Evaluation of the Undergraduate Ambassadors Scheme for Geography, Earth & Environmental Sciences (GEES)

Pilot Project Report
Helen King, March 2010
With Joy Moloney & Jim Andrews
**Introduction**

Placements offering teaching assistant experience for undergraduates into schools have become increasingly recognised as an important mechanism encouraging wider participation in further and higher education, particularly in strategically important science, technology, engineering and mathematics (STEM) disciplines. At the same time those participating benefit from exposure to the environment of primary and secondary education, enhancing their soft skills. There are an increasing number of schemes delivered under a number of banners with a variety of stakeholders. These include the Undergraduate Ambassadors Scheme (UAS), the Student Associates Scheme (SAS) and the Geography Ambassadors Scheme.

**Undergraduate Ambassadors Scheme**

The Undergraduate Ambassadors Scheme ([http://www.uas.ac.uk/](http://www.uas.ac.uk/)) is, perhaps, the most ambitious of the three. It provides university departments with a framework around which they can establish a credit-bearing module for students to work with teachers in local schools. The scheme is targeted at students studying science, technology, engineering and mathematics (STEM). The aims of the scheme are to:

- Provide key transferable skills to undergraduates which will be invaluable after graduation;
- Provide teaching experience that encourages undergraduates to consider a career in teaching;
- Supply role models for pupils;
- Give support to teachers; and
- Encourage a new generation of scientists, engineers and mathematicians.

“Universities offer UAS to their undergraduates as an optional course module which carries credits that contribute to their degree. Offered in the penultimate or final year of a degree, credits attached to this module currently range from ten to 30 credits. Although UAS provides a full set of documentation designed to help departments get the module up and running, the module is run by the university department and tutors often choose to adapt the UAS materials to fit their own requirements. After being accepted onto the module and completing an initial day of training each undergraduate is assigned to a placement with a teacher in a local school. They then work closely with the teacher on one [half] day per week for a full semester of roughly 10 weeks, providing teaching and practical assistance and conducting special projects. Throughout this period, the undergraduate is developing vital communication skills and other transferable skills, such as active listening, prioritisation and team working. [Back at the University, group tutorials offer support for students on a range of topics, including special project development and placement management.]

The undergraduates’ work in schools is assessed on the basis of such factors as a portfolio of evidence of their experiences gathered during the term, an end of module presentation and written report and the assessment of the placement teacher. UAS provides university departments with templates and guidance on this and all other aspects of the scheme, which can be easily adapted to meet local needs and academic priorities.” [UAS website]

The scheme started in 2002 with 28 undergraduates in 4 university departments and it has grown substantially in a short period of time. In 2008/9 around 900 undergraduates from a total of 125 departments had placements in classrooms throughout the UK. Figures updated in September 2009 shows that the growth of the scheme is continuing with 132 departments from 46 universities across the UK and Ireland committed to running UAS with more departments expected to be joining them in the coming weeks. The overall scheme is administered by a not-for-profit company limited by guarantee, Undergraduate Ambassadors Limited. In March 2009 UAS announced financial difficulties for which it was unable to find support and, hence, it is likely that the central administration of the scheme will cease. Whether individual universities will continue to use the approach remains to be seen.

**Student Associates Scheme**

The Training and Development Agency for Schools (TDA) offers the Student Associates Scheme which gives students the opportunity to spend 15 days in a school working alongside teachers ([http://www.tda.gov.uk/Recruit/experienceteaching/jointhestudentassociatesscheme.aspx](http://www.tda.gov.uk/Recruit/experienceteaching/jointhestudentassociatesscheme.aspx)). Students
receive a £40 per day training bursary. It is open to students registered on full-time or part-time programmes of study leading to an undergraduate degree (other than those leading to QTS), and HND, a foundation degree or a postgraduate award, including masters and doctorates. Students are given a training and induction programme. The scheme is delivered by 55 higher education institutions in England.

**Geography Ambassadors Scheme**

The Geography Ambassadors Scheme has a different emphasis in that it is focused on secondary schools and aims to raise the profile of Geography and to improve the pupils’ learning experience. The scheme was funded as a pilot in 2006-08 by the Department for Children, Schools and Families and therefore restricted to England. Funding was extended for a further 5 years to 2011 after initial (unpublished) evaluation. The project is part of the Action Plan for Geography [http://www.geography.org.uk/news/actionplanforgeography/] jointly owned by the Geographical Association (GA) and the Royal Geographical Society with the Institute of British Geographers (RGS-IBG).

The scheme is managed by the RGS-IBG [http://www.rgs.org/OurWork/Schools/Action+Plan+for+Geography/Geography+Ambassadors.htm]. Undergraduates are targeted in their second year (but students from other years are also included) and the expectation is that they should each undertake one school visit (though many go on to do more and some continue visiting after graduation). Students are recruited by adverts (posters, web) and through networking with university staff. Students complete an application form and must attend a 3 hour training session provided by one of 2 RGS staff at regional centres. Ambassadors deliver a one hour presentation, the theme of which is ‘I love geography’. The content is owned by the ambassador; pictorial content is encouraged and some structure is advised, e.g. how to progress to geography at university and where can geography take you.

To date (21st July 2009), 644 schools have received a visit from one of 750 ambassadors. Visits are for one hour to classes of 25-30 between Years 9 to 13. 47 universities have been involved to date, almost exclusively in England as visits must be to schools in England. The scheme is evaluated via feedback forms from participating teachers and undergraduates.

**The GEES Evaluation Project**

This research is funded by the Higher Education Academy Subject Centre for Geography, Earth & Environmental Sciences as part of the work of its Earth Science Senior Advisors. This pilot project seeks to evaluate the Undergraduate Ambassador Scheme (UAS) with a particular focus on the disciplines of geography, Earth and environmental science (GEES). A key question is to what extent are UAS activities effective in promoting interest in the GEES disciplines in schools.

The research will address the effectiveness of the scheme against the following aims (based on the overall aims of the UAS):

a) Providing key transferable skills to undergraduates which will be invaluable after graduation;
b) Providing teaching experience that encourages undergraduates to consider a career in teaching;
c) Supplying role models for pupils and enthusing them about GEES subjects; and
d) Giving support to teachers.

This will be achieved through working with the three main stakeholders:

- University (GEES) Students: an analysis of their module journals and UAS evaluation questionnaire to develop evidence for the achievement of aims a) and b).
- School pupils: a post-UAS questionnaire to study the achievement of aim c).
- School teachers / co-ordinators: a brief telephone interview (post-UAS) to receive feedback on aims c) and d).
**Methodology**

This small-scale project intends to pilot a methodology for evaluating the UAS scheme with respect to the GEES disciplines. It focuses on the experience of students undertaking the scheme in 2009.

**Sample**

To this end a convenience sample of students were selected from the authors’ institution, the University of Southampton. A broader sample was also sought from colleagues at other institutions; however, this elicited only one completed pupil questionnaire, two teacher questionnaires and no student data.

The Southampton sample includes all three sets of data plus student questionnaires from previous years and consistency in student induction and training. Four students volunteered to take part in the project, all from the School of Ocean and Earth Science. Each student agreed for their UAS evaluation data and module journal to be analysed. In addition, they also administered the pupil questionnaire with those they interacted with as part of their special project. Although teachers at all the schools were contacted only two responded to the request to provide feedback on the students’ experience and the impact on the pupils.

The sample is relatively small and cannot be said to be necessarily representative of all UAS. However, as more detailed case studies they provide an interesting complement to the overall evaluation of the scheme (UAS 2006) and raise additional questions about the role of ambassadors in enhancing interest in STEM subjects.

**Data Gathering**

To avoid duplication of effort, existing data were used to analyse the students’ experience of the scheme: their module journals (in the form of blogs) and the end-of-module evaluation forms provided by UAS (Appendix 1). School pupils were surveyed using a brief written questionnaire involving a combination of Likert scale-type and open-ended questions (Appendix 2). Parental permission was obtained via a take-home letter which explained the purpose of the research and gave the parent / guardian the opportunity to opt their child out. These letters and questionnaires were administered by the student. Teachers were contacted by email and invited to take part in a brief, structured telephone interview (Appendix 3).

Additional existing data, including the UAS 2005/06 evaluation report and analysis of the 2007/08 University of Southampton School of Ocean & Earth Science students’ evaluation questionnaires provided contexts with which to compare the 2009 students.

Given the timing of the project and that it was a pilot in itself, the pupil questionnaires and teacher interviews were not piloted in advance. Ethical clearance for the work, including research with minors, was obtained through the University of Plymouth Faculty of Science ethics committee (the host institution of the GEES Subject Centre who provided the funding for the project).

**Data Analysis**

The data were analysed under each of the four project aims. The student questionnaires provided information on their development of transferable skills, teaching experience and (indirectly) impact on pupils. The blogs were analysed through a process of coding to highlight comments relevant to each of the four aims. The teacher questionnaires provided data with respect to the perceived impact on pupils and support to teachers. Finally, the pupil questionnaires provided direct information on their perception of the impact of the student on their ideas about the Earth and future careers.

Finally, case studies were written based on the two Southampton schools where student, pupil and teacher data were available.
Data Analysis

Teachers’ Comments
A review of the four responses (two from Southampton schools and two from Durham) suggests that the UAS certainly benefits the teachers (as it provides extra classroom support) and the personal / professional development of the ambassadors. The impact on the pupils is less tangible; no evidence is given to suggest that it is negative and anecdotal evidence suggests one or two pupils (at sixth form level) may have had their career choice influenced.

Do you feel that the student ambassadors acted as role models for the pupils? If so, in what ways?
All the teachers felt that the ambassadors were good role models for various reasons: pupils can relate more to the ambassador than their teachers, university students help them see the importance of working hard for their future, their positive conduct, enthusiasm for science, and introducing real science to pupils.

What impact, if any, have the student ambassadors had on the pupils’ views of geography, earth and environmental sciences?
The teachers were asked to comment on the ambassadors’ impact on the pupils’ views of the GEES disciplines. This varied as not all ambassadors worked on GEES-related topics. Two teachers noted that the ambassadors addressed GEES issues but made no comment on the impact on students. One teacher noted that “it has opened the pupils’ eyes” but that was more because they didn’t know much about the topic beforehand. No direct evidence on impact was provided except that teacher noted that an ambassador had reported that a Year 11 pupil was interested in going into Oceanography (this occurred after the ambassador had had one-to-one conversations rather than during ordinary lesson time, as noted in her blog).

What impact, if any, have the student ambassadors had on the pupils’ future education / career choices?
Three teachers felt that there had been a positive impact on the pupils, alongside the other inputs that they get on career choices, through raising awareness of potential career pathways, in addition some pupils are “thinking more positively and have as a result a greater chance of reaching their now raised aspirations.” One or two (at sixth form level) actually changed their degree choices. However, as one teacher noted it is hard to tell because this was not the specific aim of the UAS and, hence, not necessarily directly addressed by the ambassador or the school.

How have the student ambassadors benefited you as a teacher?
All the teachers felt they had benefited through having an extra member of staff in the classroom, having an expert in the field, through resource development and bringing in fresh teaching ideas.

What could be done to improve the way the scheme operates in your school?
It was noted that planning in advance is useful so that the most can be made of the ambassador’s presence including making sure they come to the school on the same day each week (to help build up relationships with staff and pupils).

Other Comments
One teacher noted the importance of the scheme for the development of the University students themselves; to help them think about their teaching career and also to see how far they’ve come since being pupils themselves.
**Pupils Questionnaires**

5 schools provided pupil responses: four from Southampton and one from Durham. The student blogs provide context for Southampton responses.

**Likert-Scale Questions**

The Likert scale responses were variable between schools (as to be expected with different pupils, different students, different classroom topics and approaches) but there was no statistically significant difference in response using the Chi squared test except for the question on future careers: significantly fewer pupils from school A and more from school D strongly agreed or agreed that time spent with the ambassador had changed their ideas about future careers.

**Table 1:** The percentage of respondents who strongly agreed or agreed with these statements:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Average</th>
<th>St. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. I liked having someone different to teach me</td>
<td>78.1%</td>
<td>0.08</td>
</tr>
<tr>
<td>b. The activities were interesting</td>
<td>76.2%</td>
<td>0.09</td>
</tr>
<tr>
<td>c. I enjoyed the activities</td>
<td>73.8%</td>
<td>0.15</td>
</tr>
<tr>
<td>d. The activities made me think about the Earth*</td>
<td>50.8%</td>
<td>0.19</td>
</tr>
<tr>
<td>e. The student was very knowledgeable</td>
<td>76.8%</td>
<td>0.11</td>
</tr>
<tr>
<td>f. Time spent with the ambassador has changed my ideas about future careers</td>
<td>27.1%</td>
<td>0.22</td>
</tr>
<tr>
<td>g. I would now like to learn more about the Earth*</td>
<td>47.5%</td>
<td>0.15</td>
</tr>
</tbody>
</table>

* One ambassador was not involved in teaching Earth-related topics (she taught maths) but there was no significant difference in responses from the pupils compared with the other schools and the average response was only a couple of percent higher when these data were excluded.

**Figure 1:** Percentage of respondents from each school who strongly agreed or agreed with the statements listed in table 1.
Open-ended Questions

Please tell us how the student ambassador has changed your views about science and the Earth:

A: Year 7; Sample = 21 respondents (1 put all zeros and provided no comments); two lessons with the ambassador on rocks and minerals.
13 pupils out of 14 who provided comments stated that they hadn’t changed their views.
1 pupil noted that they liked the activities but that the rest was boring.
   “She did not change my views”
   “The ambassador did not change my views because it is just another topic that we learn. “

B: Years 10/11; Sample = 6 respondents; one lesson on transformations of trigonometric graphs.
5 pupils noted that the class was on maths so didn’t cover these topics.
1 pupil noted that “It has enlightened my knowledge of the Earth and wettened my appetite for such matters.”

C: Year 7; Sample = 9 respondents; one lesson on the solar system plus a visit to a science museum / planetarium.
7 pupils responded positively though they seem to have answered the header question (what did you think about the lessons with the university student) rather than whether their views had changed. Comments such as good and fun.
1 pupil simply stated ‘no’ and 1 stated that they ‘did not like it, God done it’
   “It was fun I liked the trip”
   “Miss made it good and the planet[arium?] was good.”

D: Year 7; Sample = 10 respondents; discovering oceanography afternoon onboard RV Callista.
9 pupils responded positively (though a mixture of comments mostly about the student rather than whether they had changed their views). 1 noted that they had not changed their views.
   “he showed me that science can be fun and its not just in a lab”
   “The lessons with the university student Were fun and better than normal lessons.”
   “The Student ambassador made me think about photosynthesis is in sea and how many animals are in the sea.”

E: Unknown year (no student data); Sample = 20 respondents; comments from teacher and pupils imply that lesson involved a fieldtrip to collect rocks and fossils with possibly some follow-up classroom activity.
5 noted that it hadn’t changed their views but 3 noted that had enjoyed the activities
1 noted that it hadn’t changed their views about science but they had changed about the Earth
3 commented positively about the student
12 noted that they had learned new things
6 noted that they enjoyed the trip
   “She was friendly and taught us many new things. I learned things that I would not usually use in our class.”
   “I really enjoyed the trip, to witby [sic]. I have some fossils to keep and I will keep them forever. PS. can we do it again. please.”
   “I don’t think it has changed my views, but I had fun doing the activities and enjoyed having a new teacher. I have learned more about the Earth.”
Please tell us how the student ambassador has changed your ideas for the career or job you would like to do when you leave school.

A: Year 7; Sample = 21 respondents (1 put all zeros and provided no comments); two lessons with the ambassador on rocks and minerals.
12 pupils out of the 13 who provided comments stated that they hadn’t changed their ideas about future careers.
1 pupil noted that they had no idea what they wanted to be.
   “She didn’t change my ideas”
   “The ambassador did not change my views because it takes a lot more than one lesson to change your mind.”

B: Years 10/11; Sample = 6 respondents; one lesson on transformations of trigonometric graphs.
All 6 responded and it didn’t change any views. However, 1 noted that it had reinforced their desire to do a maths-related career and another noted that it had changed their perspective.
   “Hasn’t changed my ideas of a career choice because it was a 30 minutes session of maths...pretty self explanatory”

C: Year 7; Sample = 9 respondents; one lesson on the solar system plus a visit to a science museum / planetarium.
6 pupils provided comments
4 expressed no change (no, don’t know, fireman)
1 wanted to work at the InTech science centre they visited and 1 wanted to teach (not clear if this was a change of view).

D: Year 7; Sample = 10 respondents; discovering oceanography afternoon onboard RV Callista.
7 pupils noted that their ideas hadn’t changed
2 noted that they now knew more about other jobs
   “It has showed me more about one job and how fun it can be”
   “It has made think about other Jobs.”

E: Unknown year (no student data); Sample = 20 respondents; comments from teacher and pupils imply that lesson involved a fieldtrip to collect rocks and fossils with possibly some follow-up classroom activity.
19 pupils responded: 1 stated ‘don’t know’, 1 put X and 17 noted that they hadn’t changed their ideas.

Overall Impact on Pupils
School B was slightly anomalous as the student taught a maths class rather than something linked to Earth Science. In general, there were similar responses for the Likert questions a, b and c. The activities which made the students think about the Earth were two of the trips (science museum / planetarium and fossil collecting); the third trip was on oceanography so pupils may not have linked this to the (solid) Earth. The only activity which influenced ideas about careers was the oceanography trip – here the student was able to demonstrate his expertise and the pupils could see what ‘real’ scientists do. The three trips also had more impact on the pupils’ interest in learning more about the Earth than the two in-class activities.
Student Questionnaires

UAS evaluation questionnaires were received from the four Southampton students. The students spent 4-7 hours at a time in their schools for 8-10 weeks.

All four students are interested in teaching as a career; two have applied and been accepted for the University of Southampton PGCE and the other two intend to apply for a PGCE. This is a considerably higher number than for the 2007-08 Geography and School of Ocean & Earth Science (SOES) UAS students of which only 52% were interested in teaching as a career.

All four students believe they have developed their transferable skills. In detail:

<table>
<thead>
<tr>
<th>Skill</th>
<th>No. of 'Yes' Responses</th>
<th>07-08 Geog</th>
<th>07-08 SOES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication (one-to-one)</td>
<td>4</td>
<td>81%</td>
<td>78%</td>
</tr>
<tr>
<td>Communication skills (with a group)</td>
<td>4</td>
<td>95%</td>
<td>100%</td>
</tr>
<tr>
<td>Presentation skills</td>
<td>3</td>
<td>90%</td>
<td>70%</td>
</tr>
<tr>
<td>Planning skills</td>
<td>4</td>
<td>90%</td>
<td>74%</td>
</tr>
<tr>
<td>Team working</td>
<td>2</td>
<td>86%</td>
<td>39%</td>
</tr>
<tr>
<td>Time management</td>
<td>4</td>
<td>86%</td>
<td>65%</td>
</tr>
<tr>
<td>Ability to prioritise tasks</td>
<td>3</td>
<td>52%</td>
<td>43%</td>
</tr>
<tr>
<td>Ability to negotiate</td>
<td>4</td>
<td>52%</td>
<td>35%</td>
</tr>
<tr>
<td>Confidence</td>
<td>4</td>
<td>95%</td>
<td>87%</td>
</tr>
<tr>
<td>Essay/report writing</td>
<td>1</td>
<td>71%</td>
<td>43%</td>
</tr>
</tbody>
</table>

All four students would recommend this module to others (this is comparable to the 100% recommendation from the 2007-08 Geography and SOES students):

“It was very enjoyable and a great experience. Gain transferable skills for life and also a great way to see if teaching is for you.”

“Because you learn things about yourself you couldn’t get on any other course.”

“It’s a really good module which gives you the chance to improve many personal skills and qualities. Learnt many transferable skills.”

“It stimulates students in a completely different [sic] way to how the rest of the degree works”

The students engaged in a variety of activities as illustrated in their blogs:

<table>
<thead>
<tr>
<th>Activity</th>
<th>No. of 'Yes' Responses</th>
<th>07-08 Geog</th>
<th>07-08 SOES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work with pupils on a one-to-one basis</td>
<td>4</td>
<td>76%</td>
<td>91%</td>
</tr>
<tr>
<td>Work with higher ability pupils to stretch them further</td>
<td>2</td>
<td>52%</td>
<td>52%</td>
</tr>
<tr>
<td>Work with pupils classified as 'Gifted and Talented'</td>
<td>1</td>
<td>33%</td>
<td>26%</td>
</tr>
<tr>
<td>Work with lower ability pupils who were struggling with the subject</td>
<td>4</td>
<td>66%</td>
<td>83%</td>
</tr>
<tr>
<td>Whole class teaching on national curriculum material</td>
<td>4</td>
<td>52%</td>
<td>52%</td>
</tr>
<tr>
<td>Use of IT in the classroom (e.g. interactive whiteboards, PowerPoint)</td>
<td>3</td>
<td>76%</td>
<td>65%</td>
</tr>
<tr>
<td>Leading class discussions</td>
<td>3</td>
<td>62%</td>
<td>61%</td>
</tr>
<tr>
<td>Talking to pupils about university and studying their subject at university</td>
<td>3</td>
<td>38%</td>
<td>65%</td>
</tr>
<tr>
<td>Helping with revision</td>
<td>2</td>
<td>24%</td>
<td>43%</td>
</tr>
<tr>
<td>Running/assisting with a lunchtime subject session</td>
<td>0</td>
<td>10%</td>
<td>9%</td>
</tr>
<tr>
<td>Running/assisting with an after-school subject session</td>
<td>1</td>
<td>5%</td>
<td>13%</td>
</tr>
<tr>
<td>Carrying out experiments in class with the pupils</td>
<td>3</td>
<td>10%</td>
<td>87%</td>
</tr>
<tr>
<td>Taking pupils on a general visit to their university</td>
<td>1</td>
<td>0</td>
<td>26%</td>
</tr>
<tr>
<td>Taking pupils to the university to perform experiments not possible to carry out in school</td>
<td>1</td>
<td>0</td>
<td>35%</td>
</tr>
<tr>
<td>Introducing IT into the classroom that hadn’t previously been used.</td>
<td>0</td>
<td>19%</td>
<td>4%</td>
</tr>
</tbody>
</table>
The students felt that they had had an impact on the pupils in the following ways:

<table>
<thead>
<tr>
<th>Activity</th>
<th>No. of ‘Yes’ Responses</th>
<th>07-08 Geog</th>
<th>07-08 SOES</th>
</tr>
</thead>
<tbody>
<tr>
<td>I helped them to understand their subject better</td>
<td>4</td>
<td>86%</td>
<td>91%</td>
</tr>
<tr>
<td>I raised their awareness of the university and what goes on there generally</td>
<td>4</td>
<td>52%</td>
<td>78%</td>
</tr>
<tr>
<td>I raised their awareness of what it is like to study science, maths or engineering at university</td>
<td>2</td>
<td>14%</td>
<td>70%</td>
</tr>
<tr>
<td>I changed their perceptions of what you can do with science as a career</td>
<td>2</td>
<td>33%</td>
<td>48%</td>
</tr>
<tr>
<td>I changed their perceptions of what university is like.</td>
<td>3</td>
<td>24%</td>
<td>48%</td>
</tr>
<tr>
<td>I taught the pupils things that they would not have learnt if I had not been in the class. Eg:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Concepts in oceanography &amp; Marine Biology</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• learning about minerals - uses and where they come from</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Awareness of different rock types &amp; names</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other impacts not already listed - please state:</td>
<td>School have decided to invest more resources in what I taught for the school. (Rock specimens from NOC)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NB These impacts won’t necessarily correlate to the pupils’ responses. The pupils were just from the project classes but during their time at the school the ambassadors interacted more broadly with other classes.

This sample is too small to compare statistically with the 2007-08 Geography and SOES responses but, by eye, there are similar patterns. For some aspects of classroom activities and impact on pupils, this sample (all from SOES) is more similar to the SOES group than the Geographers.
Student Blogs

The blogs were very useful for providing a context for the pupil questionnaire responses and for developing a deeper understanding as to the types of activities that the students engaged with. These four students used the blogs as diaries of their experience both descriptively and reflectively. As well as stating the details of the classes they observed and taught in, they also commented on their perceptions of the teachers’ methods and the pupils’ behaviour, and reflected on their own practice. As such, these will provide a useful aide memoire for the students as they embark on their own teacher training and career.

All four blogs were analysed for aim c (providing role models for pupils and enthusing them about STEM). Two of the blogs were analysed further against each of the four aims in order to develop the more detailed case studies.

School D Student: Supplying Role Models and Enthusing Pupil about STEM Subjects

The student’s first of three aims for the module was “to inspire pupils, by, effectively conveying ideas by interacting with pupils, through, observation and involvement within a ‘real’ classroom”. He seemed particularly anxious to be seen in a good light by the students as he felt this was the way to command respect and, hence, to support his authority and control within the classroom.

There is little direct evidence of impact on the pupils but the student provides several instances where he felt he had had an effect. He attended an ‘Outreach and Public Engagement skills training event’ during which he gave a 6 minute presentation to an audience of six Year 8 pupils. The student was “was very pleased to hear that they felt I had got across the basic information clearly and then built on that by making relevant the effect of dust inputs. I couldn’t help myself but ask them some questions as well just to see if they had ever heard anything I had spoken about, they all said they had not. So job done. I achieved what I wanted to do and 6 pupils went into school the next day knowing something about the influence of biogeochemistry on microbial community dynamics”.

The student enjoyed opportunities to help student acquire new knowledge, for example “I have enjoyed moments of success where I am confident that I have not just managed to get ideas across to pupils but also awaken a sense of investigation in their minds.” In his self-reflection he noted that he needed to devise strategies for engaging with the pupils on a one-to-one basis in the classroom, though again this seemed to be linked to anxiety about their impressions of him.

His special project involved a trip on a research vessel for 24 Year 7 pupils. Again he noted his feelings on being able to convey new knowledge “I remembered the feeling you get when you are able to introduce a variety of new concepts to someone and then systematically link them together in a simple and almost visible cognitive chain. I imply visible by virtue of their changing facial expressions as they formed the links in their understanding and within a minute understood the concept of salinity and why seawater sinks below riverine freshwater. I felt great.” Once again he made reference to his image, noting that he thought he had impressed the students by his active work on the vessel “rather than a stuffy assistant teacher in a neck tie”. He noted the advantage of peer-support: “It is always interesting to me to see that with anything some students are always more interested than others and it can work to a demonstrator’s advantage by playing on the interested students capacity to involve the other students. I found this approach worked well and by the end of the activity I had certain students demonstrating to other students what things were.”

One of his handouts to the pupils included information on science at work “I was able to describe how scientists work in groups and that, as trainee scientists themselves they must work in a group and pool together each of their own strengths and abilities.” Finally, pupil feedback was very positive after the trip: “Immediate feedback from the students was extremely positive and I was convinced they had all taken different things from the experience. I am sure everyone took away some science but I suspect that the trip was something more for others who may never have had this opportunity.”
School C Student: Supplying Role Models and Enthusing Pupil about STEM Subjects
This student did not specify her aims for the module in her blog. She noted a few experiences where she appeared to have some impact on the pupils:
In a Year 8 special skills group “One of the students did misbehave and tried to disrupt the others who were doing their own work. However when I removed him from the group to another computer to do his work I discovered that he was having trouble reading the questions and instead of asking for help he had just decided that he couldn’t do it. We resolved this and read the questions together so he knew exactly what he needed to do. During this time I also learned that he was very keen to join the army, this then helped when encouraging him to do his work as I pointed out that he needs to work hard if he wants to [pursue his chosen career]. By finding out what a student’s interests are teachers can encourage them to achieve the best they possibly can.”

In her first lesson for her special project with Year 7 pupils she felt that “I seemed to engage the students and many even began asking lots of questions which is great.” For the second lesson she made a model of the solar system “to aid with the teaching of this subject. I thought this would provide a visual aid to help the students understand the concept of orbits as well as the order of the planets and relative distances from the sun. The students found this fascinating and in turn it evoked many questions, both about the solar system as well as the model itself.”

Overall she felt “like I’ve had a positive impact on the students with whom I have spent time with [at the school]. Not only have I shared some of my passions and interests, but they have taught me many lessons in return.”

School A Student: All four aims
This student blogged information on the activities she engaged with in the school, her personal feelings, her observations on good / less effective teaching and the details of her special project. It was a reflective piece of writing which will act as a useful aide memoire for when she undertakes teacher-training and practice.

Key Transferable Skills
The student recognised that this module would provide her with the opportunity to enhance her personal skills. She anticipated that “It will help me gain many valuable and transferable skills, which will prove useful in future jobs.” Amongst her aims, skill development included communication skills, using her initiative and confidence in public speaking. Her development of transferable skills inter-linked with her desire to recognise “different teaching styles and [notice] which ones seems to be more effective in student learning”. She was keen to identify her strengths and weaknesses and to obtain feedback from teachers to support the development of her own teaching skills.

The transferable skills she had the opportunity to develop included research (exploring appropriate teaching methodologies and gathering resources for her special project), planning (the special project and producing two lesson plans), communication (one-to-one with pupils and teachers), presentation (to a whole class and advising pupils on their PowerPoint presentations) and writing (particularly through supporting pupils in their writing tasks).

She reflected on and learnt from her own lesson. She noted that she was nervous at first but felt more relaxed as time went on; she felt more confident about the second lesson as she had got to know the pupils and knew that the teacher had confidence in her. She learnt that she needed to be more careful with timing and allow flexibility in the lesson plan.

Her reflection on the overall experience indicated that she had grown in confidence and that her aims had been fulfilled.
Teaching Experience
In the student’s own words “The main reason why I would like to be involved is to see whether teaching in a secondary school is the right career choice for me.” Her aims for the placement included opportunities to practice as a teacher including being actively involved in the classroom, being a good authoritative figure and approaching the classroom confidently, safely and professionally. She was also keen to observe different teaching styles and their effectiveness.

Her experience at BP school provided a variety of examples of teaching environments in terms of age and level of the pupils as illustrated by her description of her first day at the school:
“I was given my own timetable showing the lessons I will be attending. They included years 7/8/9 and 10. They ranged from high, mixed and low achieving classes. I sat in 5 lessons overall. I felt that sitting in a range of ability lessons allowed me to compare the different behaviours, teaching methods and abilities.”

Her overall experience included:
- One-to-one support in a Year 9 all girls science class learning about the rock cycle, a low achieving Year 8 class, a Year 10 BTEC class working on PowerPoint presentations, a low set Year 11 class guiding their individual projects (alcoholism and boxing safety), supporting chemistry students with their homework in after hours detention.
- Advising pupils working in groups on rock investigations in a Year 7 class, in a Year 9 all boys science class, a Year 8 tutor group making rosettes and PowerPoint presentations as a mock political party.
- Marking Year 10 BTEC chemistry presentations.
- Teaching two lessons on the rock cycle to a whole Year 7 class.

In her reflection on the first lesson she taught on the rock cycle she noted that “I learnt that it is important to engage with the pupils, ask questions, look for clues in their expression whether information has been understood or not so well understood. These are things I need to consider in the future when I go into teaching.” The latter sentence suggests that the experience has confirmed her decision that teaching is the right career for her.

Her reflection on the overall experience indicated that she had learnt a lot about teaching, in particular “the importance using a variety of teaching methods for effective learning.” And she stated that she had “really enjoyed being part of this valuable and challenging experience.”

Supplying Role Models and Enthusing Pupil about STEM Subjects
There was little direct evidence of this within the blog. However there were occasions when the student and teacher felt that the pupils had been particularly motivated.

At the beginning of the module the student hoped that she would be “a good role model to the students and encourage them go on to further education.” She also noted that she wanted to make her special project exciting and interesting for the pupils; she wanted to engage the pupils so they were involved in what she was saying and not bore them with a 45 minute didactic lesson. She appreciated the need to address different learning styles by using a variety of approaches in the classroom. She arranged with NOC to borrow some rocks and minerals so the students could do a hands on practical.

In her reflection on the lesson she noted that [the pupils] “were all concentrating and listening when I presented the rock cycle. Many of them got involved when I asked questions.” Feedback from the teacher confirmed the pupils’ engagement with the topic “She said that even the noisy kids were really enthusiastic with it and did not cause any trouble at all. She said that the clever ones were really involved. They liked learning about the subject and were saying to me that they were really enjoying the practical.” She finally noted that the pupils responded particularly well to the practical, that it got them thinking and that they asked really good questions. In her second lesson on minerals, the pupils enthusiasm was illustrated by the number of questions they asked. The student thought that they had enjoyed learning about the uses of minerals in everyday life.
Supporting Teachers
Outside of her special project, the teaching experience the student engaged in generally involved working with pupils in small groups or one-to-one during their lessons. In can be inferred that this additional support in the classroom was of use to the teachers as it gave the pupils more opportunity for personal attention. There was no indication within the blog that the students’ presence was a hindrance.

The student discussed her special project with various teachers. The teacher whose class she took asked for a copy of her presentation on the rock cycle to use in the future. Her use of hand samples in the classroom resulted in the science department contacting NOC to ask about rock specimens for use in the school. For her second lesson the teacher suggested that an introduction to minerals would fit in well with the module.

School B Student: All four aims
This student blogged about the classes she worked with, information on the school, observations of teaching practice, reflections on her own teaching and details of her dissertation (producing science materials for the VLE) and special project (teaching a small group of A/A* GCSE students on transformations of trigonometric graphs). She wanted to be a maths teacher so spent most of her time with the maths department as well as sitting in on a few science lessons.

Key Transferable Skills
The student’s aims for the module were to gain confidence in public speaking, improve time keeping and planning, and to improve her negotiation skills.

The skills she had the opportunity to develop were research (on the school’s performance and on teaching methods and learning styles), communication skills (one-to-one with teachers and pupils), presentation skills (to small groups and whole classes) and planning (for special project and its lesson plan). She also had the opportunity to reflect on writing skills when supporting pupils in writing a science piece. Her dissertation may also have provided an opportunity for research and writing but she did not provide enough details of this in her blog to offer strong evidence.

Her confidence in working with small groups developed during her placement period: “I am surprised at quite how much my confidence has grown at leading a small group for most of a lesson. At the beginning of the UAS I was only helping one or two students do their work and now I am quite happy to take a whole group out for an extended time and teach them some principles.” Though she still feels nervous presenting to peers or those who know the topic well. She learnt the importance of planning for lessons and presentations and felt that her time keeping had improved slightly, though she still tended to leave things to the last minute. Her negotiation skills were not particularly tested though she felt she improved in persuading pupils to do work when they didn’t want to. Overall she felt that she had many of her aims and learnt many things about herself in general.

Teaching Experience
The student stated that one of her aims was to get a taster of teaching and to facilitate learning. She wanted to be a maths teacher and was pleased that her time was to be divided between maths (including her special project) and science (including her dissertation). She had a variety of teaching experiences at the school including:

- Tour of the school during ‘enhancement period’ to observe a variety of activities.
- One-to-one support in the classroom (e.g. helping a girl for whom English was her second language with understanding the class, helping a girl to write up an experiment for coursework, going through exam papers with year 11/12 GCSE retake students, acting as a reader for a boy with dyslexia
- Whole class teaching: preparing and delivering starter activities for GCSE maths classes, teaching congruent triangles within a class, and supporting a science practical
• Small group teaching within the classroom (e.g. going through a GCSE paper with a couple of students, working with a small group of girls on a maths task, working with 2 sixth form students)
• Small group teaching on her own: for special project, working on graphical transformations with A/A* maths GCSE maths group. And working with a small group of GCSE students on algebra; working with a small group of top set GCSE maths on vectors.

After her first day she recognised the value of experiencing a variety of different classes: “next time I visit I hope to be able to be in more classes to help and pick up more pointers about teaching methods!”

Her experience and the feedback from the teachers encouraged her in her decision to become a teacher: “They all said that I have the potential to be a great teacher, which is very encouraging for me as I continue on with my PGCE next year.” She also noted that “It has given me a great taster of teaching for the future; it showed me that this is the career path that I do want to follow and allowed me to see that I have the ability to become a good teacher.”

**Supplying Role Models and Enthusing Pupil about STEM Subjects**

There is a small amount of evidence for this within the blog. The student hoped to be able to enthuse the student: “I hope whilst I am at the school I can help boost this number [of good GCSE maths results], giving more students the drive and want to take maths onto a higher level than is compulsory.”

Her teaching seemed to engage the students, for example in her reflection on a whole class activity she took on congruent triangles she noted that “This was a good activity as most of the students were engaged with the activity and seemed to enjoy it.” Feedback from the observing teacher was also positive: “He said that the majority of the students were very engaged in the activity”

She had the opportunity to work with 2 sixth form students and to have a more informal discussion with them after class which gave her the opportunity to talk about university life: “After they had done their work we chatted for a while about university, they were telling me what courses they were looking into and asked me questions about university life, which I answered for them. They seemed really interested and excited to go to university which was really encouraging for me.”

For her special project she noted that “It was very encouraging to see that all of the students felt more confident than they did before the class.” And feedback from the teacher (who was not present in the class) was also positive: “After the lesson the teacher told me that all the students he had spoken to had given me good feedback and said that it had helped them all, one even said that they really hoped that transformations would be on the exam.”

She noted that she had been surprised at the willingness to learn of the students given the schools overall Ofsted report. She suggested this may be due to the sets she was placed in (top sets and retake classes) and “It may also have been due to a different person teaching them, the teacher of the top set actually said that the students “enjoy a different voice” during their lessons and this may encourage them to learn more. If this is the case then it proves that the UAS is most definitely a worthwhile scheme.”

**Supporting Teachers**

Her teaching experience was in general very supportive to the teachers as she was able to help pupils on a one-to-one basis in the classroom, particularly those that needed more support (e.g. a boy with dyslexia, a girl who’s English was not very strong). She was also able to take small groups of higher achieving students for private lessons on topics that were not suitable for the whole class.

Her dissertation project also seemed supportive of teaching in general, although she did not go into much details it seems that she produced learning and teaching resources on oceanography to go on the school VLE: “When I have finished sorting out my resources he said that he would help me put them onto the [school’s] Virtual Learning Environment (VLE) which is a web based area for sharing resources between teachers in school and possibly with other schools in the future, as it is still in its development stages.”
She noted a comment from the associate head teacher on the benefits of the UAS scheme as a whole: “He also said that it was very good for the school to have university students come in with fresh ideas to keep the school moving forward and that he would like to encourage the link to the university for both the UAS and PGCE courses in the future.”
**Discussion**

The research intended to address the effectiveness of the scheme against the following aims (based on the overall aims of the UAS):

a) Providing key transferable skills to undergraduates which will be invaluable after graduation;

b) Providing teaching experience that encourages undergraduates to consider a career in teaching;

c) Supplying role models for pupils and enthusing them about GEES subjects; and

d) Giving support to teachers.

There was strong, direct evidence for the effectiveness of the UAS scheme in achieving aims a, b and d. Aim c related to the impact on pupils; prior research in this area (with respect to the UAS, SAS, Geography Ambassadors Scheme and initial teacher education – ITE) has relied on student and teacher perceptions. There is very little (or no) literature which refers to studies involving the pupils themselves. To this end, a more detailed discussion is offered against Aim c.

**Aim a: Providing key transferable skills to undergraduates which will be invaluable after graduation**

Questionnaire data from the Southampton students (those participating in this project – 2009- and those from the previous year) clearly indicate that they felt they had developed various transferable skills as illustrated in the table below:

<table>
<thead>
<tr>
<th>Skill</th>
<th>2009</th>
<th>07-08 Geog</th>
<th>07-08 SOES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication (one-to-one)</td>
<td>4 (100%)</td>
<td>81%</td>
<td>78%</td>
</tr>
<tr>
<td>Communication skills (with a group)</td>
<td>4 (100%)</td>
<td>95%</td>
<td>100%</td>
</tr>
<tr>
<td>Presentation skills</td>
<td>3 (75%)</td>
<td>90%</td>
<td>70%</td>
</tr>
<tr>
<td>Planning skills</td>
<td>4 (100%)</td>
<td>90%</td>
<td>74%</td>
</tr>
<tr>
<td>Team working</td>
<td>2 (50%)</td>
<td>86%</td>
<td>39%</td>
</tr>
<tr>
<td>Time management</td>
<td>4 (100%)</td>
<td>86%</td>
<td>65%</td>
</tr>
<tr>
<td>Ability to prioritise tasks</td>
<td>3 (75%)</td>
<td>52%</td>
<td>43%</td>
</tr>
<tr>
<td>Ability to negotiate</td>
<td>4 (100%)</td>
<td>52%</td>
<td>35%</td>
</tr>
<tr>
<td>Confidence</td>
<td>4 (100%)</td>
<td>95%</td>
<td>87%</td>
</tr>
<tr>
<td>Essay/report writing</td>
<td>1 (25%)</td>
<td>71%</td>
<td>43%</td>
</tr>
</tbody>
</table>

The two Southampton blogs analysed for this aim also emphasise the development of such skills. The activities they undertook which provided opportunities for this development included:

- Research (looking into the school’s background and performance; exploring appropriate teaching methodologies and gathering resources for the special project);
- Communication skills (one-to-one with teachers and pupils);
- Planning (the special project and lesson plans),
- Presentation (whole class, small groups and advising pupils on their PowerPoint presentations)
- Writing (particularly through supporting pupils in their writing tasks).

These findings match those of the overall UAS evaluation in which “99% of undergraduates reported that the UAS module had improved their overall key transferable skills. The 3 undergraduates who felt it hadn’t improved them said that this was because they felt that they possessed these skills already. However, they did comment that the module had provided them with an opportunity to put these skills into practice.” (Herkes, 2006, p.11)
Aim b: Providing teaching experience that encourages undergraduates to consider a career in teaching

All four Southampton students are interested in teaching as a career according to their UAS questionnaire responses; two have applied and been accepted for the University of Southampton PGCE and the other two intend to apply for a PGCE. This is a considerably higher number than for the 2007-08 Geography and School of Ocean & Earth Science (SOES) UAS students of which only 52% were interested in teaching as a career.

The students observed and were actively involved in a variety of teaching environments including one-to-one, small groups and whole classes. They also had the opportunity to experience a variety of subject areas including maths, chemistry, biology and Earth science. The students recorded the teaching styles and student behaviour in their blogs and appeared to be learning a lot from the experience. All four students were interested in a career in teaching when they started the module and all four remained enthused after their UAS experience.

These students were, therefore, were at one end of the spectrum in terms of their enthusiasm for a career in teaching (possibly because they self-selected to participate in this research). The 2006 overall evaluations of UAS found that only about half of student participants were interested in teaching (Herkes, 2006, p.10). The undergraduates’ interest in teaching both before and after their UAS module was measured. Out of the 244 undergraduates that responded to this question the results were as follows:

<table>
<thead>
<tr>
<th>Interest before UAS</th>
<th>Interest after UAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Undecided</td>
<td>Undecided</td>
</tr>
<tr>
<td>50%</td>
<td>51%</td>
</tr>
<tr>
<td>11%</td>
<td>17%</td>
</tr>
<tr>
<td>39%</td>
<td>32%</td>
</tr>
</tbody>
</table>

Aim c: Supplying role models for pupils and enthusing them about GEES subjects

All the teachers who provided comments felt that the ambassadors were good role models for various reasons: pupils can relate more to the ambassador than their teachers; university students help them see the importance of working hard for their future; their positive conduct and enthusiasm for science, and the opportunity they provided to introduce real science to the pupils.

The student responses to the UAS questionnaire indicated that they felt they had had some impact on the pupils in the following ways:

<table>
<thead>
<tr>
<th>Activity</th>
<th>No. of ‘Yes’ Responses</th>
<th>07-08 Geog</th>
<th>07-08 SOES</th>
</tr>
</thead>
<tbody>
<tr>
<td>I helped them to understand their subject better</td>
<td>4</td>
<td>86%</td>
<td>91%</td>
</tr>
<tr>
<td>I raised their awareness of the university and what goes on there generally</td>
<td>4</td>
<td>52%</td>
<td>78%</td>
</tr>
<tr>
<td>I raised their awareness of what it is like to study science, maths or engineering at university</td>
<td>2</td>
<td>14%</td>
<td>70%</td>
</tr>
<tr>
<td>I changed their perceptions of what you can do with science as a career</td>
<td>2</td>
<td>33%</td>
<td>48%</td>
</tr>
<tr>
<td>I changed their perceptions of what university is like.</td>
<td>3</td>
<td>24%</td>
<td>48%</td>
</tr>
<tr>
<td>I taught the pupils things that they would not have learnt if I had not been in the class. E.g.:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Concepts in oceanography &amp; Marine Biology</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Learning about minerals - uses and where they come from; and awareness of different rock types &amp; names</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other impacts not already listed - please state:</td>
<td>School have decided to invest more resources in what I taught for the school. (Rock specimens from NOC)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
One student stated in her module aims that she hoped that she would be “a good role model to the students and encourage them go on to further education.” However, none of the students offered specific examples of how they might be acting as role models. The reflective comments in their blogs were mostly focused on their desire to become good teachers and to learn how to maintain control of the classroom in order to optimise the pupils’ learning. One student appeared to be particularly anxious about the pupils’ perceptions of him as he felt he needed to earn their respect and been seen as ‘cool’ in order to be able to manage the class.

The teachers provided little evidence for the impact on the pupils’ view of the GEES disciplines, partly because not all ambassadors worked on GEES-related topics. Two teachers noted that the ambassadors addressed GEES issues but made no comment on the impact on students. One teacher noted that ‘it has open the pupils’ eyes’ but that was more because they didn’t know much about the topic beforehand.”

One ambassador reported that a Year 11 pupil had expressed an interest in going into Oceanography following a post-lesson, one-to-one conversation; and all three of the students who had used a GEES theme for their special project felt that they had had a positive impact on the pupils:

- School D – trip on a research vessel: “Immediate feedback from the students was extremely positive and I was convinced they had all taken different things from the experience. I am sure everyone took away some science but I suspect that the trip was something more for others who may never have had this opportunity.”
- School C – lesson and science museum visit: In her first lesson for her special project with Year 7 pupils the student felt that “I seemed to engage the students and many even began asking lots of questions which is great.” For the second lesson she made a model of the solar system “to aid with the teaching of this subject. I thought this would provide a visual aid to help the students understand the concept of orbits as well as the order of the planets and relative distances from the sun. The students found this fascinating and in turn it evoked many questions, both about the solar system as well as the model itself.” Overall she felt “like I’ve had a positive impact on the students with whom I have spent time with [at the school].”
- School A – two lessons on rocks and minerals: In her reflection on the lesson the student noted that [the pupils] “were all concentrating and listening when I presented the rock cycle. Many of them got involved when I asked questions.” Feedback from the teacher confirmed the pupils’ engagement with the topic “She said that even the noisy kids were really enthusiastic with it and did not cause any trouble at all. She said that the clever ones were really involved. They liked learning about the subject and were saying to me that they were really enjoying the practical.” She finally noted that the pupils responded particularly well to the practical, that it got them thinking and that they asked really good questions. In her second lesson on minerals, the pupils enthusiasm was illustrated by the number of questions they asked. The student thought that they had enjoyed learning about the uses of minerals in everyday life.

With respect to the impact on pupils’ future education or career choices, three teachers felt that there had been a positive impact on the pupils alongside the other inputs that they get on career choices through raising awareness of potential career pathways. In addition some pupils are “thinking more positively and have as a result a greater chance of reaching their now raised aspirations” and one or two (at sixth form level) actually changed their degree choices. However, as one teacher noted it is hard to tell because this was not the specific aim of the UAS and, hence, not necessarily directly addressed by the ambassador or the school.

The pupils themselves noted little impact on their views about the Earth or their career choices, as illustrated in the table below (aggregated from the four Southampton schools and one Durham school):
Table: Percentage of respondents who strongly agreed or agreed with these statements:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Average</th>
<th>St. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. I liked having someone different to teach me</td>
<td>78.1%</td>
<td>0.08</td>
</tr>
<tr>
<td>b. The activities were interesting</td>
<td>76.2%</td>
<td>0.09</td>
</tr>
<tr>
<td>c. I enjoyed the activities</td>
<td>73.8%</td>
<td>0.15</td>
</tr>
<tr>
<td>d. The activities made me think about the Earth*</td>
<td>50.8%</td>
<td>0.19</td>
</tr>
<tr>
<td>e. The student was very knowledgeable</td>
<td>76.8%</td>
<td>0.11</td>
</tr>
<tr>
<td>f. Time spent with the ambassador has changed my ideas about future careers</td>
<td>27.1%</td>
<td>0.22</td>
</tr>
<tr>
<td>g. I would now like to learn more about the Earth*</td>
<td>47.5%</td>
<td>0.15</td>
</tr>
</tbody>
</table>

* One ambassador was not involved in teaching Earth-related topics (she taught maths) but there was no significant difference in responses from the pupils compared with the other schools and the average response was only a couple of percent higher when these data were excluded.

Only 5 of the 66 pupils surveyed across the five schools noted that the student had made them think about their careers:

- School C – lesson and science museum (INtech) visit: “I want to work at INtech”
- School B – lesson on transforming trigonometric graphs: “She just made me more determined to pursue a career that it involves maths.” and “I have not changed my ideas especially, but it has changed my perspective on such matters.”
- School D – trip on a research vessel: “It has showed me more about one job and how fun it can be” and “It has made think about other Jobs.”

In general, the pupils’ responses suggest that the UAS ambassadors provided an interesting and enjoyable alternative to their usual teachers. There is little positive evidence that the ambassadors themselves had an impact on the pupils’ views of the GEES subjects or STEM in general above and beyond that of the everyday classroom. A breakdown of the pupil questionnaire responses by school suggest that there may be a link between the types of activities provided by the students and the extent to which they impact on their ideas about the Earth and future careers:

![Graph](image)

% of students who strongly agreed or agreed with the following statements:

a. I liked having someone different to teach me
b. The activities were interesting
c. I enjoyed the activities
d. The activities made me think about the Earth
e. The student was very knowledgeable
f. Time spent with the ambassador has changed my ideas about future careers
g. I would now like to learn more about the Earth
The two activities which had the largest impact on the pupils’ thoughts about the Earth were the solar system lesson and museum / planetarium visit (School C) and fossil-collecting field trip (School E). All three fieldtrip-related activities had a greater impact on the pupils’ desire to learn more about then Earth than the two in-class activities (however, one of these two classes was on maths not Earth science). Interestingly, the activity which had the greatest impact on pupils’ ideas for future careers was the trip on board a research vessel. The class on rocks and minerals appeared to have had zero impact on the pupils’ ideas for future careers but this may have been because “it takes a lot more than one lesson to change your mind” (pupil quote).

This is a very small sample but it could be inferred that the hands on activities that took place out of the classroom were more influential on pupils’ interest in science / Earth science. None of the activities seemed to have had a major impact on their career ideas at this stage but these are just a handful of lessons in a broader range and, for year 7s in particular, their careers ideas are probably more heavily influenced by their everyday experiences. Previous research funded by the GEES Subject Centre found that, within all the school years surveyed, around two thirds of pupils think about their future career in terms of a named job or vocation. In many cases these are jobs which are ‘seen’ on a regular basis i.e. they come within the pupils’ sphere of influence (either directly or through the media) such as sports players, hairdressers, doctors, vets and teachers (King, 2007). This feature of career choice may explain why the research vessel trip had a stronger impact than the other activities: the pupils actually saw and interacted with people at work in this environment.

**Aim d: Giving Support to Teachers**

The student blogs indicated that they had been able to provide positive support to the teachers in the classroom through activities such as working with pupils on-to-one, taking small groups for additional lessons and providing whole class teaching.

All the teachers felt that they had benefited through having an extra member of staff in the classroom, having an expert in the subject area, resource development and ideas for teaching. The following quotes exemplify their comments:

“As well as reducing the pressure and allowing the staff to concentrate on other students needing help, their enthusiasm and energy is invigorating.”

“It has allowed me to see how to teach this fairly challenging topic and provided a very welcome aside for the pupils.”

**Conclusion**

The findings from this small-scale research project complement those of the overall UAS Evaluation in 2006. The students and teachers report positive experiences from having been involved. Evidence for the impact on pupils suggests that they benefit from the ambassadors’ presence through additional one-to-one support in the classroom, the students’ knowledge in the subject area, their enthusiasm and professionalism, and the provision of new activities.

The pupils themselves, in general, do not report any change of views on Earth science or their future careers as a result of the interactions with the ambassadors. There is a small amount of evidence to suggest that activities outside the classroom (e.g. fieldtrips, visits to museums) have a greater impact on their interest in the topic being covered and that activities which involve them actively seeing scientists at work have a greater potential to influence their career ideas. The evidence is not strong enough to be conclusive for this sample but does suggest an area ripe for future research. The literature on student placements in schools (through UAS, SAS or as part of initial teacher education) tends to rely on student and teacher perceptions of impact on pupils; a study that involves the pupils themselves could, therefore, add considerable value to the literature in this area.
Case Study 1
Student 1 is a third year Geology with Physical Geography undergraduate at the University of Southampton. Her main reason for choosing the UAS module was to see whether secondary school teaching was the right career choice for her. She also hoped to gain transferable skills and wanted to be a good role model to the pupils and encourage them to go on with their education post-secondary school. Her specific aims for the placement were to:

- Improve her communication skills
- Be actively involved in the classroom (interacting with the students)
- Use her initiative
- Gain confidence in public speaking
- Be a good authoritative figure, by getting the pupils to pay attention and make sure they are doing what they should be doing
- Approach the classroom confidently, safely, and in a professional manner

She hoped to take the opportunity to recognise different teaching styles and take note of those which seem to be more effective in supporting student learning. She wanted to identify her strengths and weaknesses and aim to improve them through asking for and acting on feedback from the teachers.

She was placed in the comprehensive co-educational school A which teaches up to GCSE level. According to the 2009 Ofsted report, A “is a large school where almost all students are from a White British background, although the proportion of students from different ethnic backgrounds is increasing. The proportion of students entitled to free school meals is below average. The proportion with learning difficulties and/or disabilities is above average. The school was designated a performing arts school in 2004 and a High Performing Specialist School in June 2007, and gained applied learning specialism in April 2008.” The report classified the school’s overall effectiveness as outstanding.

Student 1 spent her placement in the science department. Her experience provided a variety of examples of teaching environments in terms of age and level of the pupils as illustrated by her description of her first day at the school:

“I was given my own timetable showing the lessons I will be attending. They included years 7/8/9 and 10. They ranged from high, mixed and low achieving classes. I sat in 5 lessons overall. I felt that sitting in a range of ability lessons allowed me to compare the different behaviours, teaching methods and abilities.”

Her overall experience included:

- One-to-one support in a Year 9 all girls science class learning about the rock cycle, a low achieving Year 8 class, a Year 10 BTEC class working on PowerPoint presentations, a low set Year 11 class guiding their individual projects, supporting chemistry students with their homework in after hours detention.
- Advising pupils working in groups on rock investigations in a Year 7 class, in a Year 9 all boys science class, a Year 8 tutor group making rosettes and PowerPoint presentations as a mock political party
- Marking Year 10 BTEC chemistry presentations.
- Teaching two lessons on the rock cycle to a whole Year 7 class.

In discussion with the teachers, the student chose to produce two 50 minute lessons on the rock cycle for a Year 7 class as her special project. One class was just about to start learning this topic so the ambassador’s intervention was timely and appropriate. She undertook considerable background work to develop the lesson plans including researching teaching methods, organising equipment and materials to bring in, finding out the general class ability and thinking about assessing their learning (in order to evaluate her teaching). She devised a timed lesson plan and set out the aims and learning outcomes for the lesson as follows. Aims of the lesson:

- I firstly intend to know how much they already know about the subject- asking a 10 questions relating to the topic- getting them actively involved with the lesson.
- The rock cycle- explain what it is and all the different types of rock and how they are formed. Learn about the processes- mainly weathering and erosion
- Explain how rock forming processes are linked
• Show and describe the processes of the rock cycle as I show they an online animation
• Practical part- describe what they will learn- different properties of rocks and become familiar with their names

Learning outcomes:
• Pupils to be able to confidently say what the rock cycle is
• Pupils to be able to describe what a sedimentary, igneous and metamorphic rock is and how to identify their characteristics

The student’s reflections on the class indicated that, although nervous at first, she felt it went well and that she had engaged the pupils in the activities. She involved the class from the beginning by asking them questions to gauge their prior knowledge. Her 20 minute presentation was interspersed with questions for the pupils and then followed by a practical activity with a variety of rock specimens. Her main learning point was to allow more flexibility in planning the lesson to give more time for questions. The following week she ran a quiz to test their learning from the first lesson and then, at the teacher’s request, she provided an introduction to minerals, again using specimens borrowed from the University. She felt much more relaxed and comfortable in her second lesson and noted that “The class seemed really interested in learning about minerals, probably much more than the rocks! Their enthusiasm showed as they were constantly asking me questions, they enjoyed learning about the uses of minerals in real life.”

Overall the student had a good experience and felt that her aims for the placement had been achieved. Her confidence had grown over the weeks and she developed an understanding of the “importance of using a variety of teaching methods for effective learning”. She had the opportunity to develop a variety of transferable skills including research (exploring appropriate teaching methodologies and gathering resources for her special project), planning (the special project and producing two lesson plans), communication (one-to-one with pupils and teachers), presentation (to a whole class and advising pupils on their PowerPoint presentations) and writing (particularly through supporting pupils in their writing tasks). After her placement, she was still interested in a career in teaching though had not yet applied for a PGCE.

The pupils’ responses to the questionnaire indicated that, in general, they had had a positive experience in the rocks and minerals lessons:

| 1) I liked having someone different to teach me | 76.2% |
| 2) The activities were interesting | 71.4% |
| 3) I enjoyed the activities | 71.4% |
| 4) The activities made me think about the Earth | 85.7% |
| 5) The student was very knowledgeable | 38.1% |
| 6) Time spent with the ambassador has changed my ideas about future careers | 0% |
| 7) I would now like to learn more about the Earth | 28.6% |

In their written comments the pupils noted that the lessons had not changed their views about the Earth or their future careers. One pupil provided a possible explanation for this in that “it is just another topic that we learn” and “it takes a lot more than one lesson to change your mind [about careers]”.

The teacher provided positive feedback which reinforced the student’s own reflections. She felt that the student had acted as a role model to the pupils due to her polite manner, enthusiasm for science and the pride she took in her work. She noted that the student’s lessons on the rocks and minerals was “interesting and accessible to pupils partly due to her expertise but also due to the interesting and interactive way in which she taught this lesson.” Overall the teacher commented that it was useful to have a scientist in the classroom and an expert with whom she could consult. The school also benefited from the additional resources provided by the student in the form of PowerPoint presentations from her lessons; a school technician was also motivated to contact the NOC to ask for rock specimens.
Case Study 2

Student 2 is a third year Oceanography student at the University of Southampton. Her aims for the UAS module were to:

- Get a taste of teaching and to facilitate learning;
- Gain more self confidence in public speaking;
- Improve timekeeping and planning;
- Improve her ability to negotiate.

She was placed in the comprehensive co-educational school B which teaches ages 13-18 (up to A level) and has a 'Business and Enterprise' specialist status. The 2006 Ofsted report notes that B "is a slightly larger than average secondary school. The number of students known to be entitled to free school meals is average. The proportion of students with learning difficulties is also average, although the number with statements of special need is above average. Attainment on entry, measured by national test results and tests administered by the school is close to the average nationally. There are well established links with other local schools and colleges. The school has recently been designated a "pathfinder" in a Government initiative and extensive new building is anticipated to redesign the school and enhance learning." The report classified the overall effectiveness of the school as satisfactory.

As she wanted to be a maths teacher, the student undertook her UAS module in the maths department. She also produced learning resources on oceanography for the science department for her dissertation. She experienced a variety of lessons whilst at the school including:

- A tour of the school during 'enhancement period' to observe a variety of activities.
- Providing one-to-one support in the classroom (e.g. helping a girl for whom English was her second language with understanding the class, helping a girl to write up an experiment for coursework, going through exam papers with year 11/12 GCSE retake students, acting as a reader for a boy with dyslexia).
- Whole class teaching: preparing and delivering starter activities for GCSE maths classes, teaching congruent triangles within a class, and supporting a science practical.
- Small group teaching within the classroom (e.g. going through a GCSE paper with a couple of students, working with a small group of girls on a maths task, working with 2 sixth form students).
- Small group teaching on her own: for her special project on trigonometric graphs, working with a small group of GCSE students on algebra, and with a small group of top set GCSE maths on vectors.

In discussion with the maths teacher of a top set GCSE class, she focused her special project on teaching a small group of A/A* GCSE students transformations of trigonometric graphs, an A* topic which is not suitable to teach the whole class. She had a two hour maths period to teach the class and chose to break it down into three topics using three different activities. Her intention was then to evaluate each activity for effectiveness. She noted that the transformations she had to cover in the class and devised a variety of activities based on ideas she had researched. Her three activities included her drawing on the main whiteboard, getting the pupils to use the whiteboard and the use of graphical calculators. At the end of the class her evaluation revealed that the pupils had gained confidence in the topic and that they preferred the method which involved them writing on the whiteboard.

Student 2 had the opportunity to develop a variety of transferable skills including research (on the school’s performance and on teaching methods and learning styles), communication skills (one-to-one with teachers and pupils), presentation skills (to small groups and whole classes) and planning (for special project and its lesson plan). She also had the opportunity to reflect on writing skills when supporting pupils in writing a science piece. Her confidence in working with small groups developed during her placement period, though she still feels nervous presenting to peers or those who know the topic well. She learnt the importance of planning for lessons and presentations and felt that her time keeping had improved slightly, though she still tended to leave things to the last minute. Her negotiation skills were not particularly tested though she felt she improved in persuading pupils to do work when they didn’t want to. Overall she felt that she had met many of her aims and learnt many things about herself in general.
Overall, her experience and the feedback from the teachers encouraged her in her decision to become a teacher: “They all said that I have the potential to be a great teacher, which is very encouraging for me as I continue on with my PGCE next year.” She also noted that “It has given me a great taster of teaching for the future; it showed me that this is the career path that I do want to follow and allowed me to see that I have the ability to become a good teacher.”

The pupils’ questionnaire responses suggest that they were slightly ambivalent about the learning experience as illustrated below. However, this was only a small class (6 pupils) in a normal classroom environment and so it was not necessarily a significantly different experience from their usual lessons.

<table>
<thead>
<tr>
<th></th>
<th>% of pupils who responded ‘strongly agree’ or ‘agree’:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) I liked having someone different to teach me</td>
<td>66.7%</td>
</tr>
<tr>
<td>2) The activities were interesting</td>
<td>66.7%</td>
</tr>
<tr>
<td>3) I enjoyed the activities</td>
<td>50.0%</td>
</tr>
<tr>
<td>4) The activities made me think about the Earth</td>
<td>N/A</td>
</tr>
<tr>
<td>5) The student was very knowledgeable</td>
<td>66.7%</td>
</tr>
<tr>
<td>6) Time spent with the ambassador has changed my ideas about future careers</td>
<td>33.3%</td>
</tr>
<tr>
<td>7) I would now like to learn more about the Earth</td>
<td>N/A</td>
</tr>
</tbody>
</table>

All 6 pupils provided comments to the effect that the lesson had not changed their views with respect to their career choices. However, one noted that it had reinforced their desire to do a maths-related career and another that it had changed their perspective.

The teacher felt that Student 2 had definitely acted as a role model for pupils: “Primarily because the [pupils] can relate to the ambassadors more than they can their teachers. While most [pupils] do understand they must work hard, they do not appreciate exactly why they are working and just how fast their future is coming. The university students help them recognise importance of the work to them and most importantly boost their confidence. Most of the [pupils] that they worked with them lacked self confidence themselves.” She also thought that the student had had an impact on the pupils’ future education and career choices through raising their aspirations and increasing their confidence.

The student’s presence (and that of another UAS participant) at the school was considered in a very positive light as noted by the teacher: “As well as reducing the pressure and allowing the staff to concentrate on other [pupils] needing help, their enthusiasm and energy is invigorating. Having two staff in the classroom has meant that other strategies could be employed where group work and a wider range of extension approaches have been tried. The students have also helped reduce the pressure regarding coursework and this has meant again that more students have completed to the higher standard.”

Finally, the teacher commented on the benefits of the UAS scheme as a whole: “I do not think we can underestimate the power of development for the University students either. Not just in their consideration of a future in education but also in their recognition in how far they have come since leaving school and what is important in relation to communication. Having worked in Southampton for many years with this project there is no doubt about its impact. It is good to see that it is going from strength to strength. Please can we be involved next year.”
Acknowledgements
The authors would like to thank the students, teachers and pupils who took part in this research; Dr Roger Trend (Department of Education, University of Oxford) for his advice and guidance; and the GEES Subject Centre for the funding.

References
Appendix 1: UAS Student Evaluation Questionnaire

UAS POST-PLACEMENT QUESTIONNAIRE 2008/9

UAS is a scheme which encourages university departments around the country to offer modules that allow undergraduates to spend time in the classroom. Now that you have completed this module we would like to receive feedback on your experiences to evaluate and also publicise the scheme. Thank you for helping by completing this questionnaire.

First name: .................. Surname: ..................
University: Southampton........

Degree course - Please tick the relevant box:

□ Physics □ Technology □ Geology □ Biological Sciences
□ Chemistry □ Engineering □ Environmental Science □ Geography
□ Mathematics □ Computing □ Other - please state.................................

Length of degree............... years Year of study: □ Year 2 □ Year 3 □ Year 4

1. Having completed the module are you now interested in teaching as a career after graduation?
   □ Yes □ No □ Undecided

   If you answered ‘No’ go to Question 6. If you answered ‘Yes’ or Undecided’ go to Question 2.

2. If you answered ‘Yes’ or ‘Undecided’ how strongly would you rate your interest in teaching?
   □ Very strong □ Strong □ Some interest

3. Have you applied for a place on a postgraduate initial teacher training course? If so, where?
   □ Yes □ No Name of Institution: Southampton.................................

   If you answered ‘No’ go to Question 5. If you answered ‘Yes’ go to the next question.

4. Have you been accepted for a place on a postgraduate initial teacher training course?
   □ Yes □ No □ Don’t know

5. Do you intend to apply for a postgraduate initial teacher training course?
   □ Yes □ No □ In the future

6. Having completed the module do you feel it has improved your overall key/transferable skills?
   □ Yes □ No

   If you answered no please state why.......................................................
If you answered yes, which skills do you think you have improved? Add/rate any other skills not listed in the blank rows:

<table>
<thead>
<tr>
<th>TRANSFERABLE SKILL DEVELOPMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication skills (on a one-to-one basis)</td>
</tr>
<tr>
<td>Communication skills (with a group)</td>
</tr>
<tr>
<td>Presentation skills</td>
</tr>
<tr>
<td>Planning skills</td>
</tr>
<tr>
<td>Team working</td>
</tr>
<tr>
<td>Time management</td>
</tr>
<tr>
<td>Ability to prioritise tasks</td>
</tr>
<tr>
<td>Ability to negotiate</td>
</tr>
<tr>
<td>Confidence</td>
</tr>
<tr>
<td>Essay/report writing</td>
</tr>
</tbody>
</table>

7. Would you recommend this module to other students?  
☐ Yes  ☐ No

8. Please tell us why you answered Yes or No:

It stimulated students in a completely different way to how the rest of the degree works.

---

YOUR CONTRIBUTION TO THE CLASS

9. We would like to know what activities you carried out in the classroom. Please tick the relevant box to indicate which activity you were involved in with your class. If you were involved in activities that aren’t listed please add and rate them in the ‘Other’ row.

<table>
<thead>
<tr>
<th>ACTIVITIES CARRIED OUT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work with pupils on a one-to-one basis</td>
</tr>
<tr>
<td>Work with higher ability pupils to stretch them further</td>
</tr>
<tr>
<td>Work with pupils classified as ‘Gifted and Talented’</td>
</tr>
<tr>
<td>Work with lower ability pupils who were struggling with the subject</td>
</tr>
<tr>
<td>Whole class teaching on national curriculum material</td>
</tr>
<tr>
<td>Use of IT in the classroom, (e.g. interactive whiteboards, PowerPoint)</td>
</tr>
<tr>
<td>Leading class discussions</td>
</tr>
<tr>
<td>Talking to the pupils about university and studying their subject at university</td>
</tr>
<tr>
<td>Helping with revision</td>
</tr>
<tr>
<td>Running/assisting with a lunchtime subject session</td>
</tr>
<tr>
<td>Running/assisting with an after-school subject session</td>
</tr>
<tr>
<td>Carrying out experiments in class with the pupils</td>
</tr>
<tr>
<td>Taking pupils on a general visit to their university</td>
</tr>
<tr>
<td>Taking pupils to the university to perform experiments not possible to carry out in school</td>
</tr>
<tr>
<td>Introducing IT into the classroom that hadn’t previously been used. Please tell us what IT:</td>
</tr>
</tbody>
</table>
Other activities not already listed -- please state:
organized a trip to INTECH planetarium

10. We would like to know whether you feel you had an impact on the pupils you worked with. Please tick the relevant boxes to indicate where your work with the class had an impact. If you feel you made an impact in a way that isn’t listed then please add this in the ‘Other’ row.

<table>
<thead>
<tr>
<th>YOUR IMPACT ON THE PUPILS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>I helped them to understand their subject better</td>
<td>✓</td>
</tr>
<tr>
<td>I raised their awareness of university and what goes on there generally</td>
<td>✓</td>
</tr>
<tr>
<td>I raised their awareness of what it is like to study science, maths or engineering at university</td>
<td></td>
</tr>
<tr>
<td>I changed their perceptions of what you can do with science as a career</td>
<td></td>
</tr>
<tr>
<td>I changed their perceptions of what university is like</td>
<td></td>
</tr>
<tr>
<td>I taught the pupils things that they would not have learnt if I had not been in the class. Eg:</td>
<td></td>
</tr>
</tbody>
</table>

Other impacts not already listed – please state:

12. How many hours a week did you go into school... 6

13. How many weeks did you go into school... 9

14. Please tell us which sex you are:  
   - □ Male  
   - □ Female

15. Are you the first person in your family to go into Higher Education?  
   - □ Yes  
   - □ No

16. CONTACT DETAILS

We would like to keep in touch with you to find out what career path you have chosen and how this module may have helped you in your chosen career. To help us do this please let us know if any of the contact details you provided at the beginning of the year have changed in the section below.

Home address: ............................................................................................................................

Postcode: .................................................................................................................................

Home Telephone: .................................................................................................

Mobile: ............................................................................................................................

Email: ..................................................................................................................................
Appendix 2: Pupil Questionnaire

Evaluating the UAS Scheme: Impact on School Pupils
We are interested in hearing your views about your interest in the Earth and its people. This is not a test and there are no right or wrong answers.

Your School: ..........................................................................................................
Your School Year (e.g. Year 10): .................................................................

For the first question on this page, draw a circle round a number between 1 and 4. If you don’t know circle 0. Please answer all the questions. Please use the following codes:

1: I strongly agree
2: I agree
3: I disagree
4: I strongly disagree
0: I don’t know

<table>
<thead>
<tr>
<th>Question 1: the university student ambassador</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please tell us about the activities with the university student</td>
</tr>
<tr>
<td>I liked having someone different to teach me.</td>
</tr>
<tr>
<td>The activities were interesting.</td>
</tr>
<tr>
<td>I enjoyed the activities.</td>
</tr>
<tr>
<td>The activities made me think about the Earth.</td>
</tr>
<tr>
<td>The student was very knowledgeable.</td>
</tr>
<tr>
<td>Time spent with the ambassador has changed my ideas about future careers.</td>
</tr>
<tr>
<td>I would now like to learn more about the Earth.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question 2: what did you think about the lessons with the university student</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please tell us in this box how the student ambassador has changed your views about science and the Earth. You may or have not have changed your views. Please tell us, whatever your thoughts.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question 3: your career or job after you’ve left school</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please tell us in this box how the student ambassador has changed your ideas for the career or job you would like to do when you leave school. You may or have not have changed your ideas. Please tell us, whatever your thoughts.</td>
</tr>
</tbody>
</table>

Thank you for completing our questionnaire.
Appendix 3: Teacher Structured Interview Questions

1) Do you feel that the student ambassadors acted as role models for the pupils? If so, in what ways?

2) What impact, if any, have the student ambassadors had on the pupils’ views of geography, earth and environmental sciences?

3) What impact, if any, have the student ambassadors had on the pupils’ future education / career choices?

4) How have the student ambassadors benefited you as a teacher / the teachers?

5) What could be done to improve the way the scheme operates in your school?

6) Any other comments?