Longitudinal Evaluation of the
STAR Peer Tutoring Programme

Final report

Report prepared for the management of the
STAR Peer Tutoring Programme, Murdoch University, Perth

Study sponsored by
Social Ventures Australia
AMP Youth Boost

Kerri-Lee Harris and Jo Shaw
Centre for the Study of Higher Education
The University of Melbourne

December 2006
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Executive summary

This report examines the characteristics of the STAR peer-tutoring programme (STAR-PTP), a programme in which university students voluntarily spend time in secondary schools providing assistance to school students and teachers. The objective is to identify the principal effects of the programme on each participant group – peer tutors, school students and teachers – and to inform the development of STAR and similar programmes by identifying the factors that lead to effective university-to-school peer tutoring in an Australian context.

The findings draw upon a two-year, longitudinal study of the STAR-PTP conducted during 2005 and 2006. The project involved surveys of peer tutors, school students and teachers. Participants were surveyed through a combination of interviews and questionnaires. In total, the study involved 64 peer tutors, and 25 teachers and 138 school students from nine secondary schools in Perth, Western Australia.

The results of this evaluation highlight the importance of the STAR-PTP to the participating schools and to the university students involved as peer tutors. School students report that peer tutors help them learn, and teachers value both the direct and indirect contributions made by peer tutors. For the peer tutors themselves, the programme offers an opportunity to develop skills in a range of areas, including general communication and interpersonal skills, and specific skills related to teaching.

Importantly, the findings highlight the potential of such university-to-school initiatives to help address related education challenges currently facing Australia: enthusing and motivating school students in the areas of science and mathematics; and encouraging science-based university students to consider and prepare for careers in school teaching.

The role and contribution of peer tutors

- Peer tutors described their role in terms of providing assistance and knowledge, and helping students learn through explanation and support. They also described themselves as positive role models for science, university and learning generally.

- Teachers also described the role of peer tutors in terms of providing assistance and a positive example, and emphasised the encouragement and motivation of students to learn.

- There was near consensus among students that having a peer tutor in their class was ‘a good idea’. They described peer tutors as ‘someone to help when the teacher was busy’, and many commented that the peer tutors’ role was to help students learn.

- Students stressed that peer tutors needed to be empathic, helpful and knowledgeable, should show initiative and have a positive attitude and good communication skills.

- Most students (81%) agreed that peer tutors did help them learn, and half agreed that they made the class ‘more interesting’.

- Teachers valued the contribution that the programme made to their own teaching in terms of assistance in both identifying and addressing students’ needs and support in offering engaging classes and activities. They also valued the link to university that STAR provided.

The effect of peer tutoring upon the university students involved

- University students volunteered as peer tutors in order to gain teaching experience (40%), to develop communication and interpersonal skills (28%), or to give back to their communities (38%).

- Peer tutors generally rated themselves highly on a range of skills, including the ability to plan and to work independently. They were somewhat less confident of their oral presentation skills.
• After a year as peer tutors, most (90%) of the new tutors identified improvements in a range of generic skills and in other skills more specific to disciplinary communication and peer tutoring.

• Some peer tutors said that their involvement in the STAR-PTP had inspired them to become teachers, and they had changed their study options as a result.

• Peer tutors preparing for a teaching career valued their time as peer tutors. They described peer tutoring as an opportunity to develop their teaching skills, and to learn by observing teachers and working closely with students over an extended period.

• Peer tutors described the rewards of working with students and building relationships, and some frustration when the opportunities to interact were limited.

• Peer tutors also described the rewards of helping students learn and gain confidence. New peer tutors expressed some anxiety associated with either not having the necessary knowledge or communication skills.

The factors that underpin effective peer tutoring

The study identified six factors that influence the success of peer tutoring arrangements.

1. Matching peer tutors with classes and student needs
   The need to ensure that peer tutors placed in classes with high-achieving students have the appropriate disciplinary background, and the value of also placing peer tutors in classes with less academically focussed students.

2. Establishing a rapport between peer tutors and both students and teachers
   The importance of introducing peer tutors to the class in a relaxed and informal manner, and providing early opportunities for peer tutors to establish a rapport with the students. Students stressed the need for peer tutors to be friendly, approachable and considerate.

3. Classroom activities conducive to peer tutor participation
   The need for teachers to consider peer tutors in their class planning, but also for peer tutors to be aware that the nature of their involvement may vary from week to week. The most effective peer tutor-teacher partnerships are characterised by planning and communication.

4. Efforts by peer tutors to initiate interactions with students
   Effective peer tutoring relies upon peer tutors having confidence and demonstrating initiative by actively seeking ways in which to encourage and help students learn.

5. Youthful peer tutors who are current university students
   The value of having peer tutors who are close in age to the school students, and who are ‘students themselves’.

6. A voluntary and non-coercive programme.
   The benefits of a programme that is voluntary – where the peer tutors are keen to be involved and interested in helping students and teachers, and in developing their own skills.
Acknowledgements

This report was prepared by the Centre for the Study of Higher Education at the University of Melbourne, at the invitation of the STAR management at Murdoch University.

The two-year study involved two dedicated Perth-based research assistants, and as Project Director I express my sincere gratitude to both. First, I would like to thank Ziggy Smith for her assistance during Stage 1 of the study, conducting interviews, liaising with schools, and assisting in the analysis of the Stage 1 data. Second, I thank Jo Shaw for taking on the Perth-based role in Stage 2, and arranging and conducting the many interviews and survey collections. In addition, I specially thank Angelito Calma for his assistance in Melbourne with analysis of the final dataset.

We express particular gratitude to Russell Elsegood and Yolanda Pereira, as management of the STAR programme, for their assistance throughout the study.

Finally, we wish to thank the many peer tutors, teachers and school students who made time to take part and who offered so many insights and comments regarding the programme and its influence.

Kerri-Lee Harris
December 2006
Chapter 1: The context and purpose of the project

Increasingly, Australian universities foster linkages and the exchange of ideas with the broader community. There is a growing discussion around what constitutes ‘knowledge transfer’ and community engagement, including the role and contribution of university student placements and projects (Bebington, 2006; Phillips KPA, 2006; University of Melbourne, 2006). University-to-school peer tutoring programs are one example of the ways in which university students participate in knowledge transfer.

Many Australian universities have programs in which university students volunteer as ‘peer tutors’, to work with secondary school students and their teachers on a regular basis, alongside their university studies. Near in age to the school students, peer tutors are well placed to serve as mentors, conveying and sharing their enthusiasm for learning. The peer tutors offer academic support, but are not responsible for the teaching. They work alongside the class teacher, and are encouraged to interact with the school students in a supportive role. The STAR Peer Tutoring Programme (STAR-PTP) is perhaps the most established and recognised program of this kind in Australia.

STAR Peer Tutoring Programme

The STAR-PTP has been operating from Murdoch University since 1994. Modelled initially upon the successful Pimlico Connection programme, a volunteer school tutoring scheme operating for nearly thirty years from the Imperial College London, the STAR-PTP has grown from modest beginnings (six peer tutors and three schools in 1994) to a programme involving around eighty peer tutors and thirty schools in 2006.

The STAR coordinators match volunteer peer tutors to participating schools and nominated classes. As STAR is run from Murdoch University, the majority of peer tutors are placed in schools in the Perth metropolitan region. The peer tutors spend between two and four hours per week with their assigned classes, most commonly secondary school science and mathematics. While the emphasis of STAR remains on ‘science and technology awareness raising’ – the origin of the acronym – the peer tutoring program has broadened to include classes in other subject areas (e.g. Languages Other Than English). The emphasis remains at the secondary school level, although primary school classes are included occasionally.

Independent evaluation by CSHE

In May 2005, the Centre for the Study of Higher Education (CSHE) at the University of Melbourne was commissioned to conduct an independent evaluation of the STAR-PTP. A longitudinal approach was proposed, and the project has involved the collection of data across the 2005 and 2006 school years.

The administration of STAR involves regular cycles of internal review and evaluation, the findings of which are published in annual reports. There have also been three independent evaluations undertaken, the most recent being conducted in 2002-2003.

The study described in this report is distinctive in its breadth, including school students, teachers and both current and past peer tutors, and in the longitudinal dimension of the peer tutor survey.

The aims of the evaluation are as follows:

1 Further information about STAR-PTP and other STAR programmes is available at: http://about.murdoch.edu.au/star/peer_tutoring/peertute.html

2 http://about.murdoch.edu.au/star/annual/areport.html

• To identify the principal effects of peer tutoring upon the university students involved. The development of transferable skills was a particular focus, and peer tutors were asked to assess and describe the development of skills such as oral communication.

• To identify the principal effects of the programme upon school teachers, teaching and school students. To this end, we sought the perspectives of teachers, peer tutors and the school students themselves.

• To develop a model of effective university-to-school peer tutoring in an Australian context. The characteristics of effective peer tutor-student interactions were identified, drawing upon the views of peer tutors, school students and teachers. This information was sought for the benefit of STAR planning, and to provide a framework for developing and enhancing similar peer tutoring programmes elsewhere in Australia.

Peer tutors, school students and school teachers were surveyed through a combination of interviews and questionnaires.

The project examined the following questions, and these provide the framework for the report:

1. What is the role of peer tutors in the classroom? (Section 4.1)
2. What effects does the programme have upon schools? (Sections 4.2 & 4.3)
3. What motivates peer tutors to volunteer? (Section 5.1)
4. In what ways are peer tutors influenced by their experience with the programme? (Sections 5.2 & 5.3)
5. What should be considered in planning, facilitating and producing effective university-to-school peer tutoring? (Chapter 6)

This is the final report of the evaluation study by CSHE. The report incorporates and builds upon the findings presented in the interim report of December 2005.
Chapter 2: Survey methodology

This chapter describes the survey strategy and methodology employed for each of the two year-based stages – Stage 1 (May - Nov 2005) and Stage 2 (Jan – Nov 2006).

In summary, the study involved:

- 64 peer tutors, 25 school teachers; and 138 school students;
- teachers and students from 9 Perth secondary schools;
- a total of 84 interviews with peer tutors, school teachers and school students;
- two questionnaire-based surveys of peer tutors and school students.

2.1 Stage 1

The first stage of the study involved a broad survey of both past and current peer tutors, and preliminary interviews with teachers and a sample of their students.

2.1.1 Participants

Peer tutors

- Current: university students involved as STAR peer tutors during 2005
- Past: university students and graduates with previous experience as STAR peer tutors but not involved in 2005

The names and contact details of 220 peer tutors were obtained from the coordinator of the STAR-PTP, comprising 62 current and 158 past peer tutors.

Peer tutors were either invited to be interviewed (28 current and 16 past) or were surveyed by questionnaire (34 current and 142 past). Selection of those invited to interview was from among those tutors known to live, work or study in the local region – hence the bias in favour of current tutors.

Schools

Before contacting either teachers or school students, written permission was obtained from each schools’ Principal. Nine Perth schools were selected from a list of twelve then (2005) or recently involved in the STAR-PTP:

- Applecross Senior High School
- Lakeland Senior High School
- Murdoch Senior High School
- Princess Margaret Hospital School (see Box 2)
- Rockingham Senior High School
- Rossmoyne Senior High School
- South Fremantle Senior High School
- Thornlie Senior High School
- Willetton Senior High School

Teachers

- Secondary school teachers with experience of hosting STAR peer tutors

The STAR Link teacher\(^4\) at each participating school was contacted and asked to pass information about the study to all teachers who had hosted STAR peer tutors, whether in

\(^4\) Link teachers: At each school involved in STAR-PTP there is a nominated teacher with responsibility for liaising with the STAR coordinator, peer tutors and participating teachers. This
2005 or previously. This information included an invitation to participate in the study by interview. Eleven teachers responded and were subsequently interviewed in Stage 1.

School students

• School students from classes with a peer tutor at the time of the survey

With the assistance of participating teachers, school students in several classes were invited to be involved in small-group interviews. Consent from a parent or guardian was required, and student participation was entirely voluntary. Eleven students (eight Year 10 and three Year 11) responded and were subsequently interviewed in three groups.

2.1.2 Peer tutor survey

Peer tutor interviews

Of the 44 peer tutors contacted, 11 agreed to interview in Stage 1 of the study. Interviews were conducted individually using a semi-structured interview format. The interview questions sought the following information:

• current area of study;
• history of involvement with STAR;
• their views regarding their role in the classroom;
• description of their activities in the classroom;
• any benefits they perceived for themselves or other participants;
• any challenges that they experienced in peer tutoring;
• career plans, and whether the peer tutoring experienced was an influencing factor; and
• overall impressions of their experiences with the program.

Interviews were audio-recorded and subsequently transcribed for analysis.

Peer tutor questionnaire

The remaining 176 peer tutors, (those not included in the interview survey), were surveyed by questionnaire. Most (n=165) were first contacted by email, and all 176 were subsequently sent a copy of the questionnaire.

The questionnaires included both open questions and likert-style items, and were designed to elicit information on:

• field of university study;
• reasons for choosing that field;
• other involvement in university life;
• reasons for volunteering as peer tutors;
• duration with the STAR-PTP;
• year level and subject of the host classes;
• perceptions of the role of peer tutors;
• experiences of peer tutoring;
• self-assessment of generic skills development; and
• plans for the future.

Completed responses were received from 21 past and 17 current peer tutors. The response rate from current tutors was 50 per cent (n=17/34), while that from past tutors

‘Link’ teacher is often a teacher with a history of hosting STAR peer tutors in their own classes. It is usually the Link teacher who ‘recruits’ additional teachers to the program.
was 15 per cent (n=21/142). The lower response rate from past tutors is likely to reflect graduates’ change of address, as we were reliant upon contact details from the time of each person’s peer tutoring. We did not pursue non-respondents.

2.1.3 School teacher interviews
Teachers from six of the participating schools, agreed to be interviewed during Stage 1. The interviews were semi-structured, conducted in person, and sought the following information:

- history of involvement with STAR;
- views on the role of peer tutors;
- observations of the effect of peer tutors on school students;
- experiences of the effect on teaching of hosting a peer tutor;
- views regarding any possible benefits of tutoring to peer tutors; and
- overall impressions of the STAR-PTP program.

Interviews were audio-recorded and subsequently transcribed for analysis.

2.1.4 School student interviews
Interviews were conducted in small groups, on school premises, and using a semi-structured format. Students were asked:

- to describe what the peer tutor did in class and how they each interacted with the peer tutor; and
- whether they believed they benefited from having a peer tutor, and why.

Interviews were audio-recorded and subsequently transcribed for analysis.

2.2 Stage 2
Stage 2 of the study sought to complement the preceding stage by:

1. following the experiences of peer tutors over time, with a focus on peer tutors new to the programme in 2006;
2. increasing the number of participating teachers, including teachers hosting novice peer tutors; and
3. increasing the involvement of school students through both a questionnaire-based survey and additional interviews.

2.2.1 Participants
Peer tutors

- New: university students new to the STAR-PTP in 2006
- Continuing: university students first interviewed in 2005 (Stage 1), and continuing as peer tutors in 2006

We were provided with a list of peer tutors new to the programme in 2006 by the STAR coordinator. The peer tutors were contacted as soon as possible in the school year – for some, prior to their first school visit – and initial interviews were arranged. Of the 15 new peer tutors interviewed early in 2006, 11 were interviewed a second time 6-9 months later, toward the end of the school year.

In addition, two continuing peer tutors were re-interviewed in September 2006.

School teachers

Stage 2 included interviews with 13 teachers not previously interviewed in this study, representing six schools. Follow up interviews were conducted with 3 of these teachers, and with one teacher first interviewed during Stage 1
School students

- School students from classes with a peer tutor at the time of the survey.

Several of the school teachers participating in the study agreed to involve the students from classes with experience hosting a peer tutor. Teachers invited students to be either involved by interview, or to complete a questionnaire-based survey. Consent from a parent or guardian was required, and student participation was entirely voluntary. Responses were confidential, and not viewed by teachers or peer tutors.

Stage 2 included interviews with 25 students not previously interviewed in this study, from five schools and ranging from Year 8 to Year 11. Follow up interviews were conducted with 10 of these students 5-6 months later, in November 2006.

Questionnaires were distributed in five schools and responses were received from 102 students.

2.2.2 Peer tutor interviews

One of the principal aims of Stage 2 was to examine the influence of the STAR-PTP on the attitudes and skills of the university students involved as peer tutors. To achieve this, a two-stage interview approach was used:

1. First (initial) interviews of new peer tutors were conducted either before the peer tutor commenced in the school, or within the first few weeks. During the interview, each peer tutor completed a ‘skills quiz’ – a short questionnaire which asked:
   a. Are there any particular skills you would like to develop during your time as a peer tutor with the STAR programme?
      i. If so, why these particular skills?
      ii. How do you rate yourself on each of these skills? (scale 1-7)
   b. Please rate yourself on each of the following listed skills. The list included 10 ‘generic’ skills, including oral communication, working independently and organisational skills, and a rating scale of 1-7 for each. See Chapter 5 for details.
   c. For the skills you scored 5 or higher, where did you develop this skill?

In addition to the skills quiz, the interview questions sought the following information:

- Motivation for joining the programme;
- Expectations in terms of how they would be involved in the class, including the ways in which they might interact with the host teacher;
- Views on the most important contribution they could make as a peer tutor; and
- Views on the challenges they might face.

Interviews were conducted individually and in person.

2. Second (follow up) interviews were conducted in the last school term of 2006. These interviews were tailored around the tutors’ responses in the initial interview. Peer tutors were asked to discuss their experience of the programme, relative to their expectations. They were also given the skills quiz again. Without reference to their responses in the initial interview, peer tutors were asked to rate themselves both ‘before STAR’ and ‘now’ against each of:
   a. the particular skills that they had nominated in the first interview; and
   b. the 10 ‘generic skills’ listed.
Peer tutors were then invited to discuss those skills for which they indicated a change in the rating.

2.2.3 School teacher interviews

1. Teachers with ‘New’ peer tutors: teachers hosting a peer tutor new to the programme in 2006

2. Teachers with ‘Continuing’ peer tutors: teachers with peer tutor(s) with previous (eg 2005) experience as peer tutors, whether or not with the same teacher, school or class.

Stage 2 sought to increase the number of teachers interviewed about their experience with the program (as for Stage 1), and also to involve teachers in the longitudinal assay of tutors’ skill development. To this end, teachers with ‘New’ peer tutors were given a ‘tutor skills quiz’ complementary to that given to the tutors. Note that teachers were interviewed in May–June – after peer tutors had commenced in the schools. The quiz was a short questionnaire that asked:

a. How would you rate your peer tutor on the each of the following skills? The list was the same as that given to peer tutors, and included 10 ‘generic’ skills, such as oral communication, working independently and organisational skills, with a rating scale of 1-7 for each.

b. Are there any other skills that you believe are important for peer tutors to have or develop?
   a. If so, please rate your peer tutor’s competency for each of these skills.

Note that we did not seek to compare teacher and tutor ratings for individuals. Indeed, we did not necessarily interview both teacher and peer tutor in these ‘pairings’. The aim was simply to track teachers’ impressions over time, and to discuss any change perceptions with the teachers in follow up interviews.

Three teachers with ‘New’ peer tutors were interviewed a second time, in November 2006.

2.2.4 School student survey

Student interviews

The pilot data collected in Stage 1 identified two particular challenges for the student interviews:

• To ensure that the students were describing their experiences of having a STAR peer tutor, and not a student teacher: in some cases, the students interviewed in Stage 1 were unsure of the distinction.

• To reassure the students that they were not being asked to assess or ‘judge’ their peer tutor – during Stage 1 several students expressed concern about this. Rather, students were assured that we were interested in their experiences of having a peer tutor, generally, and would not be using their comments to evaluate the performance of individual peer tutors.

The interviewer addressed both of these issues during the introduction of each interview.

A three-stage approach to the student interviews was adopted in Stage 2:

1. First (initial) interview, incorporating pre-interview ‘student quiz’.

   Students were each asked to complete a short ‘quiz’ at the beginning of the interview. This questionnaire consisted of 12 items in three scales: student behaviour; actual peer tutor behaviour; and ideal peer tutor behaviour. The items were based on student comments made in Stage 1 interviews.

   [25 students were interviewed and completed the student quiz].
2. **Post interview questionnaire**, which students were encouraged to complete and return by post, following the interview.

   Students were encouraged to write down any other comments that they had, following the interview, and return these by mail.

   [5 students completed the post interview questionnaire].

3. **Second (follow up) interview**, also incorporating the ‘student quiz’.

   Follow up student interviews were conducted in order to assay any changes in the school students’ perceptions of peer tutoring during the study period.

   Students began the interview by completing the short quiz, identical to the first interview but without reference to their earlier responses. Any changes in their ratings then formed the basis of discussion during the interview.

   [10 students were interviewed a second time and completed the student quiz].

**Student questionnaire**

Questionnaires were distributed to students in five schools by teachers interviewed in Stage 2 of the study. The survey sought students’ perceptions of the value of having a peer tutor in their class, and the characteristics of effective peer tutoring. It included both open-ended questions and Likert-style scale items similar to those included in the student interview quiz.
Box 1: Definitions of selected terms as applied within this report

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAR-PTP</td>
<td>Refers specifically to the STAR peer tutoring programme, and does not include other, related STAR activities such as STAR-trek.</td>
</tr>
<tr>
<td>Peer tutor</td>
<td>Used to identify university students involved in the STAR peer tutoring programme as peer tutors.</td>
</tr>
<tr>
<td>Tutor</td>
<td>Synonymous with peer tutor in this report.</td>
</tr>
<tr>
<td>Past peer tutor</td>
<td>Person who has participated in the STAR-PTP as a peer tutor, but who was not listed among tutors available for placement during the study period (2005-6). Note that many past tutors were no longer enrolled at Murdoch University at the time of the study.</td>
</tr>
<tr>
<td>Current peer tutor</td>
<td>Person who volunteered for the STAR peer tutoring programme and was listed among tutors available for placement at the time of the study. Note that not all ‘current’ tutors were placed in classes at the time of the study.</td>
</tr>
<tr>
<td>STAR management</td>
<td>The management staff of the STAR programme. In 2005-6 this was Mr Russell Elsegood (Director) and Ms Yolanda Pereira (Co-ordinator).</td>
</tr>
<tr>
<td>Link teacher</td>
<td>Secondary school teacher nominated as the principal STAR contact at each school. Typically, Link teachers coordinate peer tutor placements within the school, in consultation with STAR management.</td>
</tr>
<tr>
<td>Teacher</td>
<td>Secondary school teacher with some experience of hosting peer tutors. Not all teachers interviewed were hosting a peer tutor at the time of the study.</td>
</tr>
<tr>
<td>Student</td>
<td>Secondary school student.</td>
</tr>
</tbody>
</table>

Box 2: The Princess Margaret Hospital School – a special case

The Princess Margaret Hospital School (PMHS) is a non-mainstream school. Teachers of PMHS work with school students while the students are patients in the hospital, liaising with the students’ mainstream school regarding the curriculum and specific study tasks. The aim is to assist students to ‘keep up’, where possible, and to facilitate the students’ transition back to school at the end of their hospital stay.

We elected to include this school in the study for two reasons. First, the PMHS has a long-standing and continuing involvement with STAR and therefore the input from teachers and tutors placed with PMHS was considered relevant to STAR planning and future management. Second, we reasoned that some fundamental aspects of effective peer tutoring, and the STAR programme itself, might be identified by contrasting the two contexts:

- Mainstream schools, where most classes consist of student cohorts that are stable over time and are studying a common curriculum; and

- A hospital school, where the composition of the student group changes daily and where, therefore, a variety of year levels, subjects, and curricula may be covered on any given day.

We note that it is a principal aim of PMHS to reflect a ‘normal’ school situation as much as possible. The focus is on the academic, not medical, needs of the students.
Chapter 3: Participating peer tutors, teachers and school students

This chapter provides background information on the peer tutors, teachers and school students involved in this study.

Section 3.1 describes the disciplinary mix of the peer tutors surveyed and the range of school subject placements.

Section 3.2 describes the range of involvement with STAR represented among the teachers surveyed. Teachers are not identified by school for reasons of anonymity.

Section 3.3 presents the year levels and subjects represented by the school students surveyed. Students are not identified by school, teacher or peer tutor for reasons of anonymity.

In summary:

• Half the peer tutors were studying science, typically in the life sciences and environmental science. One in four peer tutors was enrolled in a teaching course at university.

• Some peer tutors had followed a traditional entry path to university, while others had returned to university after time away from study.

• Some teachers interviewed were reasonably new to the programme, while others had a longer history of involvement. Several STAR Link teachers were included.

• The school students surveyed were predominantly in Years 8 & 9 and were typically describing their experiences of having a peer tutor in mathematics or science classes.

3.1 Peer tutors – university studies and subject areas of school placements

Peer tutors were asked to describe their university studies and the classes that they assisted in. More than half the 64 peer tutors had studied in science or related fields (56%), and nearly one in four studied teaching (23%) (Table 3.1). The most common area of science study was the life sciences, with a particular focus on environmental science and conservation (Table 3.2). The physical sciences and mathematics were less strongly represented, at 16 and 8 per cent respectively. More than half (n=35/64) had entered university immediately after completing Year 12, while 11 of those who had either deferred or taken a longer break between school and university described themselves as ‘mature-age’ students.

Almost all peer tutors were placed in classes at multiple year levels (n=57) and in more than one subject area (n=58). Science classes, including chemistry and physics classes in senior school, were the most common placements for peer tutors (Table 3.3). Nearly one in five were placed in mathematics classes, and for five tutors this was their only subject area. In addition, 20 per cent were placed in LOTE classes, most commonly Japanese.
Table 3.1 Discipline area of peer tutors’ tertiary studies – course/degree

<table>
<thead>
<tr>
<th>Peer tutors’ discipline area of university study¹</th>
<th>participating peer tutors (total n=64)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Science (ie Bachelor of Science)</td>
<td>n</td>
<td>36</td>
<td>56.3</td>
</tr>
<tr>
<td>Teaching (eg Bachelor of Education; Diploma of Education)</td>
<td>n</td>
<td>15</td>
<td>23.4</td>
</tr>
<tr>
<td>Arts</td>
<td>n</td>
<td>17</td>
<td>26.6</td>
</tr>
<tr>
<td>Laws</td>
<td>n</td>
<td>5</td>
<td>7.8</td>
</tr>
<tr>
<td>Engineering</td>
<td>n</td>
<td>2</td>
<td>3.1</td>
</tr>
<tr>
<td>Asian studies</td>
<td>n</td>
<td>7</td>
<td>10.9</td>
</tr>
<tr>
<td>Commerce</td>
<td>n</td>
<td>5</td>
<td>7.8</td>
</tr>
</tbody>
</table>

¹ may be in combination with other degrees / discipline areas (eg BSc/BEd)

Table 3.2 Discipline area of peer tutors’ tertiary studies – subject major

<table>
<thead>
<tr>
<th>Peer tutors’ discipline area of university study¹</th>
<th>participating peer tutors (total n=61)²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Science / Conservation Biology</td>
<td>n</td>
</tr>
<tr>
<td>other Biological science</td>
<td>n</td>
</tr>
<tr>
<td>Mathematics</td>
<td>n</td>
</tr>
<tr>
<td>Chemistry</td>
<td>n</td>
</tr>
<tr>
<td>Engineering / Physics</td>
<td>n</td>
</tr>
<tr>
<td>Language</td>
<td>n</td>
</tr>
<tr>
<td>Business studies / Commerce</td>
<td>n</td>
</tr>
<tr>
<td>other</td>
<td>n</td>
</tr>
</tbody>
</table>

¹ may be in combination with other discipline areas (eg Mathematics & Environmental Biology)
² not all peer tutors provided this information
Table 3.3 School subjects of peer tutors’ placement

<table>
<thead>
<tr>
<th>School subjects into which peer tutors were placed</th>
<th>participating peer tutors (total n=64)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
</tr>
<tr>
<td>Science</td>
<td>28</td>
</tr>
<tr>
<td>Chemistry</td>
<td>12</td>
</tr>
<tr>
<td>Physics</td>
<td>9</td>
</tr>
<tr>
<td>Biology</td>
<td>7</td>
</tr>
<tr>
<td>other sciences (eg Environmental Science)</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics</td>
<td>11</td>
</tr>
<tr>
<td>LOTE</td>
<td>13</td>
</tr>
<tr>
<td>other (eg Social Science)</td>
<td>2</td>
</tr>
</tbody>
</table>

* many tutors were placed in multiple school subjects (eg Science & Chemistry)

3.2 Teachers – involvement with STAR-PTP

All nine participating schools were represented in the teacher interviews, ranging from a single teacher at one school to seven at another. In summary, the group of teachers included:

- the Link teachers from most schools;
- teachers of general science, environmental science, mathematics, accounting, LOTE and chemistry;
- teachers new to STAR and those with many years in the programme;
- some teachers without peer tutors at the time of the interview;
- some teachers with new peer tutors (Stage 2);
- both male (n=12) and female (n=13) teachers.

3.3 School students – year levels and subjects involving peer tutors

The school students surveyed were from 5 schools, predominantly in Years 8 and 9, and were typically describing their experiences of having a STAR peer tutor in mathematics and science classes (Table 3.4). For many students, their experiences with peer tutors involved multiple subjects and spanned several semesters, including classes in the previous year.

Female students outnumbered males in both the interviews and questionnaire responses (Table 3.4).
Table 3.4 Description of participating school students, grouped by survey method

<table>
<thead>
<tr>
<th>Details of the school students participating in the survey</th>
<th>Interview - Stages 1&amp;2 (no. of students)</th>
<th>Questionnaire - Stage 2 (no. of students)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year levels at time of survey</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 8</td>
<td>1</td>
<td>40</td>
</tr>
<tr>
<td>Year 9</td>
<td>12</td>
<td>53</td>
</tr>
<tr>
<td>Year 10</td>
<td>13</td>
<td>0</td>
</tr>
<tr>
<td>Year 11</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>Subjects in which there is/was a STAR peer tutor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Science</td>
<td>13</td>
<td>64</td>
</tr>
<tr>
<td>Mathematics</td>
<td>17</td>
<td>24</td>
</tr>
<tr>
<td>Biology</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Chemistry</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Japanese</td>
<td>4</td>
<td>14</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>21</td>
</tr>
<tr>
<td>School (coded identity, S1-S9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S1</td>
<td>18</td>
<td>25</td>
</tr>
<tr>
<td>S5</td>
<td>6</td>
<td>-</td>
</tr>
<tr>
<td>S6</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>S7</td>
<td>4</td>
<td>53</td>
</tr>
<tr>
<td>S9</td>
<td>5</td>
<td>13</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>female</td>
<td>23</td>
<td>62</td>
</tr>
<tr>
<td>male</td>
<td>13</td>
<td>39</td>
</tr>
</tbody>
</table>
Chapter 4: The role and contribution of peer tutors

STAR documentation and advice to peer tutors defines the role of the peer tutor as ‘an assistant in the classroom’ and clearly ‘not a trainee teacher’. The study sought to discover how this was interpreted by each of the participant groups – peer tutors, teachers and school students - both through the explicit description of roles and, implicitly, through the way participants described the contribution of tutors.

The three main sections of this chapter describe:

• the role of peer tutors, as described by peer tutors and teachers (Section 4.1.1) and students (Section 4.1.2);
• the effects of the programme upon teachers and their teaching (Section 4.2); and
• the effects of the programme upon school students, as described by students (Section 4.3).

The effect of peer tutoring upon peer tutors themselves is detailed separately (Chapter 5).

In summary:

• Peer tutors described their role in terms of providing assistance and knowledge, and helping students learn through explanation and support. They also described themselves as positive role models for science, university and learning generally.

• Teachers also described the role of peer tutors in terms of assistance and being positive role models, and emphasised encouragement and motivation of students to learn.

• There was near consensus among students that having a peer tutor in their class was ‘a good idea’. They described peer tutors as ‘someone to help when the teacher was busy’, and many commented that the peer tutors’ role was to help students learn.

• Students stressed that peer tutors needed to be empathic, helpful and knowledgeable, should show initiative and have a positive attitude and good communication skills.

• Most students (81%) agreed that peer tutors ‘helped them learn’, and half agreed that they made the class ‘more interesting’.

• Teachers valued the contribution that the programme made to their own teaching in terms of assistance in both identifying and addressing students’ needs, and support in offering engaging classes and activities. They also valued the link to university that STAR provided.

4.1 The role and contribution of peer tutors

4.1.1 Perspectives of peer tutors and teachers

The following four themes emerge from the comments of peer tutors in describing their role and contributions in the classroom (Table 4.1):

1. Providing assistance to students and teachers;
2. Contributing knowledge and providing explanations;
3. Serving as positive role models; and
4. Encouraging and motivating students to learn.

Teachers’ made similar comments, although with a difference in emphasis – teachers were far less likely to describe the peer tutors’ role in terms of providing explanations or contributing knowledge, and more likely to describe their important position as role models to the school students.
Each of these four themes is elaborated below, with illustrative comments from teachers and peer tutors.

**Theme 1: Providing assistance to students and teachers**

The majority of peer tutors (n=53/64) described their role as one of providing assistance to the students, the teachers or to both (Table 4.1). They described being an ‘extra pair of eyes and hands’, and that this meant individual students were more likely to get assistance when they needed it.

*With one teacher going around the room, she doesn’t get to all of them or can’t spend a lot of time, so having me there, I can spend that extra time with them and help them out a bit more. Just an extra person in the room to help them when they need it [peer tutor; interview]*

*We are there to assist the students when they have questions, individually. The teacher cannot give each and every one the attention that they need, so I am there to help in that way [peer tutor; interview]*

*They [the students] will set up and do a lab, and I will walk around and make sure they are trying to do the stuff properly, and not trying to light up other things with the Bunsen burners or playing with matches etcetera [peer tutor; interview]*

*I move around from student to student, helping them when they get stuck on a problem. The teacher doesn’t have time. About 2/3 of the class actually want to learn, but the other 1/3 don’t want to be there. I can’t spend much time with them, as they don’t even get their books out. They can be disruptive, and the teacher is kept quite busy with ‘behaviour management’. I can help the remaining students, and between us we are able to help about twice as many students, individually, as he would be able to alone [peer tutor; interview]*

Teachers, too, emphasised the role of peer tutors in providing assistance. In particular, teachers described the indirect assistance that they received in their role as teachers...
through the assistance tutors provided directly to students, including students requiring extra support.

They [the peer tutors] will go around and help them [the students] with their problems. So that makes my job much easier because sometimes, especially with the chemistry and physics problems, there may be three hands up at once and you’re trying to explain something to one and the rest have to wait, normally. Whereas if you’ve got someone else there to help you, that’s really good then. The kids are not held up waiting for me to get to them [teacher; interview]

The kids get their questions answered twice as quickly. They don’t have to wait as long because there are two people to answer their questions. Our strategy is basically just to walk around the room and make sure that we approach every single student during that lesson so that we are talking to every individual student. And in doing that it helps them [the students] to then slip in a question without everyone else knowing [teacher; interview]

Sometimes they [the students] are doing some lab work, for example, and it’s really good because I can’t be everywhere at once so he [the peer tutor] can be going around helping some of the students with what they’re doing, with what they’re supposed to be finding out, and that’s great because it’s a second person doing that [teacher; interview]

Also in accord with peer tutors’ perceptions, teachers highly valued the one-to-one assistance that peer tutors provided students.

If a particular student is having trouble, they can have the support they need. There’s time that the teacher hasn’t got available to spend with that little group or that person because they’ve got the whole class to teach [teacher; interview]

One-on-one help helps kids more than anything. That’s why people pay so much for private tutors, and that’s why, often, they have a positive effect. It’s that one-on-one with the kid [teacher; interview]

However, some teachers also cautioned against peer tutors spending too much time with particular students, and encouraged them to ‘spread their attention’ across the class whenever possible.

Some teachers and peer tutors distinguished the role of peer tutors and teachers in terms of the willingness of students to ask questions of someone younger, and describe this ‘variety’ of interactions as a positive influence in the classroom.

Sometimes it’s not just the teacher telling them the answer, someone else is, so they might actually believe them. I think the fact that it’s someone closer to their age and also someone that’s recently finished school and is at uni and they can feel reasonably comfortable asking questions [teacher; interview]

If students have a problem you can just make a comment and say “this student’s having a problem here” …because some students are really afraid to come forward, but if they have a peer tutor there that’s only a couple of years older than them they might feel more inclined to talk about where they’re having problems…and therefore you can help direct them to the teacher and vice versa [peer tutor; interview]

I usually get time to show her [the peer tutor] what we’re doing, and she goes around and helps the kids and if we’re doing an oral activity, practicing vocab with the whole class together, I might start off and then I’ll ask [the peer tutor] to take over because she seems really confident and that works really well. The kids like that [teacher; Japanese class; interview]

His [the peer tutor’s] contribution has been good in terms of being able to relate to students, in terms of being a university student rather than a teacher, so it’s been good from that aspect… I think they [the students] are getting exposure to another form of interaction, which always helps, so that’s a huge benefit rather than getting used to the same teacher all the time [teacher; interview]

Some students discussed more personal issues with their peer tutors. While this was acknowledged and encouraged to some extent by teachers, teachers also advocated caution and the need for peer tutors to set appropriate boundaries.
They told me some things that sometimes they’d tell the teacher … depending. And sometimes they swore me to secrecy and I told them I had to tell somebody if it was really bad. So even though we, they, mainly did the work, there was a lot of … they’d tell me about their home life. And one boy - he didn’t live at home so he’d tell me, well, it was pretty horrifying because he’d been on the streets for five days - the teacher had no idea. The school had no idea [peer tutor; interview]

If someone’s upset or something, you would see it. You really would. They’re not going to learn anything if they’re upset. You try to get them back on track…”OK., what’s the problem?” you know … “That girl said this to me,” or whatever “OK., you just try to deal with it and back to maths” [peer tutor; interview]

Theme 2: Contributing knowledge and providing explanations

Nearly one in three peer tutors described their role specifically in terms of providing students with explanations.

I helped students understand the basic concepts of their subject. I explained things in a way in which they could relate and not just the cold hard facts [past peer tutor; science classes; questionnaire]

[The most important contribution] is when a teacher introduces a new concept - and that’s what my teachers tend to do on the day that I am there. There is the opportunity then for those students who don’t grasp that concept, especially in maths, to have that individual attention. You can go to the kid and say “So what part is it that you don’t understand?” and make it relevant to them… you can say “OK, what are you interested in?” And then look at that concept, and what they are interested in, and work out how they can understand that… on an individual basis. Some kids can get the concept and just run with it, but some kids are still up in the air and it may be for many different reasons [peer tutor; interview]

I try to get them [the students] to actually look at what they are doing and notice what’s actually happening in their experiment, making sure they are understanding the point of it in relation to what the teacher has just been talking about [peer tutor; interview]

Some students pick up on one way of doing things. I just love to be able to help them out, even if it means coming from a different aspect. It might just make it go click, and “oh that’s how you do it” [peer tutor; interview]

Also grouped under this theme were comments relating to knowledge contribution or teaching (Table 4.1). The comments classified as ‘to teach’ were few, but are distinguished due to their being less explicitly student focused. Only one peer tutor explicitly described the role of peer tutoring in terms of ‘teaching’, and that person had been involved in STAR some time ago, having left the university in 2000. The other comments grouped together as ‘to teach’ described ‘coaching’ or ‘giving answers’.

Most of the time I’ve been doing questions and answers from the book. And I walk around the class going, “any troubles? – no? – good”. Next one, “any troubles? – no? – good” [peer tutor; interview]

Theme 3: Serving as positive role models

A third major theme to emerge was the peer tutors’ view of their role in setting positive examples for the school students they worked with. Half the peer tutors described themselves as ‘role-models’, and such comments amounted to almost one quarter of all the comments made by peer tutors regarding their role (Table 4.1).

Provide a positive role model of someone young and ‘normal’ who enjoys science, learning, and interacting with others [peer tutor; questionnaire]

I was a role model for students – demonstrated enthusiasm for science and education [past peer tutor; questionnaire]

Teachers agreed that tutors could provide a general positive presence in the classroom.

She [the peer tutor] is going to Uni, she’s got a life, she’s got herself together and they talk about that sort of stuff [teacher; interview]
They’ve been wonderful role models as well … they talk about their lives [teacher; interview]

While some comments were general in nature, others specifically described peer tutors’ roles in:

a. encouraging students to consider further study; and

b. promoting a positive view of the discipline and career options in the discipline.

These comments were often coupled to those describing peer tutors’ efforts more generally to encourage and enthuse students.

a. Encouraging students to consider further study

Many peer tutors described the opportunity afforded the school students from getting to know someone from university. The peer tutors offered students information about study options and personal accounts of their own journeys through school and university, and were keen to encourage students to pursue further study.

I guess a lot of it, too, was having someone in uni in the classroom with the kids. To get the kids to, well, just someone they wanted to ask questions about or know what it’s like to do science at uni, and questions like that [peer tutor; interview]

I think it’s more the life experiences that you pass on as well. I’m only 18 but the fact that they ask me about uni…what uni’s like, how much different it is, how am I enjoying it…They get that first hand knowledge of what they can expect at uni…so it gives them a chance to not only have the ability to relate to you on the classroom chemistry level but also on a personal level [peer tutor; interview]

Provide them with info/insight into what uni is like and hopefully inspire them to enter uni [peer tutor; science classes; questionnaire]

Inspire students to learn and make them aware of the multitude of education options and workplace options they have [peer tutor; science classes; questionnaire]

I think it’s great for the students to have… someone in there saying, “well this is what I did when I was at high school and this is what I’m doing now”. Just sort of showing them we’re not all smart people, we’re normal people and I think it’s good for both of us, both the [university] students and the class [peer tutor; interview]

One in three of the teachers interviewed also described the role of peer tutors in raising students awareness of, and aspiration for, university study. One teacher in particular, was of the opinion that this was the principal objective of the programme. In describing a particular peer tutor, another teacher said:

He sort of got down to their level and [would] say “Well, look guys. You’re in Year 11 now, You’re very shortly going to have to be thinking about what you’re going to do. Maybe you want to go to university, maybe you don’t. But this is what I’m doing and I find it fantastic” etcetera, etcetera, and he just breathes enthusiasm [teacher; interview]

One teacher suggested that his students had gained additional benefits from being in the programme because they were able to visit Murdoch University for a field trip. He stated that this would not have been possible without the connections he had developed through STAR. His class was able to visit the university during a non-teaching week, access laboratories and lecture theatres, see a range of science equipment, meet academic staff and get some feel for a possible future as a tertiary student.

I have no evidence at all, but I’m positive that my students have chosen to go to Murdoch because of that [teacher; interview]

b. Promoting a positive view of the discipline, and career options in the discipline

Peer tutors were keen to share their enthusiasm for their chosen discipline with the students.

I am also a sort of role model to show them where their studies in science (in my case) can take them [peer tutor; science classes; questionnaire]

I basically gave a positive role model to the students regarding science - “Not every scientists wears a white coat” [past tutor; science classes; questionnaire]
Tried to promote science at a university level by laying out the advantages and disadvantages of a career in science [past tutor; science classes; questionnaire]

Helped students learn and fostered and encouraged an interest in Japan and Japanese language as a future career option [past tutor; language class; questionnaire]

In this case, it reinforced to my kids the value, the enjoyment, of science. Because he [the peer tutor] was plainly enthused about his role as a geologist [teacher; interview]

Theme 4: Encouraging and motivating students to learn

Teachers expressed the view that peer tutors play an important role in encouraging and motivating students, and fostering enthusiasm for the subject matter.

I'm pretty sure that they [the students] get a more encouraging feeling about the whole idea of "why I'm studying" – 'someone else thinks it's important, and they're here, and they don't have to be here' - so that's got to be a good thing [teacher; interview]

Having someone who’s young and enthusiastic and has lived in Japan and can talk to them about their experiences in Japan [teacher; interview]

Similarly, in describing effective peer tutoring, one teacher commented that peer tutors could ‘make the particular learning area an exciting place to be’ by conveying their own enthusiasm for the subject.

Nearly twenty-five per cent of peer tutors also described contributing to encouraging and motivating students, although peer tutors placed less emphasis on this than they did on their role in providing explanations and assistance (Table 4.1).

Provide an opportunity for students to interact and learn from someone close to their age – who they can relate to – in order to get them a little more excited about the subject area and make learning fun, not a chore [peer tutor; science classes; questionnaire]

I tried to boost the self-confidence of students who had difficulties in learning [past peer tutor; science classes; questionnaire]

I know that I’m making a difference: just the other day a student was stuck and so was just talking to a mate. I helped him understand the point, and for the rest of the class both he and his mate worked really well and solved a whole page of problems. I could tell that they were really engaged, and pleased to know what they were doing [peer tutor; interview]

4.1.2 Perspectives of school students

The value of having a peer tutor in the classroom

There was near consensus (n=98/102) among school students that having a peer tutor in class was ‘a good idea’. The range of explanations given by these students is described in Table 4.2.

Two out of three students commented that having a peer tutor in class was like having an ‘extra teacher’.

I think having a star pt in my class is a good idea (in a class of about 30) the usual teacher is usually busy so with a peer tutor there it's like an extra teacher. Eg. Normally I have to wait a while (when raising my hand) because my teacher is busy, but there is less wait with a peer tutor [Year 8 school student; questionnaire]

It's useful to have a second 'teacher' in class. It makes the lesson run smoother. It's also good because the atmosphere is more relaxed with the teacher not having to be in every place at once [Year 8 school student; questionnaire]

Good idea because the peer tutor can help out in the classroom, being an extra set of hands for the teacher [Year 9 school student; questionnaire]
Table 4.2 School students’ views regarding the positive value of having a peer tutor in class

<table>
<thead>
<tr>
<th>Themes</th>
<th>Written explanation offered by students who answered ‘Yes’ to the question; ‘Do you think having a STAR peer tutor in your class is a good idea?’</th>
<th>number of students to make this comment</th>
<th>percentage of responses (n=158)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. an extra ‘teacher’</td>
<td>help teachers when busy</td>
<td>31</td>
<td>45.6</td>
</tr>
<tr>
<td></td>
<td>doubles the number of teachers / we get more attention / more one-to-one attention</td>
<td>41</td>
<td></td>
</tr>
<tr>
<td>2. assist students to learn</td>
<td>helps us learn</td>
<td>14</td>
<td>29.1</td>
</tr>
<tr>
<td></td>
<td>help with the class work</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>different ways of explaining things</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td></td>
<td>help individuals when they are having difficulties</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>3. good rapport</td>
<td>kind and friendly</td>
<td>3</td>
<td>10.8</td>
</tr>
<tr>
<td></td>
<td>makes the class more enjoyable</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>understand us because they are a similar age</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>more approachable than teachers</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>4. teacher-training</td>
<td>they learn to be teachers</td>
<td>11</td>
<td>7.0</td>
</tr>
<tr>
<td>other</td>
<td></td>
<td>12</td>
<td>7.6</td>
</tr>
</tbody>
</table>

*98 students provided a total of 158 individual coded responses to these questions, with many students providing multiple reasons

Nearly 30 per cent of all comments referred to the contribution peer tutors made toward student learning. Fifteen per cent of students commented that peer tutors brought a different perspective and a ‘different way of explaining things’ to the class.

Because they help us learn more about the learning area and can help us altogether, or mostly one on one, when we are experiencing individual difficulty [Year 8 school student; questionnaire]

They may also explain questions differently to the teacher. It’s easier to understand [Year 9 school student; questionnaire]

At times they are better at clarifying, and help greatly in understanding how to do problems during class … I personally found it assisted me in grasping new concepts more easily [Year 11 school student; questionnaire]

Explained things differently from the teacher so I understood better [Year 9 school student; questionnaire]

Students referred to a friendly, relaxed atmosphere created by peer tutors and several students said that they valued their own relationship with the peer tutor.

It’s a great way to learn; fun and entertaining; help encourage us kids to learn [school student; questionnaire]

They are understanding what we are going through because they were just there [Year 11 school student; questionnaire]

Because they would be able to help with work … instead of a shy child having to ask a teacher, they can ask the peer tutor who would be willing to help out [Year 8 school student; questionnaire]

Because they would understand the trouble you’re in if you don’t feel good [Year 9 school student; male; questionnaire]

Just three students (3%) surveyed by questionnaire said that peer tutors were ‘not a good idea’. Two students from the same class wrote that peer tutors did not get involved, and so were not helpful, and a third commented that different teaching styles tended to be confusing.

Because they don’t do anything - they just make you feel intimidated and you can’t do your work [Year 8 school student; questionnaire]

Although peer tutors can help people who are behind and/or need extra help to catch up, different people have different teaching styles and it may be confusing to learn in two different ways [Year 11 school student; questionnaire]
The attributes and behaviour of effective peer tutors

School students were asked to list the characteristics of effective peer tutors. Students stressed that peer tutors needed to be empathic, knowledgeable, and needed to help students learn (Table 4.3).

Understands the student; able to respond to the students’ questions [Year 8 student; questionnaire]

Knows what they’re doing; can answer a lot of science questions; is patient [Year 8 student; questionnaire]

Knows the subject relatively well and is able to assist; is easily approachable; is friendly [Year 11 student; questionnaire]

Is able to help you when you are in difficulty; listens to your point of view [Year 8 student; questionnaire]

Is a kind person that we can get along with; can help us with our questions [Year 9 student; questionnaire]

Students also emphasised the importance of peer tutors taking the initiative in providing assistance and interacting with students, and the need for a positive attitude and engaging approach (Table 4.3).

Encourages students to ask them questions [Year 8 student; questionnaire]

Can participate and fill in for the teacher if they left for something [Year 9 student; questionnaire]

Looks out for students who appear to require assistance [Year 11 student; questionnaire]

Takes initiative and helps out without being asked to [Year 11 student; questionnaire]

Enthusiastic about their job [Year 9 student; questionnaire]

Enjoys helping and teaching others [Year 11 student; questionnaire]

Table 4.3 Students’ definitions of effective peer tutors

<table>
<thead>
<tr>
<th>Students’ written responses to the question: What defines an effective peer tutor?</th>
<th>n</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Empathy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>friendly; patient; caring; respectful</td>
<td>59</td>
<td>57.8</td>
</tr>
<tr>
<td>Assistance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>able to help us; able to help us learn</td>
<td>48</td>
<td>47.1</td>
</tr>
<tr>
<td>Knowledge</td>
<td></td>
<td></td>
</tr>
<tr>
<td>knowledgeable and confident</td>
<td>43</td>
<td>42.2</td>
</tr>
<tr>
<td>Initiative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>interactive; take initiative</td>
<td>29</td>
<td>28.4</td>
</tr>
<tr>
<td>Attitude</td>
<td></td>
<td></td>
</tr>
<tr>
<td>positive; engaging; passionate; happy; have ‘people skills’</td>
<td>23</td>
<td>22.5</td>
</tr>
<tr>
<td>Communication</td>
<td></td>
<td></td>
</tr>
<tr>
<td>communicate well; able to talk to students</td>
<td>17</td>
<td>16.7</td>
</tr>
<tr>
<td>other</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>9.8</td>
</tr>
</tbody>
</table>

*102 students recorded 229 coded comments.

Students were also invited to register their level of agreement with a series of statements describing peer tutor qualities. These statements covered aspects of both ‘actual’ and ‘ideal’ peer tutor behaviour (Table 4.4).
Table 4.4 Students’ responses to statements about peer tutors and peer tutoring

<table>
<thead>
<tr>
<th>Theme</th>
<th>Questionnaire items</th>
<th>number of students (total n=102)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>disagree/ strongly disagree</td>
</tr>
<tr>
<td>Student behaviour</td>
<td>I like to ask the peer tutor for help</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>When the peer tutor is in the class, I find the</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>class more interesting</td>
<td></td>
</tr>
<tr>
<td>Peer tutor behaviour (actual)</td>
<td>Peer tutors help me to learn</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Peer tutors are just like student teachers</td>
<td>15</td>
</tr>
<tr>
<td>Peer tutor behaviour (ideal)</td>
<td>After a few weeks, the peer tutor school know my</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>name</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Peer tutors should ask student questions about the</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>school work</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Peer tutors should tell students what they need to</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>know</td>
<td></td>
</tr>
<tr>
<td></td>
<td>It is important that the peer tutor knows all</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>the answers</td>
<td></td>
</tr>
</tbody>
</table>

Students were strongly of the view that peer tutors should ‘tell students what they needed to know’ (Table 4.4). In contrast, fewer students felt that peer tutors needed to have ‘all the answers’, with nearly 20 per cent of students disagreeing with this statement.

Advice to university students considering volunteering as peer tutors

School students were also asked what advice they would offer a person who was considering joining STAR as a peer tutor. Most students (90%) offered a response, and these mirrored the attributes described in Table 4.3: empathy; ability and willingness to assist; knowledge; initiative; positive attitude; good communication skills.

- If they are thinking of being a peer student they should be focused on helping students learn and understand diversity of individuals [Year 8 student; questionnaire]
- Not just help solving homework problem – should not just say the answer, but also develop the idea and give some hints to students! [Year 11 student; questionnaire]
- I’d tell them to make sure they don’t just stand back and wait for students to come to them but to walk around and talk to the students. Be yourself and just talk about ‘life’ with students [Year 9 student; questionnaire]
- Explain any answers as simple as they can, stay patient with a struggling person, and have a positive approach to work [Year 9 student; questionnaire]
- Practise your conversation skills because students will not ask for help if you are not approachable [Year 9 student; questionnaire]
- Be happy around everyone because no one likes a grouch. Doesn’t mind telling us that he/she doesn’t know the answer and compliment students to make them feel comfortable [Year 8 student; questionnaire]
- I would tell that person that being a peer tutor is an important role and helps students to improve and learn at their subject [Year 9 student; questionnaire]

The effect of the programme upon school students is described further in Section 4.3.
4.2 The effect of the programme upon teachers and teaching

As detailed above (Section 4.1.1), teachers highly value the assistance that peer tutors afford them in classes where there are many students requiring attention. In addition, teachers described several specific benefits to them in their professional work as teachers:

a. The ability to design and offer more creative or intensive learning activities.

b. The identification of individual student needs.

c. Maintaining links to the university sector, research and disciplinary developments.

a. The ability to design and offer different learning activities

Several teachers stressed that having the assistance of a peer tutor enabled them to achieve a wider range of tasks and activities with their students than they would otherwise have been able to offer. One teacher commented that the support, ‘spreading the load’, allowed him to include more practical elements in the curriculum and give students additional exposure to ‘hands on’ activity. A second teacher said that more outdoor activities could be incorporated, with the help of the peer tutor.

The kids just love her being there. They can go outside and do these things so it’s a great benefit [teacher; interview]

A third teacher commented:

It opens up lots more opportunities to doing different types of activities and multi-leveling with that class, and also for targeting kids [teacher; interview]

That same teacher also described a specific opportunity for involvement in out-of-school science activities, made possible through the support of the peer tutor.

We’ve got education week coming up, where they want to put a display up in the shopping centre, and last year I got a kit from the Royal Australian Chemical Institute and we were supposed to go to primary schools, with a group of kids who were going to “dem” a bit of chemistry. Of course that didn’t eventuate, we didn’t have the time…it’s all this time to try and get it organised, so it’s put into the too hard basket, but we’ve still got these two kits and so now it’s another thing that I’m going to ask [the peer tutor] … if she could get four students out of that class, aside, pull this kit apart and have a go at the demonstrations, and when they’re happy that they understand what they are doing as group, to go to the shopping centre for a couple of hours and put on a little performance. Or go to primary schools... At least [the peer tutor] can just get the initial work done and when I’m happy, and the kids are happy that they’re confident … well then, we’ll perhaps organise to get them to the primary schools and do what we were meant to do last year [teacher; interview]

Yet another teacher described the benefits in terms of providing ‘enriched’ tasks.

We’ve been doing enriched tasks with the year 8s and when [the peer tutor] comes in, we’ve been in the library and he helps the kids with research in the library which is another skill they have to develop…[teacher; interview]

b. Identification of individual student needs

Several of the teachers interviewed described how peer tutors helped them to identify and meet the needs of individual students, and in many cases the teachers detailed specific incidents. One of the teachers described a situation in which he was unaware that one of his students was struggling with the curriculum.

She [the peer tutor] came up to me and said ‘just going over these few calculations, this student just didn’t understand this half AT squared’ … just didn’t have a clue what it meant, and she [the peer tutor] actually picked up this problem and mentioned it to me [teacher; interview]

The teacher elaborated. Prior to a test in class the next day, for the benefit of the whole the class and so as not to single out the student identified as in difficulty, he worked
through several examples of the expected test questions and felt that this enhanced his teaching efforts and the students' learning.

Another teacher described the difficulty he faced in trying to identify both struggling and outstanding students in classes of 30 or more students.

> It's almost impossible to do, but you try to provide appropriate activities and lessons so you can engage students in a variety of things. Yes, they [the peer tutors] identify different problems that students have, whether they're a better ability student or not. But I've seen them [the peer tutors] actually target lower ability kids, get them organised because they need to just be organised [teacher; interview]

Yet another teacher spoke of the value he placed on the assistance and support afforded by the peer tutor. At the end of each lesson he would spend a few minutes discussing the lesson with the peer tutor.

> And she'll say to me, 'look John and Mary didn't do much because they need XYZ'. Now I can go ahead and organise that. Now, if she didn't tell me that, the kids may not feel comfortable coming up to me and hassling me, and now I can just get that stuff for the kids and we can get going for the next session [teacher; interview]

Peer tutors too described identifying student needs or learning difficulties, and informing the teacher.

> And another boy in the Year 11 class, he was really good at thinking. And when he came to writing it down, he couldn't do it at all. So the way I, maybe, helped him as such was that he could articulate the words, I would write them down in a sentence - what he had said - and then he would copy. It was his words, I was just writing them down. And he would copy them down and I told the teacher that he did have a learning problem because she didn't know about it at all [peer tutor; interview]

**c. Maintaining links to the university sector, research and disciplinary change**

Mention was also made of the personal and professional value in being able to maintain a link with the tertiary sector. Teachers described the benefits in terms of awareness of new technologies and techniques, and also the structure of university curricula in their fields.

> It's quite good for me because they're up to date on modern techniques and different ways of doing things so it's good [teacher; interview]

> I know with [the peer tutor] there's been a few times where we've talked about how they go about teaching the technology side of the course at uni ...[the peer tutor] certainly helped me with sources I wasn't aware existed. Just the interaction with someone who's currently going through a course that I haven't done for 20 years or so it is very valuable [teacher; interview]

> I chat to him about what he's doing, and his work in the holidays - like collecting sea grasses - or just different projects he's doing in his degree. So you get to find out a bit about it ... because things change in the universities, and degrees, so you get to find out a bit about that and it also provides extra support for the kids in the class [teacher; interview]

One teacher said that the experience with STAR kept his own personal contact with Murdoch 'alive and constant'. Another teacher, in his general remarks regarding the programme, made the following comment:

> And it is also good for myself, personally ... it keeps me in touch with the university as well, which is good. Quite often as teachers you become settled in your own little world, your own little school and you forget, you know, what's happening there as well. And so yeah, it keeps you in contact with people there and what's going on [teacher; interview]
4.3 The effect of the programme upon school students

During interviews with teachers and peer tutors, the effect of the program on student learning was frequently discussed. The comments referred to the assistance afforded by peer tutors (Section 4.1.1), and the motivation of students, including the benefits of peer tutors as positive role models. Students themselves said that they valued the presence of peer tutors in their classes (Section 4.1.2), including the ability of peer tutors to provide extra assistance and a different way of explaining things.

This Section presents additional insights into the effect of the programme on students, gathered in student interviews and through the questionnaire-based survey of students.

4.3.1 Motivation and support for learning

In describing their interactions with peer tutors in class, the students most commonly described the peer tutor as an ‘extra’ source of assistance (see also Table 4.2). Students also discussed the value of having a different perspective when they were wrestling with new and challenging ideas.

To have someone else in the class was also good, because if the teacher was busy you’d have someone else to go to [school student; interview]

She’d just help us out with things we were having trouble with in the prac [school student; interview]

When we’re doing experiments, it’s kind of hard having 6 to 8 groups and [the teacher] can only go to one group, but [the peer tutor] is there and he can like help us….He knows the same thing [the teacher] would say. It’s just easier having two people instead of waiting on one [Year 11 student; interview]

It did help a lot, the peer tutor. Especially in chemistry because it’s such a complex subject…so with help already given by the teacher, it’s better to have a peer tutor around [Year 11 student; interview]

She showed us easier ways to work it out – like – she showed us how she’d figured it out instead of the way the teacher had been taught, and then taught to us [school student; interview]

Most students (81%) agreed or strongly agreed that peer tutors helped them to learn (Figure 4.1) and half (50%) credited the peer tutor’s presence with making the class ‘more interesting’.

4.3.2 Encouragement to consider tertiary study

Students described the benefit of hearing about university from the peer tutors, as current university students. Several of the students said that they felt more comfortable and confident about going to university as a result of discussions with their peer tutor.

Me and my friend – we did talk to her [the peer tutor] about stuff, like uni and that, and like what it’s really like - and it’s sort of good to know that because then, like, we then would have an idea of what it would be like to do science at uni [school student; interview]

[the peer tutor] sees how uni is like - since he’s closer to our age than teachers are…we get to see how he saw [the university] so in a way I guess we can relate to that better than to what teachers and speakers coming into the school tell us [Year 11 student; interview]

I felt, like, more confident about going to university and that it wasn’t really as hard as I thought it would be ‘cause she showed us some of the things that she was doing and, yeah, so it helped [school student; interview]
4.3.3 Relaxed, informal relationship with peer tutors

While students described the benefits of having a peer tutor in terms of being an ‘extra teacher’ in the classroom (see Section 4.1.2, and Table 4.2), during interviews they emphasised the difference between peer tutors and teachers (Table 4.3). Students said they related well to peer tutors because the peer tutors were young, friendly, and ‘students too’.

*Teachers are more for, like, actual teaching and recording and marking - whereas the peer tutors are, like, they want to help with learning* [Year 11 student; interview]

*I get nervous so I tell my teacher I don’t understand whereas with him I didn’t* [school student; interview]

**Figure 4.1 Students’ level of agreement with statements of peer tutor influence**
She understood what you were trying to ask her. Like some teachers, they don’t understand what you’re trying to say or anything but she understood, so it was alright [school student; interview]

You can talk to her like if she’s just another teenage girl [school student; interview]

They can relate to where you’re coming from because they’re younger – like, they have more interests in what you do after school [Year 9 student; interview]

The fact that they’re younger and they’re studying too so they, like, you’re both learning at the same time. She knows more, you’re learning off her but she’s also learning so she knows what’s happening [school student; interview]

Table 4.3 Comparison of students descriptions of teachers and peer tutors: summary

<table>
<thead>
<tr>
<th>Teacher</th>
<th>Peer tutor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole class</td>
<td>One-to-one</td>
</tr>
<tr>
<td>Assessment</td>
<td>Learning</td>
</tr>
<tr>
<td>General information</td>
<td>Specific information</td>
</tr>
<tr>
<td>Judgemental</td>
<td>Non-judgemental</td>
</tr>
<tr>
<td>More knowledge</td>
<td>Less knowledge</td>
</tr>
<tr>
<td>Broader area of expertise</td>
<td>Specific area expertise</td>
</tr>
<tr>
<td>Teaching</td>
<td>Answering questions</td>
</tr>
</tbody>
</table>

Notably, during many of the group interviews, students discussed the difference between trainee teachers and peer tutors. They described the trainee teachers in a very different role – one of ‘teacher’ – to that of the peer tutor. The implications of this are discussed further in Chapter 6.

[discussion between two students in group interview]
Student 1: He [the student teacher] didn’t really want to relate to us. Like, he was there just to teach
Student 2: …. whereas X (peer tutor; name removed) wanted to talk to us
Student 1: They’re (the peer tutors) not setting you work – they’re not disciplining you – like your teachers are. You know, like, telling you what to do
Student 2: You can’t get in trouble from them
Student 1: They’re more friendly. Student teachers are like what they say they are - student teachers. They want to teach. They’re trying to be a teacher so they’re acting like one.
Student 2: ‘I’m better than you’ – ‘I have authority’

4.3.4 Special activities associated with having a peer tutor
In some cases, teachers had planned unusual activities and classes in response to having a peer tutor available – either as an ‘extra pair of hands’ or as a link to resources and information not otherwise available (see also Section 4.2). Students were enthusiastic about this aspect of the programme.

[discussion between two students in group interview]
Student 1: We collected samples and then we took them back to the lab at uni and we, um, looked at them and there was, like, stuff alive in them!
Student 2: Yeah! And, I can’t remember when, we were panning for gold as well on one of them [excursions] in year nine.

…we went to Bibra Lake and studied the lake - all the organisms in the lake - and we brought that back and did all sorts of experiments, and everything, and we extracted DNA and then, yeah. She [the peer tutor] just showed us around the university and stuff and showed us the library
Chapter 5: The effect of the programme upon peer tutors

An important aim of the study was to examine the effect of the experience of peer tutoring upon the peer tutors themselves. First, we sought to discover why university students might choose to become involved in this voluntary programme. In addition to being important information for the development of the STAR-PTP, this also provides the context for examining any effects that the experience has upon participants. Second, we asked whether the programme played a role in skills development among participating peer tutors. Third, we asked peer tutors about the relationship between peer tutoring and their university studies. This chapter is presented around each of these three questions:

Section 5.1 – The reasons university students volunteer as peer tutors, summarising the interview and questionnaire responses of 58 peer tutors.

Section 5.2 – The effect of peer tutoring on the development of particular skills. Peer tutors were asked to rate themselves on a range of skills, both ‘generic’ and more specific (Stage 1 of the study; Section 5.2.1). In addition, during Stage 2 of the study, new peer tutors were asked to identify skills that they hoped to develop through peer tutoring, and to rate themselves both before and after their experience with the programme. The findings of this longitudinal aspect of the study are presented in Section 5.2.2.

Section 5.3 – Other influences of the programme, including the relationship between peer tutoring, university and career plans.

In summary:

- University students volunteered as peer tutors in order to gain teaching experience (40%), to develop communication and interpersonal skills (28%), or to give back to their communities (38%).
- Peer tutors generally rated themselves highly on a range of skills, including the ability to plan and to work independently. They were less confident of their oral presentation skills.
- New peer tutors nominated communication, interpersonal skills and teaching as skills they hoped to develop as peer tutors. At the end of a year as peer tutors, most (90%) identified improvement in at least some of these areas.
- After a year as peer tutors, most (90%) of the new tutors identified improvements in a range of generic skills and in other skills more specific to disciplinary communication and peer tutoring.
- Peer tutors preparing for a teaching career valued their time as peer tutors. They described peer tutoring as an opportunity to develop their teaching skills, and to learn by observing teachers and working closely with students over an extended period.
- Peer tutors described the rewards of working with students and building relationships, and some frustration when the opportunities to interact were limited or when students were disengaged.
- Peer tutors also described the rewards of helping students learn and gain confidence. New peer tutors expressed some anxiety associated with either not having the necessary knowledge or communication skills.

5.1 Peer tutors’ motivations for volunteering

While the reasons peer tutors cited for volunteering with STAR were varied, two principal themes emerged (Table 5.1). Most peer tutors were either seeking teaching experience or wanting to ‘give back’ to schools and their community by helping others – or both.
Table 5.1 Reasons university students volunteer as peer tutors with STAR

<table>
<thead>
<tr>
<th>stated reason for volunteering as a STAR peer tutor</th>
<th>peer tutors making this comment¹ (n=58)</th>
</tr>
</thead>
<tbody>
<tr>
<td>teaching experience</td>
<td>24 (41.4)</td>
</tr>
<tr>
<td>to help others; make a difference; give back to the community</td>
<td>22 (37.9)</td>
</tr>
<tr>
<td>develop communication skills and to work with people</td>
<td>16 (27.6)</td>
</tr>
<tr>
<td>general ‘interest’ in peer tutoring and/or science</td>
<td>10 (17.2)</td>
</tr>
<tr>
<td>future employment; résumé building</td>
<td>11 (19.0)</td>
</tr>
<tr>
<td>to gain ‘experience’, generally</td>
<td>5 (8.6)</td>
</tr>
<tr>
<td>to develop self confidence</td>
<td>4 (6.9)</td>
</tr>
<tr>
<td>others</td>
<td>3 (5.2)</td>
</tr>
</tbody>
</table>

¹ Most peer tutors gave multiple reasons for volunteering

I’m doing teaching so its good experience for me because it’s not so much about the knowledge, its how to teach, to get the students to learn and manage them [new peer tutor; interview]

Just the fact that for my own personal benefit as well as the people that I am tutoring. I am studying chemistry but I still think about the possibility of going on to a teaching career. So when you add that into it, it makes sense to actually go into the classroom and do things like this. So, from my point of view, the fact that it gives you a little bit of experience in the classroom without actually studying education and you know, without actually being in charge of the class as well … it is just a background view, different from when you are actually at school. And from their point of view – you remember when you were at school? there is a teacher with 25 kids, it’s quite tough if you need help – to get help sometimes if you are doing stuff, or doing course work, or all working on questions. So I thought it would be really valuable to the people that I am helping as well as giving something back. I have been going back to my High School, so it’s good to give something back to your actual community that you have come through. So that’s the main reason, the fact that you are helping other people and helping yourself at the same time [new peer tutor; interview]

I wanted to help others at school. I had a hard time at school and wanted others to have a less hard time [past peer tutor; questionnaire]

More than 25 per cent said that they volunteered in order to work with people and develop their communication skills.

I enjoy doing community-based activities. This allowed me to expand my skills and knowledge in these areas [past peer tutor; questionnaire]

To develop new skills, including communication skills and interpersonal skills. I like to work with kids and to share my knowledge, teaching people. It was an opportunity to build my self-confidence [past peer tutor; questionnaire]

Twenty per cent mentioned résumé building, typically in combination with motivating students to learn.

I wanted to do an extracurricular activity that would demonstrate to potential future employers that I have “people skills” and that I am a good communicator [current peer tutor; questionnaire]

Because I was doing part time study and had extra time on my hands, and because it ends up giving you such a good thing on your transcripts, and you also get to go to High
School and encourage kids to want to learn and come to university. Because, we didn’t have anything like that when I was at High School [new peer tutor, interview].

A volunteer position always does look good on a CV, a résumé … and it’s also nice to think your helping out. It’s just – thinking back to my schooling life. We never had anybody that came around to help us out. And if I had someone to help me out when I was younger maybe I wouldn’t have mucked around as much. I think you just get a little bit extra out of helping kids [new peer tutor, interview].

**Recruitment of peer tutors**

In discussing their reasons for volunteering, many peer tutors also described how they had first learned of the STAR-PTP. Many had received invitations by email, and commented that this ‘personal’ approach was highly influential in their decision-making. In addition, several peer tutors said that they heard from friends, and some commented that they had subsequently been active in recruiting friends to the programme.

I think I got an e-mail about it, or maybe I got sent a letter. I thought that it sounded like a good idea. So I went along to the training session, where you didn’t have to commit to anything, but just see what they had to say [new peer tutor; interview].

### 5.2 The development of particular skills among peer tutors

#### 5.2.1 Findings from the initial survey (Stage 1)

In Stage 1 of the study, we asked peer tutors about their experiences of peer tutoring, and their self assessment of skills in particular areas including communication and interpersonal skills. We did not specifically ask them to describe the role of peer tutoring in developing these skills, seeking instead to see what emerged from a less directed discussion of their aspirations and experiences.

Most respondents rated themselves highly across the range of skills, including interpersonal communication, teamwork and organisational skills (Fig. 5.1). However, fewer peer tutors, current or past, judged their ‘public speaking’ skills as either ‘good’ or ‘very good’.

![Figure 5.1 Peer tutors’ self assessment of their skills: (Stage 1)](image-url)
We sought to discover if peer tutoring played a role in developing these skills. Although peer tutors were not asked this question directly in Stage 1 of the study, their description of their experiences as peer tutors centred on the practice of communication. Peer tutors described their role in the class in terms of helping students individually, explaining ideas, communicating enthusiasm (see also Chapter 4). They described the importance of developing a rapport with the class, and the different communication strategies that they would adopt in their efforts to relate to students. Peer tutors also explained that they needed to communicate differently with teachers than with students, and that they needed to learn the boundaries around these different communications styles. Several peer tutors reported increased confidence as a result of their experiences with STAR, and teachers too expressed the view that peer tutors gained ‘people skills’ and confidence through their involvement in the class.

At the beginning he [the teacher] got me to do a small talk on what I was doing at university. If you can face a class of 30 or 40 kids, you can do anything! [current peer tutor; interview]

[When I started with STAR-PTP] I probably lacked confidence then. I probably have a lot more now [past peer tutor; interview]

I think maybe I’ve learnt to engage more with, to risk sounding cliché, I’ll say some ‘younger people’ [current peer tutor; interview]

It does a lot for their own confidence, their self-esteem, the way they relate to people [teacher; interview]

I think, it makes a difference. Talking to different kinds of kids, I think that’s a good thing for any adult. I think that’s a good thing, you know … my theory is you can speak at different levels and different things makes a big difference for everyone [teacher; interview]

Almost all the peer tutors surveyed in Stage 1 had some experience with the programme, and some had extensive experience over a several of years. Therefore, to more critically examine the effect of peer tutoring on the skills development of peer tutors, Stage 2 of the study centred on a longitudinal survey of peer tutors new to the programme in 2006.

5.2.2 Finding from the longitudinal survey of peer tutors (Stage 2)

Skills nominated by peer tutors

Fifteen peer tutors new to the programme were interviewed in early 2006. They were each asked to nominate any particular skills that they hoped to improve through involvement with the programme. The most commonly cited skills related to communication and interpersonal skills (Table 5.2).

The communication thing is important in any job, whether you're working in a lab with a team and you have to communicate with your team effectively or if you're doing research and have to get grants and tell people about what you're doing and try to get them to give you money, and even in interviews [new peer tutor; 1st interview]

Public speaking is always a problem, as in not blushing in front of people. It might go away with experience. To be comfortable with a group of people, because I see myself in the future doing things around people so if I get more comfortable with the experience. I always think that I can cope with a group of people but when it comes to the day I always struggle [new peer tutor; 1st interview]

You’re sort of really talking about interpersonal skills. … just working with them [the students] 1:1, just getting to know them, because it’s a lot easier for them to relate to you and for you to relate to them if you just know a little bit about them. So I think that’s the main one, especially with Year 11’s [new peer tutor; 1st interview]

I think it is a chance to improve interpersonal skills, improve communication skills. Just the whole experience of it is good because you can learn to relate to different kinds of people. Obviously in a class of 30 kids there is going to be different types of children in that class. They are not all going to be outgoing, noisy, obnoxious children. There is going to be quiet ones, the smart ones – there’s going to be all the different kinds. So it’s really good if you’re able to relate to everybody and have that skill because it is obviously important to have for later [new peer tutor; 1st interview]
New peer tutors also described how they hoped to learn more about teaching by working with students and observing the approaches taken by the teachers.

*How to explain things properly to the kids. Like, it’s hard to remember from school just how you were taught. You remember what you learned and you know it all now, but it’s hard to know how to go from having never experienced to learning it. I want to watch the teacher do that. Dealing with the kids as well, and seeing how they progress and how to teach them step by step, and how to actually relate to them. Work out how to actually explain the meaning behind the aspects. So they have a better understanding, not just the rules. So they actually understand what the rules are about, and how it came about* [new peer tutor; 1st interview; enrolled in Bachelor of Education (mathematics) and placed in Mathematics classes]

Table 5.2 Skills nominated by new peer tutors for development as peer tutors.

| Skill                        | Number of tutors nominating this skill (n=15) | Average self assessment
d\textsuperscript{1}, on a scale of 1-7
d\textsuperscript{2} (n=11) |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication skills</td>
<td>Ability to communicate effectively, explain concepts, present confidently</td>
<td>10</td>
</tr>
<tr>
<td>Interpersonal skills</td>
<td>Ability to establish rapport, identify with students, work in a team</td>
<td>6</td>
</tr>
<tr>
<td>Teaching skills</td>
<td>Ability to ‘teach’ and manage a class</td>
<td>7</td>
</tr>
<tr>
<td>other</td>
<td>Such as leadership skills, time management and ‘patience’</td>
<td>2</td>
</tr>
<tr>
<td>‘before STAR’</td>
<td>3.65</td>
<td>3.0</td>
</tr>
<tr>
<td>‘after STAR’</td>
<td>5.1</td>
<td>5.25</td>
</tr>
<tr>
<td>‘before STAR’</td>
<td>4.17</td>
<td>5.58</td>
</tr>
<tr>
<td>‘after STAR’</td>
<td>4.25</td>
<td>5.5</td>
</tr>
</tbody>
</table>

\d\textsuperscript{1} At the second interview, the 11 peer tutors rated themselves on each of their nominated skills, both ‘before STAR’ (ie retrospectively) and ‘after STAR’ (ie ‘now’, and as a consequence of experiences as a peer tutor)

\d\textsuperscript{2} 1= ‘I struggle with this’; 4=‘I cope’; 7=‘I am very good’

Eleven of the 15 new peer tutors were interviewed again toward the end of 2006. Each was asked to rate themself on their nominated skills. They were asked to indicate both a ‘before’ and ‘after’ score to indicate any improvement that they believed they had made (Table 5.2). On average, the peer tutors reported improvements in each of the nominated skill areas. Some individual cited no change on some skills, and modest gains on others, while other peer tutors reported much higher degrees of improvement (Table 5.3).

*Participation in the STAR program had forced me to speak loudly and clearly in front of a class, it served as a good form of training for myself, in terms of getting people’s attention and then keeping them interested in the lesson. Explaining vocabulary and grammar to the students has in a way improved/increased my confidence in speaking to both individuals and groups of people* [peer tutor D; 2nd interview; sought public speaking skill development]

**Standard set of skills**

In addition to nominating skills individually, new peer tutors were asked to rate themselves against a standard set of eleven skills, as described in Table 5.4. These skills include both recognisably ‘generic skills’ and others more specific to disciplinary communication and peer tutoring.

As a group, the peer tutors reported improvements against each of the eleven skills (Table 5.4). There was a tendency for respondents to emphasise the difference when reporting the two scores at the second interview. However, there was also a ‘real’ difference between the first interview score and the ‘after STAR’ score reported at the end of the year.
Table 5.3 Self assessment of the development of nominated skills
(as reported by peer tutors at the second of two interviews)

<table>
<thead>
<tr>
<th>Peer tutor coded ID</th>
<th>Skills nominated by peer tutor</th>
<th>self assessment' on a scale of 1-7</th>
<th>'before STAR'</th>
<th>'after STAR'</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Before STAR</td>
<td>After STAR</td>
</tr>
<tr>
<td>A</td>
<td>Time management and study skills</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Working in a team</td>
<td>5</td>
<td>5.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Leadership skills</td>
<td>6</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ability to talk to people easily</td>
<td>5.5</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>5.38</strong></td>
<td><strong>5.63</strong></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Communication &amp; interpersonal skills</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Disciplinary knowledge</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>4.5</strong></td>
<td><strong>4.5</strong></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Increased confidence in explaining concepts</td>
<td>4</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Presentation skills</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>4.00</strong></td>
<td><strong>5.50</strong></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>Public speaking</td>
<td>3</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Patience</td>
<td>3</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Time management</td>
<td>3</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>3.00</strong></td>
<td><strong>5.67</strong></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>Communication skills</td>
<td>5</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Explaining things more clearly</td>
<td>5</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Public speaking</td>
<td>3</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>4.33</strong></td>
<td><strong>6.00</strong></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>Explaining or introducing something in English</td>
<td>2</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Speaking English, learning more vocabulary</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Good relationship with children</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>2.33</strong></td>
<td><strong>3.67</strong></td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>Improve speaking and listening skills</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To practice teaching; to teach</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>3.50</strong></td>
<td><strong>4.50</strong></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>Planning class time and class management</td>
<td>2</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Make students feel good about Japanese language &amp; culture</td>
<td>1</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>1.50</strong></td>
<td><strong>5.50</strong></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>Getting to know the kids one-on-one; interpersonal skills</td>
<td>5</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>5.00</strong></td>
<td><strong>6.00</strong></td>
<td></td>
</tr>
<tr>
<td>J^2</td>
<td>Increased knowledge of classroom management</td>
<td>2</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Teaching resource development</td>
<td>1</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>People skills with students and teachers</td>
<td>3</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>2.00</strong></td>
<td><strong>6.33</strong></td>
<td></td>
</tr>
<tr>
<td>K</td>
<td>Teaching scientific concepts to novices</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>4.00</strong></td>
<td><strong>5.00</strong></td>
<td></td>
</tr>
</tbody>
</table>

At the second interview, the 11 peer tutors rated themselves on each of their nominated skills, both ‘before STAR’ (ie retrospectively) and ‘after STAR’ (ie ‘now’, and as a consequence of experiences as a peer tutor).

^2This peer tutor was new to STAR, but had several years experience in a similar role. The ‘before’ rating therefore refers to ‘before school placements’, rather than ‘before STAR’.  

41
Table 5.4 Standard set of skills discussed with peer tutors in Stage 2 interviews: mean ratings, presented by skill

<table>
<thead>
<tr>
<th>Description of skill, as presented to peer tutor during the interview</th>
<th>Mean self assessment rating on a scale of 1-7 (n=10 peer tutors)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>first interview 'before STAR'</td>
</tr>
<tr>
<td></td>
<td>'after STAR'</td>
</tr>
<tr>
<td>Public speaking</td>
<td>4.1</td>
</tr>
<tr>
<td>Working independently</td>
<td>4.8</td>
</tr>
<tr>
<td>Problem solving</td>
<td>4.8</td>
</tr>
<tr>
<td>Working as part of a team</td>
<td>4.7</td>
</tr>
<tr>
<td>Organisational skills</td>
<td>4.4</td>
</tr>
<tr>
<td>General ('generic') skills</td>
<td></td>
</tr>
<tr>
<td>Communication related to university studies</td>
<td></td>
</tr>
<tr>
<td>Explaining concepts to peers</td>
<td>4.6</td>
</tr>
<tr>
<td>Explaining concepts to novices</td>
<td>4.6</td>
</tr>
<tr>
<td>Writing, such as essays or lab reports</td>
<td>4.3</td>
</tr>
<tr>
<td>Communication related to school placements</td>
<td></td>
</tr>
<tr>
<td>Communicating with high school teachers</td>
<td>4.8</td>
</tr>
<tr>
<td>Communicating with high school students one-on-one</td>
<td>5.0</td>
</tr>
<tr>
<td>Communicating with small groups of high school students</td>
<td>3.8</td>
</tr>
</tbody>
</table>

1 At the second interview, the 11 peer tutors rated themselves on each of their nominated skills, both ‘before STAR’ (ie retrospectively) and ‘after STAR’ (ie ‘now’, and as a consequence of experiences as a peer tutor).

All but one of the peer tutors reported an improvement in each of the three categories (Table 5.5), although not for each of the individual skills within each category. There was some correlation between the peer tutors’ intentions regarding a future teaching role and their assessment of skill development during their time as peer tutors. The peer tutors currently enrolled in teacher programs at university (H & J) were among the respondents most convinced that their skills had improved. In contrast, the two peer tutors who reported either no improvement (B) or only a modest change in a few skills (C), were not planning to teach in the future.
Table 5.5 Standard set of skills discussed with peer tutors in Stage 2 interviews
(sum of ratings change for each skill category, presented by peer tutor)

<table>
<thead>
<tr>
<th>Peer tutor coded ID</th>
<th>Ratings change for each skills category(^1,2)</th>
<th>Intentions regarding future teaching role</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>General (‘generic’) skills</td>
<td>Communication related to university studies</td>
</tr>
<tr>
<td>A</td>
<td>2.5</td>
<td>1.5</td>
</tr>
<tr>
<td>B</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>C</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>D</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>E</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>F</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>G</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>H</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>I</td>
<td>0.5</td>
<td>4</td>
</tr>
<tr>
<td>J</td>
<td>14</td>
<td>6</td>
</tr>
</tbody>
</table>

\(^1\)Skills categories are detailed in Table 5.4
\(^2\)Ratings provided at second interview

5.3 Other influences of the programme upon peer tutors

5.3.1 Teaching experience

Many peer tutors (n=24/64) were motivated to join STAR in order to gain teaching experience (see also Section 5.1). While 25 per cent (n=16) were enrolled in an education course at the time, others used the experience to help them decide on a career path.

I considered teaching as one of my options after my science degree and wanted some exposure to the Australian education system – I finished my Year 12 studies overseas [past tutor; commenced with STAR in the second year of BSc; questionnaire]

Choosing school teaching as a career

Some of the peer tutors interviewed said that their involvement in the STAR program had inspired them to become teachers, and they had changed their study options as a result. At least two peer tutors who were originally interested only in science had chosen to extend their studies to include teaching qualifications.

Several of the teachers interviewed were keen to encourage peer tutors to consider teaching as a career, as illustrated by the following response to the question ‘what are the potential benefits to the peer tutors?’

I know that it’s not a main thing for the course [STAR-PTP], their not supposed to be teachers, but hopefully it might inspire some of them to become teachers… which I always see as a real positive. Most of them [the peer tutors] go in there and from the beginning make it clear that they don’t want to be teachers. But it would be nice to think that some of them might change their minds. Sometimes it doesn’t take much! [teacher; interview]

Valuable experience for future teachers

Peer tutors who were already studying to become school teachers, or who were planning to do so after completing their first degree, tended to be keen advocates of peer tutoring. They described their involvement with the STAR-PTP as an opportunity to practise and develop their teaching skills with a group of students over an extended period. Whilst they acknowledged that in-school experience was a formal part of their education courses, they described the teacher practical placements as ‘short term’ and therefore limited.
It’s just the best thing! As an Ed student, we have practicals, but STAR is much better. [In my teaching placements so far] I just got to observe a bunch of different classes, and so didn’t have a chance to get involved with the students. But STAR is great because it is ongoing. You have a chance to get to know the students – I now know all their names (both classes) and they really appreciate that. I feel comfortable, and so do they. This isn’t possible in a practical, as you just settle in and its over [peer tutor; interview]

Similarly, teachers described peer tutoring as a valuable opportunity for student teachers to practise and develop their teaching skills. One teacher argued that due to the short-term nature of practical opportunities for teachers within their courses, student teachers are unable to see the results of their engagement with students over an entire term or semester. The STAR peer tutors who were student teachers had a far better opportunity, the teacher argued, to learn about communicating with students and to see the long-term results of this interaction through their involvement in STAR than they did through university practical placements.

I think it [STAR-PTP] should be expanded to be quite honest. It should be mandatory for student teachers. … they [the student teachers] go through a two or three week, or even a six week prac, or even a ten week prac and it’s just not the same as picking up a class through a whole year and seeing growth, seeing assessment, seeing the development, seeing the parent contact, seeing a whole range of other things that a teacher must do over a period of a year [teacher; interview]

One peer tutor, new to the programme and an education student, was similarly keen to advocate peer tutoring for education students. His perception was that the STAR-PTP was specifically targeting ‘straight science’ students, and that many ‘education/science double major students’ would be keen to be involved if they were made more aware of the opportunity.

One current peer tutor and education student also contrasted the STAR-PTP and teaching placements in terms of the relationship she was able to have with the students.

As a tutor, you’re there as a student aid. The student says ‘hey I don’t know how to do this’ and you do it with them. Whereas, as a prac teacher, you can’t have that relationship with them. You’ve gotta be a bit more distant. That’s not a real idea of what teaching’s about [peer tutor; interview]

Another peer tutor described the benefits in terms of experience and skills in dealing with school staff and with particularly challenging students. This peer tutor had a STAR-PTP placement in a lower-ability, Year 11 class and earlier in the interview had described the challenges and rewards of working with students with learning difficulties and behavioural problems.

STAR helped me a lot with, even with dealing with teachers because with teachers … obviously she didn’t know a lot about STAR either. So also I learnt how to deal with her, her colleagues, deal with relief teachers because a couple of times she was off sick and there was relief teachers and they didn’t know how to deal with me either. The relief teachers were like, ‘Oh my God. There’s a relief teacher in the class already, what am I here for?’ So it helped me a lot in dealing with people in general, especially in the education system. So that was another real bonus. So when I do prac now, I’m not as nervous as I was. … I’m really glad I did it. It made me able to cope with teaching a lot better as such. The kids don’t scare me, I mean some of the kids scared me in the beginning when I did STAR but they don’t scare me now and I know that I meet difficult, well challenging, difficult students in situations like that, I won’t be so scared as I was. I won’t be so hesitant on how to approach them and I won’t be anywhere near as, I don’t know, not scared, very nervous around them … because I know I can deal with them easier, so I’m more skilful at dealing with difficult students [peer tutor; interview]

One teacher commented that providing an opportunity for peer tutors to develop as ‘teachers’ was not an onerous task, unlike hosting a trainee teacher, which ‘takes considerable time on the part of the teacher’. A second teacher described providing a peer tutor with opportunities to get more involved in the teaching.

The girl that I had with chemistry, she was excellent. And, at one stage … because she was talking about maybe teaching as a career … I said ‘look you don’t have to, but if you
want to, why don’t you mark some of their work and they watch you while you do it?” And she did that and she got something out of that, because they never get to see me marking. I do it at home or whatever, and they could actually say “thank you” and “why did I get this?” and that sort of stuff. And then I said to her, perhaps you’d like to take a lesson one day. Now, I wouldn’t normally do that - but she was heading toward teaching. But she decided not to, and that’s great. It was an opportunity I offered her and she said no. That’s fine [teacher; interview]

5.3.2 Learning through ‘teaching’

A few peer tutors explained that STAR peer tutoring had helped them in their own disciplinary learning – either through communicating ideas with others, or through needing to revise the ‘basics’.

You don’t ever learn ‘till you teach someone else [peer tutor; interview]

It was good fun being back at high school ‘cause, you know… at university you get so far trapped in your own little field, and to go back to year-eight science and go, “We’re bubbling carbon dioxide through lime water, why are we doing that?” “What’s it going to do?” And I just… a couple of times I had to go back to the teacher… “Can you remind me of why we are doing this because I’ve actually forgotten.” So reinforcement of your basic scientific knowledge is really good [peer tutor; interview]

5.3.3 Experience with people and situations beyond academia

Teachers and peer tutors alike described the STAR-PTP as an opportunity for university students to experience life and society ‘beyond the world of university’.

I think the girl that I’ve got at the moment, she’s looking at these kids and she is seeing what is happening with society and how much time and effort it takes to try and solve some of the issues with young people. She’s sort of learning a bit about the other side of life that you don’t see at uni [teacher; interview]

I think getting uni students into a normal situation apart from just an academic situation is really good [peer tutor; interview]

It takes you out into the community and to help people and you get something out of it as well because it helps you learn how other people are as well. Its an excellent program to introduce you to more real world … it gives you experience [peer tutor; interview]

In the case of the hospital school, one teacher explained that volunteering at the PMHS provided peer tutors with a somewhat unique opportunity to work with sick children in a positive environment.

I think that for a lot of people, they have no idea about the difficulties that some people have in life … Volunteer work is something … it’s a growth for the person. I think it gives them an idea of how we [the hospital school] operate, a whole different work environment. It’s good for their self-esteem because they know they’re very appreciated … but it also lets them see children who are suffering that have a very positive attitude [teacher; interview]

5.3.4 Combining study and peer tutoring

Considering that the peer tutoring involves approximately one half day each week, we sought to discover whether available time was an issue for the peer tutors involved. When asked to identify the principal challenges that they experienced as peer tutors, only 3 out of 38 tutors mentioned ‘finding time’. However, availability was clearly a consideration for students considering volunteering.

I thought about doing it [last semester] but obviously because I was working so much and I just didn’t feel that I’d be able to fit everything in and I just thought well, it’s only a couple of hours a week. But I would have struggled to fit it in, and I just thought that I’m better off just leaving it and maybe doing it further down the track [new peer tutor; interview]

Having learned that, if you want a reasonable grade, you’ve really got to get into the research, so I decided that instead of doing 4 units I only did 3 … I thought that if I cut down one of my units, it gives me more time & it was actually good because it freed up 2 full days in my week and I can fit most of my lectures and labs all on a Tuesday. And I’ve only got 2 hrs on Thurs & Fri so I’ve got Thurs & Fri pm free and had all of Mon & Wed. So I went from having no time to having really way too much time & I had heard about peer
tutoring in my 1st year, & because I wasn’t sure that I wanted to continue with my BSC degree or do education (because I didn’t actually know whether I wanted to do that science or be a teacher) so I thought, well maybe if I did a bit of the peer program it would help me decide which way I wanted to go. But I knew with my previous study load, there was no way that I could do it, so this year, with my lighter study load, I thought I could do one day of peer tutoring & thought that was good [new peer tutor; interview]

Having volunteered, peer tutors continue to monitor their time commitment. The most common reasons cited for leaving the programme were first, graduation and second, increased study commitments or other time constraints.

5.3.5 Rewards and challenges: summary
The questionnaire based survey of peer tutors in Stage 1 of the study asked current and past peer tutors to list both the most rewarding aspects of peer tutoring, and the most challenging. The results are summarised in Table 5.6.

Peer tutors described the rewards of working with students and building relationships, and some frustration when the opportunities to interact were limited or when students were disengaged.

Reward: The relationships I built with the students - I enjoyed going and they looked forward to me returning [past peer tutor; questionnaire]

Reward: When a struggling student finally understands a concept you have been working on with them and they pass the required test/assignment/activity and the student is pleased and more confident in themselves [peer tutor; questionnaire]

Challenge: Teachers who didn’t have an idea on how to use the resource I was providing them [past peer tutor; questionnaire]

Challenge: Not every class had something for me to do - if they weren’t doing practicals I was ‘useless’. This made the teachers have to change their lesson plans on a few occasions [past peer tutor; questionnaire]

Challenge: Balancing reporting bad behaviour and winning trust of the students!! [peer tutor; interview]

Peer tutors also described the rewards of helping students learn and gain confidence, and the associated anxiety of either not having the necessary knowledge or communication skills.

Reward: When a struggling student finally understands a concept you have been working on with them and they pass the required test/assignment/activity and the student is pleased and more confident in themselves [peer tutor; questionnaire]

Reward: When a student gains confidence in their ability as most automatically assume they’re stupid or ‘can’t do it’ [peer tutor; questionnaire]

Challenge: Sometimes students’ questions, as it has been several years since I studied some of it [peer tutor; questionnaire]

Challenge: Trying to explain mathematical concepts in terms students will understand when it seems obvious to me [peer tutor; questionnaire]
Table 5.6 Responses of peer tutors to the questions: ‘What aspects of your role did you find most rewarding / challenging?’

<table>
<thead>
<tr>
<th>Rewarding aspects (n=)</th>
<th>Challenging aspects (n=)</th>
<th>Percentage of responses (n=77)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>working with students</td>
<td></td>
<td></td>
</tr>
<tr>
<td>providing assistance;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>encouraging and motivating students</td>
<td>20</td>
<td>26.0</td>
</tr>
<tr>
<td>lack of opportunity for interaction with students</td>
<td>5</td>
<td>6.5</td>
</tr>
<tr>
<td>relationship with the class</td>
<td></td>
<td></td>
</tr>
<tr>
<td>building a relationship with the students and teacher</td>
<td>13</td>
<td>16.9</td>
</tr>
<tr>
<td>disruptive or disinterested students</td>
<td></td>
<td></td>
</tr>
<tr>
<td>communicating with teacher</td>
<td></td>
<td></td>
</tr>
<tr>
<td>student learning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>students gain confidence</td>
<td>12</td>
<td>15.6</td>
</tr>
<tr>
<td>difficult questions from students</td>
<td></td>
<td></td>
</tr>
<tr>
<td>other</td>
<td></td>
<td></td>
</tr>
<tr>
<td>helping</td>
<td></td>
<td></td>
</tr>
<tr>
<td>tutors’ skills development</td>
<td>3</td>
<td>6.5</td>
</tr>
<tr>
<td>travel and finding time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>initial anxiety</td>
<td></td>
<td></td>
</tr>
<tr>
<td>total: 50</td>
<td>total: 27</td>
<td></td>
</tr>
</tbody>
</table>

*38 peer tutors provided a total of 77 responses to these questions, with many peer tutors citing multiple rewards
Chapter 6: Conclusions – the factors that underpin effective peer tutoring

Many examples of effective and successful placements were described by the teachers and peer tutors surveyed. Similarly, school students were almost unanimous in the view that having a peer tutor in class was ‘a good idea’ (see Section 4.1.2). Peer tutors were able to provide assistance to teachers and students, to motivate students and to serve as positive role models. Teachers described the benefits that ensue from having an extra person in the class (see Chapter 4) and peer tutors described developing confidence and communication skills (see Chapter 5). Students said that peer tutors helped them learn, and in many cases made their classes ‘more interesting’ (see Chapter 4).

It is clear from the study’s findings, however, that such positive outcomes are not guaranteed or automatic. Some participants described placements that did not work particularly well. Peer tutors could feel under utilised or unsure of their role in the classroom. Teachers and students commented that peer tutors occasionally struggled to show initiative or to engage with students.

Distilled from the variety of experiences reported by the peer tutors, teachers and students, this chapter describes six factors that influence the success of peer tutoring arrangements.

1. Matching peer tutors with classes and student needs
2. Establishing a rapport between peer tutors and both students and teachers
3. Classroom activities conducive to peer tutor participation
4. Efforts by peer tutors to initiate interactions with students
5. Youthful peer tutors who are current university students
6. A voluntary and non-coercive programme

1: Matching peer tutors with classes and student needs

The peer tutors surveyed were from diverse backgrounds and discipline areas, and were placed in a range of schools and classes. Both peer tutors and teachers described the need for consideration to be given to matching the peer tutor to the class. While participants described effective placements with a variety of combinations, there was a tendency to favour the following arrangements:

a. Assigning high-ability classes (ie. classes with students of higher academic ability) peer tutors with the strong, discipline-specific backgrounds.

b. More placement of peer tutors into lower, middle or mixed pathway classes, with less emphasis on a need for matching the disciplinary-expertise of the peer tutor with the subject in those classes.

Peer tutors placed in high-ability classes were valued by both teachers and students. One teacher described the peer tutors who had assisted him over several years with classes and projects for particularly gifted science students. The teacher described the peer tutors as playing a very important role in the class, and emphasised that the disciplinary knowledge and background of these “extremely competent” peer tutors were essential.

Peer tutors also favoured placement in classes where they felt confident in the subject area. Motivating students and helping them learn were cited by peer tutors as the principal rewards of peer tutoring, and they described feeling uncomfortable when they were in classes where they were challenged by the content. Students too stressed the need for peer tutors to be knowledgeable in the subject area.

Conversely, teachers also advocated more placement of peer tutors into classes with less able students, and that in such cases the specifics of the peer tutors’ disciplinary background was less critical. While they conceded that matching peer tutors availability
with school timetables was an unavoidable constraint, they argued that there could be more emphasis on placing peer tutors with ‘lower-ability’ classes. One teacher described a tendency for schools to nominate specialist, activity-based classes, where “an extra pair of eyes and ears” were helpful in managing complex practicals and project-based classes. While this was considered valuable, the same teacher argued that students in lower ability classes stood to benefit the most from having a peer tutor working with them.

2: Establishing a rapport between peer tutors and both students and teachers

The relationship between students and peer tutors is a critical component in the programme. Participants in the study described ‘relaxed and trusting relationships’ as a key characteristic of effective placements. Students described effective peer tutors as being ‘friendly towards students and teachers’. Conversely, teachers reported problems if peer tutors were uncomfortable in the class. Equally, new peer tutors were anxious when first meeting the class.

I was a bit nervous. I don’t know what I was expecting, but I think I was expecting the kids to ignore me and if I walked up to the desk asking if they wanted help, I was expecting them to try to get me to go away. But most of them weren’t like that and they actually wanted the help and needed the help. So you go to the desk and they didn’t really ask you but you just help them out. I didn’t feel like I was just standing there doing nothing. I was actually involved. So [the first day] was a lot better than what I was expecting [new peer tutor; interview]

New peer tutors also expressed concerns over the teachers’ expectations of them. They understood their role as defined during their induction into the programme, yet expressed anxiety around teachers’ perceptions and understanding.

I hope the teacher is briefed on what peer tutors are, what we are there for and not be expecting us to do unexpected things because we are not prepared to take a class. We are just there to help students [new peer tutor; interview prior to first placement]

The teacher is responsible for the class, not me...we are not there to discipline. Basically the teacher sets the task, we just work within whatever the parameters are and just fit in. So I’m hoping that’s the way it works [new peer tutor; interview prior to first placement]

The importance of establishing a rapport early on was emphasised by both peer tutors and teachers. Suggestions for ensuring this included:

- Having peer tutors visit the school, and meet the teachers involved, before their first class visit. This meeting could include a brief explanation to the schools’ principal mission or priorities, and a discussion of the approach taken by the teacher in their particular classes. The objective would be to ensure that teachers and peer tutors understand the programme and the role of the peer tutor, and that the peer tutor has an introduction to the teaching and learning culture of the school.

- Introducing the peer tutor to the class in a way that assured the students that the peer tutor was there ‘to help them’, but not as a teacher does. It was suggested by some teachers that this be a ‘low-key’ introduction – the aim being to ensure that students clearly distinguished peer tutors from trainee teachers.

- Providing opportunities, early, for the peer tutor to move around the class and speak with students in an informal way. Later, opportunities might be provided for the peer tutor to speak with the whole class about their university interests – but this was not advised on the first visit, when the emphasis was more upon assimilating the peer tutor into the class in a relaxed way.

Most teachers described the peer tutor-student relationship as being more relaxed and less formal than that of the teacher-student relationship. They described this as crucial to the success of the programme. Students were accustomed to having student/trainee teachers visit their classes, and these visits were not seen to be particularly valuable to the students – the benefits were to the trainee. In contrast, teachers and students alike
valued the benefits afforded schools by the STAR programme. For these benefits to be fully realised, however, teachers stressed the need for students to appreciate that peer tutors were not in the class as trainee-teachers. For those peer tutors who are also enrolled in education this poses an additional challenge, in terms of both their introduction to the class and how they participate thereafter. As one peer tutor with considerable teaching experience described:

> It has set me back a bit. I can take a class, but I’m not allowed to in STAR. You just have to sit and be a support… Over the last 3 years I’ve increased my responsibilities so I can take a class. STAR does not permit that so I’ve had to come back, take a step back so that’s a bit restrictive for me. But under normal circumstances, that would be fine. But if they want peer tutors to be ongoing, I think they would perhaps need to change their expectations, because you do develop skills and strategies and its very hard to sit at the back of the classroom and not want to get up there and get in there and do it [new peer tutor; interview]

Given the described importance for peer tutors’ to develop rapport with the students, breaks in the continuity of placements pose some potential challenges to the programme. The need to match peer tutor availability with school timetables means that peer tutors will often need to change school classes – or even schools – during the course of a year. This was true for many of the peer tutors and teachers interviewed – yet they generally described their experiences as rewarding and valuable. One teacher, in fact, commented that the novelty of having a ‘different face’ in class was positive, and spoke against an overemphasis on continuity. If peer tutors and schools have the skills and strategies necessary to quickly establish effective relationships, continuity is not essential.

Both peer tutors and teachers stressed that peer tutors should be ‘reliable’ – not missing classes too often or without notice. While teachers and students expressed understanding of the competing demands on peer tutors around examination time, teachers were less tolerant of peer tutors who were absent without explanation or notice. Reliability, however, was not a widely reported problem and some teachers commented that this was ‘not an issue’. One teacher from the hospital school – a school with extensive experience of working with volunteer organisations – commented that the reliability of STAR peer tutors was a hallmark of the programme.

3: Classroom activities conducive to peer tutor participation

There is a need for teachers to consider peer tutors in their class planning, but also for peer tutors to be aware that the nature of their involvement may vary from week to week. One peer tutor described his frustration at once turning up to the school, only to discover that the class was sitting an examination and there was nothing for him to do but sit at the back of the room. Others spoke appreciatively of instances where the teacher created opportunities for them to be involved.

> We were both new. So basically, he got me to sit at the side of the class during discussion times or when they were working. If there were any questions I could walk round and help them, basically. Questions on what they were doing or questions in general about uni and stuff. … It wasn’t that hands on. I would have liked to have been a bit more involved in the class [peer tutor; interview]

> I guess the teacher made it more practical for me in the classroom, which was really nice because the kids were a lot more active, nice and happy [peer tutor; interview]

However, this does not mean the teachers are expected to mould the curriculum or the school timetable around peer tutor availability. One Link teacher expressed the concern that some of his fellow teachers were of the impression that this was necessary, and hence they did not accept peer tutors in their classes.

The most effective peer tutor-teacher partnerships were characterised by planning and communication. Teachers knew the peer tutors - their individual strengths and their availability – and endeavoured to incorporate the peer tutor into the lesson plan. Peer tutors had an understanding of the curriculum, were kept informed about the lesson plans and were flexible in their expectations.
4: Efforts by peer tutors to initiate interactions with students

Appropriate introductions (see 2, above) and class planning inclusive of peer tutors (see 3, above) do not in themselves guarantee effective interactions between peer tutors and students. Ultimately, this relies upon the initiative of peer tutors. Peer tutors need to actively seek opportunities to engage with students. Teachers described as ‘less helpful’ situations where a peer tutor would require constant direction or would wait for students to take the initiative. Peer tutors need the confidence to initiate conversations with students, individually or in small groups.

I would like to see them fairly proactive so they actually go around and watch what’s happening because then the students are probably more positive about relating. I think the students find it hard when there’s a new person in the room to relate to them to put their hand up, some students will do that but some students find that more difficult [teacher; interview; in describing what makes for effective interactions]

I’ve been lucky because he [the peer tutor] seems to read which kid needs him - he seems to know. So that sometimes, before I’ve said ‘can you help that kid’, you look up from helping someone else and he’s over there already - that sort of thing. So, to me, that’s someone who’s like an equal and I like that. A little bit of initiative, not just waiting. I think that makes someone effective in my classroom, and in helping me to get the kids to where I want them to be [teacher; interview]

In addition, peer tutors need to be alert to situations that lead to them spending too much time with just a few students. Several teachers stressed this point. Peer tutors typically described ‘moving around, working with all students’ as an important aspect of their role. Both teachers and peer tutors identified situations that can lead to uneven attention:

- The peer tutor is more comfortable with some students than others;
- Some students are more demanding of the peer tutors’ attention; and
- The peer tutor believes that some particular students need more attention, and purposefully targets them.

The latter may be helpful in some situations, but should be negotiated between the peer tutor and teacher.

5: Youthful peer tutors who are current university students

While youth is not an essential characteristic of an effective peer tutor, teachers and students alike described effective peer tutors as being ‘on the same wavelength’ as the students. They described youthful people who understood and used the language of students, and who were relaxed in their dress and ‘manner’. In addition, peer tutors were ‘also students’. Students explained that this enabled peer tutors and students to relate in ways not possible for teachers and students.

It’s a really good idea to have kids who work with somebody who’s only a bit older than them. It’s nice for them [teacher; interview]

I think they [students] find it genuinely interesting to have another person only a few years above them. I think it has quite a lot of value. I felt that the interaction between the current student and the kids was really positive [teacher; interview]

6: A voluntary and non-coercive programme

A characteristic of the STAR programme is its voluntary basis and, from the perspective of many teachers and students, this is a key to its success. Several teachers commented that it is essential that peer tutors ‘want to be there’. They valued their enthusiasm, and one teacher made the point that any attempt to coerce or ‘force’ university students to participate would be detrimental to all concerned. Despite the best intentions, the teacher argued, peer tutors could not be expected to fully appreciate what was involved before they started and so should feel free to withdraw from the programme if it didn’t suit them.

This same teacher described his understanding of the incentives offered peer tutors, and therefore his surprise that the voluntary approach ‘has worked’.
When it [STAR] first started...they [the peer tutors] came along because they were getting something out of it, and then after a couple of years they [STAR management] announced that they were dropping that and were going to ask people - out of the goodness of their heart - to come in and spend time with 32 grotty little children. I said to them, ‘it’s not gonna work because it’s a one way relationship. They’re giving and not getting anything back’ … but it has worked! [teacher; interview]

Peer tutors are recognised for their involvement in the programme through a Certificate of Community Service, an incentive featured on the STAR web site. The web site also describes involvement in terms of developing skills valued by employers. Despite this, only one in five peer tutors gave ‘CV building’ as a motivation for joining the program. Twice as many said that they volunteered in order to contribute to the community and help young people.
References

