Peer Assisted Learning: a case study into the value to student mentors and mentees.

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Abstract

Peer Assisted Learning (PAL) is a system of student support used in a growing number of universities in the UK and worldwide. Practitioners in the School of Surveying at Kingston University have been running such a scheme for first-year undergraduates since 1990 and have recently undertaken a research project into perceptions of PAL by both attendees and mentors. Case study methodology (Tellis, 1997) was the chosen research design for the evaluation in which data from focus groups, interviews, and student questionnaires were collected and analysed.

The results support much of the previous literature related to PAL/Supplemental Instruction (SI) schemes, but also highlight gaps which this study may begin to fill. Students appeared to be clustered into two groups: those who used PAL as a means of

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managing a comprehension problem (reactive) that had arisen and those that used it as a means of preventing problems (proactive). Additionally, PAL mentors also fell into two groups: those who elected to become mentors for other-centred reasons and those who did so for personal gain. The findings show that both PAL attendees and mentors perceived a number of benefits from the scheme and that local lessons were learned that enabled the School of Surveying to better support its undergraduate students.

Keywords: PAL, student support, case study, surveying, mentor, mentee

Introduction

Peer Assisted Learning (PAL) is a system of student support used in a growing number of universities in the UK and worldwide. Its origins are SI schemes from the USA (Martin, Blanc and DeBuhr, 1983), which are timetabled, but voluntary, study skills sessions that are facilitated by successful more senior students.

This paper presents a case study evaluative research project that was undertaken to explore the impact on undergraduates who attended and those who mentored on a PAL Scheme in the School of Surveying at Kingston University.

The actual and perceived benefits to these groups of students are analysed in the context of the published literature.

Literature Review

The principles underpinning Peer Assisted Learning/Supplemental Instruction schemes have been identified from previous evaluative research (Falchikov, 2001; Rust and Wallace, 1994; Martin and Arendale, 1993; Capstick, 2004a; Capstick, 2004b). These principles include:

- The scheme should target high risk modules or courses, not high risk students
- First-year student participation should be voluntary

- Sessions should focus on both the learning process and on content
- Student mentors are facilitators and not quasi-lecturers

The aforementioned studies highlight three points:

1. Students resent being forced to participate in remedial modules and programmes, and students are more likely to benefit from support programmes that specifically target high risk courses rather than high risk students (Rust and Wallace, 1994; Martin and Arendale, 1993).
2. First-year students are more likely to engage actively in sessions that are student-facilitated rather than those that are facilitated by lecturers (Rust and Wallace, 1994).
3. Successful second and third-year students are better equipped than lecturers to help first-year students to become expert students (Martin and Arendale, 1993). Although as discussed below there is some evidence supporting the view that PAL schemes encourage students to take a surface learning approach.

These findings can be traced back to cognitive and social constructivist learning theories. Conflict can arise when new information does not fit into a student's existing mental organisation (Piaget, 1972). He referred to this as cognitive conflict and suggested that this causes disequilibrium for the student, resulting in an adjustment of his or her mental organisation to accommodate the new knowledge. Piaget also proposed that teachers frequently erroneously assume that knowledge is a copy of reality that can easily be assimilated without conflict but, that cooperation among student peers led to a genuine exchange of thought and exploration, and to a greater likelihood that new ideas would be assimilated.

Vygotsky (1978) proposed an alternative to Piaget's cognitive constructivism as an explanation for how learning takes place. He perceived the student as being in the process of entering the practices, values, ways of thinking and language of the wider community, in this case, the community of Surveying. Central to Vygotsky's development of social constructivism theory is social participation with others in learning activities. The theory hypothesises that social interaction with peers facilitates more learning than can be achieved by students on their own. The role that peers can play in this is to provide "expert scaffolding," which enables students to achieve their next level

of development (Falchikov, 2001, p 89). Hence, cognitive and social constructivism, provide a theoretical underpinning for PAL schemes, suggesting that learning best takes place when it occurs in discourse with peers from within that knowledge community.

Benefits to PAL attendees

PAL schemes can be offered as part of modules that are perceived as having difficult or challenging content, or, alternatively, can be offered as a way of developing specific cognitive or academic skills associated with the module or its assessment. In the UK, the former appears to be the most common approach. Previous research into PAL schemes has reported positive impacts of such schemes on assessment marks (Bidgood, 1994; Coe et al, 1999). Others have demonstrated the positive impact of PAL schemes on the development of transferable skills (Price and Rust, 1995) or on the development of thinking skills (Capstick and Fleming, 2001). Research into PAL schemes has also focused on the positive impact of cooperative and participative learning through discussion (Donelan, 1999) and how cooperative learning in PAL sessions influences student cognition and the ability to apply abstract ideas (Lundeburg and Moch, 1995). However, studies have also identified some negative aspects of PAL schemes and their evaluation. In one study it was argued that, although attendance at peer support sessions was positively and significantly correlated with academic performance, students adoption of less meaning-orientated approaches to studying was an indication of a fall in their quality of learning (Ashwin, 2003a). In trying to find a link between participation in PAL sessions and improved performance, presumptions and assumptions are made about the actual mental processes that might be affecting improved performance (Capstick, 2004c).

Concerns have been expressed that the learning environment of PAL can lead to a decrease in the quality of learning because of the emphasis on succeeding in assessments rather than on a deeper understanding of material (Ashwin, 2003a; Capstick, 2004c). PAL sessions may encourage a surface approach to learning the content (Capstick, 2004a), and other evaluative studies of PAL programmes support this concern (Saunders and Gibbon 1998; Miller and Packham 1999; Packham and Miller 2000).

What is apparent from the literature is that the principles underpinning PAL are sound as is the theoretical underpinning (Capstick, 2004c), and that the potential for benefits to students are clear. Further research is needed to ascertain the actual learning processes that take place through PAL sessions and the extent to which they promote or inhibit deeper, strategic and surface approaches to learning (Marton and Säljö, 1997).

Benefits to PAL mentors

Students, who successfully take on the role of PAL mentors, often demonstrate characteristics of "experts" (Weinstein, 1988). These "experts," according to Weinstein, are people who know more, whose knowledge is better organised and more integrated, who have effective strategies for acquiring and using knowledge and are self-regulating (Weinstein, 1988). Teachers may be described as experts in their subject area. However, successful students are often experts at being students. They are therefore, better placed to lead first-year students towards becoming expert students.

Fewer studies have been undertaken into the benefits of PAL schemes to those who act as PAL mentors. Students who take on the role of PAL mentor develop a greater understanding of the social aspect of learning (Ashwin, 2003b) and successful students who take on the role of mentors in SI schemes report an enhancement to a range of their personal skills (Donelan and Wallace, 1989).

Finally, there appears to be little qualitative literature related to the reasons why students are (or are not) motivated to engage in a PAL scheme. The study presented here may begin to address this.

The context of the study - Implementation of the Peer Assisted Learning scheme in Surveying

The purpose of the PAL scheme for first-year undergraduates in Surveying was to offer small group learning sessions on a voluntary basis. The intention was to enable first-year students to:

- Gain confidence in their own ability to work on, and solve, problems.

- Develop greater understanding of course content.

- Take greater responsibility for their own learning in an informal learning environment.

Second-year students who had successfully completed the first year of the same programme were trained as mentors for these weekly PAL sessions. These second-year students were, therefore, aware of the challenges of the first year of the programme.

It was made clear to the students that PAL mentors do not teach; rather, they help first-year students to gain course-specific skills, and give general advice on resources and approaches to study. The mentors, in short, help junior students to become skilled at being successful students. In the School of Surveying PAL mentors run one-hour timetabled weekly sessions, take a register of attendance to monitor uptake and report to the PAL tutor (a member of academic staff) either verbally or by writing a weekly report highlighting issues, problems and concerns raised. PAL mentors receive payment of £130 per term and, ideally, are required to attend a two-day training session followed by ongoing supervision and observation of sessions by the University PAL co-ordinator (a centrally based member of academic staff) who also offers an advisory service to PAL mentors. In practice, however, not all mentors attended the training programme. The PAL attendees did not all attend every session with the numbers per session ranging from 2 to 10.

The evaluative research method

An evaluative case study research project was undertaken to ascertain the perceived benefits of the PAL scheme to both first-year students and to those second-year students who acted as PAL mentors. Case study methodology (Tellis, 1997) is designed to expand and generalise theory (Yin, 1994), and was the chosen research design to assist in building upon current work. This research was carried out by giving special attention to completeness of observation, reconstruction and analysis of the case under study as recommended by Zonabend (1992). Through using multiple data

collection methods to incorporate the views of all those involved, the aim of which was to look at events that make up the case in a systematic way, we aimed to gain a deeper understanding of peer mentoring.

A six-stage research design was used that drew upon the work of Yin (1994), Stake (1995) and Simons (1980), as is shown in Table 1.

Table 1.   The case study research design and process (from Yin, 1994)

1. Identify and define the research questions
2. Select the case (cases) and determine how data will be collected and analysed
3. Prepare to collect data
4. Collect data
5. Analyse the data
6. Write the evaluative report

The research questions for this study were:

- What are attendees' perceptions of the value of PAL sessions?
- Why did other students (non-attendees) not attend PAL sessions?
- How do PAL mentors perceive the benefits of being a PAL mentor?

The data collected was from PAL mentors and first-year students from the 2004/05 and 2005/06 cohorts. The total numbers of first year students enrolled onto the 2004/5 and 2005/6 undergraduate programmes in surveying was 124 and 208 respectively. 55 of these students participated in the PAL scheme. A questionnaire was used for this study that consisted of sixteen Likert-style questions and eight open ended questions. This is a modified version of that created in the peer learning project based at Bournemouth University (Capstick, 2004c) and is shown in Appendix 1.

Questionnaires were distributed to all students in both cohorts whether they had participated in the PAL sessions or not. In total 10 questionnaires were returned from PAL attendees and 30 returned from PAL non-attendees. In addition two focus groups were undertaken, one with PAL attendees for each cohort. These were facilitated following methods outlined by Merton et al (1990) to cover the maximum range of relevant topics in line with the research questions, provide specific data that could be

coded and analysed, explore the participants' feelings through facilitating group interaction, and to take into account the personal contexts of the participants. The questions raised and prompts used are shown in Appendix 2.

Additional data were collected from PAL mentors of whom there were four for each of the cohorts, via one-to-one Interviews with one mentor from the first and two from the second cohort. The interview questions used were adapted from Capstick (2004c) in line with our research questions and are shown in Appendix 3.

The extent of the data collection is summarised in Table 2

Table 2.   Data collected from PAL attendees and mentors

	Number of students in the First year cohort	Total number of PAL attendees	Number of questionnaires returned		Number of PAL attendees at the focus group	Number of One to One interviews with PAL mentors
			PAL Attendees	Non-PAL attendees		
2004/05	124	35	10	30	10	1
2005/06	208	20			6	2

Findings

Table 3 shows the results from the student questionnaire.

Table 3.   Questionnaire scores from PAL attendees

Question (agree or disagree that the PAL sessions contributed to the following)	Student (number of sessions attended)									
	A (1)	B (2)	C (1)	D (3)	E (3)	F (1)	G (2)	H (6)	I (2)	J (6)
Understanding the subject matter of the course	4	4	5	5	4	4	2	2	2	4
Enjoyment of learning	3	4	4	5	3	3	2	2	2	4
Opportunity to clarify basic concepts	3	4	5	5	4	4	2	4	3	4
Opportunity to clarify complex concepts	3	3	5	5	3	4	2	2	3	4
Better marks in assignments	3	3	4	5	3	3	2	2	2	4
Social aspects of learning (learning with others)	3	4	4	5	4	4	4	2	2	4
Development of my confidence	3	4	4	5	4	3	2	1	1	4
Opportunity to air concerns away from teaching staff	3	4	4	5	x	4	4	4	3	4
Better preparation of assignments	3	4	4	5	x	4	2	3	3	4
Development of study skills (e.g. essay writing, use of library, note taking, planning	3	3	3	5	x	4	2	3	2	4
Remembering factual information (e.g. names, dates)	3	3	3	5	x	3	2	2	3	3
Awareness of course expectations	3	4	4	5	x	5	4	4	4	4
Reassurance about course-related concerns	3	4	4	5	x	4	4	3	x	4
Reassurance about non-course-related concerns (e.g. accommodation, finances)	3	3	3	4	x	3	3	2	x	2
Settling into Kingston University	3	4	3	5	x	4	4	2	x	1
Obtaining a 2nd Year's perspective on the course	3	4	3	5	x	5	4	4	x	4

Scoring used: 1 = strongly disagree, 5 = strongly agree, x = no response

The data indicates that the greatest benefits of attending PAL sessions were the opportunity to improve awareness of course expectations, air concerns with PAL mentors and fellow first-year attendees and to receive reassurance about course related

concerns, and learning about the perceptions of more senior student mentors who were successful. Non-course related issues such as reassurance about accommodation and finance were least valued.

The open-ended questions and data from the focus groups and interviews were analysed using a method of thematic analysis (Van Manen, 1990). A theme is defined as the experience of meaning, or a simplification of the summary of a significant factor (Van Manen, 1990, p. 87). Van Manen suggests three processes for isolating thematic statements: the *holistic approach*, the *selective or highlighting approach*, and the detailed or *line-by-line approach*. The first approach produces a more global identification of themes, seeking overall meaning of the text, the second focuses on phrases or sentences that seem to stand out in the text and the third approach is a close examination of the text sentence by sentence. All three approaches were employed in this analysis. One researcher undertook the initial thematic analysis and this was reviewed by a second researcher to ensure agreement.

Most PAL non-attendees indicated that they were part-time students; most of these indicated that, as part-time students, they had never heard of the PAL sessions, while the few that had, found that the sessions did not coincide with the one day each week that they were at the University. All full-time students who did not attend PAL sessions indicated that they did not feel the need for this type of support, although one respondent indicated that she or he might attend selective sessions in future (e.g. to better understand difficult concepts in Surveying such as valuation). What emerges from this data is that the PAL sessions were very much geared towards full-time students on this programme.

From the open-ended interview questions, the focus groups and interviews with mentors, three major themes emerged for PAL attendees.

Attendee theme 1: Environment for learning

> "*It's different to lectures…the one hour schedule (of lectures) gives you little opportunity to ask questions*"

Attendees chose to attend PAL sessions for a number of reasons ranging from not understanding a particular lecture -leading to ad hoc attendance:

> "*Most of them wouldn't come week in week out, they'd only come when they needed help, and they didn't need help every week"* (mentor)

-to those who went to many PAL sessions as a way of preventing problems and preparing for assignments.

> *"If you stayed he'd [The PAL mentor] come out with a few things that if you were doing your course work you knew you'd be able to use."*

These two extremes can be described as proactive and reactive PAL attendees. A majority of the attendees identified issues related to the environment for learning that was provided in successful PAL groups, in particular the ways in which they provided a safe environment for learning.

The flexibility of the PAL sessions also appeared to contribute to their success and they were felt to enhance the entire first year learning experience in a number of ways:

> *"PAL sessions give valuable for tips on time management because the mentors are more believed than lecturers about how long work will take."*

> *"…unofficial knowledge, e.g., which books are worth buying."*

The environment for learning and perceived enhancement of learning that PAL sessions brought played a significant part in attendees continuing to come to PAL sessions. In addition mentors appear to play a part in enabling attendees to better understand significant concepts within the discipline being studied.

> *"The mentors help to contextualise learning. The lecturers say, 'You'll understand it at the end of the course.' But the mentors give more information."*

Despite the overall perceptions that PAL sessions created a good environment for learning, first-year PAL attendees also made suggestions for how they could be improved:

> *"I would like to have had a session with a course work deadline plan as the focus of the session."*

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Attendee theme 2: Perceptions of achievement

An important aspect relating to this theme was the impact of seeing student work from previous years in the PAL sessions; there appeared to be a perception that seeing previous years' work gives a sense of what they need to do to achieve. Attendance at PAL sessions gave some attendees a sense of what was possible.

> *"They give insights and advice that you wouldn't otherwise get, like how different lecturers mark."*

Attendees indicated that by getting advanced information from PAL mentors about what the second year is like encourages them to achieve in their first year. In fact 85% of PAL attendees progressed to the second year as against an overall figure of 75%. This relationship between quantifiable success in the first year and attendance at PAL sessions acted as an additional stimulus.

> *"At induction, lecturers highlighted the positive correlation between those who attended PAL sessions and achievement."*

However, the data from this study does not suggest a causal relationship between PAL attendance and first-year success, and it is possible that students who would have been successful anyway might be more likely to take advantage of the PAL scheme.

In addition, certain pieces of coursework led to an increase in student attendance at certain PAL sessions, and overall, first-year attendees perceived that one of the most positive aspects was how PAL sessions and mentors contributed to the achievement of good assessment results:

> *"My group members for the project attended [PAL session] together."*

> *"…helped me to understand what was expected of me and what standard we should be going for."*

Attendee theme 3: Organisational issues

> *"…time spent negotiating time and space to meet [in a PAL session] after a lecture was well worth it."*

These included the timing of PAL sessions, timetabling and resource issues. PAL sessions were timetabled to run in a designated time period in a pre-booked room. Many barriers or negative aspects of PAL sessions that emerged from the data from those who attended were related to these organisational issues. When asked to identify the aspects of PAL that they disliked responses included location and lunchtime timing.

The attendees indicated that some of the rooms that were allocated for timetabled PAL sessions were too far away from the location of the lectures. In addition, rooms were changed at the last minute and the information was not necessarily conveyed to attendees. Attendees concluded that, despite this, PAL attendance was all about personal motivation and that "Only the conscientious attendees turned up."

Attendees and PAL mentors, however, also found ways of overcoming some of the identified organisational barriers. In some cases mentors and attendees negotiated together to meet at times and places that were different to the designated timetabled PAL sessions.

Mentor theme 1: Becoming a PAL mentor

> *"PAL helped me during my first year to find my way around uni and gave me the opportunity to ask questions about what I didn't understand. I wanted to help other first-year students to get the same support."*

Second-year students expressed a number of reasons for choosing to train for, and become, a PAL mentor. Some chose to take on the role because of their own positive experience of being in a PAL group when they were in their first-year, while others were primarily interested in perceived personal gain from being a mentor, including CV enhancement, development of confidence and presentation skills, and the opportunity for extra responsibility and contacts.

> *"…networking opportunity, now and in the future...I thought it would help me to network informally with other potential Surveying professionals."*

All mentors were interviewed for the role. Although the School of Surveying provided mentorship training, only some undertook it while others felt it unnecessary. Those who had undertaken training and found it worthwhile also seemed to perceive that having

been a student in the PAL group in their first-year had been the best training for being a PAL mentor in the second year. Follow up training was also provided and those who had attended the initial training also tended to come to the follow-up training session and find it useful:

> *"The follow-up training confirmed that I was being effective"*

Mentoring theme 2: Being a PAL mentor

The role of being a PAL mentor included providing ongoing support and guidance, and managing the day to day issues and situations that arose in the PAL sessions. Mentors felt they received good support from academic staff and identified some specific support and guidance that helped.

> *"The PAL tutor who is responsible for PALS in our school offered to answer questions and asked us about main problems students were having and their progress."*

However, PAL mentors also identified areas where support could have been improved through reducing the administration tasks, for example, the payment forms and the rooming issues.

Each PAL mentor organised their sessions in a similar way. Each session involved filling in the attendance register, making some opening remarks, waiting for attendees to ask specific questions, answering questions and talking to the attendees , finding out how their course work is progressing and offering advice. Some PAL mentors worked with the group as a whole; others divided it into smaller groups. However, from the data, it appears that the experience of being a mentor varied and changed over time and this affected mentors' perceptions of whether their expectations were met. Some mentors were disappointed that their experiences did not match their expectations.

> *"I thought the students would take the opportunity to attend all sessions during the year but that didn't happen. Some students…didn't take it seriously. It is voluntary and should help them with their problems."*

> *"Very often we feel like lecturers being in front of students…they didn't come up with questions but were waiting for us to entertain them."*

Others felt that their experiences of being a PAL mentor met their expectations well, and all perceived benefits to themselves in undertaking the role, but the nature of these varied: younger PAL mentors identified issues of confidence and developing presentation skills as being the major benefits to themselves. Some older mentors felt that it was their existing personal confidence that motivated them to become PAL mentors. They also tended to identify other benefits, largely relating to their own personal and educational growth and development and they highlighted the social gains.

> *"…being able to help and set up a social network. It is incredible how many students know my name. Even if students I worked with have nearly finished their second year we are now still in touch and questions and problems are still discussed."*

There was an apparent association between the reasons mentors gave for becoming a PAL mentor and the aspects of the role they found most enjoyable. Those who had identified personal gain reasons enjoyed things such as developing confidence and presentation skills, developing social networks, consolidating own learning and keeping the mind sharper. Those who had identified non-personal reasons for becoming PAL mentors tended to most enjoy the "other-centred" benefits of mentorship such as:

> *"Giving back to students and seeing them go through the learning experiences."*

> *"Seeing student's anxiety dissipate throughout a session."*

Mentors also appreciated that they were able to:

> *"speak in ways that lecturers can't."*

Those who had become a mentor for personal gain and those who had done so for "other centred" reasons both identified aspects of being a mentor that were least successful, least useful or that they disliked. These included administrative problems related to room bookings and payment forms, decreasing number of attendees coming to PAL sessions as the year progressed and passivity of attendees in PAL sessions.

> *"They expected us to entertain them instead of taking an active part."*

There is also a point that seems to demonstrate convergence between evidence from PAL attendees and PAL mentors in relation to the different reasons/purposes that attendees came to PAL sessions. Mentors claimed that although those who attended PAL sessions regularly found them to be beneficial in terms of their learning, other attendees only came to sessions when they "became unstuck."

> *"…some students only appeared [at PAL sessions] near examination times when they realised …that there was something they were not sure about…"*

> *"There was a difference between students [who regularly came to PAL sessions] who wanted to learn and those who came only when they had a problem…"*

This may illuminate the difference between attendees who used PAL sessions proactively as a means of learning prior to any problems being identified, and those who used PAL sessions reactively when things began to go wrong.

Mentoring theme 3: Potential for improving the PAL scheme

PAL mentors articulated improvements that they felt could be made to the scheme under a number of broad headings: fostering active student participation; incentives for student attendance; compulsory versus voluntary attendance; and administrative issues.

> *"I think the idea (of PAL) is brilliant but it still needs students to take on the idea and to participate. Students need to understand that the first year is the basis for the following years."*

However, PAL mentors seemed unable to suggest ways in which this might happen. Some suggested that incentives need to be offered but did not articulate what these might be and what might work. There were mixed views about whether PAL sessions should continue to be voluntary but most mentors agreed that this should be the case.

> *"I wouldn't make it compulsory…keep the informality…perhaps more incentives for attending but that would contradict it being voluntary."*

The administrative issues associated with mentorship had been raised previously. In terms of potential improvements to the PAL scheme, mentors suggested that issues

related to filling in and getting payment forms processed and better room booking procedures would improve the way PAL works.

Discussion

The perceptions of the PAL attendees in this study indicated that they fell into two groups: those who used the PAL sessions when problems arose or as a means of managing a comprehension problem (reactive) that had arisen, and those that used them as a means of preventing problems (proactive). Those in the reactive category described the learning environment of PAL as being one where questions could be asked, where mentors contextualise learning, where new material from lectures that was hard to understand could be clarified and where problems associated with new material could be solved.

> *"The mentors help to contextualise learning".*

> *"It's different to lectures…the one hour schedule (of lectures) …little opportunity to ask questions…PAL mentors made it more comfortable for me to ask questions…"*

> *"They have clarified lectures to help me get a better understanding of work, such as valuation."*

Those who used PAL sessions proactively described the learning environment in terms of finding out how to approach learning and studying, developing time management skills, understanding group dynamics and preparing for assignments. Indeed, certain pieces of coursework led to a rise in attendance in PAL groups immediately prior to the submission dates for that coursework.

> *"PAL teaches how to approach learning,"*

> *"I learned time management …PAL sessions are valuable for tips on time management because PAL mentors are more believed than lecturers about how long work will take."*

> *"It helped me by outlining key points needed to gain a high mark in coursework."*

Many of the findings that emerged from this study can be discussed against the existing literature about PAL schemes. The majority of surveying students who participated perceived that there was value in the PAL sessions. The findings from this study suggest that attendees valued the cooperative learning environment created in the PAL sessions.

> *"My group members for the project attended (PAL session) together."*

It may be that such learning cooperation among peers might have led to exchange of thought as explored in some of the literature (Piaget, 1972), but the findings of this study do not necessarily confirm this. This study of the PAL scheme in Surveying does appear to confirm similar findings in the literature (e.g. Falchikov, 2001) that PAL mentors provide expert scaffolding which enables attendees to better achieve. In addition, the opportunity to air concerns with PAL mentors and fellow attendees, and to receive reassurance, the opportunity to clarify course requirements and expectations, and the perceived benefits of learning from the experiences of successful, more senior student mentors were indicated by the quantitative data and largely confirmed and expanded through the qualitative data.

The success of the PAL sessions was also influenced by the perceived qualities of good mentors and the nature of the relationships that the PAL sessions helped to foster. Characteristics of a good mentor were identified by PAL attendees.

> *"It's easier to learn from someone who's had to work it out for themselves."*

> *"They seem to be at the level I am on…"*

A good PAL mentor, according to attendees,

> *"…recognises different learning abilities – styles – ways of communicating."*

> *"…helps with the socialising process."*

> *"…is a learning role model."*

This study also supports the suggestion (Ashwin, 2003b) that PAL schemes are strongly influenced by the context in which they operate, both in terms of processes and outcomes. The environment for learning created by the PAL groups was seen as a key factor in the perceived usefulness of the PAL sessions.

For attendees in both the reactive and proactive categories, there was a general perception that PAL sessions contributed to their achievement and success in assessments. They spoke of clarifying the standard expected in assessments and of getting help with coursework assignments:

> *"if you have a problem with your work they [mentors] are happy to bring in their work and they'll show you how to set it out"*

The findings from the PAL mentors indicate that, like the attendees, they also fall into two groups: those who elected to become PAL mentors for other-centred reasons and those who did so for personal gain. The former did so to give something back to the University or to enable first-year PAL attendees to experience what had been a positive experience for them.

> *"It is an area that I can give something back to the university."*

> *"When I had the chance to give something back, I took it."*

> *"PAL helped me during my first year to find my way around uni and gave me the opportunity to ask questions about what I didn't understand. I wanted to help other first year students to get the same support."*

Those who became PAL mentors for personal gain did so for the extra money, because it would look good on their CV's, for social networking or to gain presentation skills that would help their future career.

> *"I did it for personal benefit…to enhance my CV."*

> *"…develop confidence and public speaking skills"*

> *"…opportunity for extra responsibility"*

> *"…networking opportunity, now and in the future...I thought it would help me to network informally with other potential Surveying professionals."*

The training and follow-up sessions were seen by most mentors as worthwhile and as being of use beyond their mentorship role, although a higher proportion of those who became PAL mentors for other-centred reasons, appeared to appreciate the training more. As mentors became more experienced and confident in the mentorship role, they felt able to change the way they ran the sessions, which, in turn, changed their perceptions of the role of the mentor and their expectations of the role. Those mentors who had identified increased mentoring confidence and skill cited a number of areas where they benefited from being a mentor. An important finding from this study is the identification of some potentially significant information about PAL mentorship, including motivation for being a mentor, preparation for mentorship, organisational issues that both assist and hinder the PAL mentorship role and some of the characteristics of a good PAL mentor.

Conclusions

Higher education is a complex process for students, requiring them to learn new material, develop higher order cognitive skills and to become successful. Whereas academic staff are responsible for presenting content and also contribute to the development of certain cognitive skills, this study demonstrates, in line with others (e.g., Martin and Arendale, 1993), how successful second-year students can be better equipped than lecturers to help those in their first year to become expert students. However, what counts as an "expert student" needs further examination. For example, in this study, becoming an "expert student" might be construed as learning how to successfully navigate through the first year of an undergraduate degree and to enable first-year PAL attendees to develop surface and strategic approaches to learning (Marton and Säljö, 1997). The findings seem to indicate that the PAL scheme in surveying did, indeed, help students though their first year with perceived benefits to both PAL attendees and mentors. There is some evidence that, for certain students, they developed strategic approaches to their learning.

However, "expert student" might also be defined in relation to the development of deep approaches to learning and the development of cognitive skills such as analysis and synthesis. Some students in this study did indicate that PAL sessions enabled them to develop these skills. However, although this study demonstrates that successful senior students are well-equipped to help new students to learn, the issue of measuring the actual learning processes that take place in PAL sessions and the extent to which PAL sessions help to either promote or inhibit deep approaches to learning (Marton and Säljö, 1997) still needs further study. It may be that the role of PAL is to contribute to the first definition (above) of the "expert student," while it may remain the role of the academic lecturer to develop in the students those skills that address a definition of "expert student" that is related to development of deeper approaches to learning.

Finally, as a result of this work, changes have been made to this PAL scheme to enable the sessions to be more accessible to a greater number of first-year students (full-time and part time) by incorporation it into the formal timetable. Work is also in progress to provide improved support to PAL mentors who now meet half termly with the PAL Tutor to discuss issues raised by students. Minutes of the meetings are fed through to the School Staff and Review meetings for further action as a result of which PAL mentors are now invited to attend Student Consultative meetings with staff and student year representatives. PAL mentors have been given the facility to email all first year students and respond to queries. A recent move to newly refurbished accommodation has enabled the School to provide a regular meeting place in a bright, colourful and airy reading room for the PAL sessions which is a great improvement on previous venues which could change from week to week and sometimes be on a different campus. A formalised feedback mechanism is now in place with questionnaires to first year students attending PAL sessions completed at the end of the year.

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
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Appendix 1: School of Surveying First Year PAL Evaluation Questionnaire.

1	Approximately how many PAL sessions have you been to this year?
2	If you have been to 3 or more PAL sessions, what has made you keep attending?
3	If you have not been to a PAL session, or to less than 3 sessions, please indicate

If you have been to *any* PAL sessions please indicate whether you agree or disagree that they contributed to the following (by circling the appropriate response)

		--	-	?	+	++
4	Understanding the subject matter of the course	--	-	?	+	++
5	Enjoyment of learning	--	-	?	+	++
6	Opportunity to clarify basic concepts	--	-	?	+	++
7	Opportunity to clarify complex concepts	--	-	?	+	++
8	Better marks in assignments	--	-	?	+	++
9	Social aspects of learning (learning with others)	--	-	?	+	++
10	Development of my confidence	--	-	?	+	++
11	Opportunity to air concerns away from teaching staff	--	-	?	+	++
12	Better preparation of assignments	--	-	?	+	++
13	Development of study skills (e.g. essay writing, use of library, note taking, planning time)	--	-	?	+	++
14	Remembering factual information (e.g. names, dates)	--	-	?	+	++
15	Awareness of course expectations	--	-	?	+	++
16	Reassurance about course-related concerns	--	-	?	+	++
17	Reassurance about non-course-related concerns (e.g. accommodation, finances)	--	-	?	+	++
18	Settling into Kingston University	--	-	?	+	++

19	Obtaining a second year's perspective on the course	--	-	?	+	++
20	In which other ways have you found PAL to be of value?					
21	*If* PAL has been helpful for your assignment or other coursework, please describe how PAL has been helpful in this way					
22	*If* PAL has been helpful towards understanding topics, please describe how PAL has been helpful in this way					
23	*If* PAL has been of value in terms of its social/ group learning format, please describe how PAL has been of value in this way					
24	*If* PAL has been of value in terms of obtaining a second year's perspective on the course, please describe how PAL has been of value in this way					
25	Which (if any) aspects of PAL do you dislike?					
26	What would you like to see improved or developed in relation to PAL?					
27	Any other comments?					

Appendix 2: Focus Group Schedule to PAL attendees

Schedule for Surveying PAL focus

The aim of this focus group is to give us a deeper level of understanding of the ways in which the PAL has worked for you, in particular your actual experience of how it was run and how it worked in terms of your learning and experience as a student.

To Individuals

What are the single best and worst things about PAL?

To Group

Can you describe the PAL sessions you went to?

This question is not about evaluating the session but more about how the session worked.

Prompts:

- How were they led
- What makes them different from lectures
- What has made you keep attending?
- Please describe how PAL has been helpful or unhelpful.

If we consider learning, how do you feel the PAL sessions have been involved?

Prompts:

- Has PAL helped with group work?
- Has PAL helped with understanding certain topics?
- Can you explain a learning experience?
- Why was it important?
- What was it about the experience that helped you to understand?
- How does the way in which the session are run/led affect learning

    Confidence to speak out?

    Real second year experience?

    Perspective on the course?

What factors do you feel would influence Peer Assisted Learning?

Prompts:

- Barriers/benefits of learning in a PAL setting?

What are the skills/characteristics/abilities of a good PAL mentor?

What would you like to see improved or developed in relation to PAL?

Do you have any comments about the guidance you received?

Appendix 3: Interview questions to PAL mentors

<u>**PAL Surveying interview schedule**</u>

Purpose of interview:

To assess your experience of being a PAL mentor with Surveying students and to identify benefits, drawbacks and potential improvements.

Background and Training

1.   Why did you choose to become a PAL mentor?

2.   Did you have any initial training?

3.   Was the initial training sufficient\worthwhile?

4.   What initial training would you have liked?

5.   Did you have any follow-up training?

6.   Was the follow-up training sufficient\worthwhile?

7.   What follow-up training would you have liked?

8.   Could you describe any ongoing guidance and support that you may have had?

9.   Was the ongoing guidance and support worthwhile?

10.   What ongoing guidance and support would you have liked?

Experience of PAL

11.   Please describe your experience of the PAL sessions

12.   Did your experience meet your expectations?

13.   Did you gain anything from your experience as a PAL mentor? If so please describe what you gained.

14.   Did being a PAL mentor affect your confidence? If so please describe how

15.   Did being a PAL mentor affect your presentation skills? If so please describe how

16.   Which aspects of being a PAL mentor did you most enjoy?

17.   Which aspects of being a PAL mentor did you most dislike?

18.   Which aspects of being a PAL mentor did you find most/least useful?

Follow up

19.   In your experience what works well within PAL

20.   What makes a good PAL mentor

21.   What could be improved and how?