Speech and Language Therapy students' experience of Peer Assisted Learning: undergraduates investigate PAL as a means of enhancing academic and professional development

Anne Guyon
University of East Anglia

 Zoe Butterfint
University of East Anglia

Andrea Lacy
University of East Anglia

Aisha Sanosi
University of East Anglia

Katie Sheridan
University of East Anglia

Jessica Unwin
University of East Anglia

ABSTRACT

The implementation of Peer Assisted Learning (PAL) on healthcare courses in Higher Education Institutions has been explored in a number of studies. This paper presents research into the experience of PAL on a BSc Speech & Language Therapy (SLT) programme. The research was conducted by final year undergraduate SLT students to form the basis for their final dissertations. The focus for their research was on the effects of PAL on academic and professional development for both mentees and mentors on the same course. Data were generated from standard PAL evaluations and focus groups. Findings indicate that mentees benefit from PAL in terms of their university experience and learning. Mentors benefited from opportunities to develop and practice skills for their future employment. Engagement with PAL is attributed to its structured yet informal nature and the enthusiasm of the mentors. However, the collaborative nature of PAL takes time to develop, impacting on the behaviours of both mentees and mentors. Overall PAL offers mentees and mentors opportunities which enhance their academic learning and professional development.

1

Key words: Peer Assisted Learning; Speech & Language Therapy; student research; academic learning and professional development

Introduction

Peer Assisted Learning (PAL) is a support system by which first year students are provided with academic guidance by students studying at higher levels on the same course. Learning is achieved through discussion and shifts the emphasis from individual to cooperative knowledge acquisition (Capstick, 2004; Capstick and Fleming, 2004). This collaborative approach allows students to share knowledge and experience in order to achieve common learning goals (Laal and Ghodsi, 2012; Laal and Laal, 2012). Universities are becoming increasingly aware of the benefits of peer collaboration (Hammar Chirac, 2014; Bannan-Ritland, 2002). Students learn to 'inquire, share ideas, clarify differences, problem-solve and construct new understandings' (Hammar Chirac, 2014, p.2). Students often form informal study groups with friends. PAL formalises the learning which occurs in these groups (Boud et al, 2001) through a combination of constructivist and situated learning.

Constructivism is defined as 'the idea that learners construct knowledge for themselves' (Hein, 1991, p.1) and is based on prior experience. Individual constructions are socially and culturally contextualised and therefore likely to be subjective (Hogan and Tudge, 1999). Social constructivism allows more objective meanings to be constructed through collective experience and knowledge (Vygotsky, 1978; Hogan and Tudge, 1999). Situated learning is based on the premise that most learning in everyday life is learned in situ (Boud et al., 2001). This encourages the development of problem-solving skills and application of knowledge to real-world experiences (Lave and Wenger, 1991).

In order to engage in PAL participants need a clear understanding of its function and their roles within it. 'Peer' is generally taken to mean students studying at the same level (Lincoln et al., 1993). However, in PAL there is an inherent difference between students with greater experience and knowledge, referred to as 'mentors' in this paper, and students with less experience and knowledge, referred to as 'mentees'. 'Assisted' suggests that help will be given, but implies that mentees are relatively passive. Mentors may be seen as experts (Falchikov, 2001) resulting in mentees expecting to be given answers (Sultan et al., 2013). Years of schooling could condition mentors and mentees into taking on traditional roles of

teachers and students respectively (Gillam, 1994). The term 'learning' is key as it emphasises the need for mentees to be actively involved (Lincoln et al., 1993).

PAL on healthcare courses

A number of studies have explored healthcare students' experience of PAL and the development of academic and professional skills (Field et al., 2007; Burke et al., 2007; Sole et al., 2012). PAL is usually tailored to the specific requirements of individual courses (Cheng and Walters, 2009) which provides the opportunity for mentees and mentors to develop the skills to construct and apply their learning within a specific context (Sole et al., 2012; Wadoodi and Crosby, 2002; Saleh et al., 2013). This is consistent with the move from concept-driven to concept-application approaches to health education (Institute of Medicine, 2010).

Mentors contribute to concept development and application by offering 'expert scaffolding' (Falchikov, 2001, p.89), utilising a knowledge base similar to that of mentees (Lockspeiser et al., 2008). By sharing their personal experience mentors are seen as more approachable than lecturers (Field et al., 2007), thereby providing a learning environment in which mentees feel safe to contribute (Anderson et al., 1996; Naqi, 2014). Topping (2005) and Capstick (2003) report the development of skills in listening, explaining, questioning and critical thinking which allow mentees to develop concept-application skills (Duane and Satre, 2014) and contextualise their clinical knowledge (Burke et al., 2007). There is some debate as to whether this results in improved performance as claimed by Sole et al. (2012) and Santee and Garavalia (2006). Sevenhuysen et al. (2014) for example compared the outcomes from PAL to those from traditional clinical education techniques and found students were comparable in their abilities to apply knowledge.

Donelan (1999) however, states that it is the mentors who benefit most from PAL through the development of transferable skills for their future careers. Sultan et al. (2013) and Skalicky and Caney (2010) cite team-work, planning and leadership skills as potential benefits. This is particularly important given that there is increasing emphasis on collaborative working for healthcare professionals in the UK (Chipchase et al., 2012; Makino et al., 2013; Hood et al., 2013; Sevenhuysen et al., 2014). The expectation is that newly qualified practitioners will be equipped with the knowledge and skills to function as part of a wider multi-disciplinary team (Stephenson et al., 2002; Mulholland and Derdall, 2004). The ability to take responsibility for their own learning, exchange ideas and engage

in meaningful discussion is also critical to professional development (Rogers et al., 2011). This requires confidence, communication and self-reflection skills which can be gained through PAL (Stout and McDaniel, 2006; Smith et al., 2007; Naqi, 2014).

PAL at the University of East Anglia

PAL was introduced into the University of East Anglia (UEA) in January 2013 with the aims of reducing attrition, improving performance and enhancing employability. In 2014-15 it was offered to students on thirteen programmes across the faculties of Humanities, Science, Social Science and Health. The BSc Speech and Language Therapy (SLT) course is based in the Faculty of Health and has been participating in PAL since September 2013.

Learning requirements for SLT students

Qualified SLTs work with children and adults with a range of communication and swallowing difficulties. Graduates are expected to become autonomous lifelong learners with a wide-ranging knowledge base and the ability to apply theory to practice. They need to develop clinical and professional skills in order to work in teams within and across professions (RCSLT, 2005). Concerns have been raised by educators on professional degree courses that traditional instructional approaches do not equip students to meet these requirements (Khosa and Volet, 2013). Students need to develop strategies to increase engagement, motivation and self-evaluation. This can be achieved through self-directed (Schunk, 2005; Hammond et al., 2010) and peer-based activities (Casey et al., 2011).

The SLT programme at UEA is delivered using problem-based learning (PBL) in order to encourage concept development and application through active learning between students studying at the same level (Mok et al., 2008). Similarly to PBL, PAL offers opportunities for active engagement with concepts introduced through formal teaching (Capstick et al., 2004). The differences are the interaction between students studying at different levels and the absence of a faculty tutor.

In 2014-15, the year of this project, PAL was offered to all first year SLT students as a single group of mentees. Two final year students and one second year were trained as mentors. The term mentor is used by a number of student support services at UEA to signify students with a supportive or facilitative role. SLT PAL mentors share their experience and skills with mentees in order to support academic and professional development. Mentees are defined as students who are new to UEA and SLT, although

some may have previously studied in different disciplines at undergraduate level. Mentees are encouraged by mentors to contribute to PAL sessions by raising topics and queries as well as sharing their learning.

Twenty-three out of 25 students attended at least one PAL session. Weekly sessions were timetabled to support learning in the Foundations module of the programme which introduces core concepts that underpin learning throughout the course. This module could be described as high-risk (Costelloe, 2014), as students may be encountering concepts for the first time or may have greater strengths in one subject area over others. PAL also gives the mentors the opportunity to revisit earlier learning.

Although a number of studies have explored PAL on healthcare courses, there is a lack of literature relating to the SLT student experience. This study aimed to investigate SLT students' experience of PAL from the perspectives of mentees and mentors, in particular whether PAL enhances academic and professional development. The paper also presents a novel perspective, namely an investigation by students studying on the same course as the participants. All final year SLT undergraduate students undertake a dissertation project in order to fulfil the research requirements of their programme. Four student researchers (SRs) were selected to conduct this research. The study was designed and supervised by the lead author. Each student pursued an individual focus for their final dissertation. Three students focussed on the mentee experience and learning through PAL. One student explored the mentor experience and opportunities for professional development. A synthesis of the four dissertations is presented.

Methodology

Ethical approval for the project was gained from the UEA School of Education Ethics Committee. Permission was sought to conduct a study involving students as both researchers and participants; to use anonymised student data and to ensure data protection requirements would be met. The study used a mixed methodology, drawing on data from standard PAL evaluation, which generated a small amount of quantitative and qualitative data and provided an overview of SLT students' experience of PAL. The main source of data was qualitative and generated through focus groups.

Roles of student researchers and supervisors

The SRs were selected on the basis of their interest in undergraduate education and qualitative research. None of the students had participated in PAL as it was not available to them in their first year, nor had they been mentors.

The primary supervisor had a dual role as a lecturer in SLT and as PAL champion for the university. In order to reduce the risk of these roles influencing the investigative process or participant responses, the SRs were responsible for recruitment, conducting the focus groups and transcription of the audio data. All participants were assigned an identification code, to ensure confidentiality and anonymity. The supervisors only had access to anonymised transcription data.

The SRs received fortnightly group supervision during the Autumn term to provide guidance for the project and training in project-specific research methods. The SRs were given guidance on qualitative methods by the primary supervisor and quantitative methods by a second supervisor. Towards the end of the project the primary supervisor met with SRs individually to support development of an individual focus for each dissertation.

Data collection

Two sources of data were available to the SRs: data from standard evaluations completed by students as part of the PAL process and focus groups. Separate focus groups were conducted with mentees and mentors undertaking PAL in 2014-15.

Evaluation forms: Anonymised data from mentees in 2013-14 and 2014-15 evaluation cycles were made available to the SRs. These forms offered quantitative data from responses to five questions using a 5-point Likert scale. Additional comments and questions provided qualitative data to further explore student responses.

Focus groups: All prospective participants were provided with information about the project and explicit consent was obtained prior to each focus group. In total nine mentees and all three mentors were recruited for the study. Demographic data (Appendix 1) were collected prior to conducting the focus groups. The data indicate that the participants have similar characteristics to the wider healthcare and SLT student population. Seven participants (78%) in the mentee group were aged 18-24 years and undertaking their first degree which corresponds to 82% of all healthcare students at UEA (UEA, 2014). One

(8%) participant had taken a gap year. This correlates with government figures, which indicate that 7% of students take gap years (Crawford and Cribb, 2012). All participants were female which corresponds to the gender representation within the SLT profession of 97.1% (CfWI, 2014). These data also enabled the SRs to reflect on participants' comments in relation to their characteristics (Braun and Clarke, 2013).

In December 2014, the SRs ran two mentee and one mentor focus groups. A semi-structured script (Appendix 2) was developed by the SRs based on analysis of the 2013-14 PAL evaluation forms (the only ones available prior to the focus groups). Additional questions generated naturally during the first focus group were added to the script to ensure parity with subsequent focus groups. The groups were run by paired student researchers, one leading the questioning and the other making notes. Sessions were audio-recorded and orthographically transcribed.

Analysis

Quantitative data were analysed using tools available in Excel to describe numerical patterns of response from the evaluation forms, highlighting areas of particular benefit or not. Thematic analysis was used to identify themes from the qualitative data which could be compared to the findings from the focus groups.

Thematic analysis was also used to identify patterns of meaning across the transcriptions generated from the focus groups (Braun and Clarke 2013). The data were read repeatedly, before coding (Graneheim and Lundman, 2003). The student researchers compared their coding at regular intervals as a means of ensuring validity. Having analysed all the data obtained from this study each SR selected a particular individual focus for their dissertation. This allowed students to drill into areas of their own interest in relation to the student experience, and resulted in a greater wealth of data and interpretation of themes (Braun and Clarke 2013).

Findings

Quantitative data

The data presented in Figure 1 provides an overview of mentee evaluations combining 2013-14 and 2014-15. The data have been combined as a similar pattern of response was

found in both years. The majority of respondents indicated that PAL had very definitely or definitely improved their experience at UEA (n=26); benefitted their learning (n=27) and would help them in the future (n=24). Twenty-five students indicated they would recommend PAL to future students.
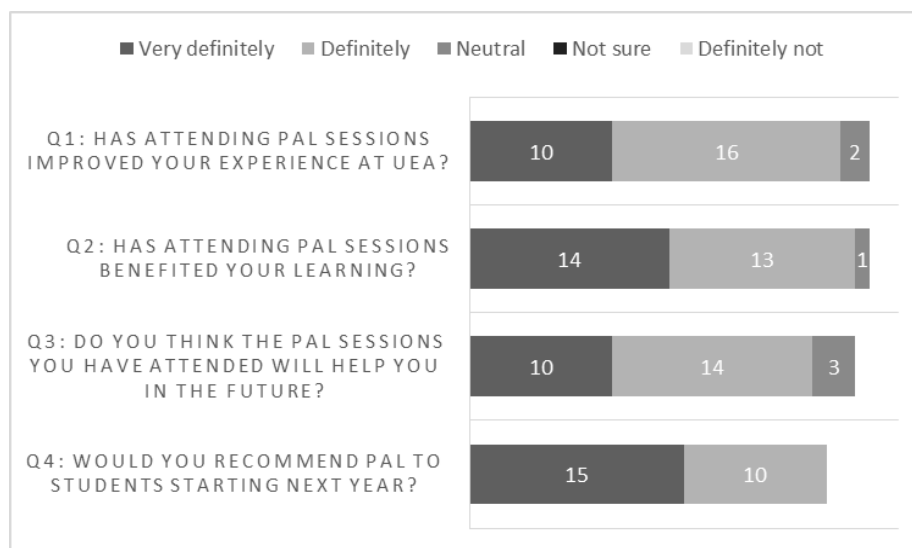

Figure 1: SLT Mentee PAL evaluations – 2013-15: (2013-14 n=10; 2014-15 n=18) presenting total number of responses to each question.

Mentees were asked to rate specific benefits of PAL (Figure 2). The majority felt PAL had increased their confidence in starting university (n=21); understanding the requirements of university (n=22); confidence in getting good grades (n=21) and confidence in completing the degree (n=22). Mentees also indicated that PAL had helped with increasing knowledge, understanding and skills (n=27). Areas where there was less agreement that PAL helped with getting to know other students (n=20) and academic writing (n=10). The remaining responses to all questions ranged from 'no effect yet' to 'definitely reduced'.
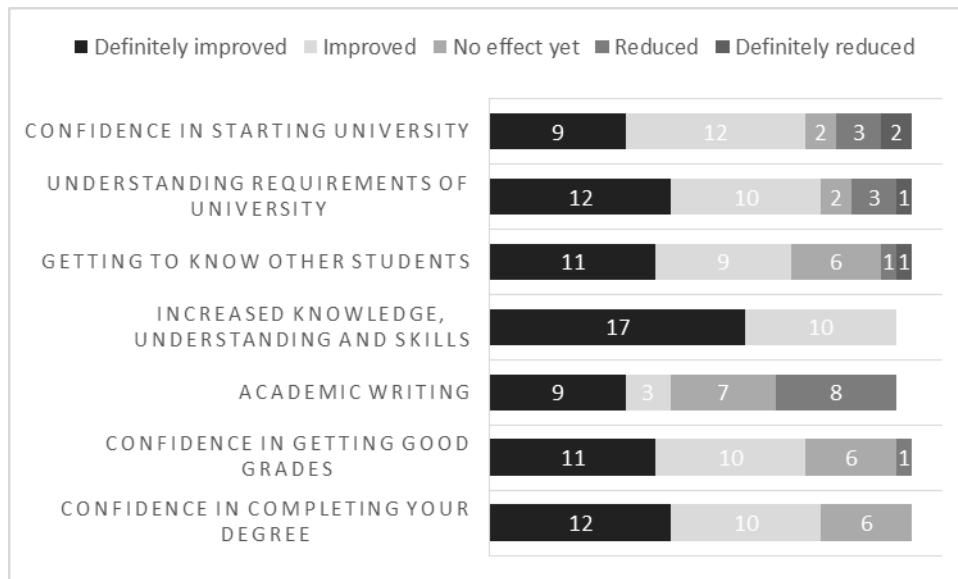
Legend: Definitely improved | Improved | No effect yet | Reduced | Definitely reduced

Category	Definitely improved	Improved	No effect yet	Reduced	Definitely reduced
CONFIDENCE IN STARTING UNIVERSITY	9	12	2	3	2
UNDERSTANDING REQUIREMENTS OF UNIVERSITY	12	10	2	3	1
GETTING TO KNOW OTHER STUDENTS	11	9	6	11	
INCREASED KNOWLEDGE, UNDERSTANDING AND SKILLS	17	10			
ACADEMIC WRITING	9	3	7	8	
CONFIDENCE IN GETTING GOOD GRADES	11	10	6	1	
CONFIDENCE IN COMPLETING YOUR DEGREE	12	10	6		

Figure 2: SLT Mentee PAL benefits – (2013-15: 2013-14 n=10; 2014-15 n=18) presenting total number of responses to each question

Qualitative data

The main themes to emerge from the qualitative data were: engagement with PAL; mentor-led to collaborative learning and academic and professional outcomes.

Factors which encouraged engagement were described by some mentees as gaining a sense of satisfaction from attending voluntarily.

> You get quite a good feeling after you've been to an optional session. (ME:A9)

Others commented that having a structure was reassuring and encouraged participation.

> I was worried it would be awkward that we'd just sit there and think maybe we should do this but they have it all structured. (ME:A8)

Others based engagement on their learning needs at the time:

> I'd already written the essay so I didn't need to go to that one. (ME:A1)

The approachability of the mentors and their enthusiasm for the course were described as reasons for attending PAL sessions and engaging with the course.

> I feel much more relaxed to ask questions […] because I don't have to worry about the lecturer judging me. (ME:A9)

> You can tell [the mentors] really love the course and it's what they really want to do so you think 'that's going to be us in two years' time'. (ME:A6).

The mentors felt a responsibility to orientate and reassure the mentees as well as provide a purpose for attending

> A lot of them haven't been in this setting before so we talked about them finding their way around campus and that sort of thing. (MR:B3)

> If they don't feel like they're going to benefit from it or be able to share learning […] then nobody is going to gain from that. (MR:B1)

Mentees spoke about the positive aspects of interacting with students from the same and cross-year groups, both from social and academic perspectives.

> It's quite nice to get to know other people on your cohort in a less formal environment. (ME:A2)

> The lecturers obviously just give you an overview […] the students have already been through it and they know how much extra information you need. (ME:A8)

Mentors expressed a sense of empathy and duty to share their learning:

> Allowing them to gain from someone who has been there before. (MR:B1)

> [It's] really important throughout the course to be generous with your learning. (MR:B2)

The interactive and less pressurised nature of PAL compared to formal teaching allowed mentees to explore key aspects of course content.

> They'll get us doing sort of tasks […] things which kind of make you pay attention. (ME:A3)

> Lecturers have a lot to fit into their slots sometimes […] it's a bit overwhelming. (ME:A1)

The shift from mentor-led to collaborative learning took time to develop. The mentors were more aware of the need to work collaboratively and viewed their role as providing learning opportunities to meet the mentees' learning needs.

> We are completely led by what they are wanting to do, we have no agenda in terms of what we want to do. (MR:B1)

Initially mentees took a passive role and were dependent on the mentors for structuring the sessions, resulting in the mentors adopting a more directive than facilitative style.

> We literally just tell them what we want to do. […] they have it all structured. (ME:A8)

> We don't really give them the answers necessarily it's more […] you might need to go and revise that bit. (MR:B2)

Over time there was a growing awareness among mentees that they should be taking a more active role. One mentee commented on the natural progression of group participation.

> I think it's our responsibility to actively engage […] and meet our part of the deal. (ME:A1)

> At the beginning we were quite held back, that's a very natural thing […] that'd occur in any group you had. (ME:A1)

Mentors commented on the changes they had seen in mentees and how their contributions were changing the nature of the sessions.

> At the beginning we tried to encourage them that they needed to help each other's learning […] so it's good that they are doing that. (MR:B2)

> By them expressing what they are finding hard or easy, they kind of end up learning through each other. (MR:B1)

A shift towards collaborative learning became more evident once mentees realised the mentors were learning at the same time.

> Even the PAL mentors were confused […] and we all sort of worked together to work it out. (ME:A8)

Mentors noted that PAL was influencing mentees to form their own study groups.

> [Mentees] have begun to meet up independently in smaller groups, to practice doing things themselves. (MR:B1)

In terms of academic outcomes, data from the focus groups indicate that mentees felt PAL was helping them develop knowledge and understanding. They were developing learning strategies and felt better prepared for lectures.

> Reading up on the topic so I have the answer ready for the lecture like I kind of knew what the lecturer was talking about. (ME:A5)

Consequently there was an increase in confidence among the mentees.

> Everyone has got more confident to speak up within lectures. (ME:A4)

> Realising that actually I do get that, sort of like a self-confidence thing. (ME:A1)

Among the mentees there was debate as to whether benefits were short or longer term.

> [PAL] will help me with my exam […] but possibly not in the long-term. (ME:EVAL)

> [PAL provides] the building blocks for the rest of our degree [and] when you do placement things become more relevant. (ME:A2)

PAL was also benefitting the mentors' learning:

> You can check that you understand it if you can explain it to someone else. You're never really in the position where you're so perfect that you don't need to practice it. (MR:B1)

> Through first year you get to grips with it so that's about keeping up your knowledge and then building on it. (MR:B3)

Both mentees and mentors recognised professional outcomes and the relevance of learning collaboratively to their future practice.

> PAL […] prepares you for your career when you have to work in a team of people. (ME:A5)

Mentors were able to articulate more specific aspects of teamwork such as delegation and reliability:

> We'll divvy it up this way then for each person to go away and come back with their task because there's never been the case where one of us has said we'd do something and then not done it. (MR:B1)

Mentors were gaining skills in planning sessions, providing resources and the ability to be flexible in response to changing needs.

> You have to use your initiative and be flexible with your plans and it is not necessarily going to go the way you planned. (MR:B2)

Mentees and mentors commented on interpersonal skills mentors used and developed in the sessions.

> It wasn't dry because of the way they presented it to us and their personalities and they are easy to relate to. (ME:A1)

> Having empathy and being sensitive to certain situations and diplomatic and it's all interpersonal skills which are really important in SLT. (MR:B2)

The mentors recognised the transferability of the facilitation skills they had gained through PAL.

> As an SLT you'll have students on placement […] and you need to be able to facilitate that and be sensitive to any issues. (MR:EVAL)

Discussion

Quantitative data

On the whole the findings from the quantitative data were positive, in particular PAL was perceived as benefitting mentees' university experience and learning. The majority of respondents would recommend PAL to future students. Respondents indicated that PAL would benefit them in the future, although the question does not specify in which respect and will be reviewed for future evaluation forms.

In response to questions regarding more specific benefits the majority of mentees felt PAL had increased their confidence in starting university, getting good grades and completing their degree. In particular mentees felt that PAL had helped with increasing knowledge, understanding and skills. These benefits are also cited in the literature. Field et al. (2007) report increased performance and confidence as gains from PAL. Areas where there was less agreement were in the social benefits of PAL, which may be explained by the small SLT cohort and multiple opportunities to socialise. Academic writing was rated lower than other benefits, which is likely to be because of the practical and discussion-based nature of SLT PAL sessions.

Qualitative data

The themes presented in the findings provide useful insight into both the benefits and potential challenges of PAL. Boud et al. (2001) discusses the importance of balancing informality with structure as a means of encouraging engagement. A safe and less pressurised learning environment than formal teaching allows the mentees to ask questions and express ideas (Longfellow et al., 2008; Hammond et al., 2014). These aspects were mentioned by the mentees. There are also clear benefits for mentors who often enjoy sharing their interest for their subject (Burgess et al., 2014). However, recurring comments from the focus groups suggest that the mentors in this study were perhaps too helpful, which might have encouraged dependency in the mentees.

The mentors saw their role as providing learning opportunities based on mentees' learning needs as advocated by Arendale (2002). However, initially they admitted to directing mentees. In turn the mentees described initially shifting responsibility for structuring and leading sessions onto the mentors, a risk outlined by Capstick and Fleming (2004). Mentees' comments suggest they understood that they should be actively involved in planning sessions, but found it difficult. An egalitarian relationship is the ideal to encourage collaborative learning within PAL (Boud et al., 2001; Topping, 2005). However, mentors are usually selected because they are able to model the behaviours required for success (Longfellow et al., 2008). This results in potential tension between egalitarian and hierarchical relationships. Seeing students from higher years as more knowledgeable may encourage mentees into passivity as was evident in this study (Hammond et al., 2010).

The SRs were particularly aware of the shift from dependent to collaborative learning, possibly because of their own experience of developing similar skills in Problem Based

Learning. By the time of the focus groups the mentees were starting to take more active roles in the sessions. The shift towards collaborative learning occurred once mentees recognised mentors' learning needs. This progression towards greater participation over time is described as typical by Capstick and Fleming (2004). There was also evidence of ongoing collaborative learning as reported by Arendale (1993). Mentors indicated that mentees were meeting independently in small groups for revision sessions, using the structure of PAL as a guide.

It is questionable whether mentees achieved 'social construction of shared knowledge' (Roschelle, 1992, p.236) as an academic outcome of PAL. There was some awareness of the value to their contributions to others' learning, but the focus tended to be on immediate and individual needs as reflected by Ashwin (2003).

PAL offers opportunities to apply knowledge to clinical practice through mentors sharing their experience (Yang et al., 2012). There was little reference by the mentees to the clinical applicability of concepts they were learning. This may be because professional practice seems far in the future for first year students. Mentors described benefitting from sharing their learning and revising subjects. Topping (1996) states that mentors benefit because of the enhanced cognitive processing required for utilising their existing knowledge and skills.

Both mentees and mentors recognised professional outcomes from PAL. The Royal College of Speech and Language Therapists (RCSLT, 2014) list the ability to work in a team as a necessary quality for a career as a SLT. The development of team-working skills is evidenced in a number of studies (Moreland, 2005; Green, 2007; Chipchase et al., 2012 and Keenan, 2014). The mentees recognised the value of PAL experience as an introduction to team-working even though they found it difficult in the early stages. Morrison et al. (2011) noted that team-working needs to be learned and found the combination of experience and the help of a supervising SLT were predominant factors. This could be equated to the cross-year bonding which occurs in PAL (Wadoodi and Crosby, 2002), where mentors provide a team-working environment and act as role models.

Planning sessions and providing appropriate resources are key aspects of SLT intervention (Fourie, 2009). Well planned sessions are critical to the effectiveness of PAL (Green, 2007), as evidenced by the mentees who found planning and resources beneficial to their learning. Mentors recognised the development of these skills, a finding supported by Hartman (1990)

and Chipchase et al. (2012). Flexibility is another key skill for SLTs (Crane and Cooper, 1983; Fourie 2009). The mentors described adapting their plans in response to the changing needs of mentees. Rossin and Hyland (2003) and Keenan (2014) found that mentors could match activities to required levels of difficulty.

Interpersonal skills are the tools of the trade for SLTs who interact with clients with a range of communication difficulties. These skills are also seen as one of the most important elements of a mentor's role (Knight and Yorke, 2002; Green, 2007). The mentors described the skills of empathy, sensitivity and diplomacy they had developed through the PAL sessions.

As qualified professionals SLTs use facilitation skills when working with clients, colleagues and students. PAL offers mentors the opportunity to develop skills in facilitating learning and giving feedback (Crowe and Soloman, 2001; Nestel and Kidd, 2005; Burgess et al., 2014). On occasion they felt they needed to be more directive indicating a fine line between facilitation and teaching. Nevertheless the mentors recognised the transferability of the skills they used to aid the mentees' learning to their future roles as placement educators.

Critique

This was a small study of a particular group of healthcare students in a single setting and a larger study would be needed to confirm wider application of the findings.

An area of improvement for a future similar study would be to clearly delineate between data generated from standard evaluation and from the focus groups. The evaluation data in this study provided some insights which could have been explored more fully to form the basis of questions for the focus groups.

When analysing the focus group data, there was some disagreement between the SRs centring on whether the word 'peer' refers to mentees only or mentors and mentees. This resulted in differences in coding of some sections of the data. Clarifying terms such as 'mentee', 'mentor' and 'peer' would have pre-empted this disagreement.

Conclusion

Previous research has mainly been conducted by academics with a specific interest in PAL. Although the findings from this study reflected those in the literature, the project provided a novel perspective in that the investigation was conducted by students. The SRs had the advantage of having insider understanding of the SLT course although they did not have direct experience of PAL. Student-led focus groups offer the same advantages as PAL itself, in that discussion with fellow students may encourage mentees and mentors to be more open than they would be with an academic. This presents opportunities for future research in that students could explore the first year experience in greater depth to gain insight into their understanding of the requirements of higher education and challenges students may face on a professional course.

The SRs gained a number of research skills, such as recruiting participants, planning, organising and generating questions for the focus groups, transcribing and analysing the data. They were aware that as novice researchers their interviewing technique in the focus groups needed improvement. They sometimes asked leading questions and did not always follow up on responses. However they generated rich data which have given an insight into the SLT students' experience of PAL and their findings demonstrate that PAL does provide the opportunity for SLT mentees and mentors to develop academic and professional skills.

Acknowledgement

References

Anderson, R. Robins, L.S. Fitzgerald J.T., Jultquist, D. and Zweifler, A. (1996) 'Fourth-year medical students as small-group leaders of first-year students', *Academic Medicine,* 71, pp. 793-4

Arendale, D. (1993) 'Foundation and theoretical framework for Supplemental Instruction' in Martin D.C. and Arendale D. (eds.), *Supplemental Instruction: Improving first-year student success in high-risk courses Monograph Series Number 7. Columbia, SC: The National Resource Centre for the First Year Experience and Students in Transition*, (2nd ed), pp. 19-26.

Arendale, D. (2002). 'History of Supplemental Instruction (SI): Mainstreaming of developmental education' in Higbee J. (ed) Histories *of developmental education*. Minneapolis, MN: Centre for Research on Developmental Education and Urban Literacy, General College, University of Minnesota.

Ashwin, P. (2003) 'Peer support: relations between the context, process and outcomes for the students who are supported', *Instructional Science*, 31(3), pp.159-173

Bannan-Ritland, B. (2002) 'Computer-mediated communication, e-learning, and interactivity: a review of the research', *Quarterly Review of Distance Education,* 3(2), pp. 161–169

Boud, D., Cohen, R. and Sampson, J. (eds.) (2001) *Peer learning in higher education: learning from and with each other*. London: Kogan Page

Braun, V. and Clarke, V. (2013) *Successful Qualitative Research: A Practical Guide for Beginners.* London: Sage

Burgess, A., McGregor, D. and Mellis, C. (2014) 'Medical students as peer tutors: a systematic review', *BMC Medical Education*, 14, pp. 115-140

Burke, J., Fayaz, S., Graham, K., Matthew, R., and Field, M. (2007) 'Peer-assisted learning in the acquisition of clinical skills: a supplementary approach to musculoskeletal system training'. *Medical Teacher*, 29 (6), pp. 577-582

Capstick, S. (2003). Implementing Peer Assisted Learning in Higher Education: The experience of a new university and a model for the achievement of a mainstream programme. *Peer assisted learning conference,* 1 (1), pp. 1-18

Capstick, S. (2004) Benefits and Shortcomings of Peer Assisted Learning (PAL): An Overview. [online] at: http://pal.bournemouth.ac.uk/ (Accessed: 28 April 2015)

Capstick, S., Fleming, H. & Hurne, J., (2004) 'Implementing Peer Assisted Learning in Higher Education: The experience of a new university and a model for the achievement of a mainstream programme', [online] Available at: http://pal.bournemouth.ac.uk/documents/implmntng%20pal%20article61.pdf (Accessed: 14 May 2015)

Capstick, S. and Fleming, H. (2004) 'Peer assisted learning in an undergraduate hospitality course: second year students supporting first year students in group learning', *Journal of Hospitality, Leisure, Sport and Tourism Education*, 1 (1), pp. 69-75

Casey, D. Houghton, C. Smith, R. Burke, E. Mee, L. Van Der Putten, D. Bradley, H. and Folan, M. (2011) 'Use of peer assessment as a student engagement strategy in nurse education', *Nursing and Health Sciences,* 13, pp. 514-520.

Centre for Work Intelligence (2014) *Securing the Future Workforce Supply: Speech and Language Therapy Stocktake.* London: CfWI

Cheng, D. and Walters, M. (2009) 'Peer-assisted learning in mathematics: an observational study of student success.' In: Journal of Peer Learning, 2, pp. 3-39.

Chipchase, L.S., Buttrum, P.J., Dunwoodie, R., Hill, A.E., Mandrusiak, A., and Moran, M. (2012) 'Characteristics of student preparedness for clinical learning: clinical educator perspectives using the Delphi approach', *BMC Medical Education*, 12 (112), pp. 1-9

Costelloe, L. (2014) 'Documenting the Experiences of Student Leaders in a Peer-Assisted Learning Scheme.' CSSI Conference [online]. Available at: http://www.academia.edu/7429758/Documenting_the_Experiences_of_Student_Leaders_in_a_Peer-Assisted_Learning_Scheme (Accessed: 29 May 2015).

Crane, S.L., and Cooper, E.B. (1983) 'Speech-language clinician personality variables and clinical effectiveness', *Journal of Speech and Hearing Disorders,* 48 (2), pp. 140-145.

Crawford, C. and Cribb, J. (2012) Gap year takers: uptake, trends and long-term outcomes [online]. Available at: https://www.gov.uk/government

Crowe, J. and Soloman, P. (2001) 'Perceptions of student peer tutors in a problem-based learning programme'. *Medical Teacher,* 23 (2), 181-186.

Donelan, M. (1999) 'SI Leaders: The Real Winners'. *Paper presented at the National Conference on Supplemental Instruction,* Kansas City, Mo.

Duane, B.T. and Satre, M.E. (2014) 'Utilizing constructivism learning theory in collaborative testing as a creative strategy to promote essential nursing skills', *Nurse Education Today,* 34 (1), pp.31 – 34

Falchikov, L. (2001) *Learning Together: peer tutoring in higher education.* London: Routledge

Field, M. Burke, J. McAllister, D. and Lloyd, D. (2007) 'Peer assisted learning: a novel approach to clinical skills learning for medical students', *Medical Education,* 41, pp. 411-418

Fourie, R. J. (2009) 'Qualitative study of the therapeutic relationship in speech and language therapy: Perspectives of adults with acquired communication and swallowing disorders', *International Journal of Language & Communication Disorders,* 44 (6), pp. 979-999.

Gillam, A.M. (1994) 'Collaborative Learning Theory and Peer Tutoring Practice', in: Mullin, J.A. and Wallace, R. (eds.) *Intersections: Theory-Practice in the Writing Center.* Illinois: National Council of Teachers of English

Graneheim, U.H and Lundman, B. (2003). 'Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness', *Nurse Education Today,* 24, pp. 105-112.

Green, A. (2007) 'Peer Assisted Learning: empowering first year engagement with a formal curriculum through the educative' [online]. Available at: http://www.uni-

bielefeld.de/Universitaet/Einrichtungen/SLK/peer_learning/pal/pdf/PAL-Empowering-First-Year-Engagement-With-A-Formal-Curriculum-Through-The-Educative.pdf

Hammar Chirac, E. (2014) 'Group work as an incentive for learning: students' experiences of group work', *Frontiers in Psychology*, 5, pp. 1-18.

Hammond, J.A., Bithell, C.P., Jones, L. and Bidgood, P. (2010) 'A first year experience of student-directed peer-assisted learning'. *Active Learning in Higher Education*, 11 (3), pp. 201-212

Hartman, H.J. (1990). 'Factors affecting the tutoring process', *Journal of Educational Development,* 14 (2), pp. 2-6.

Hein, G. (1991). Constructivist Learning Theory. *The Museum and the Needs of People*, 1 (1), 1. *CECA Conference,* Jerusalem, Israel October 1991

Hogan, D.M. and Tudge, J.R. (1999) 'Implications of Vygotsky's Theory for Peer Learning'. In: O'Donnell, A.M. and King, A. *Cognitive Perspectives on Peer Learning.* London: Lawrence Erlbaum Publishers

Hood, K., Cant, R., Baulch, J., Gilbee, A., Leech, M., Anderson, A. and Davies, K. (2013) 'Prior experience of inter-professional learning enhances undergraduate nursing and healthcare students' professional identity and attitudes to teamwork', *Nursing Education in Practice,* 14, pp. 117-122.

Institute of Medicine (2010) *'The Future of Nursing: Leading Change, Advancing Health'.* Washington DC: Institute of Medicine

Keenan, C. (2014) 'Mapping student-led peer learning in the UK' [online] *The Higher Education Academy.* Available at: https://www.heacademy.ac.uk/sites/default/files/resources/Peer_led_learning_Keenan_Nov_14-final.pdf (Accessed: 5 May 2010).

Khosa, D.K. and Volet, S.E. (2013) 'Promoting effective collaborative case based learning at university: a metacognitive intervention', *Studies in Higher Education,* 38 (6), pp. 870-889.

Knight, P.T. and Yorke, M. (2002) 'Employability through the curriculum', *Tertiary Education and Management,* 8 (4), pp. 261-276.

Laal, M. and Ghodsi, S.M. (2012) 'Benefits of collaborative learning', *Social and Behavioural Sciences,* 31, pp. 486-490.

Laal, M. and Laal, M. (2012) 'Collaborative learning: what is it?', *Procedia: Social and Behavioural Sciences,* 31, pp. 491-495.

Lave, J. and Wenger, E. (1991) *situated learning: legitimate peripheral participation,* Cambridge: Cambridge University Press

Lincoln, M.A., McAllister, L.L. and Lindy, L. (1993) 'Peer learning in clinical education', *Medical Teacher,* 15 (1), pp.17-25

Lockspeiser, T. M., O'Sullivan, P., Teherani, A., and Muller, J. (2008) 'Understanding the experience of being taught by peers: the value of social and cognitive congruence', *Advances in Health Sciences Education*, 13 (3), pp. 361-372.

Longfellow, E., May, S., Burke, L. and Marks-Maran, D. (2008) '"They had a way of helping that actually helped": a case study of a peer-assisted learning scheme'. *Teaching in Higher Education,* 13 (1), pp. 93-105.

Makino, T., Shinozaki, H., Hayashi, K., Lee, B., Matsui, H., Kururi, N., Kazama, H., Ogawara, H., Tozato, F., Iwasaki, K., Asakawa, Y., Abe, Y., Uchida, Y., Kanaizumi, S. (2015) 'Attitudes toward interprofessional healthcare teams: a comparison between undergraduate students and alumni', *Journal of Interprofessional Care,* 27 (3), pp 261-268

Mok, C.K.F., Whitehill, T.L. and Dodd, B.J. (2008) 'Problem-based learning, critical thinking and concept mapping in speech-language pathology education: A review'. *International Journal of Speech-Language Pathology,* 10 (6), pp. 438-448

Moreland, N. (2005) 'Learning & Employability: Work-related learning in higher education, Series Two', [online] *The Higher Education Academy.* Available at: http://www.qualityresearchinternational.com/esecttools/esectpubs/morelandwrl.pdf (Accessed: 20 April 2015).

Morrison, S.C., Lincoln, M.A. and Reed, V.A. (2011) 'How experienced speech-language pathologists learn to work on teams', *International Journal of Speech-Language Pathology,* 13 (4), pp. 369-377.

Mulholland, S. and Derdall, M. (2004), 'Exploring what employers seek when hiring occupational therapists', *Journal of Occupational Therapy,* 72 (1), pp. 37-44.

Naqi, S.A. (2014) 'Peer assisted learning as a formal instructional tool', *Journal of the College of Physicians and Surgeons Pakistan,* 24 (3), pp. 169-172.

Nestel, D. and Kidd, J. (2005). 'Peer assisted learning in patient-centred interviewing: the impact on student tutors'. *Medical Teacher,* 27(5), pp. 439-444.

Rogers, L., Mulholland, S., Derdall, M. and Hollis, V. (2011) 'From all perspectives: opinions of students and teaching staff regarding occupational therapy distance education', *British Journal of Occupational Therapy,* 74 (5), pp. 241-248.

Roschelle, J. (1992) 'Learning by collaborating: convergent conceptual change'. *The Journal of the Learning Sciences.* 2 (3), pp. 235-276

Rossin, D. and Hyland, T. (2003) 'Group work-based learning within higher education: an integral ingredient for the personal and social development of students'. *Mentoring and Tutoring,* 11, pp. 153–162.

Royal Collage of Speech and Language Therapy (RCSLT) (2003) *'Position paper - the provision of clinical placements: stakeholder roles & responsibilities',* RCSLT. Available at: http://www.rcslt.org/members/publications/publications2/provision_of_clinical_placements (Accessed: 30 April 2015).

Royal College of Speech & Language Therapy (RCSLT) (2014) 'A Career in Speech & Language Therapy' Available at: http://www.rcslt.org/speech_and_language_therapy/docs/undergraduate_guide_072014 (Accessed: 13 July 2015)

Saleh, M., Sinha, Y., and Weinberg, D. (2013) 'Using peer-assisted learning to teach basic surgical skills: medical students' experiences', *Medical Education Online,* 18, pp. 1-3.

Available at: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3752041/pdf/MEO-18-21065.pdf
(Accessed: 14 July 2015)

Santee, J. and Garavalia, L. (2006) 'Peer tutoring programs in health professions schools', *American Journal of Pharmaceutical Education,* 70 (3), pp.1-10.

Schunk, D.H. (2005) 'Self-regulated learning: the educational legacy of Paul R. Pintrich', *Educational Psychologist,* 40 (2), pp. 85–94.

Sevenhuysen, S., Skinner, E.H., Farlie, M.K., Raitman, L., Nickson, W., Keating, J.L., Maloney, S., Molloy, E. and Haines, T.P. (2014) 'Educators and students prefer traditional clinical education to a peer-assisted learning model, despite similar student performance outcomes: a randomised trial'. *Journal of Physiotherapy,* 60 (4), pp. 209-216

Skalicky, J. and Caney, A. (2010) 'PASS student leader and mentor roles: a tertiary leadership pathway', *Journal of Peer Learning,* 3 (1), pp. 24-37.

Smith, J., May, S. and Burke, L. (2007) 'Peer assisted learning: a case study into the value to student mentors and mentees'. *Practice and Evidence of Scholarship of Teaching and Learning in Higher Education,* 2 (2), pp. 80-109.

Sole, G., Rose, A., Bennett, T., Jaques, K. and Rippon, Z. (2012) 'A student experience of peer assisted study sessions in physiotherapy', *Journal of Peer Learning,* 5 (1), pp. 1-11.

Stephenson, K.S., Peloquin, S.M., Faota, O., Richmond, S.A., Hinman, M.R. and Christiansen, C.H. (2002) 'Changing educational paradigms to prepare allied health professionals for the 21st century', *Education for Health: Change in Learning & Practice,* 15 (1), pp. 37-49.

Stout, M. L. and McDaniel, A. J. (2006) 'Benefits to Supplemental Instruction leaders', *New Directions for Teaching and Learning,* 106, pp. 55-62.

Sultan, F.K.P.D., Narayansany, K.S., Kee, H.L., Kuan, C.H., Palaniappa Manickam, M.K., and Tee, M.T. (2013) 'Helping students with difficult first year subjects through the PASS Program'. *Journal of Peer Learning,* 6, pp. 59-75

Topping, K. (1996) 'The effectiveness of peer tutoring in further and higher education: a typology and review of the literature', *Higher Education,* 32, pp. 321–45.

Topping, K. (2005) 'Trends in peer learning', *Educational Psychology,* 25 (6), pp. 631- 645.

University of East Anglia Business Intelligence Unit (2014) *Facts and figures.* UEA, 2014*.*

University of East Anglia (2014) *'Peer Assisted Learning at University of East Anglia'.*

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes.* Harvard University Press: USA.

Wadoodi, A. and Crosby, J.R. (2002) 'Twelve tips for peer-assisted learning: a classic concept revisited', *Medical Teacher,* 24 (3), pp. 241-244.

Yang, K., Woomer, G.R. and Matthews, J.T. (2012) 'Collaborative learning among undergraduate students in community health nursing', *Nurse Education in Practice,* 12 (2), pp. 72-76.

Author Details

Anne Guyon is a lecturer in Speech and Language Therapy at the University of East Anglia. She has a particular interest in the student perspective on learning and peer learning. She holds a Masters in Clinical Education for which her dissertation focussed on the student experience of Problem Based Learning. Since 2013 she has held the role of and Peer Assisted Learning champion for the university. This role involves promoting, developing and evaluating PAL in schools from each faculty.

Dr Zoe Butterfint is Senior Lecturer in Phonetics and Director of Teaching & Learning Quality in the School of Health Sciences at the University of East Anglia. The main focus of her day to day work relates to student experience and the quality of the students' learning experience. Her research interests include: student experience and student expectations of Higher Education; and areas related to variability in speech in individuals with acquired dysarthria and the associated impacts on intelligibility.

Andrea Lacy, MA, qualified as a Speech and Language Therapist in 2015. She currently works within a low secure setting for adults with learning disabilities who have a forensic history, mental health illnesses or personality disorders. Prior to training as a speech and

language therapist, Andrea was a teacher in community education, FE and HE with a teaching background in English Language and Linguistics.

Aisha Sanosi qualified as a Speech and Language Therapist in 2015. She is working a Teaching Assistant at a mainstream school within a Year 1 class as well as providing 1:1 support to a pupil with a severe hearing impairment. She is currently studying for a Level 3 qualification in supporting pupils with sensory impairment from which she will further educate the staff at the school in developing strategies for specific pupils.

Katie Sheridan qualified as a Speech and Language Therapist in 2015. She works in a special school in London for children age 3-11 with severe learning difficulties and autism. Katie liaises with the Great Ormond Street Hospital Augmentative and Alternative Communication hub for assessment and funding for high-tech devices. She hopes to run a small study looking at one child's journey from being referred to GOSH for a device through to using it in her everyday environment.

Jessica Unwin is a Speech and Language Therapist who works within the adult team at East Coast Community Healthcare (ECCH) based in Norfolk, UK. Jessica graduated from the University of East Anglia in 2015 with a degree in Speech and Language Therapy and has a background interest in counselling and is a strong supporter of peer support within the profession.

Appendix 1: Table showing demographic information for mentees (A1-A9) and mentors (B1-B3) who participated in focus groups

Code	Age					Straight from school		Gap year		Previous degree		FT/PT employment		Employed in health/soc care/ed'n		1st in family to attend university		Live on campus		Journey time in minutes			School in UK		Gender	
	19-21	22-24	25-29	30-39	40+	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	<30	30-39	60+	Yes	No	Female	Male
A1			1				1		1	1		1		1				1		1		1		1		1	
A2	1 (18)					1										1		1						1		1	
A3	1					1										1			1		1		1		1	
A4	1 (18)					1											1	1					1		1	
A5	1 (18)					1											1	1					1		1	
A6	1						1			1							1	1					1		1	
A7	1						1	1									1		1				1		1	
A8	1 (18)					1										1			1	1			1		1	
A9	1 (18)					1						1					1	1					1		1	
B1		1					1			1							1		1	1			1		1	
B2	1					1										1			1	1			1		1	
B3			1				1			1		1			1		1		1		1		1		1	

Appendix 2

PAL Project: Focus group procedure

- Refer to the 'script' to ensure all points are covered when taking consent and introducing participants to the focus group procedure
- Try to cover all questions to ensure you have covered all topics; you need to be prepared to be flexible about the order of questions and the extent to which you can explore certain issues
- You will need spare copies of participant information sheets; a copy of the study proposal and background information; audio-recorders; questions
- Decide which of you will be asking questions and which will be taking notes and whether you will be swapping roles during the focus group

Arrange seating to make sure all of you are comfortable – in a circle round a table is probably best. Close windows to block out background noise if possible. Have the audio-recorders set up and ready to record. Check that all students are happy with audio-recording.

Introduce yourself and your fellow student; explain your roles: who will be asking questions and who will be taking notes. Explain the notes are to provide background information for the transcripts.

Before recording:

Say: *"Thank you very much for taking the time to take part in this focus group; I just need to remind you that everything you say remains confidential to the research team; your name will not be used when the focus group is transcribed or in any future reports or writing to do with the project. Please ensure you do not share any information from the focus group outside this room. If you have concerns you may leave the focus group at any time or we can pause the recording at any time"*

If they ask you any questions you are unsure about check the proposal / background information / participant information sheet. If you still cannot answer their question/s tell them you will check with Anne Guyon and get back to them. Ask if it is OK to proceed.

Remind them about the overall aims of the study: to gain an understanding of students' experience of PAL as a means of facilitating academic learning and professional development.

When you're all ready, say: "I'm going to switch on now"; start recording.

Say: "*This is the PAL Project focus group for MENTEES / MENTORS taking place on DATE conducted by NAME + NAME*

Mentee questions:

- Background information: name, education / occupation before coming to university

- What made you want to attend PAL sessions?

- Is it what you expected it to be?

- What were your expectations?

- What do you think are the similarities / differences between PAL and formal teaching / learning?

- How do you see the role of the mentors?

- What do you feel mentors contribute to PAL sessions?

- How do you see your role?

- What do you feel you contribute to PAL sessions?

- How do you decide what should be in the sessions?

- Have you found the sessions helpful?

- Yes / no: in what way?

- Are there aspects of the course you find challenging? Has PAL helped?

- Thinking about your future as an SLT, do you think what you have gained from PAL will be transferable to future years?

- Would you recommend PAL to future 1st years? Why?

- Is there anything else you would like to add?

Mentor questions:

- Background information: name, education / occupation before coming to university

- What made you want to be a PAL mentor?

- Is PAL what you expected it to be?

- What were your expectations?

- What do you think are the similarities / differences between PAL and formal teaching / learning?

- How do you see your role?

- What do you feel you contribute to PAL sessions?

- How do you see the role of the mentees?

- What do you feel mentees contribute to PAL sessions?

- How do you decide what should be in the sessions?

- Do you think the sessions are helpful?

- Yes / no: in what way?

- Are there aspects of the course you find challenging? Has PAL helped?

- Thinking about your future as an SLT, do you think what you have gained from PAL will be transferable to future years?

- Would you recommend PAL to future 1st years? Why?

- Is there anything else you would like to add?