



Peer-assisted learning: A planning and implementation framework. Guide supplement 30.7 – Practical application

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AMEE GUIDE SUPPLEMENTS

Peer-assisted learning: A planning and implementation framework. Guide supplement 30.7 – Practical application¹

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Introduction (Q1–3)

The acquisition of teaching skills is included in many objectives stated in General Medical Council's (GMC) 'Tomorrow's Doctors' (General Medical Council 2003). However, a recent survey of UK medical schools demonstrated that none of these was addressed in any of the obstetrics and gynaecology (O&G) curriculae (Royal College of Obstetricians and Gynaecologists 2008).

Peer-assisted learning (PAL) is an exciting teaching method. It offers the benefit of enhancing the teaching skills of students, while increasing their understanding of educational theories and their application in teaching with different techniques. Via PAL, students may also identify their own learning needs and exhibit creativity and resourcefulness. Overall, it could be an exciting way of introducing the 'teaching of teaching' to O&G curriculae. However, it has never been tested with O&G students before, and there have been less successful examples with other professions (Morris & Turnbull 2004).

Aims (Q4–6)

With this pilot study, we aimed to test the reaction of tutees and peer-tutors to PAL-O&G and identify challenges and barriers to full-scale implementation. A clinical lecturer led the project, supported by the local academy and on-the-job tutors.

Methods

We used the AMEE Guide no. 30 (Appendix) as framework for planning and reporting our study (Ross & Cameron 2007). Numbers in brackets refer to relevant sections of the Guide.

Training the tutors (Q7–9)

Two fourth-year medical students were randomly recruited from the University of Bristol undergraduate programme and training was incorporated in to the Reproductive Health and Care of the Newborn (RHCN) obstetric teaching programme. Both were taught PAL techniques, the principles of adult learning and learner-centred teaching models to improve their approach to and their evaluation of teaching. Both students were also trained in the principles and clinical skills of

performing an episiotomy and its repair, to include knot-tying and suture-techniques, with the use of a video and an episiotomy training simulator. We selected this skill as a novel learning experience: no student would have had any prior practical or theoretical knowledge, but everyone could benefit from the skills developed.

The techniques were practiced with one-to-one supervision by two trainee obstetricians. Of these two student-tutors, one provided the peer-assisted training and the other acted as a peer-assessor, using both validated peer-feedback forms and free comments to facilitate feedback and reflection.

Training the tutees (Q10–12)

Tutees were recruited from the fourth-year Bristol University medical student RHCN programme. After reading an approved information leaflet, they signed a consent form. These tutees were randomly allocated, using appropriate software, to two groups: one to be taught by the selected peer-trainer (Group 2), the other to be taught by a trainee obstetrician (Group 1). Neither gender nor previous education was specified; however, all students were from fourth year and therefore had had the same basic obstetric training.

Interaction (Q13–15)

These two groups were taught within a structured programme, which was identical in content. It included a lecture-based (power-point) presentation and a video on the principles of episiotomy, knot-tying and suturing techniques; and practice in episiotomy and its repair with the use of an advanced episiotomy model. After evaluating their session, both groups received an additional question and answer session with an experienced trainer to ensure the equity of teaching. The study was fully approved by the Faculty of Medicine and Dentistry Committee for Ethics, University of Bristol.

Evaluation (Q16–18)

We evaluated the students' reaction with a validated course experience questionnaire (Field et al. 2007) with Likert scale, and knowledge with post-session multiple-choice questions (MCQs). Both the peer-trainer and peer-assessor were asked

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for feedback and invited to make free text responses about their experience. Our aim was to determine if a completely new skill could be effectively taught by a peer-tutor, with the additional benefit of developing transferable skills and teaching experience, without compromising knowledge gained by their tutees. Positive feedback from trainer and trainees would be encouraging for planning full implementation.

Results of the MCQs were calculated as percentages and recorded in Microsoft Excel. Tutees' views, based on the questionnaire, were compared with the Mann–Whitney *U*-test. Statistical significance was set at $p < 0.01$ to account for multiple testing.

Results

A total of 10 students were randomly allocated to two groups of five each, but two students were unable to attend the clinical-tutor-led session because of other commitments. As a result, the tutor-led group had only three student tutees, whereas the peer-led group had five.

Tutees' reaction

Each student completed the course experience questionnaire (Table 1) after the PAL session and a score of ≥ 4 was considered positive ('agree' or 'strongly agree'). The tutees regarded most aspects of the PAL positively; all students reported the session as interesting, and over half of the students regarded it as relevant to their training regardless of it being taught by peer or experienced tutor. It was found that between the groups trainee perception of tutor knowledge did not significantly vary. However, feedback was deemed more clear in the tutor-assisted group.

Tutees' knowledge

Results from the MCQs were positive (>90%) for both groups.

Peer-tutors' reaction

'I think potentially very useful in a situation of teaching practical procedures where one-on-one supervision is really necessary and that is difficult in a large group'; 'I found that pretty positive as I know it's something we need to learn to do, so it was good to practice, and I quite enjoyed it!'; 'The theory

of the presentation has been produced by somebody properly qualified... makes it easier and more acceptable for both student tutors and learners if they are from the same peer group'.

Peer feedback

'I think the info provided by (peer trainer) was at an appropriate level'; 'It is difficult for someone to teach others on a subject they have never actually done on a real person and also they can't answer technical questions on'.

Conclusion (Q19–24)

PAL is a useful method to enhance learning among students and speciality tutees, as well as to provide opportunities to develop a teaching portfolio, one of the GMC requirements (General Medical Council 2003). The use of PAL within simulation training can combine benefits of practical training and operant conditioning in a non-threatening environment. This environment has been shown to be conducive to asking questions and to enhance confidence prior to the skill being performed in the real clinical situation. Other studies have also shown that PAL might be a valid method for improving psychomotor skills; peers can be resources for practising clinical skills while they also practise themselves (Weidner & Popp 2007).

In our pilot study, the knowledge gained by the tutees was not compromised by peer training, and a relatively complicated subject could be taught to one student and then relayed to other students to an acceptable standard. The peer tutor and peer observer enjoyed the experience.

It appears therefore possible to train students to teach their peers' basic skills, but problems are uncovered when experience and more in-depth knowledge is required. The skills being taught should therefore remain relevant to the set undergraduate curriculum, while retaining a focus on the process of developing the peer tutors as teachers, under the guidance of experienced tutors.

If the focus is clear and a structured framework is followed (Ross & Cameron 2007), PAL could be useful for enhancing students' manual and teaching skills in a specialty in which it has been historically difficult to do so.

Table 1. Course experience questionnaire.

Question	Clinical-tutor-led group (% who agree)	Peer-tutor-led group (% who agree)	<i>p</i> -value (Mann-Whitney <i>U</i> -test)
Was the training session interesting?	100	100	0.408
Was the session appropriate?	66	60	0.500
Did the tutor seem informed?	100	60	0.012*
Were the explanations clear?	100	80	0.011*
Was the feedback from the tutor useful?	100	60	<0.01**
Were you comfortable asking questions?	100	60	0.012*
Are you confident after the training session?	33	20	0.157
Would you recommend this session to a friend?	100	60	0.020*

Notes: **p*-value higher than our chosen level of statistical significance (0.01) but <0.05; **statistically significant.

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Note

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