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What value does peer-assisted learning have in the training of student paramedics?

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What value does peer-assisted learning have in the training of student paramedics?

Abstract

The article below describes how the implementation of peer-assisted learning into the classroom setting can help to support student paramedics in the development of their own clinical skills and knowledge.

Peer assisted learning is now being recognised as an effective learning strategy to support the development of health care professionals. Furthermore, adopting coaching style dialogue and conversation enhances learning and development for both the coach and coachee and in this instance for year 1 and year 3 student paramedics. The article describes broadly the evaluation findings of a session whereby year 3 student paramedics coached year 1 student paramedics to further develop a range of clinical skills through demonstration and discussion. A summary overview of the findings reflects the multiple benefits of this innovative approach to facilitating learning, including a notable increase in professional knowledge and skills for both groups of students.

Key words:

- Peer- assisted learning
- Coaching
- Learning environment
- Innovations in paramedic education
- Practice development

Key points:

- Development of innovative learning strategies.

- Utilising peer assisted learning and coaching skills to enhance and develop student paramedics knowledge in line with the evolving pre-hospital setting.
- Recognising the value of peer support in the classroom setting.
- Enhancing student learning in the social environment.

Background

In the UK, the newly qualified paramedic role (NQP) is emerging. The Health and Care Professions Council (HCPC) has clarified within the paramedics Standards of Proficiency that 'registrants must understand the importance of participation in training, supervision and mentoring' (HCPC 2014). Having an understanding of how enhanced coaching skills can further support the development of colleagues and students is now an expected skill for the qualified clinician to have. This is demonstrated by the varied mentorship approaches within the pre-hospital arena.

Developments for conducive and effective learning environments for students studying at higher educational institutes is on-going, with new techniques emerging and progression in the use of technology. Some techniques, although not new, are being developed further and identified as valuable for student learning. An example being, peer-assisted learning where students learn from others engaged in different clinical backgrounds (inter-professional) and also, where students from the same clinical area seek learning from each other (uniprofessional) (Williams & Reddy 2016).

Peer-assisted learning is recognised as a process of gaining knowledge from another student who is further into their training (De Silva et al 2017; McLelland et al 2013).This approach has been utilised in other fields of clinical education and healthcare, including nurse training (Brannagan et al 2013) but there is limited literature identified within the paramedic profession. Moore et al. (2015), recognises the positive impact peer to peer learning has on undergraduate students and how it can drive deeper learning. This is further

supported by Ytreberg & Aars (2015), who suggests that physiotherapy students who have participated in peer-assisted learning, benefited from the social aspects of this activity and also, supports the student clinician to develop in an emotionally supportive learning environment.

This innovative pedagogy allows a more social learning environment to emerge, as well as implementing the teaching process into the students journey (Williams & Reddy 2016). Bandura's (1971) social cognitive theory, identifies an individual's knowledge acquisition through the learning from one and another, which is facilitated by observation, imitation and modelling. Peer-assisted learning provides a suitable environment for this approach to be taken and allows a more senior student to model a skill or behaviour whilst the more junior peer, observed and imitated this. Dewey (1916) theory of progressive education is also supported by the peer-assisted learning and recognises that individuals will learn with a 'hands on approach'.

As Woods et al (2014) suggests, working with peers is now an effective and increasingly used model for teaching, in which the 'teacher' is slightly more advanced in skill level and knowledge base than the learner. The literature reports that learners are more comfortable approaching their peers with questions, with the peer teachers developing confidence alongside a more critical understanding of their acquired knowledge. Furthermore, Yu et al (2011) reports that peer teaching has been shown to be equivalent to traditional teaching methods in terms of achieving learning outcomes for the more junior peer.

When considering implementation of the peer teaching model, Lawrence et al (2018) highlight the need for peer preparation prior to teaching, to ensure the experience is productive and meaningful. Bournemouth University decided to explore integrating peer to peer teaching with coaching within the BSc (Hons) Paramedic Science programme.

Planning

As an idea originally suggested by the academic team, a meeting was arranged between the paramedic programme team and the University Practice Learning Advisers, who specialise in practice education and development, to discuss how this idea could be integrated within the current curriculum.

Review of the clinical skills timetable identified when both year 1 and 3 students were in the university, to enable the peer-assisted session to take place. A discussion was then held to negotiate as to what the intended learning outcomes were to be for both cohorts. It was acknowledged that 3 core skills, which included, peak flow measuring and interpretation, oropharyngeal/nasopharyngeal insertion and suctioning of an airway would be explored. The 3rd years were recognised as having the necessary experience and understanding of these skills, with the 1st years having limited exposure only.

2 learning packages were developed collaboratively for both cohorts, to include self-identification of learning styles for both, with 3rd years having additional skills protocols supported by literature from the evidence base, for example the UK Ambulance Services Clinical Practice Guidelines (Brown et al 2016).

Bespoke student feedback forms were developed for both cohorts, based on a brief literature review. The 1st year cohort was asked to comment in writing on the form as to their learning experience with a particular focus on the teaching skills of the 3rd year (peer teacher). The 3rd year cohort was asked to offer written feedback to the 1st years based upon their clinical skills, knowledge and practice.

Gregory et al (2011) identify the importance of being prepared to teach when considering facilitated peer learning, as this enhances the likelihood of a positive learning outcomes. Mindful of this, it was agreed that both cohorts would benefit from an individual preparation session beforehand.

The session for the 3rd year students focused on developing their existing coaching skills using reflections from practice. Key aspects included theories pertaining to coaching styles, learning styles, facilitation of learning, alongside how to offer effective feedback. The session was experiential, encouraging students to share their reflections about positive and effective learning experiences, plus also practice their newly enhanced coaching skills with support from the University Practice Learning Advisers.

As part of the session the 3rd years were also asked to complete and discuss a learning style questionnaire to identify their preferred learning style and with consideration as to the implications for their peer teaching.

At the end of session, the 3rd years were scheduled time to practice these skills, including the clinical aspect with the equipment available. Support was also available from the academic team. Importantly the students were encouraged to link theory to practice, using coaching dialogue whilst working in pairs.

For the 1st years, the preparatory session provided scope for them to explore their learning styles and discuss their expectations for the peer to peer teaching episode. The latter stage of the session also provided the students with a plan of how the session would be facilitated. During this session, students were asked to complete a learning style questionnaire and have a discussion about how best they feel they learn within the practice setting to support them within the coaching session.

Aims

The central aim from this session was for the 3rd year student paramedics to participate in peer-assisted learning and develop their coaching skills. Therefore, then allowing the students to feel better equipped when utilising these skills in the near future, once qualified.

A secondary aim was for the 1st year students to gain more understanding and exposure to equipment and skills that they may have not been able to use.

Observations – preparatory session

3rd Years

It was noted that the students appreciated the value in discussing preferred learning styles during the preparation session, not only to inform their own learning as senior students, but also pertaining to their planned teaching approach. The students' understanding mirrored that of post qualification students attending an HEI approved (BU) formal mentorship course. In particular, the students demonstrated awareness as to the impact of Additional Learning Needs upon students' learning both in the classroom setting and for professional practice skills. They also vocalised awareness as to the potential power of verbal and non-verbal communication with junior colleagues, framed as a wish to avoid being judgemental hence negatively impacting on confidence, this again mirrored post qualification students on a mentorship course in terms of mentoring insight. The students also stated that they wished to share their passion and enjoyment of the paramedic role, especially as more senior students, enabling them to encourage and support their junior colleagues.

1st Years

The more junior students initially had some difficulty in understanding the principles behind peer teaching, indeed 1 student suggested that it was a "tick box exercise". However this comment opened up successful wider discussions enabling understanding as to the differences between coaching and teaching. This dialogue enabled the students to consider what learning could be achieved from the session plus also, crucially, what they could contribute. It was noted by the facilitators that additional preparation for the 1st years would be beneficial, in particular focussing on the links between mentoring and coaching as a paramedic reflecting the HCPC paramedic Standards of Proficiencies (2014).

For both cohorts there was a strong focus on facilitating the students to understand the benefits of “not just giving the answer/being given the answer” instead developing and contributing to coaching conversations with their peers.

Observations during the Session

There was full engagement from all students during the activity, the session was noisy with on-going discussion and practical actions. Facilitators visited each peer learning triad for support and to offer feedback – it was noted that all students expressed enjoyment during the session and the learning extended to sharing experiences as to the paramedic programme and suggestions for practice learning both on and off clinical site.

Observations post Session - Informal Debrief

The 3rd years spoke of their enjoyment of the session, increased confidence as to their own knowledge and skills set in particular. The most common challenge was cited as not offering the junior student the answer and/or ‘telling them what to do”. Thus developing their own coaching skills. An unexpected finding was that the 3rd years spoke positively about simply being offered the opportunity to share time and learning with colleagues on the same course.

The 1st year students acknowledged the value of this session and commented on how they now felt more confident in using the equipment. An additional observation noted students confidently asking their peers many questions and without any hesitation. Sharing learning with more senior peers was also mentioned as a positive experience.

Many of these informal observations were also noted when assessing the formal feedback, detailed below.

Student evaluations

Students who participated in the workshop were invited to provide feedback at the end of the session, this was achieved via an anonymous questionnaire which allowed for qualitative data to be collected and broadly analysed. Each cohort group, year 1s and year 3s were able to complete the forms in separate rooms- thus reducing the risk of biases when answering questions honestly with the other cohort in attendance.

Students were told that comments and forms would remain anonymous but maybe used to develop future initiatives at Bournemouth University and that they may be used for future academic publication. This information was also clearly displayed on the form itself. Students were able to withdraw their consent formalised via a tick box at the end of the form, allowing them to opt out from this. Formal ethical approval was not required due to this being a bespoke education innovation and not a research study or evaluation.

In total, 33 feedback forms were completed- 11 forms were returned from the year 3 group and 22 from the year 1's- of these, 1 indicated they did not wish their answers to be considered and therefore their form was removed from consideration.

Findings

Results were analysed using content analysis (Cohen et al 2007) as it was felt this gave the best ability to fully appraise the results and in particular allowed a question by question analysis to be carried out, reducing the amount of text generated in order to provide an effective analysis (Bengtsson 2016). In addition to this, each year group data was analysed separately in order to fully understand each cohort's particular experiences. Within each group, each question was analysed on an individual basis. Comments were coded based on their content and themes for each question were then identified. Both levels of analysis; manifest (surface) and latent (deeper) were carried out in this way- initial analysis of the data

was at the manifest level where coding used terms closely related to the answers given, latent analysis was then applied by the academic team in order to establish broader content and themes in order to establish the underlying theme of the text answers (Bengtsson 2016) - this also included analysis of answers which had been placed in the 'incorrect' question box, for example, a comment such as 'more practical session time please' was written in the 'what would you like us to keep in the activity' as opposed to 'what would you like to change' section.

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INDIVIDUAL QUESTIONS ANALYSED	**COMMENTS CODED**	**BROAD THEMES DRAWN OUT**
Answers given by participants were written down. Any duplicate answers were logged with the previous comment.	All comments were coded into different areas/headings of interest.	Headings/areas of interest were grouped into Broad themes.
Examples	**Examples**	**Examples**
"Longer to prepare for lesson" (Year 3)	What didn't work so well	Suggestions for future delivery
" I enjoyed the chance to practice with equipment" (Year 1)	Clinical skill acquisition	Personal Development
" I have a greater appreciation of peer to peer learning" (Year 1 and 3)	Understanding of peer to peer learning	Personal Development
"It has given me the confidence to engage in mentoring activities in the future" (Year 3)	Seeking out future learning opportunities.	Future Professional Development
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Table 1. Content Analysis as applied.

From the feedback for both cohorts, 3 main areas were established; personal learning, personal future development and suggestions regarding the further delivery of this teaching initiative.

1. Personal Learning

This was a key area of feedback which was identified and there were differences noted between the 2 cohorts.

Year 1s reported that both the acquisition of a new clinical skill (in this case peak flow and suction) and the chance to refresh existing ones (basic airway manoeuvres) was of benefit. In addition to this, year 1s found an increased understanding of peer to peer teaching and the future demands of the BSc programme i.e.- expectations of them at levels 5 and 6.

The year 3 cohort feedback highlights an understanding of the importance of a varied approach to teaching, relating to an increased understanding of varied approaches to mentoring and coaching. In addition, they report benefits to their own positivity and outlook as a future paramedic, for example realising their own skilled capability was higher than they first thought.

2. Future professional development

Year 1 students identified the need to be more positive about their own capabilities and were looking forward to using their new clinical knowledge and skills on placement.

Year 3 students also reported the value of directly applying clinical knowledge and skills into the session and an increase in their own confidence was noted, especially through the question and answer process with more junior students. In addition, there was a strong suggestion that they would openly engage with mentoring and coaching activities in the future.

3. Suggestions for future delivery

There were positive comments towards the existing structure and delivery from both cohorts indeed many comments focused on the both the benefits of the clinical sessions and particularly, the peer to peer approach.

Suggestions for improvement focused on increasing the length of time for the preparation sessions to include wider discussion and dialogue, as both cohorts identified that more time was needed in order to fully realise the opportunities available. In addition, more space or separate rooms were needed- it was reported by both cohorts that the comparatively small rooms resulted in difficulties with both moving around and hearing what was being said.

Year 3 students in particular suggested that they would appreciate more time to prepare for the clinical teaching session which they facilitated and were also of the opinion that a more detailed explanation of the innovation was needed to be offered to the year 1 cohort so that they (year 1 students) fully understood what their expectations were of themselves.

Year 1 students suggested a slight modification to the session to perhaps offer a greater variety of 'different 'stations' thus increasing the opportunity for wider learning experiences, but, as before, each station facilitated by a year 3 student.

Emerging broad themes from all feedback

There are several broad themes to be acknowledged when reviewing the feedback given. Firstly, the 2 cohorts both identified key individual learning goals, both personally and professionally from the session which was a key objective articulated for the session during the design stage.

Year 3 students particularly focused on the recognition of differing learning styles, both for themselves and others for teaching and learning. In particular they highlighted the importance of a varied approach to coaching conversations both for themselves as students and as future professionals:

"it is difficult to teach to different styles and it depends on what the student wants" (Year 3, participant 10)

"methods of coaching (are important) and adapting coaching to individual learning styles" (Year 3, participant 7).

"tailoring teaching for students with different learning styles" (Year 3, participant 2).

The year 1 cohort enjoyed the practice elements of the session but also felt there were benefits through close interaction with the year 3 students:

"(I gained an) insight into the 3rd year" (Year 1, participant 5).

"good to hear what the 3rd year is like and get advice" (Year 1, participant 6).

In addition to the feedback above, it is important to note that there were also some shared experiences reported by both cohorts. There was a repeated theme that the social contact between cohorts was of value, allowing for a culture of shared learning, where shared experiences of practice and university setting could happen.

Both cohorts also reported a positive experience in terms of their own confidence and realisation as to the extent of their own clinical knowledge:

"I feel more confident" (Year 1, participant 5).

"To be more pro-active within my own learning" (Year 1, participant 18).

"My own knowledge is better than I thought" (Year 3, participant 10).

"I had more knowledge about certain topics than I thought" (Year 3, participant 5).

Conclusion

The review of the feedback demonstrates that this experience was recognised as a beneficial process for both year groups. The findings highlighted the value of implementing this innovation, with a variety of key learning points identified, namely including the recognition of individual skills and knowledge, the development of coaching skills and enhancing effective relationships between cohorts.

All students expressed that they had gained some new insight, whether this was clinical knowledge and skills or through sharing of the student experience for example, the

Paramedic Science programme and/or practice placement experiences. This was further endorsed by the year 3 students confirming that an increase in further peer to peer contact would have been beneficial throughout their programme, perhaps even beginning in year 1.

Overall, the review of the feedback identified that this was a very successful teaching and learning session and therefore there are planned further discussions and review as to how peer to peer coaching could be formally embedded into the curriculum for all year groups.

Reflective questions

Is there a role for peer-assisted learning within your organisation?

How could you encourage peer-assisted learning within your practice area?

Describe the benefits of encouraging the use of coaching skills during peer to peer reflective discussions?

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