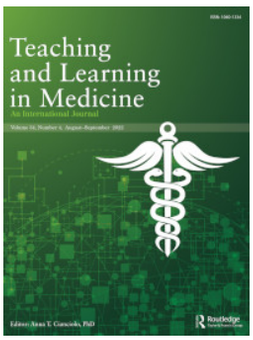

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GROUNDWORK

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Students' Experiences of Peer Observed Teaching: A Qualitative Interview Study

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ABSTRACT

Phenomenon: Development of teaching skills is an important aspect of medical student training. One method of developing teaching skills is participation in peer teaching with observation and feedback from peers. This study aims to explore student teachers' experiences of peer observation of teaching and how they intend to utilize this feedback. *Approach:* We conducted individual semi-structured interviews with peer tutors who had experienced peer observation of their small group teaching and subsequent feedback. The interviews were conducted by a medical student peer not involved in the peer observation of teaching scheme. They were audio recorded and transcribed. The pseudonymised transcripts were coded independently by two researchers using thematic analysis. *Findings:* Nine students participated in interviews lasting a mean of 42 minutes. We identified three main themes: motivations for observation, experiences of observation, and responses to feedback. Students were motivated to have their teaching observed by both intrinsic and extrinsic factors: to develop their skills and competence as a teacher, in recognition of the important role this plays in their career, to provide reassurance that they are providing good quality teaching, to ensure the content of their teaching is appropriate and accurate, and to provide evidence of engagement in, and development of, teaching. Students described feeling nervous before the observations and preparing more for their teaching than they might normally, however, during the observations they felt more comfortable which they attributed to the peer-peer relationship. Students described finding the narrative feedback more useful than the quantitative elements as it provided more detail as to how they might improve. Several students described how they have used the feedback they have received on their teaching to improve subsequent sessions. *Insights:* Peer observation of teaching is a useful and acceptable method of providing feedback on student teaching and recipients intend to use this feedback to improve their teaching.

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KEYWORDS
peer teaching; observation; feedback; qualitative; background

Background

Recently, recognition that medical students require support and development to prepare for their future role as teachers has come to the fore. This is reflected in the inclusion of teaching competencies set out by international regulatory bodies. In the United Kingdom, the General Medical Council stipulates in *Outcomes for Graduates* that newly qualified doctors must be able to 'work effectively and appropriately as a mentor and teacher for other learners in the multi-professional team;'[1(p10)] in Canada, teaching competencies are described within the CanMEDS domain of 'scholar';[2] in Australia and New Zealand, the Australian Medical Council state that graduates should be able to 'demonstrate […] fundamental skills in educating colleagues.'[3(p4)]

It is clear then that medical students should be developing skills in teaching during their undergraduate programmes. In response, numerous authors have developed educational programmes to develop this competency in students. Marton *et al.* categorize these programmes into three broad types: experience of peer teaching, teaching skills workshops, and participating in outreach programmes.[4] Amongst 19 accounts of peer teacher training programmes identified in a systematic review, only two employed direct observation of peer teaching to provide feedback.[5] While peer observation of teaching (POT) is recognized to be an effective means of developing faculty skills in

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teaching,[6] it is seldom used for developing undergraduate peer tutors' teaching skills.[7]

POT is a process where an individual observes a colleague's teaching and provides them with feedback. The process aims to stimulate mutual reflection in the tutor and observer, ultimately leading to improved teaching.[8] There are three described models of peer observation; evaluative, developmental, and collaborative.[9] The 'evaluative model' relies on senior review of junior colleagues teaching, making a judgment on their performance, often with implications for promotion. The 'developmental model' involves expert educators providing feedback to develop a teacher's competency. Finally, the 'collaborative model' relies on peers observing each other's teaching providing feedback to stimulate reflection and improve teaching.

Naturally, being observed by a peer does not necessarily lead to improvement in teaching.[10] Feedback and reflection following observation are the interventions most likely to change teaching practice. In a study of clinicians receiving POT, tutors valued feedback most when the feedback was delivered immediately after teaching, identified key features, was non-threatening and promoted reflection.[11] In a survey of 24 residents who had received feedback after POT, 62% demonstrated changes in their teaching and 57% felt that the process made them better teachers.[12] This suggests that feedback on teaching can be useful for developing the competencies of novice teachers. Conversely, a study of more experienced teachers identified variability in their acceptance of feedback on teaching, highlighting perceived credibility of the feedback provider and competing priorities as barriers to acting on feedback.[13] There are several factors influencing whether teachers accept and utilize feedback on their teaching.[14] Three such factors are the recipient, provision of feedback itself, and the impact of feedback on the individual.[15] First, however, consideration needs to be given to why learners seek feedback. Teunissen, *et al.* identified that not all learners actively seek feedback on their performance.[16] Factors influencing feedback seeking behavior include goal orientation, personal factors, interpersonal factors, and perceived costs and benefits.[16,17] In the existing literature the goal orientations of student peer teachers seeking feedback are currently undescribed.

In addition to the above, for recipients to perceive feedback as credible it should also be timely, specific, constructive, and 'actionable'.[18] Others support this and highlight the need to provide recipients with support and information to address the gap between current and desired performance.[19] This support can avoid critical feedback being perceived as burdensome and paralyzing which may lead to non-engagement with the feedback process.[20]

There have been no identified reports in the existing medical education literature of students' experiences of peer observation of teaching or, indeed, how they respond to and act upon feedback on their teaching practice. This study aimed to explore students' experiences of peer observation of teaching and how they intend to use feedback provided on their teaching.

Methods

Ethical approval was granted from Keele University School of Medicine Ethics Committee. This manuscript is reported in accordance with the Consolidated criteria for reporting qualitative research (COREQ).[21]

Context

We previously reported full details of the peer observation of teaching scheme we developed for medical student peer teachers.[7] At our institution there is a strong culture of extra-curricular near-peer teaching as part of a student society. Medical students deliver near-peer teaching to more junior students on a fortnightly basis covering a wide range of clinical and non-clinical topics. Sessions usually last one to two hours in the evening and are classroom based for small groups of approximately 12 students. As part of our tutor development programme, student tutors have the opportunity of attending a half day training workshop on session design and small group teaching, and are offered the opportunity to have a senior medical student trained in peer observation and feedback observe one of their teaching sessions. We adopted a model of POT, incorporating elements of the developmental and collaborative models aiming to develop both the tutor's and observer's teaching through feedback, discussion, and reflection.[7] Tutors were allocated a near-peer observer based on availability. Tutors and observers met to establish observation goals and the tutor's desired focus for feedback. Peer observers completed a peer observation form to structure their feedback. Observers and tutors met immediately after the observation to have a feedback conversation and to provide the tutor with the written feedback for future reference. Tutors were encouraged to reflect on the feedback they received but this was not mandated.

We emphasized to all tutors that the purpose was purely to develop their teaching rather than to evaluate or assess.[8] The peer observers are senior medical students trained in peer observation through a half day workshop.

Design

We conducted a qualitative interview study of tutors who had participated in peer observation at the School of Medicine, Keele University. We adopted a constructivist perspective, recognizing that meaning is constructed through dialogue between the researcher and the researched.[22]

Sampling and recruitment

We used a criterion sampling approach.[23] All students who had delivered near-peer-teaching and received feedback after peer observation of teaching (n = 16 during the period of data collection) were invited to participate via an email from the lead researcher (ME). Interviews were arranged in the same academic year as the peer observation and were a maximum of three months after the POT encounter. Written consent was obtained at the time of interviews.

Data collection

We conducted individual semi structured interviews using an interview schedule to guide our questioning (Appendix 1, Supplementary material). We piloted the schedule with the first two participants and made minor revisions before proceeding with data collection.

The interviews were held at a mutually convenient time in a university building. Students were encouraged to bring copies of any feedback on their teaching to help inform discussion. All interviews were conducted by one researcher (ME) who was not involved in the peer observation process with the intention to allow open and candid discussion of students' experiences of the feedback that they received. We also anticipated that the interviewer's role as a fellow medical student would minimize any power dynamic. All interviews were audio recorded and then professionally transcribed. The transcripts were pseudonymised and then imported in to NVivo version 12 to facilitate analysis.

Data analysis

We analyzed the transcripts using thematic analysis.[24] All three researchers read through all the transcripts to familiarize themselves with the data. We then each independently analyzed two selected transcripts and coded them inductively. We then met to discuss any discrepancies in the codes and to agree on an initial coding framework. ME and ELR then coded the remaining transcripts. We met periodically to review and discuss our coding and interpretations. Once all of the transcripts were coded, we met as a research team to construct themes. We then reviewed the content of the coding for each theme to ensure internal homogeneity and external heterogeneity. ME and ELR then reviewed all the transcripts to ensure our thematic framework appropriately reflected the entirety of our data and to ensure all data relevant to each theme had been coded. We then named our final themes to reflect the messages conveyed within them.

Reflexivity

Given our epistemological perspective, it was important to recognize the potential influence of our research teams' backgrounds and our interaction with the participants and our interpretation of their accounts. At the time of data collection, we were all senior medical students. We have since graduated and were early postgraduate trainees during the analysis phase. ELR also holds an academic appointment in faculty development. We were all involved in establishing and co-ordinating the POT scheme. We were cognizant, therefore, that we may have a propensity to seek the positive elements of the data. In the interviews, ME encouraged participants to express both their positive and negative perceptions they held. During analysis, we consciously sought divergent opinions within our data and discussed how our individual assumptions may influence our interpretation of the data during our regular meetings.[25]

Results

Nine students (six males, three females) participated in individual interviews lasting a mean of 42 minutes each. The participants ranged from years 2 to 5 of a five-year degree programme.

We constructed three main themes: motivations for observation, experience of observation, and responses to feedback. Within these results we will refer to medical students engaged in near-peer teaching as 'tutors', other medical students observing this teaching as 'observers', the students being taught as 'students', and academic staff employed at the medical school as 'faculty'.

Motivations for observation

Tutors described several different motivations for participating in POT. These included: to provide evidence for their involvement in teaching, to develop teaching

skills, and to reassure themselves of the quality of their teaching.

Some tutors were predominantly extrinsically motivated, describing wanting to be observed in order to evidence their involvement in near-peer teaching. They reported expecting the written feedback they received would be more useful in their learning portfolios (reflective portfolios that are maintained by students and reviewed by a member of faculty who was their personal development tutor during an annual appraisal) than a certificate of appreciation. They described this as being valuable, enabling them to reflect on and demonstrate their development to their personal tutors.

> 'Pad out my Portfolio!… This teaching thing wasn't a completely selfless act, there is some personal gain and that was one of the things.
>
> Student 4, Male, Year 4.
>
> I know we get the certificates for saying we've done it but actually having something like this is, good to have in your portfolio even just for your own reference to look back at but certainly if you're reviewing it with your PDT [Personal Development Tutor] then perhaps allows a bit more discussion
>
> Student 8, Female, Year 2.

Others described a predominant intrinsic motivation to develop as a teacher. They recognized that teaching will form a crucial part of their future career in medicine and sought to develop these skills early. They recognized that POT could give them a different perspective on areas to improve that they may not have considered through self-reflection alone. Most tutors had limited formal training in teaching so were unsure of the quality of their teaching and as a result obtaining reassurance was a strong motivation for feedback.

> Obviously we're doing this to sort of improve our teaching, erm, further ourselves so feedback is, it's like a crucial part of that […] I really just wanted feedback on what I was doing right and what I was doing wrong
>
> Student 7, Male, Year 2
>
> Medicine is a profession where you're constantly teaching your juniors and receive teaching from your seniors. So, as I know I'll be teaching in the future, I wanted to get quite good at it early
>
> Student 1, Male, Year 3
>
> I'm very interested in teaching, and I see it as part of my future career. It's important to me that I develop myself as a teacher. And peer observation, having a peer observe my teaching allows me to do that
>
> *Student 3, Male, Year 4*
>
> You'll get something insightful from the person giving you feedback. Something that either you've thought went wrong or went well, that they disagree with, or just something that you haven't thought about completely, that they can enlighten you on
>
> Student 6, Male, Year 5
>
> I maybe thought that the stuff I'd been doing so far was possibly wrong, I just tried what I thought worked for me. So yeah, it was just basically to get some assurance that the teaching that I was doing was useful
>
> Student 2, Male, Year 3

Experience of observation

Students' experiences of observation were variable. They were generally anxious before the observation and described three reasons for this. Firstly, they were concerned regarding repercussions if their teaching was perceived to be poor, such as being withdrawn from the near-peer-teaching programme. Secondly, they feared looking "stupid" or being judged by their peers if the session went badly, an anxiety which may be exacerbated by the close knit nature of the medical school. Thirdly, they worried about their content knowledge being insufficient and there being a more knowledgeable peer in the room. Conversely, this last point acted as a source of reassurance for some students that any factual inaccuracies could be corrected.

> I was a bit apprehensive about it at first, because, obviously, there's someone else in the session, and there's someone there just to watch you, rather than, someone who's appreciating the teaching. So it is a bit intimidating.
>
> Student 3, Male, Year 4
>
> I was pretty nervous because my performance was being assessed and umm, I wasn't the most knowledgeable person in the room, because usually when you teach you should be, so I was conscious of making sure I didn't say anything inaccurate.
>
> Student 4, Male, Year 4

In order to overcome anxiety regarding content knowledge, tutors reported enhanced preparation as a coping strategy in sessions when they knew they were going to be observed. This may reinforce the educational benefits to the tutor of peer teaching.

> Initially I think I best put more work in to it potentially because if I am going to be being watched I don't want it to be terrible
>
> Student 1, Male, Year 3

> It made me reflect on past teaching. It made me think about my preparation for the teaching session at hand, and I think I did prepare a bit more because I thought to myself 'right, what do I want feedback on?' or 'How can I make sure this is as good as possible?'
>
> Student 3, Male, Year 4

Despite the initial anxiety described, students universally reported feeling comfortable being observed by near peers. This was also evident in the post-observation feedback meeting with tutors where the social congruence inherent in the peer relationship allowed for perceived empathy and understanding, creating a more informal discussion. This informal relationship led to honest discussion and constructive feedback.

> I was nervous at the beginning […] knowing that he was in my eyeline and thinking 'what is he going to be thinking?' But then that faded after about 5 or 10 minutes and I just got on with it and focused on the students
>
> (Student 5, Female, Year 2)

> They've come from a similar stage from you, only a couple of years ago, erm, they seem a lot more understanding. You feel like more, it feels like more informal, more like a general conversation rather than a formal affair where they're telling you how you did and start criticising you.
>
> Student 8, Female, Year 2

> If it's someone you know, then the informality is really there, and they can just say to you, 'Look. This wasn't very good… they can be a bit blunt with you and not have to worry about, you know, professional courtesy and not offending you, because, you know, your mates can offend you.
>
> Student 3, Male, Year 4

> I can't say I felt any worry or anxiety about it, erm more a sense of…er, reassurance, I guess, there was, there was a more senior student there. His, er, his obviously not my knowledge but I guess that's a useful thing as well because if you, if you're unsure of anything when you explain stuff to junior students, they're, they, they're there to help as well, I think.
>
> Student 7, Male, Year 2

Responses to feedback

Tutors reported valuing the feedback they received after peer observation. They described the verbal feedback as the most useful element, allowing clarification of learning points. However, they also recognized the utility of written feedback for future reference and reflection. The value of the feedback was also influenced by timing. Tutors noted that the immediacy of verbal feedback made it more useful as the delay with written feedback gave time to forget key points. Tutors highlighted that fatigue after the teaching session may limit the efficacy of the post-observation feedback.

> I think the contact with the observer afterwards is quite important to clarify any issues and just gives you a better understanding of what has been written down, but its good to have the hard copy as well so both forms I think are good.
>
> Student 2, Male, Year 3

> It gives you that immediacy [verbal feedback]. You can bounce things off them and say, 'Do you think that was a good idea or should I not have done that?' It gives you that immediate, 'Well, this was all right or not'
>
> Student 6, Male, Year 5

> We were emailed it probably about a week after the session. So yes, like, interval time you tend to forget about all the little things you did. Erm, so it's probably less useful in that case
>
> Student 7, Male, Year 2

The feedback from the peer observer was considered to be more useful than other sources of feedback, for example student evaluation questionnaires. This was felt to be because the observers were more specific and detailed with their feedback. They were also considered more likely to offer a balance of confirmatory and constructive feedback. They described the narrative feedback as more useful than the Likert type questions as the latter were perceived to lack detail.

> Yeah, it was more detailed the observational feedback, the students just had the questionnaires and they have about two minutes, and they just want to go home I guess and they just tick the boxes, and put maybe one comment at the bottom, and you never really know if they are being honest or if they are just being nice because they don't want to offend you
>
> Student 5, Female, Year 2

> The positive is good for the reassurance and the negatives is good for moving forward and knowing what to do next time to change it. I think if you did it all either way then you lose out on the benefits of the other
>
> Student 5, Female, Year 2

Tutors reported that peer observation and feedback influenced their future teaching. They described the process encouraged them to reflect on their teaching and helped consideration of how they may improve future sessions. They were able to identify specific changes that were utilized in their future teaching sessions.

> I had a read through it, […] I focused more on the negatives and just had basically a little think about how I could improve that the next time I did it."

Student 2, Male, Year 3

I think its sort of evidence of my reflection, the fact that I've changed my teaching style slightly, and also producing lesson plans to improve the teaching to the students

Student 1, Male, Year 3

Some participants described reflecting for action in advance of their next teaching sessions, whereby they would review the feedback they received after their peer observation and consider how they would approach the session differently this time in order to improve.

I also used it and took it out when I was planning my next session and wrote down a few things… like just making sure that I introduce myself, and also we implemented name badges for the next session as well, which was useful

Student 1, Male, Year 3

Discussion

Summary of results

This study sought to explore students' experiences of POT and how they utilize the feedback received. We have identified that students were motivated to have their teaching observed by a mix of extrinsic and intrinsic factors. While many were anxious prior to the observations, they describe feeling comfortable during the experience which they attribute to social congruence between observer and tutor. Students use the feedback they receive both for reflection and to inform future teaching.

Comparison with existing literature

Previous studies have identified that students are motivated to develop their teaching skills.

For example, an evaluation of a programme to develop student teaching, identified through questionnaire and focus groups, that students were motivated to develop their teaching skills as they realized that being an educator would form a key role in their medical careers.[26] Another important motivator was use of the written feedback as evidence of teaching and development. Whilst several programmes to develop students' teaching utilize certificates for portfolios as an incentive[27,28] written evidence for portfolios has not been previously reported as a motivating factor for seeking feedback. The present study has highlighted that written feedback is a useful way to evidence student teaching and provides an opportunity to demonstrate development over time. As a result, having this documentation as part of the process may be an important factor for students to receive feedback on their teaching.

Overall, student tutors found POT to be an acceptable way of receiving feedback on their teaching. However, despite this, pre-observation anxiety was widely reported amongst tutors. This anxiety was reportedly due to fear of assessment and reprisals for poor performance, as well as fear of embarrassment if criticized by colleagues. This is in keeping with reports of POT in other populations. Others have found anxiety reported as a potential barrier to observation of teaching in GP tutors especially when observed by a non-peer.[8] Similarly, foundation doctors undergoing POT almost universally reported apprehension before observation.[29] Interestingly, in keeping with our study, they also reported a case of a tutor feeling reassured by having the observer to help if needed. This anxiety may be heightened if there is a power differential between observer and tutor or that there are perceived consequences based on performance as in the evaluative model.[9] Use of peer observers at a similar stage of training and repeat observations may help to minimize this power differential, and improve familiarity and trust with the process therefore helping to reduce this anxiety.[29,30] One of the unique findings of our study is the importance attributed to the social congruence between tutors and observers in establishing a psychologically safe learning environment and the fact participants report observation by faculty would be undesirable. This is similar to the cognitive and social congruence in peer teaching.[31] Ultimately, after an initial period of anxiety, all tutors reported feeling comfortable with being observed by peers. This corroborates the findings of another study which interviewed senior dental tutors involved in POT and identified initial anxiety followed by comfort, which persisted into the post-observation feedback meeting with tutors reporting they could have more open and honest discussions with their peers.[32]

All student tutors were able to identify areas for development and specific changes in their teaching following their feedback using the proforma as a tool for reflection on and for action, reviewing this prior to future teaching. This process of reflection forms a key part of the POT process as observation alone does not equate to improved teaching.[10] A study of POT with foundation doctors as peer tutors identified that the process stimulated reflection and specific changes in future teaching.[29] These findings suggest that POT is an effective method of developing novice tutors' teaching skills.

In concordance with existing literature, student tutors found the verbal aspect of the feedback most useful, possibly due to the immediacy and opportunity to explore feedback in depth.[33] However, tutors also recognized the value of written feedback as a tool for future reflection for action and that immediate feedback may be limited by fatigue at the end of teaching sessions often after a full day of learning activities. Similar issues are raised as a barrier for clinicians participating in POT around clinical commitments.[8,33] It is recognized that effective POT is time consuming and provides a major challenge for making the process useful and sustainable.[34] Consequently, consideration should be given to allow appropriate time for feedback when delivering POT.

Strengths and limitations

This is the first report of medical students' experiences of peer observation of teaching as a tutor development approach. We have provided important and novel insights into the phenomenon that can help inform the design of student tutor training. We used a student peer to conduct the interviews which we believe will have fostered a more candid discussion due to social congruence and lack of power dynamics. While the interviewer was not involved in the peer observation scheme during or prior to the interviews, he was a member of the committee of the near-peer teaching society (Keele Medical Education Society) at the time of the interviews. He endeavored to encourage honest discussion from the participants, but his role on the committee may have influenced their responses through social desirability bias.

A further limitation of this study is the relatively small sample size. While there are no absolute numbers required for qualitative studies, authors generally recommend between 12 and 60,[35] and empiric work suggests saturation at 12 interviews.[36] Due to the small sampling frame of students that had participated in the POT scheme at the time of data collection we were not able to recruit any further participants. While we do not purport to have reached saturation, we believe our data is sufficient to answer our research questions given the narrow focus and sample specificity.[37]

Recommendations for future research and practice

We have found that POT is an acceptable and useful method of receiving feedback. We recommend that educators consider incorporating observed authentic teaching practice into peer tutor development programmes. These observations should be conducted by peers or near peers and be followed by a feedback conversation, the main points of which should be documented in writing to enable future reflection.

Given the reported impact that this feedback has on students' teaching, future work should look to examine the content of peer feedback to ensure that it is of sufficient quality to optimize the development of student tutors teaching.

Conclusions

This study has identified several different motivating factors for undergraduates to participate in the process of peer observation and feedback. These include reassurance about their teaching skills, evidence for portfolios, and importantly, to aid their development as a teacher. Student responses demonstrate that the majority found the process useful and that despite some initial anxiety, POT is a valuable and acceptable way of receiving feedback on their teaching. Separation of 'evaluation' from the process may reduce the barriers to acceptance and reduce anxiety, aiding a positive developmental learning process. Interestingly, all student tutors reported using the feedback to improve and develop their future teaching performance. Overall, it appears that peer observation of student teaching should be encouraged and may be a useful tool in developing the teaching skills of student tutors.

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Disclosure statement

No conflict of interest to declare.

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