The critical friend – a way to develop as a tutor in problem-based learning groups

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Tutors in problem-based learning (PBL) need to reflect on their role, to prevent stagnation. We aimed to explore the learning experiences of tutors gained by being and having a critical friend in a PBL group. Eight teachers, from several professional programs at the Faculty of Medicine of a Swedish university, participated in a cross-program activity involving the being and having a critical friend to improve their skills as PBL group tutors. They were individually interviewed, and the transcriptions were subjected to conventional qualitative content analysis. The results revealed that a critical friend from another discipline can be useful and that experiences from both roles, to be and to have a critical friend, is necessary for reflection and learning, and thus optimal results. We conclude that support from the organisation, knowledge sharing, and communication are required to enable a systematic use of critical friends to be implemented with credibility.

Keywords: critical friend, facilitation, higher education, improving teaching skills, problem-based learning, reflective practice, tutors

INTRODUCTION

Problem-based learning (PBL) is an educational method and approach in the medical and health sciences that has been successfully implemented worldwide (Neville, 2009). The pedagogical principles of PBL involve learning as an active process in small groups of students, which are considered fundamental and central for a student-centered learning process (Vygotsky, 1978). The students' learning is dependent of relevance and meaning. In PBL, this is provided by real-life scenarios, related to the students' upcoming profession (Boud & Feletti, 1997; Dahlgren, 1993). Moreover, in PBL the students take responsibility for and use reflection on their own learning, a resourceful approach for life-long learning (Schraw, 1998; Schön, 1987). Another principal of PBL is tutors' feedback. In PBL, tutors do not act traditionally as lecturers by answering the students' questions. Instead, the tutors ask metacognitive questions aiming to challenge the students to critically review their new knowledge, the literature and the collaboration when formulating new goals for their learning (Boud & Molloy, 2012). Thus, tutors play a key role in PBL groups. They can stimulate to active and collaborative learning and develop the self-directed learning abilities of students (Van Berkel & Dolmans, 2006). However, Azer et al. (2013) reviewed the available literature and identified some problems in PBL programs that may arise among tutors some years after a successful implementation. They showed that if tutors reflect on their own supervision at regular intervals, this can avoid

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problems such as slipping into a "content expert" role, neglecting the problem-solving process by skipping steps in the PBL process, and having one's own rules and methods of conducting sessions. An advanced professional "tutor training" was recommended to be developed to manage and solve the problems mentioned above (Azer et al., 2013). This can be supported by starting a reflection process in a dialogue with a mentor (Schön, 1987).

The paradigm of reflective practice that has dominated professional development for a long time is that of reflective learning (Kolb, 2015; Schön, 1987). Reflection leads to new understanding and knowledge that includes a new understanding of unsafe situations, a greater ability to cope with difficult situations, and new professional knowledge (Schön, 1987). Together, learning takes place during the process of reflection. Thus, in a broad sense, the reflection theories are a ground for the concept of a "critical friend", which Stenhouse introduced in 1975, as a dialogue between colleagues involved in research projects (Stenhouse, 1975). The concept was later revitalised and described as a model for reflection and continuous professional development in medical education (Handal, 1999). Unlike earlier models of peer review, the critical friend model relies on friendship and mutual trust between pairs of colleagues. The model has been viewed as a part of evaluation, representing the highest order of learning (Bloom, 1956). Moreover, the critical friend was described as a trusted colleague who asks provocative questions, while simultaneously offering a friendship-based critique of a person's practice (Costa & Kallick, 1993).

Research into the role and actions of critical friends has been performed in several settings among tutors and students using quantitative and qualitative methods. This research showed that one positive aspect of the model is that peer observation among tutors is an effective way to facilitate reflection by the tutors on their teaching (Bell et al., 2010; McKeown & Diboll, 2011). Negative aspects, however, are found in that cultural intolerance, fear, and a reluctance to give friendly feedback arise in peer observations among students (Wachob, 2011). Learning in pairs can create vulnerability, and its success depends on good communication between the members of the pair (Wennergren, 2016). It becomes important that the critical friend can ask provocative questions, give criticism, and is trusted by the observed teacher (Costa & Kallick, 1993). A study at Karolinska Institutet in Sweden investigated experienced teachers in the Faculty of Medicine. A critical friend observed a colleague using a pre-determined protocol, and then gave feedback to the teacher. Each teacher involved in the study reflected differently on their teaching after the study than they had done before, and managed their teaching in a new way (Dahlgren et al., 2006). A study of academics who observed their colleagues' teaching at a large research-intensive university in Australia gave the same result: Observing a colleague led the academics to change their teaching practices (Hendry et al., 2014). Results from PBL contexts that use the model in clinical settings are scarce, as are results from tutoring in PBL groups. A centre for educational development at the Faculty of Medicine of a Swedish university arranged an activity that used the critical friend model, in an initiative to motivate and inspire teachers to develop their role as learning tutors in PBL groups. The aim of this study was to explore the learning experiences of tutors gained by being and having a critical friend in a PBL group.

Key questions we aimed to answer in our study:

What was learned by critical observation of a colleague involved as a tutor in a PBL group?
What was learned from being critically observed as a tutor by a colleague during a PBL group session?

MATERIALS AND METHODS
Small-scale intervention
The setting of this study was the Faculty of Medicine at a Swedish university. Teachers from various medical and health sciences programs were invited to participate in a small-scale intervention arranged by a centre for educational development at the Faculty of Medicine of the university. The intervention aimed to develop the teachers' role as learning tutors in the PBL groups. The intervention was conducted in five steps. Step 1: The teachers met and described their experiences as tutors. Step 2: The teachers visited in pairs, where members of a pair had been selected from different programs. Step 3: The teachers met in a workshop in which reflections from the visits were discussed and the theoretical basis of these reflections determined. Step 4: Individual interviews were held with five women and three men who had accepted an invitation to participate. The interviewees were from four programs (nursing, physiotherapy, occupational therapy, and medicine) and gave written informed consent. The age range of the teachers who accepted the invitation was 35–60 years, and their length of experience as tutors ranged from novice to more than 20 years. Step 5: ES and AKK, both senior researchers, interviewed the teachers individually in locations chosen by the interviewees. All interviews were carried out in the researcher's or the teacher's office. The interviews were recorded with a digital voice recorder, and thereafter transcribed.

Data collection
A semi-structured interview design was chosen and tested with a pilot interview (Kallio et al., 2016). Central open-ended questions posed to the teachers were: You have during the autumn acted as a critical friend. Can you tell me about how it was? What did you learn from being observed by a critical friend? What did you learn from observing a colleague? Probing questions such as "Can you tell me more about that?" were used to deepen, develop, and clarify the replies from the teachers.

Data analysis and rigour
The transcripts were analysed by conventional qualitative content analysis (Hsieh & Shannon, 2005). First, all transcriptions were read repeatedly (as reading a novel) by both ES and AKK to attain immersion and to achieve a sense of the whole (Tesch, 1990). During this process, the meaning of the text was determined. Secondly, the transcripts were carefully read, word-by-word, in order to derive codes (Hsieh & Shannon, 2005; Miles & Huberman, 1994). This was accomplished by visualising the exact words of the transcripts that captured key concepts. Thirdly, we independently made notes of our first impressions and thoughts, which we compared and discussed with the aim of reaching consensus about the categories identified (Hsieh & Shannon, 2005).

To clarify the work during the different phases of the analysis an example is provided here.

Regarding the question about what was learned from being observed by a critical friend, a meaning was identified: "*I think that it is good that it is someone from another faculty. It gives different things; I mean no preconceived thoughts*" and given the code: *Another context is good*, which together with similar codes shaped the category: *Learning exchange.*

The main purpose of the analysis was to search for content, i.e., visible and obvious statements in the text that illuminated the teachers' learning experiences of being and having a

critical friend during the tutoring of PBL groups. The actual words used by the interviewees were used as far as possible during all analysis steps. To ensure rigour, the authors collaborated during the analysis and discussed reflections and suggestions for the categories until agreement was reached.

This study adhered to the Declaration of Helsinki (The World Medical Association, 2020). All teachers who were invited to participate received a letter with information about the study. The letter stressed that participation was voluntary, and non-participation would not affect the presumptive participant in any way. They were also assured that all data would be treated confidentially. They received a response letter to sign, and all eight teachers gave informed consent and were enrolled into the study.

RESULTS

We identified seven categories of teachers' learning experiences of being and having a critical friend when tutoring PBL groups. Three of these relate to being observed by a critical friend: *The unspoken tutorship; Confirmation*; and *Learning exchange.* Four further categories relate to a critical friend observing a colleague: *Adding new tools; Reflection on own tutoring; Cross-border encounters*; and *Realise the need for critical friends.*

To have a critical friend

The unspoken tutorship
This category includes the teachers' learning experiences of receiving feedback from the observers regarding the teacher's body language and unspoken expressions.

> What you say. What you don't say. To hear what the observer sees, feels and experiences … Because that's what I experienced with my observer, it was not only what was said, but also body language and more, these unspoken expressions that my observer highlighted. (Respondent 1)

Confirmation
The tutors experienced that the critical friend helped their development as tutors by giving suggestions and/or feedback about their way of tutoring. An observer could confirm that the tutoring was optimal. Feedback about theoretical knowledge was also experienced as confirmatory.

> I think that it is very important that there is an opportunity to do this. For my own development as well. You see it as a confirmation that you are acting correctly. Well, maybe you can't say "acting correctly", but acting in an optimal way, somehow. And then you may get suggestions … (Respondent 2)

> It has to do pretty much with confirmation of this; the way of tutoring that you have developed through the years and read about. (Respondent 3)

Learning exchange
This category consisted of the learning experiences of the tutors that arose when they acknowledged the impact a critical friend from another program could have. In this case, the critical friend did not have any preconceptions about the teacher as a close colleague. The teachers' learning experiences also consisted of feedback from the critical friend about the taxonomical

levels of the questions put to the students. The feedback also regarded the tutor's approach to the students.

> I think it's good that it's someone from another program … It gives different things, I think. No preconceptions … (Respondent 1)

> She [the critical friend] had observed the level at which I set my questions … taxonomically, but also related to whether I tutored the group process or the knowledge process … The type of questions I used. (Respondent 4)

> But I was a bit too quick when replying, and my critical friend remarked on this. Not with many words but more from his behaviour I understood that he thought so. That I could have left it out. And then I think that the learning was how I react when I get emotional as a teacher … And then I still think that it is a learning [experience]: I have realised that I work in a rather conscious manner. (Respondent 4)

To be a critical friend

Adding new tools
When the teachers observed a colleague from another program, they saw some new tools and ways to tutor the students. A new tool for some observes, for example, was Post-it notes, while others were stimulated to think more about the progression in the students' learning process.

> Something like that, but I learned a lot … With the brainstorming exercise, each student wrote Post-it notes, for everyone to get involved, and have to think a little bit more … So I'll test this technique some more now. (Respondent 2)

Reflection on own tutoring
This category related to how the tutor had experienced acting as a critical friend in a different context. Watching a colleague enabled the critical friend to observe their own practices objectively and led to some reflections about them.

> So it was, of course, at the same time observation of the students' activity, and her [the observed teacher's] activity and behaviour towards the students. And a reflection on whether I would have done so or not … metacognition. (Respondent 3)

> This could be the reason that I became fascinated by the second group, because it stood for things that … Ah, that started a lot of reflections. (Respondent 4)

> So, I think that was an important lesson … this waiting and also that I may not be able to use my personal experiences so much. It may be good to hold back a little more. (Respondent 5)

Cross-border encounters
The study had been designed such that teachers from the nursing program, for example, observed tutors in the occupational therapy or physiotherapy program. PBL was used as both a method and an approach in all participating programs, but the curriculums differed. The teachers experienced a critical friendship that crossed discipline boundaries and that they learned about new ways to tutor the students, when they observed colleagues from other programs.

> To get to medical school where I was working, I also thought that was great because it was another curriculum … I also thought it was very interesting to view … another form of teaching. (Respondent 4)

> Now I observed PBL groups that were not in the nursing program, and it was really useful, I think … It gave me a lot, in that I see that we are very similar, and we face the same challenges. (Respondent 3)

Realise the need for critical friends

Several teachers who had used the model with a critical friend stated afterwards that the concept was, of course, something to work with, not least in the development of tutors.

> I think it is good that this is linked to the critical friend and development. It should be linked to a process in which we update ourselves, and we can read and discuss with each other. (Respondent 2)

DISCUSSION

This study has shown that in a PBL context, in which different programs use the same pedagogical approach, it can be useful to meet in groups and observe not only within their own teaching team, but also across discipline boundaries. Based on the teacher's reflections about what was learned during the visits, our results also showed that learning exchange took place during the critical friend observations. Both those doing the teaching and the critical friends experienced these effects.

Learning occurs in a community of practice, i.e., in a practical activity in which the members feel commitment and participation and when experiences are shared (Lave & Wenger, 1991). This study created communities of practice in which the participating teachers were given the opportunity and forums required to reflect jointly on the teacher's role and activities. We showed that this can contribute to collective learning and to the development of the participants' own scholarship of teaching. The term "scholarship of teaching" (Kreber, 2006) describes not only teaching skills, but also the sharing of one's experience and knowledge with others and developing one's practice by subjecting it to peer review. The observations by a critical friend allowed teachers to share their teaching practice and subject it to a collegial review, which provided the conditions required to strengthen their roles as learning tutors. As tutor in a PBL context, one role is to stimulate and develop the students' metacognitive learning. This can be performed by asking questions such as: "What do you think about that?" or waiting for the students' reflections while being quiet, can be helpful in supporting them to reach deeper learning. By getting feedback from the critical friend during such situations regarding body language and about what was said and not said, the participating tutors also got a glimpse of their own mentoring style and were able to reflect on it. Moreover, to observe a colleague led to reflections about their own practices, whether the critical friend would have done the same as the teacher who was observed or not.

A successful peer observation system can in other words lead to enhanced teaching and learning, which is valued both by the teaching staff and the university management (Carroll & O'Loughlin, 2014). One way to develop tutoring skills is to act as a critical friend, either within a discipline or across discipline boundaries. This study has shown that the teachers experienced a critical friendship that crossed discipline boundaries positively. When the teachers observed colleagues from other programs, they also learned about new tools and new ways to tutor the students.

An additional result, not answering the aim of the study, was that some of the teachers expressed concerns and nervousness about being observed by a colleague. Similar experiences have been discussed previously (Tanner et al., 2017), in terms of vulnerability, in the sense of making individual teaching public for other learners. Another study has shown that fear of criticism can be a barrier for the peer observation process (Adsehead et al., 2006). Participants in the study presented here were not free to choose their critical friend because we wanted to orchestrate cross-discipline encounters, something that has not previously been done. However, it is important that critical friends rely on friendship and mutual trust (Handal, 1999). A preparatory meeting was therefore held, as it has been recommended that participants should be offered the opportunity to discuss their expectations for the upcoming observations (Murphy Tighe & Bradshaw, 2013). The expectations were positively appraised since teachers in general lacked constructive feedback from colleagues in their everyday work. This led them to consider being offered a critical friend as a privilege. The teachers also mentioned that they expected to be strengthened by the observer's critical observation, since they felt trust and respected the observer as an honest colleague.

Nevertheless, a system with feedback between only two people may be vulnerable, due to the fear of hurting the tutor's feelings. This may lead to not giving honest feedback, which decreases the amount the tutor learns. Thus, groups of 5–6 critical friends is suggested to be formed (Wennergren, 2016) in subject-matter departments, as well as interdisciplinary grade-level academy teams. This support metacognition and reflection in the teacher's practice, and in this way increase student achievement (Curry, 2008). In times of poor resources for education, systematic work with critical friends can be an efficient way to maintain and improve quality in the teachers' skills development, which will have a positive outcome on the students' learning. A tutor may be assigned to act as a critical friend and observe a colleague (from the teaching team or from another program) at one point during one semester, and to be observed by the critical friend thereafter. This can be repeated during the semester.

This study has strengths and limitations. The strengths are that the interview guide had been constructed by both researchers and tested with a pilot interview, which showed that no corrections were needed. The transcripts were analysed by conventional qualitative content analysis, which is suitable for this type of data (Hsieh & Shannon, 2005). To achieve credibility in the study, both researchers had prolonged engagement and lengthy contact for several months with the respondents who participated in the critical friend activity and consented to be enrolled in the study. Analyst triangulation was achieved as both researchers worked independently and later collaboratively throughout the analysis procedure (Lincoln & Guba, 1986).

The teachers were asked to use Gibb's reflection model before the visit, but a limitation is that we did not follow up whether they had actually used it, nor what they thought about this model (Gibbs & Unit, 1988). We did not use a formal structure for the feedback process, which could have been useful. In most cases, the critical friends gave their feedback to their colleague immediately after the observation. Something to consider in further studies of the critical friend model is that participants find it easier to deliver collegial feedback after they have experienced both roles – observer and observed (Carlson et al., 2018). Feedback should also involve strategies for the future, and that the "student" is the driver of the feedback, and this should also be considered when planning future studies (Boud & Molloy, 2012).

Another limitation is that eight participants is a small number, and these were predominantly female teachers from four programs. However, the teachers involved in this study had a large information power (Malterud et al., 2016), in regard to the study aim and the specificity

experience they had by participating in the cross-program activity provided by the Medical faculty. The information power was also strengthened by the quality of the dialogue between the researchers and the teachers. Thus, the larger information power the sample holds, the lower number of participants are needed in qualitative studies. Still, the results may have been different if more male teachers and participants from other programs, such as speech therapy, had participated. The teachers who took part, however, shared important learning experiences in the cross-discipline encounters. Moreover, the results of this small-scale intervention study need to be considered carefully regarding generalisability. The sample is purposefully, carefully selected and information-rich from a context presented that could illuminate the questions under study. According to Patton, such formative research does not seek generalisations beyond the specific intervention studied, which is applicable here (Patton, 2002). We intended to explore the learning experiences gained by this intervention within a specific context and time in a specific group of teachers and the results should be considered as such. However, this research area is not fully understood, and further studies using both qualitative and quantitative research design are needed to broaden the knowledge about how tutors' learning take place in the context of an interdisciplinary critical friendship in PBL.

This study was arranged along with a small-scale intervention conducted in 5 steps. During step 3, when the teachers met in a workshop to theoretically and empirically reflect on their learning experiences, they were invited to participate in this interview study, which may be considered as ethically doubtful as the study was not reviewed and granted by an ethical review board. However, this study complies with the principles outlined in the Declaration of Helsinki (The World Medical Association, 2020) and does not involve any potential ethical dilemmas that may affect the teachers involved. Prior to the interviews the teachers were orally and in written format informed about the study, and that participation was voluntarily. We informed about that non-participation or withdrawal from the study would not affect them in any way. We also declared that the interview material would be coded and treated confidentially ensuring that their names or other identifiable data could not be reviled in all reporting of the study. The teachers were not dependent on ES or AKK in any professional way. All teachers gave informed consent by signing a response letter which they brought to interview location.

CONCLUSION

This study has shown that acting as or having a critical friend is important for the development of teachers' skills as tutor in a PBL context. The study has shown in particular that a critical friend from another discipline can be useful. Experience from both roles, to be and to have a critical friend, is necessary for reflection, and thus optimal results. Support from the organisation, knowledge sharing, and communication are required to enable a systematic use of critical friends to be implemented with credibility.

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DECLARATION OF INTEREST STATEMENT

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