
Small group facilitation skills in problem-based learning

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Abstract

Medical schools are increasingly changing over to a problem-based system of learning. Students work in a small group to analyze a well-structured, clinically relevant patient case. Problem Based Learning (PBL) provides a logical approach in training students for practicing medicine in a complex environment by exposing them to simulated problems which may reflect real life situations. PBL requires a change in mindset on the part of both the learner and the teacher/facilitator.

For tutors, metacognitive skills, i.e. the ability of active, positive, conscious monitoring and direction of activities carried out by the students who were confronted with a problem, clear communication, and awareness of the learning needs of the students are rated as important. The 'knowledgeable' teacher no longer dominates learning, and students and teachers became equal partners in the learning process. Teachers/facilitators are requested not to give answers but to provide students with more room for active self-learning. An effective PBL tutor has the ability to communicate informally with students and has an empathic attitude which creates an atmosphere in which open exchange of ideas is facilitated.

Programmes to improve PBL facilitation skills have been carried out in various institutions in the South Asian region. The positive impact of these training programmes highlights the need for workshops to develop such facilitative skills among South Asian medical educators. Problem-based learning should gradually become the more important and more widely used method of learning compared to didactic lectures.

Key words: facilitators, faculty development, South Asia

Introduction

During the past few decades, many medical schools have changed over to a problem-based learning (PBL) curriculum (Leung *et al.*, 2003). PBL is characterized by individualizing learning needs of students, improving motivation for learning, and stimulating the integration of knowledge with formative evaluations (Wynen, 1990). PBL requires a shift to a learner-centered, inquiry based environment for the students (Wood, 2003).

Problem-based learning

In PBL, students work in small groups to analyze a well-structured, clinically relevant patient case. This provides a logical approach to training students for practicing medicine in a complex environment by exposing them to simulated problems which may reflect real life situations (Wilson, 2007). The idea that PBL can only be used in the setting of a full-blown problem-based curriculum, where students work in small groups supported by costly facilities is erroneous (Hogerzeil, 2001).

PBL can also be used in different settings in medical education. In PBL, while the students are the main players in the learning process, the tutors/facilitators play an important role as they set the learning boundaries (Hogerzeil, 2001).

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Change in mindset

PBL requires a change in mindset on the part of both the learner and the teacher/facilitator. Students need to be aware of the role of the tutor and should not expect a situation where the facilitator determines what should be learned, to what depth, and in what sequence (Das *et al.*, 2002). In a study on student perceptions of tutor skills in PBLs, metacognitive skills of the tutor, i.e. the ability to carry out active, positive, conscious monitoring and direction of the reasoning activities of students who were confronted with the problem were rated as important (Das *et al.*, 2002). Clear communication and awareness of the learning needs of the students are also important tutor skills in PBL facilitation. Students were often unable to identify their learning needs and the depth of study required and this made them uncomfortable in a PBL curriculum (Woodward & Ferrier, 1982). The tutors may need to address this issue.

The role of the teacher

PBL requires a major shift in the way teachers deal with students. The 'knowledgeable' teacher is no longer dominating learning and students and teachers become equal partners in the learning process. The teacher stops lecturing and starts asking questions (Hogerzeil, 2001). In a PBL course, teachers should encourage critical thinking, foster self-directed learning and curiosity, monitor group progress, promote teamwork and create conducive learning environment (Wilkerson, 1998).

Skills required for the teacher/facilitator

Facilitation in PBL requires a different set of skills on the part of the teacher/facilitator. A recent work has identified the twelve qualities of a good teacher or mentor (Azer, 2005). These include; he/she is committed to the work, encourages and appreciates diversity, interacts and communicates respect, motivates students and co-workers, brings a wide range of skills and talents to teaching and demonstrates leadership in teaching, encourages creative work, emphasizes teamwork, seeks to continually improve teaching skills and provides positive feedback (Azer, 2005). Six important roles a medical teacher must also engage in are the roles of the information provider, the role model, the mentor and learning facilitator, the student assessor and curriculum evaluator, the

curriculum and course planner and the resource material creator (Harden & Crosby, 2000). Some teachers may be more proficient in some roles than in others.

Practical hints for problem-based learning

The Teacher's Guide to Good Prescribing lists practical hints for problem-based learning and teaching (Hogerzeil, 2001). Some of these are, starting the session by defining one single problem and making sure that everyone understood it; avoiding interference with the group during the first ten minutes of the session and considering interventions only to influence the group process. The PBL facilitator should guide the learning process of the group by probing, prompting and questioning (Ling *et al.*, 2007). He/she is to assist the group processes to ensure that the group interacts well and maintains focus. One study shows that students prefer facilitators to explain unclear facts and to correct them when facts are wrong (Yee *et al.*, 2006).

As already stated in PBL, teachers/facilitators are requested not to give answers but to provide students with more room for active self-learning (Leung *et al.*, 2003). A PBL tutor may take the roles of a parent, a professional consultant, a confidant, a learner and a mediator (Wilkerson & Hundert, 1991). A PBL facilitator should have expertise in group facilitation skills and is the custodian of the group process and the guide for discovery. The ideal tutor does not remain silent regardless of the subject matter of the PBL. The tutor must know when to interject or intervene and when to hold back and participate equally with the students (Wetzel, 1996).

An effective PBL tutor

An effective PBL tutor should have the ability to communicate informally with students and an empathic attitude which enables an atmosphere to be created in which open exchange of ideas is facilitated (Schmidt & Moust, 1995). Bibace and coworkers classified teachers' verbal behaviours under four styles: assertive, suggestive, collaborative and facilitative. These styles are along a continuum with the most student-centered (facilitative) style at one end and the most teacher-centered (assertive) style at the other (Bibace *et al.*, 1981). Collaborative and facilitative teaching styles are ideal in a PBL tutorial. Medical students respond warmly to positive stimuli, and react by withdrawal and defensive attitudes to negative environments (Bligh, 2003). The

teacher has the responsibility to establish an environment that encourages learning.

Faculty development programmes

Faculty development programmes have received less priority in South Asia. In India, National Teachers' Training Centers (NTTCs) conduct training programmes for medical teachers (Bansal & Supe, 2007). These programmes are held over a ten day period and cover areas such as educational objectives, educational methods, media, assessment methods and curriculum planning. Such programmes may be inadequate for the number of teachers and certain private medical institutions in India have developed links with international medical schools.

The FAIMER Institute

The Foundation for Advancement of International Medical Education and Research (FAIMER) institute is a two-year fellowship programme which has been designed for medical school faculty from developing countries (Norcini *et al.*, 2005). The programme is designed to teach educational methods and leadership skills and to develop strong professional bonds with other medical educators. A community of medical educators is being created in many developing countries and retention of physicians may be promoted (Burdick *et al.*, 2006). FAIMER stresses skills necessary to be a successful PBL facilitator.

Facilitator training workshops in developed nations

In the United States, a one-day workshop consisting of five small group sessions with two facilitators was used to train faculty in problem-centered, learner-focused, small-group process (PLS) (Crites *et al.*, 2002). The initial discussion centered on the concepts and principles related to successful facilitation skills while the subsequent four small groups reinforced these concepts and principles using case scenarios and role plays. In Seattle, US a two-hour faculty development programme was conducted in small group facilitation (Kim *et al.*, 2003). Faculty members first shared their experiences in managing small groups and then engaged in role plays based on the scenarios exemplifying challenging group dynamics. The faculty found the role plays interactive, experiential, comfortable and fun (Kim *et al.*, 2003).

A three-day course designed for medical school faculty to promote self-directed learning, teaching skills, personal awareness and interdisciplinary collegiality (Pololi *et al.*, 2001) was found to be highly effective in initiating a long-term faculty development programme. The academies of medical educators at Harvard Medical School (Thibault *et al.*, 2003) and the University of California, San Francisco (Cooke *et al.*, 2003) are two examples of successful training programmes for tutor facilitators. In the University of Southern California, School of Dentistry a PBL process workshop was conducted (Dalrymple *et al.*, 2007) and learning theory supporting PBL was introduced and an extended role play method was used to provide participants with personal experience of the PBL learning cycle.

Facilitation skills in South Asia

There have not been many studies on PBL facilitation skills in South Asia. At the BP Koirala Institute of Health Sciences (BPKIHS) in Dharan, Nepal a three day training session for PBL was held for teachers in which there was a significant increase in knowledge about various aspects of PBL following the workshop. Teachers felt the skills learnt would be very useful in their work situation (Baral *et al.*, 2010). At Aga Khan University (AKU) in Pakistan, structured small group experiential learning was used to enhance skills in PBL facilitation (Sadaf *et al.*, 2009). Participant feedback was positive and the exercise provided faculty with an opportunity to practice facilitation skills and develop a standard approach to deal with difficult situations during small group dynamics. At AKU, Pakistan facilitators are a heterogeneous group of individuals and are introduced to basic educational principles of PBL and attend formal facilitation training workshops (Saeed *et al.*, 2010). The study has shown that recent medical graduates may be more effective as facilitators compared to established faculty members. In attributes such as asking appropriate questions, prioritizing learning objectives and identifying misconceptions, recent graduates performed better than established faculty. At AKU, skills of residents were compared with faculty members in facilitating PBL sessions (Jafri *et al.*, 2007). Knowledge Base Content Learning (KBCL), PBL, Student Centered Learning (SCL) and Group Skills (GS) were assessed. Faculty showed a greater rating in KBCL and in overall scores. The authors concluded that residents and postgraduates could be an effective supplement to faculty members in PBL.

Lessons for South Asia

Workshops to develop facilitation skills among South Asian medical educators are required. In institutions where training programmes have been conducted, the sessions were effective in improving skills of faculty members and postgraduates (Baral *et al.*, 2010; Sadaf *et al.*, 2009; Saeed *et al.*, 2010; Jafri *et al.*, 2007). Studies to elucidate baseline levels of facilitation skills among faculty are also urgently required. In addition to training programmes on PBL and facilitation, programmes tailored to address specific deficiencies noted in baseline studies will also be useful. Small group learning using role plays and other methods may be ideal to develop such skills. Integration of subjects using clinical problems should be considered. Problem-based learning should gradually become the more important and the more widely used method of learning compared to didactic lectures.

Encouragement to young medical educators to become good problem-based learning facilitators should be provided.

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