



EDUCATION FOR HEALTH

PRACTICAL ADVICE

Problem-based Learning: Enhancing Tutors' Facilitation Skills Using Structured Small Group Experiential Learning

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Published: 18 May 2009

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Education for Health, Volume 22, issue 1, 2009

Available from: <http://www.educationforhealth.net/>

A B S T R A C T

Introduction: Effective facilitation of PBL tutorials requires tutors to develop observation skills, cognitive strategies and motor skills. The initial tutor training workshops at Aga Khan University were geared towards providing an understanding of the theory of the PBL process but not hands-on experience in facilitation.

Objectives: To use structured, small group experiential learning (SSGEL) to enhance skills in PBL tutorial facilitation, with opportunities to practice and provide individual feedback.

Methods: The workshop was structured using Gagne's principles of instruction as a framework, making the learning more experiential and systematic. Cue cards were used with trigger statements related to disruptive behaviors and inappropriate feedback statements from students that commonly occur during PBL sessions, to give tutors an opportunity to handle these simulated situations.

Outcomes: Analysis of the post workshop evaluation forms provided generally positive feedback from participants on the structure and content of the revised workshop. Participants highlighted the session on PBL experience as highly interactive and rated it as a good learning experience, with an average rating of 4.54 out of 5.

Conclusion: The structured small group experiential learning exercise provided faculty with an opportunity to practice facilitation skills focusing on developing a standard approach in dealing with common, difficult situations in maintaining group dynamics



during a PBL session. The structure of the program was designed to enable participants to better understand the rationale and philosophy of PBL and the curricular change in our school, and to prepare them to serve more effectively as PBL tutors.

Keywords: Problem-based learning, tutorial facilitation, tutor training, small group learning, facilitation skills, group dynamics

Introduction

The Aga Khan University (AKU) undertook a major educational change in 2002 by introducing Problem-based Learning (PBL) as the main instructional strategy for the undergraduate medical curriculum. The previous curriculum, from 1983 – 2002, was systems-based with traditional lectures and tutor-led tutorials as the main instructional methods. The revised curriculum of the 5-year MBBS program required a large pool of faculty members to participate as PBL tutors both in the pre-clinical and clinical years. To meet the requirement for trained PBL tutors, a half-day “PBL: Tutorial Facilitation Skills Workshop” was conducted at AKU, held three times during the 2003-4 academic year.

From the outset, the purpose of the half-day workshops was to introduce the faculty to the key concepts of human learning and memory, the philosophical basis of PBL and the PBL process. By the end of the workshop, participants were expected to be able to discuss the basic principles underlying PBL; identify tutors’ and students’ roles within PBL; demonstrate the processes of facilitating a PBL tutorial and discuss the processes of assessment and feedback in a PBL session. The initial workshops consisted of interactive large group presentations and discussions. A certificate of participation was awarded at the end of the workshop.

Effective facilitation of PBL tutorials requires the tutors to develop observation skills, cognitive strategies and motor skills (Hitchcock & Mylona, 2000); however, the initially designed, half-day long interactive presentations did not allow participants to practice or demonstrate their skills in facilitating tutorials. Opportunities for small group activities and hands-on exercises to deal with managing difficult group dynamics and completing the PBL process assessment cycle were not part of the activity. This lack of opportunity within the structure of the workshops was cited repeatedly in post workshop debriefing sessions, where participants recommended allocating more time for hands-on experiences. The participants felt that tutorial assistance in the controlled workshop setting would enable them to learn how to identify problems during facilitation, and they wanted experienced facilitators to help them manage the problems through individualized feedback.

With these suggestions in mind, the Department for Educational Development at AKU lengthened the initial one half-day workshop to two half-days and restructured the contents using Gagne’s Nine Events of Instruction (Gagne, 1985). The restructured workshop was piloted in August 2004. It included multiple small group activities followed by individualized and group feedback, providing opportunities for the participants to practice and demonstrate effective tutorial facilitation skills. This report shares the conduct of this revised PBL tutorial facilitation skills workshop for faculty members at the Aga Khan University from August 2004 to August 2005.

Methods

Realizing that it was difficult for clinical faculty to participate in workshops of longer duration, the PBL tutorial facilitation skills workshop was re-structured in 2004. Within the new structure, a set of articles were sent for participants to read prior to the



workshop; mandatory observation sessions were added for participants to observe actual PBL sessions in progress on campus; interactive presentations were added to address the reasons for curricular change from traditional to PBL; and brainstorming sessions and small group activities were added that focused on the PBL process, process assessment, feedback and managing group dynamics. The sessions were sequenced using Gagne’s Nine Events of Instruction as a framework making the learning experience more contextual and systematic (see table 1).

Table 1: Content and sequence of the revised workshop for PBL tutors along Gagne’s 9 Events of Instruction

#	Sessions of the Workshop	Gagne’ 9 Events of Instruction	Instructional Technique
1	Welcome & Introduction	1 - Gaining Attention	<ul style="list-style-type: none"> List participants’ expectations through brainstorming session
2	Overview of the workshop	2 - Informing learners of Objective	<ul style="list-style-type: none"> Share objectives and components of the workshop
3	Art of Facilitation	3 - Stimulating recall of pre-requisites	<ul style="list-style-type: none"> Trigger recall through key questions based on the pre-reading material in Buzz groups
4	Curricular change from traditional teaching to learning through PBL.	4 - Presenting the stimulus material	<ul style="list-style-type: none"> Interactive large group presentation
5	PBL Experience I & II: Overview of the Task	5 - Providing learning guidance	<ul style="list-style-type: none"> Group distribution & identification of the roles for the task
6	PBL Experience I & II & PBL process assessment	6 - Eliciting the performance	<ul style="list-style-type: none"> Demonstrate the process of facilitation of a PBL tutorial through the task Use the assessment forms Provide feedback to facilitators on their facilitation & to students on their participation Interactive presentation on assessment of PBL Process
		7 - Providing feedback	
7	Post workshop - Observe Facilitation	8 - Assessing performance	<ul style="list-style-type: none"> Actual PBL facilitation in a subsequent module A senior and experienced PBL tutor will observe 2 PBL sessions being facilitated by the participant in a subsequent module. The observer’s checklist identifying the strengths and weakness in facilitation filled out by the observer will be used to provide formative feedback to the facilitator.
		9 - Enhancing retention and transfer	

Observation of a PBL session, prior to participating in the workshop, is mandatory for all participants. Participants observe an actual PBL session in process on campus in Years 1 & 2 of the MBBS Curriculum. Their attendance is scheduled well in advance, in consultation with the respective Year Committee Chairs and the module committees. Pairs of participants are assigned to one of the 11 PBL groups to ensure that not more than two participants join a given group to minimize disruption of the regular PBL process. Participants are briefed on their roles as observers, where they are expected to observe the PBL process and jot down any concerns or queries they may have, which are later addressed during the workshop. Participants are asked to adhere strictly to these guidelines.

One week prior to the workshop the participants are sent a set of articles as mandatory pre-reading, consisting of seminal work in the field of PBL and stories of its successes. There is an explicit expectation that participants read the articles before attending the workshop. A brainstorming session is held at the start of the workshop to discuss the key concepts covered in the reading material to help ensure that all participants have read the articles.



A session on “Curricular change: from traditional teaching-learning to PBL at AKU” reviews for participants the reasons for adopting PBL as a teaching-learning strategy at the school and provides insight into the curriculum change process that was undertaken by the AKU, from needs assessment to implementation.

The interactive session on “Why PBL and How PBL” explains to participants the philosophy and concepts of PBL. This session sets the stage for participants to share their observations and concerns regarding the PBL sessions they have observed, which are crafted on a white board into a consensus list of concerns.

Solutions to participants’ identified problems are addressed in the subsequent structured small group experiential learning (SSGEL) activities of one and a half hours duration each on two separate days of the workshop, entitled “PBL Case Experience I: Introduction of the case” and “PBL Case Experience II: Discussion and Conclusion of the case”.

For the SSGEL participants are divided into two groups, seated in different rooms. Each group is further subdivided with half of the participants playing the roles of tutors and the remaining half that of students. All participants who role play as students or facilitators in “PBL Experience I” on day one switch their roles to facilitators and students in the session on “PBL Experience II” on day two. The “students” task is to read through the given case and identify the learning objectives related to the case. The tutors have the opportunity to facilitate the group of students, for ten minutes each. Participants learn how PBL learning objectives are derived during group discussions, how participation is promoted within a group, and how difficult group members are managed during a PBL process. In addition, each tutor receives 5 minutes of feedback on his/her facilitation from the workshop facilitators, who are available as resource persons to guide the groups through the task and intervene when the group encounters difficulties or has concerns about group dynamics.

During the “PBL experience sessions I & II”, cue cards with trigger statements relating to 5 disruptive behaviors and 5 inappropriate feedback statements are presented to “students” to elicit behaviors that the facilitator is then to identify and attempt to resolve (see table 2). Before the session starts, the cue cards are randomly given to five participants acting as students. The participants acting as tutors are purposefully kept unaware of the contents of the cue cards to give them an opportunity during the session to identify the disruptive behaviors shown by the students and to restore cooperative group dynamics.

Table 2: Cue cards to elicit simulated disruptive behaviors and inappropriate feedback statements from student role-players

#	Disruptive Behavior	Inappropriate Feedback Statements
1	constantly addressing the facilitator and seeking his/her input	responding harshly to a student’s comment by saying that his/her idea is stupid
2	playing with your mobile	pointing to one student and accusing him/her of never allowing you to speak
3	leaving the room without seeking permission from the group or facilitator	pointing to the facilitator and accusing him/her of never hearing/listening to what you have to say
4	constantly talking to the person sitting next to you	reporting that today’s session was excellent and there is no need for feedback
5	remaining quiet throughout the session	claiming that you never told me before that I was not performing well in the PBL process



Towards the end of the experiential sessions participants fill out the various assessment forms (self and peer assessment by students, individual student assessment by facilitator, evaluation of facilitator by students and an evaluation of the case or problem), thereby helping participants become familiar with the processes of the evaluation as well as the content of the forms that will be used when they later lead PBL sessions with actual students.

Debriefing and information from the workshop evaluation form identify sessions that could have been more effective and areas for improvement.

Outcomes

Ninety-seven faculty members participated in the four workshops held from August 2004 to August 2005. Analysis of the post workshop evaluation forms provided generally positive feedback on the structure and content of this revised format. Participants highlighted the session on PBL experience as highly interactive and rated it as a good learning experience, with an average rating of 4.54 out of 5 (see table 3).

Table 3: Workshop ratings by faculty participants

Year	Number of Participants	Rating on workshop evaluation form
August 2004	27	4.11
March 2005	23	4.5
June 2005	26	4.88
August 2005	21	4.67
Overall	97	Average 4.54

Typical comments provided in response to “What aspects of the workshop did you like the most” on the workshop evaluation forms included:

This workshop has been extremely useful in developing confidence in me for PBL facilitation. Hope to be able to apply the tips learnt during the PBL sessions.

Very useful! I had experienced PBL as a student also, and the PBL Case Experience session in the workshop really helped me place myself in the role of a facilitator

PBL Experience was an amazing exercise – I learnt a lot by discussion which I would not have been able to learn alone.

Discussion

The experience of being actively involved and engaged throughout the workshop was not possible for participants of the previous one half day workshops. The revised two half-day workshops helped address participants’ previous concerns about their training by immersing them into the PBL case experience from the outset by starting with the observation sessions and having them list their concerns about facilitating small groups. This was followed by active involvement during the small group experiential learning exercises, which provided participants with a structured, standardized approach to dealing with common challenging situations encountered during tutorial facilitation in an actual setting.



Within the newly formatted workshops, interactive presentations provide an orientation to the principles of learning and provide participants with relevant background before having them participate in small group activities incorporating role-play and engagement in the PBL process. (Vanhanen *et al.*, 2001; Wuenschell *et al.*, 2007).

The purpose of the observation sessions prior to the start of the workshop was two-fold. First, it was meant to give participants insight into the process of an actual PBL session by observing the interactions between a trained facilitator and students and help them appreciate the group dynamics and the processes through which students are able to achieve the learning objectives. Second, it was meant to identify participants' specific concerns about the PBL process by observing what went well and what did not go well in the PBL sessions they observed. Introducing observation sessions gives participants an opportunity to see experienced facilitators in action thereby appreciating the role of the facilitator in a PBL session, learning how it differs from the role of a traditional lecturer or tutorial leader, and learning the key skills of an effective PBL facilitator. (Wuenschell *et al.*, 2007).

The SSGEL exercises entitled "PBL Case Experience I & II" help participants develop and practice skills in facilitating tutorials and giving feedback to learners through a non-threatening, collaborative learning experience. This workshop provides participants with a unique experience that takes them through the processes of PBL, from identifying the learning objectives of the case presentation, to identifying what learners do and do not know, and then acting as a tutor and using facilitation skills to maintain effective group dynamics for a successful PBL session (Dalrymple *et al.*, 2007). This is unique in the sense that other reported PBL faculty development workshops provide participants with the opportunity to role play as facilitators (Vanhanen *et al.*, 2001; Dalrymple *et al.*, 2007; Wuenschell *et al.*, 2007) or play the role of the students with the lead facilitator guiding them through the PBL process (Dalrymple *et al.*, 2007). In our revised workshop all participants play the roles of both student and facilitator, in turns, as they proceed through the mock process of PBL. The key objective of this experiential session was to provide hands-on experience in facilitation and managing group dynamics in a controlled setting. (Wuenschell *et al.*, 2007)

The use of cue cards during the SSGEL with trigger statements related to disruptive behaviors and inappropriate feedback statements helped tutors develop a standard approach to dealing with common and difficult situations to maintain group dynamics during a PBL session. These trigger statements were greatly appreciated by the participants and were termed as real-life situations in the debriefing session.

Within the new workshops, a brief plenary on the processes and purpose of assessment within PBL is provided to participants. It covers the principles of giving and receiving feedback within the PBL process and reviews the specific assessment forms used for process assessment at AKU. The session on assessment helps clarify faculty-participants' issues and concerns regarding assessment within the PBL process, making evaluation more contextual and appropriately placed.

Feedback is built into the workshop as an essential component of the SSGEL, ensuring that all participants are informed of key areas that they need to practice and improve on to become better facilitators. This has been highlighted (Vanhanen *et al.*, 2001) as a key component of effective faculty development workshops. All tutors receive feedback on their brief facilitation from the workshop facilitators along with tips for effective facilitation.

The concluding segment of the SSGEL is designed to engage participants in PBL process assessment. During this activity participants complete the various assessment forms (the self and peer assessment by students, individual student assessment by



facilitators, evaluation of facilitator by students, and the evaluation of the case or problem) thereby becoming familiar with the PBL process assessment as well as the content of the forms.

The debriefing session and the workshop evaluation forms helped the workshop developers receive first hand information from participants on which sessions of the workshop were most appreciated and on key areas for improvement. The qualitative aspect of the workshop evaluation form helped developers gauge the overall effectiveness of the workshop. In our study it was encouraging to note that the most appreciated aspect of the workshop was the SSGEL exercise in the form of PBL Case Experience.

Conclusions

The “PBL Case Experience I & II” is a structured, small group experiential learning exercise that provided faculty - participants at AKU with an opportunity to practice facilitation skills focusing on developing a standard approach to dealing with common, difficult situations in maintaining group dynamics during a PBL session. The structure of the program enables participants to better understand the rationale behind and philosophy of AKU’s curricular change, hopefully enabling them to serve as effective tutors and effective faculty members within their respective domains.

Acknowledgements

The authors would like to thank and acknowledge the faculty members of the Department for Educational Development who have contributed in revising this workshop and have facilitated the Tutorial Facilitation Skills workshop since 2002. We would also like to acknowledge Dr Sue Roff, Centre for Medical Education, Dundee University Medical School, for her feedback on this report.

References

Dalrymple, K.R., Wuenschell, C.W., Rosenblum, A., Paine, M., Crowe, D., von Bergmann, H.C., *et al.* (2007). PBL core skills faculty development workshop 1: an experiential exercise with PBL process. *Journal of Dental Education*; 71(2):249-59.

Gagne, R. (1985). *The Conditions of Learning* (4th ed.). New York: Holt, Rinehart & Winston.

Hitchcock, M.A., & Mylona, Z.E. (2000). Teaching faculty to conduct problem-based learning. *Teaching and Learning in Medicine*; 12(1): 52-57.

Wuenschell, C.W., Dalrymple, K.R., & Shuler, C.F. (2007). PBL core skills faculty development workshop 2: Training Faculty in Group Learning Facilitation Skills Through Role-Modeling and Role-Play Activities. *Journal of Dental Education*; 71(5): 606-618.

Vanhanen, H., Pitkala, K., Puolakkainen, P., Strandberg, T., Lonka, K., *et al.* (2001) The PBL tutorial laboratory: a method for training medical teachers. *Medical Teacher*; 23: 99-101.