Problem-Based Learning: Mandatory Personal Qualities of Effective Facilitators

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Abstract. In any teaching context, shifting traditional methods of learning to problem-based learning often invites many questions and views from various parties. For more than thirty years, there have been ongoing debates as to issues such as the proper method of execution, appropriate curriculum, and learning environment for problem-based learning, as well as the cognitive skills and personal qualities of the facilitator (lecturer). Because the facilitator is a crucial component to this form of learning, this article focuses on investigating two personal qualities that are the main prerequisites to producing an effective facilitator. The importance of these qualities, as well as the proposed measures to implement problem-based learning, are also discussed.

Keywords : problem-based learning, knowledge, competence, effective facilitator

Introduction

Problem-based learning is an approach that began in the mid-1960's (Dolmans et al., 2002; Major, 1999) at Canada's McMaster University. The method was born in the field of medical education (Nesargikar, 2010), and soon expanded further into other countries by the year 1970 (Rhem, 1998; Savin-Baden, 2000), where the method was soon adopted in higher education (Wood, 2004) for business (Peterson, 2004; Whelan-Berry & Marshall, 2000), nursing (Dehkordi & Heydarnejad, 2008), statistics (Bude' et al., 2009), and engineering education (Shahrom et al., 2005). Today, teaching and learning methods that use problems as a motive and main focus (Hillman, 2003) to generate knowledge are also being applied to students in secondary schools all around the world (Belland et al., 2009; Ramlee & Zaharatul Laili, 2008).

This increasing push for problem-based learning is due to its effectiveness in shaping students' flexibly, so that they may be able to apply their knowledge and skills more readily in the real world. As Savin-Baden (2000:2) notes:

> *Problem based learning is an approach to learning through which many students have been enabled to understand their own situations and frameworks so that they are able to perceive how they learn, and how they see themselves as future professionals.*

Perhaps because it is being incorporated into more and varying fields of study, problem-based learning is often at the center of many debates. Some issues include tackling the early challenges of adapting the paradigm of traditional learning to problem-based learning (Ertmer & Simons., 2005; Nesargikar, 2010); defeating misconceptions about the practice (Savin-Baden, 2000); understanding the benefits and negative implications of problem-based learning in specific curriculum or courses (Banta et al., 2000; Neville, 1999); and comparing views on the roles of an effective facilitator (Dahlgren et al., 1998; Dolmans et al., 2002; Van Berkel & Dolmans, 2006), as well as said individuals' skills and competencies needed to lead groups (Azer, 2005; Sadaf et al., 2009; Jung et al., 2005).

These issues remain heavily debated and studied, particularly in regards to the roles, responsibilities, and qualifications of effetive facilitators. This matter deserves attention, considering the importance of a strong authority figure in ensuring the success of problem-based learning; thus, the discussion in this article will focus on two personal qualities that are the main prerequisites for proficient faciliators. The requirement of these personal qualities not only help to clarify the nature and role of the facilitator, but also alleviate other relevant issues such as the finding the proper method of execution, curriculum, and educational environment for problem-based learning. Finally, with more faciliators posessing the required qualities, we can challenge existing misconceptions about this form of teaching and learning.

Personal Quality Effective Facilitator

Problem-based learning is an alternative method that produces individual that can meet the demands of the job market (Savin-Baden, 2000), which are often complex, unstructured, and cannot be obtained through reading and studying alone (Peterson, 2004). By practicing their curriculum, students are exposed to activities that enhance problem-solving skills (Belland et al., 2009), comfort in interacting and socializing (Wood, 2003), self-sufficiency, and life-long learning (Low Chin Han & Ng Hui Teng, 2005; Wood, 2004). Students' abilities to build knowledge and hone these skills are heavily dependant on their lecturers' abilities to efficiently control active methods of learning (Bude' et al., 2009; Hillman, 2003; Van Berkel & Dolmans, 2006; Woods, 1996). Based on the review of literature, it appears that there are two important personal features that enable a faciliator to effectivly implement problem-based learning: 1) content

knowledge and competence, and 2) skillfulness in handling groups. The following is a description of both features:

Content Knowledge and Competence

Effective facilitators are those who have proficient knowledge and expertise in the courses they are teaching (Dolmans et al., 2002). Furthermore, they must understand what discipline entails in their respective fields, the underlying philosophy of that work, and the learning outcomes that can be achieved by students. However, as confirmed by Neville (1999) and Peterson (2004), problem-based learning should not encompass the whole of any curriculum or course, since this method has its limitations. In fact, its implementation must first be in line with existing knowledge of students and must be introduced by the facilitator at appropriate stages so that optimal results can be obtained. Therefore, each lecturer must have an accurate understanding of the curriculum and courses, so that he or she may select and plan out the most appropriate operation of teaching for his or her line of study.

In addition, the facilitator should also understand the differences and similarities of various teaching methods (philosophy, procedures, outcomes, etc.), as to avoid misunderstanding or confusion when implementing a particular practice. According to Savin-Baden (2000), unclear understandings and interpretations may cause some people to believe that they are carrying out a certain methods, when, in reality, they are being ineffective or negligent.
Amongst common confusions, Savin-Baden (2000) notes that many faciliators have trouble identifying differences in problem-based learning with simply learning to solve specific problems. He cautioned that, although both provide scenarios to resolve problems, the focus of learning outcomes, scope of solutions, and context are all different. This is because the scope of the discussion when learning to solve problems depends on the content of the studied topics; in contrast, problem-based learning offers methods of understanding and thinking that can cross all courses and curriculum, and be applied to most contexts. Without recognizing these differences, facilitators may carry out "problem-based learning" because it sound attractive (Ertmer & Simons, 2005), even though they do not truly know the purpose and benefits of this specific method.

In problem-based learning, the facilitator's role is to design a quality problem (Van Berkel & Dolmans, 2006)-unstructured, complex (Peterson, 2004), practical, realistic, and across disciplines (ESCalate, 2007)-in line with the prescribed learning outcomes. The next task of the facilitator is to guide students in solving the problem (Ramlee & Zaharul Laili, 2008) through cognitive activities (Dolmans et al., 2002), such as asking open-ended questions (Peterson, 2004), motivating students to learn (Pederson & Liu, 2003), constructing and evaluating hypotheses to help students focus on their inquiries (Hmelo-Silver & Barrows, 2006), challenging students' critical thinking skills (Woods, 1996), and creating relationships and formulas to obtain information (Ertmer & Simons, 2005). After these procedures, counseling can be reduced little by little, depending on the

capabilities of and exposure given to the students, as well as their abilities to carry out independent learning (Hmelo-Silver & Barrows, 2006).

Facilitators must have knowledge of the education's content and understanding of how problem-based learning should be implemented. Proficiency in both these areas will not only help facilitators adapt their leadership styles to various types of students, but also address issues such as the role and involvement of facilitators, the application of problem-based learning to larger groups of students, and the resources required to support student activities. The facilitator must also determine which courses are applicable and appropriate for problem-based learning, thereby planning problems that give meaning to students. Once faciliators perform these steps in the learning process and determine the appropriate valuation of the learning outcomes defined, they can encourage students to be independent in acquiring knowledge.

2. Skillfullness in Handling Groups

It is well known that the problem-based learning involves the construction of small, active groups of students (ESCalate, 2007; Wood, 2004), who collaborate with each other to solve problems (Ertmer & Simons, 2005). However, the success of this group depends on the dynamism that allows members to play a role in the learning and teaching (Jacob et al., 2009). Dynamism (Azer, 2005), according to Jacob et al. (2009), can be observed through the interaction between the facilitator and the group members, and between members themselves. Moreover, Corey et al. (2010) and Ohlsen (1970) also associates dynamism with therapeutic and anti-therapeutic energies, which both operate in a group. Researchers such as Gambhir (2007), Jung et al. (2005), Nesargikar (2010), and Van Berkel & Dolmans (2006 agree that group dynamics are key to group learning activities and need to be addressed by the facilitators when implementing problem-based learning. The group dynamic, as noted by Wood (2003), is key to establishing the skills and attitudes necessary for use in the real world.

A dynamic group can be formed if the facilitator has the competence and skills of handling groups. Discussions amongst facilitators, as oberserved by Azer (2005), Chen & Rybak (2004), Corey et al. (2010), Ertmer & Simons (2005), Jacob et al. (2009), Liwen (2007), Nesargikar (2010), Ohlsen (1970), Wood (2004), and Yalom (1975), revealed that there are several abilities that a facilitators must have full grasp of in order to provide optimum guidance to the group. These features help facilitators play their roles effectively, solving issues that arise while implementing problem-based learning, such as conflicts among members or difficulties in reaching conducive answers to a given problem. In their discussion, facilitators summarized necessary characteristics, competencies, and skills for handling groups:

1. Facilitators must understand the nature, goals, limitations, and advantages of the controlled group. A clear understanding can help facilitators devise a plan beforehand, choose the appropriate members

for the group, and have a degree of leadership within the framework of the relevant groups.

2. Facilitator must clearly understand the different levels of understanding that exist in a particular group to ensure that learning and development occurs smoothly for everyone. This knowledge allows the facilitator to prepare and implement appropriate interventions, such restructuring the group so that members can be more productive.

3. Facilitators must be trained and practice leadership skills such as providing feedback, drawing out, cutting off, spinning off, linking, modelling, and using eyes and tone of voice to encourage all members to participate in discussion. Guidance, support, and appreciation can also increase the motivation of each member to work in tandem to solve a problem

4. Facilitators must understand and pay attention to verbal or nonverbal elements that may influence the group dynamic. The size of the group, the facilitator's attitude, meeting settings, and the attitude exhibited by all members of the group can all determine whether the groups are therapeutic, neutral, or anti-therapeutic.

5. Facilitators must be comfortable in their roles and have knowledge about the topic of discussion, all the while being patient, flexible, friendly, and open-minded. These feature allow the facilitator to effectively guide the group through both the understanding of the problem and the process of solving it.

6. Facilitators must realize the challenges that come with leading a group. Some concerns to keep in mind are the attitudes of members who try to dominate discussion, empty conversations, storytelling that deviates from the original point, fights and conflicts between members. In addition, faciliators must also be constantly aware of their own feelings of disappointment or anger towards the members. Awareness of the possible problems can help facilitators build trust and ties between members of the group.

In short, facilitators must 1) wisely and efficiently execute the lesson content, and 2) adeptly handle the group process. However, as confirmed by Wood (2004), listening, speaking, and arguing are not only responsibilities of the facilitator, but also the students. Cooperation and interaction in group activities will also increase the students' skills to work as a team, build trust, and nourish positive attitudes towards altruism and self-compassion.

Implications And Recommendations

With the understanding that facilitators must possess both personal qualities to effectively implement problem-based learning, appropriate changes must be taken to ensure that individual can provide the best guidance. The following recommendations could be considered to help identify and develop effective personal qualities:

1. Courses or workshops on philosophy, curriculum, and learning outcomes

An expert facilitator is one who understands the teaching curriculum (Wood, 2003) and is able to plan and implement appropriate learning methods. Appropriate resources and help should be provided to every lecturer in any department so that he or she may understand the curriculum fully and develop learning outcomes consistent with the program or university's goals. As of now, not all lecturers are clearly informed about the disciplines that are taught, either because they do not understand the philosophy behind the curriculum or how to achieve a specific learning outcome. Ambiguity and lack in these areas hinder the teaching process, since the facilitator will not know when or if to problem-based learning, or any other learning methods for that matter. Therefore, all lecturers must be required to attend courses that detail the curriculum and learning outcomes, so that they do not deviate from the intended path.

2. Facilitator Training: Problem-Based Learning

The shift from traditional teaching methods to problem-based learning causes confusion in its definition and execution, as well as how the facilitator advances the change (Dolmans et al., 2002; Ertmer & Simons, 2005; Savin-Baden, 2000). Difficulties and obstacles are often encountered in the early stages of implementation (Jung et al. 2005), coupled with the lack of support and resources to fully go through with it (Ertmer & Simons, 2005). These problems arise from facilitators' misunderstanding of and reluctance towards modfying their teaching to more student-centered learning methods. Without the proper educationa and practice, facilitators will feel neither confident nor prepared in their work. Thus, in order for lecturers to fully accept and feel comfortable with this method, their training in lectures, workshops, and discussions must cover implementation, advantages, limitations, suitability, and the importance of problem-based learning. In addition to this core training, tips, materials, and resources must be made available to them at all times.

3. Facilitator Training: Handling Small Groups

Facilitators must be able to guide small groups effectively to have a strong dynamic, all the while preventing them from running off course; however, such skills cannot be learned through books alone and require hands-on practice. As explained by Chen & Rybak (2004), Corey et al. (2010), and Jacob et al. (2009), before an individual is eligible to operate the group, he or she must first experience small group settings as a member of co-facilitators, who then receive guidance from expert facilitators. In addition to gaining exposure to different ways of implementation and leadership styles, the facilitators-in-training will also gain an accurate understanding of the theoretical framework behind problem-based learning, since they themselves will experience the group setting and see their performance. By practicing therapeutic techniques on themselves, facilitators will have insight on the most effective ways to reach out to the groups they will lead in the future.

4. Feedback and Continuous Assessment

The faculty and university are advised to conduct activities that will continue to improve faciliators' professionalism in implementing problem-based learning. Through feedback and ongoing assessments, facilitators can share their experiences, identify barriers, and make improvements. As also recommended by the Dolmans et al. (2002) and Jung et al (2005), facilitators must be given space and supportive environment to reflect on their practice. Therefore, it is proposed that facilitators be kept up to date with periodical skill training. These sessions will give facilitators the opportunity to practice new skills in different settings through role-playing activities, and their performance will be given immediate feedback. Through dialogue, narration, session "mini-pbl," and constructive feedback, facilitators will continuously have solid foundations on which to carry out their teaching methods effectively.

Conclusion

In order to introduce problem-based learning into the educational space, an effective facilitator must possess knowledge and competence of the content they are teaching, as well the skills to control groups. These personal qualities not only reflect the professionalism and character of the facilitator, but also address many questions that arise when considering the implementation of problem-based learning. These qualities are not necessarily inherent, but require continuous training in order to be fully established and then properly utilized by the facilitator. In order to promote effective implementation problem-based learning, appropriate actions should be taken so that every lecturer can be supplied with enough knowledge and resources to feel confidence in their work.

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