PROBLEM-BASED LEARNING: A TEACHING STRATEGY THAT PREPARES THE STUDENTS FOR WORK LIFE

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Abstract

Problem-based learning (PBL), which started in medical education in the 1960s, is currently used extensively in the same field; and has spread to fields such as nursing. PBL is a learning method that which involves student centered group learning facilitated by a tutor whose role is to guide the students toward discovering answers on their own rather than providing them with answers. PBL is believed to enhance higher order thinking. This paper reports on my experience of PBL. Initially, I was frustrated and shocked but at the end, I enjoyed and appreciated PBL. I found it enhancing communication and critical thinking skills. I believe it would even be beneficial if it is started at undergraduate level; such that when students get to postgraduate level, they will have mastered the concept and can therefore reap the best out of it. In addition, PBL needs to be complemented with other approaches to learning.

Background and Introduction

The problem-based learning (PBL) strategy has been used for professional training in medicine since the 1960's and is now used extensively in that field (Mills & Treagust, 2003). It is now been used in related professions such as nursing. Problem-based learning has been defined a learning method which employs student-centered learning through small groups facilitated by a tutor or "expert" whose role is to guide the students toward discovering answers on their own rather than providing them with answers. What the process involves is assigning cases or problems to students that trigger problem solving and acquisition of knew knowledge. It promotes development of communication skills, active learning, teamwork and critical thinking (Asad, Iqbal & Sabir, 2015).

Because of its ability to promote the development of high order cognitive skills, PBL is believed to prepare students for solving real life problems that they are likely to face in their work upon graduation (Pagander & Read, 2014). Although PBL has been credited for its superiority over the traditional lecture method (Breton, 2010), its effectiveness has not been adequately researched, and debates on whether it is best when used solely or along with other learning-teaching methods are continuing (Pagander & Read). In addition, the few published studies on the method have had confliction results (Hung, 2011). Some critics of PBL have argued that it is not a "one size fits all" as variables such as prior learning may account for good learning outcomes (Kuruganti et al., 2012).

The purpose of this paper will be to discuss my experience of the PBL approach to learning and teaching following my participation in a graduate course offering that used such approach. My paper will address the two stages that I saw my team and I going through; and these are (1) the stage of frustration and shock and (2) the stage of discovery and triumph. The paper ends with conclusion and recommendations.

My experience of the PBL Approach to Learning and Teaching

Stage of Frustration and Shock

Two forces working in consonance justify the label that I give to this stage. One force was the inability of the learning team to solidify and commit itself to learning while the other force was strange or unusual expectations about students' and teacher's role in the learning process. My encounter with our first scenario was a nightmare. I was assigned the team leadership and I had to schedule a meeting. Team members' social commitments competed with school work. Some were attending funerals; some had to go to church, whereas some had work commitments. For those who did not want to miss the church service, I shared with them my view that the church service could wait because the academic clock would continue to tick. We released those who were attending funerals leaving only those who had no pressing commitments to meet and push the work.

When my efforts to schedule physical meeting were proving futile, I suggested a "Whats App messenger" group. Some members bought the idea and we created the group which could allow us to communicate and work on our assignment. However, some members chose not to subscribe to WhatsApp and therefore could not join the communication network. We then decided to communicate through text messages, which meant that one had to part with some coins. Some members would come to the group meetings but would not contribute to the discussions. Some would not do their individual assignments but would instead advance all sorts of excuses. Group members' family commitments were taking priority over school work, and I felt helpless as a team leader.

It was both a frustrating and a learning moment for me as a team leader. I learned that dealing with human beings is a serious challenge and that managing people can be very stressing. I realized that I had to be stern and autocratic because otherwise group work would suffer. I dictated to my colleagues that they needed to forfeit the church service and come to the meeting. I leant that if other group members fail to play their part, I do not need to give up on them; I need to do the work while I continue to negotiate or reason with them until they come to my commitment level. In the end, we submitted sub-standard final write-up paper as only two group members were available to meet to finalize the work.

The monster that the concept of PBL was conceived to be was confusing. Some of its ideas sounded illogical and unreal. It was our first encounter with PBL and we found it be a very strange teaching and learning method. We were used to the traditional method of teaching and learning whereby the lecture imparts knowledge to the students and gives assignment, tests and examinations. The new method that had just been introduced to us was strange confusing; especially we wee expected to determine what we knew and what we did not know. I found

differentiating between what we knew and what we did not know confusing because as far as I was concerned, the two were overlapping. Nonetheless, I learnt that determining what we knew and what we did not know was a crucial aspect of PBL called self-assessment where the students participating in a PBL session "have to make statements about what they already know and can do and where there are gaps in their knowledge and competences" (Macdonald, 2005).Another thing that I found strange was that we needed to determine our learning goals whereas as far as I knew, presented with the scenario before us, the right thing would have been to set clients' behavioral objectives for our intervention. However, according to the fifth stage (determining learning objectives) of PBL, the students must agree on achievable and comprehensible learning objectives for the task (Pagander & Read, 2014).These objectives will be the necessary knowledge the students need to acquire before they will be able to continue on working with their clients.

Stage of Discovery and Triumph

Working on the second scenario was enjoyable as by that time we had a good insight into PBL. Even group members' attitude PBL had changed as we now appreciated the method as a good learning strategy. Group work had started to flow smoothly; members honored scheduled time for group meetings. Only one group member missed the meetings because of work commitment. Individual assignments were completed on time and reports were discussed at the scheduled meetings. When people were given assignments they did it and presented to the group members for compilation. Except for the theoretical model which gave us a little headache, we did quite better than we did in the first assignment. Group members showed up for the final write-up and they were punctual. The initial confusion was no more as were now conversant with PBL.

At this stage, we began to understand and appreciate the role of learning facilitator as to make sure that we acquired the knowledge on our own as she gave us the problems triggered us to go out and search for some information on the internet and elsewhere that empowered us to be able to solve problems presented in the scenarios. The problems that we were presented with in the scenarios depicted problems that nurse meet day-to-day as they provide health care to communities. The analysis of scenarios enhanced my problem solving skills that I continue to be able to tap from. A study comparing the traditional method of lecturing and PBL students reported that PBL was better than lecture method with regard to learning acquisition and long-tern problem solving (Pagander & Read, 2014). In their study, Asad et al., (2015) found that PBLs greatly improved intrinsic motivation for learning, problem solving and critical reasoning skills. However, as the notion that PBL produces better learning outcomes than other methods remains inconclusive (Kuruganti et al., 2012); Pagander & Read, 2014), combining PBL with other approaches to learning must be considered. In addition, more research on PBL is needed especially in Botswana nursing education where PBL is yet to be well established. Otherwise my own experience point to the value of PBL and I believe it would yield even better results if introduced at undergraduate level so that when students get to graduate level, they are already socialized into the method and can mentor younger ones.

In PBL, students do self and peer assessment; and these are some of exercises that we engaged in as a way of generating or providing feedback on our contribution and participation in the learning process. The assessment results helped me realize my strengths and weaknesses. This

enabled me to capitalize on my strengths and improve where I found myself lagging behind. I diarized and made a reflection on my experiences after every meeting; and I used the diary as one of the resources when we were preparing for class presentations.

Conclusion and Recommendations

My experience of PBL as a teaching and learning strategy can be best described in two stages, the initial stage of frustration and shock and the end stage of discovery and triumph. The first stage was marked by frustration about my group's performance as well as the shock brought about by unknown in PBL. The second stage was marked by my discovery and appreciation of PBL as an empowering approach to learning. The problem based learning strategy enhanced my ability to solve real life problems that I will meet in my nursing practice. The self and peer assessment presents a feedback mechanism that helps students in PBL helped me to realize my strengths and weaknesses so that I can improve where I am weak and capitalize on my strengths. I recommend that PBL be used from as early as undergraduate such that when students get to postgraduate they have mastered it and use it with ease. In addition, the PBL strategy needs to be combined with other learning strategy in order to get the best out of each strategy. Lastly, more research focusing on the effectiveness of the PBL needs to be done so it can inform the use of the strategy.

References

Asad, M., Iqbal, K., Sabir, M. (2015). Effectiveness of problem based learning as a strategy to foster problem solving and critical reasoning skills among medical students, *J ayub med coll Abbottabad, 27*(3), 604-607

Hung, W. (2011). Theory to reality: a few issues in implementing problem-based learning.*Education Tech Research Dev,* 9, 529-552

Kuruganti, U., Needham, T., &Zundel, P. (2012). Patterns and Rates of Learning in Two problem-based learning courses Using outcome based assessment and elaboration theory. *The Canadian Journal for the Scholarship of Teaching and Learning, 3*(1).

Macdonald, R. (2005). Assessment strategies for enquiry and problem-based learning. In T. Barrett, I. Mac Labhrainn, & H. Fallon, *Handbook of Enquiry & Problem Based Learning* (pp. 85-93). Sheffield: Galaway.

Mills J, E., & Treagust, D. F. (2003). Engineering education – is problem based or project-based learning the answer? Australasian journal of engineering education**http://www.aaee.com.au/journal/2003/mills_treagust03.pdf**

Pagander, L. & Read, J. (2014). Is Problem-Based Learning (PBL): An Effective Teaching Method? A Study Based on Existing Research. Handledare: Marjorie Carlsberg Institutionen för Kulturoch Kommunikation