Reviewer's report

Title: Long-term follow up of factual knowledge after a single, randomised problem-based learning course

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Level of interest: A paper whose findings are important to those with closely related research interests

Advice on publication: Other (see below)

This study shows that no differences were found between the performance outcome as measured by the traditional MCQ and short essay tests within a single discipline (Pharmacology) in two randomized group of students, PBL and LBL, over a period of 18 and 27 months after the course. The authors disappointingly concluded that their data do not provide evidence for a beneficial effect of PBL on factual knowledge.

This paper suffers from the following setbacks:
[1] The data were collected from only one-year intake of students rather than students from a few years. Therefore the number of students is limiting and the students have limited training in PBL. Thus, the division of these two groups was purely based on pedagogic methodology imposed on them, irrespective of its effectiveness on students attitude of learning.
[2] "PBL" was introduced as a 3rd year pharmacology course and the nature of "PBL" was illy defined. Therefore, PBL might have been introduced simply as a different method of teaching other than didactic lecturing. This is in fact a common practice of many medical schools which claims the implementation of hybrid-PBL. The important point is that, despite different methodological instructions, if student's attitude of learning in the "PBL course" is not different from the students in the LBL groups, they will use the similar traditional strategies to pass the examines. If this assumption is correct, one would not expect differences in the outcome, especially when they are imbeded within the traditional curriculum, assessed by the same conventional tool, and encouraged to focus on the factual knowledge.
[3] These results in fact could be intergreted in another way: "The lack of differences between the test outcome in PBL and LBL groups suggest that putting student in a PBL environment within a traditional curriculum does not compromize student's acquisition of factual knowledge over a long term within a given discipline". This positive interpretation is more realistic than the negative conclusion portraited by the authors. Indeed, many papers on this issue with a similar conclusion have been published during the past several years in either PBL courses or PBL curricula.

Competing interests:

None declared.