Letter to the Editor

Tutor-Less Problem-Based Learning in a Large Classroom Setting—Could It Also Save Costs?

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Dear Editor:

Klegeris *et al.* (2013) are to be congratulated for adding another important piece to our knowledge of how problem-based learning (PBL) can be implemented. As the debate about PBL is less about whether it works and more about what forms of it work, studies such as this will become more important. However, the authors miss one vital outcome measure of the research—that of cost. One of the major criticisms of PBL is that it can increase costs. Such increased costs are largely related to increased numbers of faculty. The average size of a PBL group is seven, and large faculty numbers are therefore required (Albanese, 2010).

Anything that adjusts the student:facilitator ratio should have a dramatic effect on the number of facilitators required and thus on costs. Also, if tutor-less PBL can be carried out in a large classroom setting, then the cost of facilities will also be reduced. Forty-seven students received the intervention in this study; if we assume the group size was seven (as is usual in PBL), then this form of PBL would have saved the time of at least five tutors and the space requirements of five tutorial rooms. The costs of PBL relate mainly to faculty, facilities, scenarios, and learner inputs. Faculty and facilities are likely to make up a large majority of the costs, and these are the two components that are likely to be reduced if the study format is implemented. If the five tutors would normally have to meet their small group once per week for one half-day session in a tutorial room throughout the college year (which would constitute in the region of 30 weeks), then 75 tutor days and 75 days' worth of room occupancies would be saved. The actual amount saved would depend on tutor salaries and room rates and would vary from country to country.

At a time when student fees are increasing, any suggestions regarding more cost-effective forms of education are welcome. There is little published evidence on cost and value in PBL and some doubt as to whether cost-effectiveness and PBL are compatible, prompting Wittert and Nelson (2010) to entitle their chapter on the subject "Problem-Based Learning: Is a Cost Effective Approach Possible?" According to Finucane *et al.* (2009), the cost of delivering PBL to 240 students in the first 2 years of a graduate-entry medical school was €1,526,952 ($1,997,191), and the annual recurring cost was €664,000 ($868,485) per year. Klegeris *et al.* (2013) may have shown one possible cost-effective approach to this important pedagogy.

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