Editors' Introduction to Volume 2, Issue 2

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This issue of IJPBL addresses the use of problem-based learning for professional development in teacher training, similar to its original use in medical schools, to develop practitioners’ reasoning skills, foster peer collaboration, and increase conceptual understanding of the practice. Although doctors and teachers do vastly different jobs, they both need to demonstrate content knowledge and to properly diagnose situations (i.e., identify and treat a physical ailment vs. identify and treat learning obstacles). The three manuscripts included in this issue discuss using PBL for these purposes and provide practical, research-based approaches as the basis for further study.

While there is substantial literature on how other professional schools have used PBL (e.g., engineering, business), this particular issue is an important contribution because, as Weizman and colleagues note, there has been little research that examines the use of PBL for improving teacher education and continued professional development. We hope that these articles will foster more discussion and additional research.

Articles in this issue

Jonassen and Hung, in “All problems are not equal: Implications for problem-based learning,” argue that while PBL has been used in a variety of professional schools, the types of problems used depend on the nature of the discipline. The goal of this paper is to initiate a dialogue on the kinds of problems most amenable to PBL and how the PBL process may have to be adapted in order to support different kinds of problem solving with varying levels of problem difficulty.

The second article, “Measuring teachers’ learning from a problem-based learning approach to professional development in science education,” is based on research supported, in part, by the National Science Foundation. Weizman, Covitt, Koehler, Lundeberg, Oslund, Low, Eberhardt, and Urban-Lurain measure the impact of a PBL professional development model on teachers’ content and pedagogical knowledge. The study focuses
on the effect of a two-week summer workshop on teachers’ conceptual understanding, and the effect of this workshop and subsequent monthly meetings on their pedagogical content knowledge. The authors report the findings from the first year of this five-year design experiment.

In the last article, “Engaging teachers’ pedagogical content knowledge: Adopting a nine-step problem-based learning model,” Goodnough and Hung describe the use of PBL to facilitate teachers’ professional learning by helping them examine their decision-making practices related to curriculum development, instruction and assessment, and student learning. The three objectives for this study include 1) examining how teachers engage their content knowledge when designing PBL modules, 2) describing how they used the nine-step problem design model, and 3) documenting their perceptions of its strengths and limitations.

We are pleased to publish these three manuscripts and hope that you find them useful and insightful.

Introducing a new book review section

Based on the suggestions of our editorial review members during our annual AERA meeting in New York, we have added a new book review section to the journal. Johannes Strobel, Purdue University, and Sandra Williamson, Wilmington College, have agreed to serve as our book review editors. If you are interested in contributing a book review for future issues, please contact one of these two editors, jstrobel@purdue.edu or sandra.c.williamson@wilmu.edu. See additional guidelines in this issue.

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