



Published online: 8-18-2014

Editor's Introduction

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IJPBL is Published in Open Access Format through the Generous Support of the [Teaching Academy at Purdue University](#), the [School of Education at Indiana University](#), and the [Jeannine Rainbolt College of Education at the University of Oklahoma](#).

Recommended Citation

Glazewski, K. (2014). Editor's Introduction. *Interdisciplinary Journal of Problem-Based Learning*, 8(2). Available at: <https://doi.org/10.7771/1541-5015.1518>

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THE INTERDISCIPLINARY JOURNAL OF PROBLEM-BASED LEARNING

EDITOR'S INTRODUCTION

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IJPBL Updates

We held our annual board meeting in April 2014, at which time we announced changes to the board. We wish to welcome Andrew Tawfik of Concordia University - Chicago and Kun Huang of Mississippi State University. We also extended deep appreciation to Andy Walker of Utah State University and Jason Ravitz in the Education Outreach and Evaluation Division at Google, who both recently completed their board terms and generously provided input as well as meaningful, comprehensive manuscript reviews. In addition, we recognized Andrew Tawfik and Suha Tamim for their extraordinary service to IJPBL in 2013. At the board meeting, we also reported the journal submission and acceptance rates. In 2013, we received 26 submissions, and our five-year acceptance rate is 15 percent. Also in 2013, we had over 85,000 full-text downloads directly from the IJPBL website, and we are pleased to report that we are on pace to increase that number in 2014.

In This Issue

The current issue informs a wide range of problem- and project-based learning perspectives in higher education. Readers with an interest in medical education may want to read three studies in tandem:

- "Students' Experiences in Interdisciplinary Problem-Based Learning: A Discourse Analysis of Group Interaction" by Imafuku, Kataoka, Mayahara, Suzuki, and Saiki
- "Using Online Digital Tools and Video to Support International Problem-Based Learning" by Lajoie, Hmelo-Silver, Wiseman, Chan, Lu, Khurana, Cruz-Panesso, Poiras, and Kazemitabar
- "Empathy, Self-Reflection, and Curriculum Choice" by Grosseman, Hojat, Duke, Mennin, Rosenzweig, and Novack

The study by Imafuku and colleagues develops a deeper understanding of student dialogue and reflective practices

through their in-depth study of three cross-disciplinary teams comprised of students from such areas as medicine, dentistry, nursing, and pharmacy. Their layered analysis of student artifacts and interactions presents a lens into student insights, difficulties, areas of resistance, and capacity to persist. Similarly, the investigation by Lajoie and colleagues chronicles a cross-cultural implementation with medical students in Hong Kong and Canada collaborating on a problem that involves considerations for delivering bad news to patients. The tool-plus-human support of the instructors in this implementation represents an innovative way of thinking about scaffolding and supporting the facilitator. Furthermore, the cross-cultural component of this study reflects an important step in advancing our knowledge of the types of considerations we should have with regard to implementations that are sensitive to diverse audiences, and I would like to see work in this area carried further. In addition, I appreciated that they addressed transfer in their work, which I would also like to see us continue to address in our research. Finally the paper by Grosseman and colleagues investigates the relationship between student self-selection into PBL and a number of factors: gender, empathy, and self-reflection. Some of the findings extend our understanding of who enters as a PBL learner, and we are challenged to consider what we may do to support learner capacities for self-reflection and empathy.

The three additional papers in this issue address implementations of problem- and project-based learning in other higher education settings. "Taking a Leap of Faith: Redefining Teaching and Learning in Higher Education Through Project-Based Learning" by Lee, Blackwell, Drake, and Moran, reports the results of an investigation studying eight faculty from a variety of disciplines in higher education. The paper informs our understanding of project-based learning in higher education, and their results speak to issues of partnership-building, assessment, and student engagement. Those who work with professional educators will likely find the recommendations informative and practical. The second

paper, titled “A Multilevel Analysis of Problem-Based Learning Design Characteristics” by Scott, reports the results from her investigation of PBL design characteristics that may influence student engagement and perceived learning. Some of the results confirm commonly held assumptions about student-level capacities for self-directed learning and reflection. Her study also investigated team-level dynamics, and she provides a nuanced discussion of the importance of performance goal orientation diversity among team members. Through her work, we gain a much deeper understanding of problem design and team facilitation. Finally, in the paper titled “Engaging Non-Scientists in STEM Through Problem-Based Learning and Service Learning,” Tawfik, Trueman, and Lorz engage in a multi-year investigation that charts the evolution of a biology course from lecture-based methods to PBL-based approaches, culminating in an urban water investigation. The authors provide detailed insight into the considerations involved throughout the various iterations. In addition, the authors highlight the natural pairing between service learning and PBL, and it is important to see this foregrounded as *authenticity* takes center stage in this learning environment.

I am reminded of a paper that is now more than 15 years old entitled “Deep Learning is Difficult” by Sandberg and Barnard (1997). Their research extended beyond typical media comparison studies conducted at the time. The researchers set out to teach about tidal patterns, a topic rife with misconceptions, and conducted three studies with the goal of determining how we might best design an immersive learning environment. Study 1 tested a teacher versus Hypercard Tutor study, and pretest and posttest results showed students essentially performing equally poorly. Study 2 tested the Hypercard Tutor versus Enhanced Hypercard Tutor that added a self-explanation component and support resources that included print, a teacher (available by phone or online communication), and extant resources (encyclopedias, dictionaries, and similar). Students gained knowledge in both groups, but the researchers found no clear differences between groups. Study 3 tested Enhanced Hypercard Tutor versus Cognitive Apprenticeship Enhanced Hypercard Tutor, which included a coach who conducted extensive modeling of how to find information from the multimedia tutor. Students learned in both conditions, but there was no difference between the groups. The authors began their discussion section by asking, “What went wrong?”

Sandberg and Barnard then posed two key questions: “If we do not follow the arguments put forward by our colleagues as the main causes of lack of learning results, to what cause do we attribute the lack of learning results? How can we get a better view on the problems learners may encounter?” (p. 32). The authors went on to discuss the difficulties involved

with deep learning and understanding of complex material. They interrogated their own early assumptions that the Hypercard Tutor would enhance learning, but perhaps discouraged students from exerting effort. And they concluded by underscoring the vital importance of that sustained learner effort to engage self-assessment, metacognitive skills, and learning strategies.

The main reason this paper came to mind as I reviewed the papers in this issue is that sustained learner effort is vitally central to what we do in PBL. Across the six papers, we gain a deeper understanding of the learner experience in PBL. The authors help us to arrive at some meaningful suggestions and recommendations, but like Sandberg and Barnard, also more questions.

Reference

- Sandberg, J., & Barnard, Y. (1997). Deep learning is difficult. *Instructional Science*, 25(1), 15–36. <http://dx.doi.org/10.1023/A:1002941804556>

THE INTERDISCIPLINARY JOURNAL OF PROBLEM-BASED LEARNING

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Submission of articles that report on original research, classroom or project descriptions and evaluations, syntheses of the literature, assessments of the state of the art, and theoretical or conceptual positions that relate to the use of PBL, including the planning, management, operation, and evaluation of PBL are highly desired. Please note that for original research, we expect to see an explanation of the research question(s), description of the methods employed, analyses used, and recommendations for implementation and further research.

Length

Manuscripts should be between 10 and 25 double-spaced U.S. standard letter size (8½"× 11") pages in length. In addition, an abstract of approximately 125 words is required.

Style

Manuscripts should be prepared according to the APA format as described in the Publication Manual of the American Psychological Association (6th ed.). Manuscripts not conforming to these specifications will be returned to the author for proper formatting.

Format

Manuscripts should be submitted electronically through the journal website, <http://ijpbl.org>. Articles may be uploaded in either of the following formats.

- MS Word using only the truetype versions of standard PostScript fonts (Times, Arial, Symbol)
- Rich Text Format (RTF) with the same constraints for fonts

Manuscripts submitted to IJPBL need to be free of identifying characteristics, including author name(s), acknowledgments, and references to the author(s)'s previous or forthcoming work. All references to the author(s) should be replaced with the word "Author" throughout the manuscript.

Review Process

Manuscripts are reviewed first by the editors. Those that are appropriate for the journal are sent to at least two experts in PBL scholarship, particularly in the primary author's discipline or content area. All reviews are blind, that is, without identifying the authors to the reviewers. On the basis of the reviewers' recommendations, the IJPBL editor will decide to publish the manuscript as submitted, to request a significant revision and resubmission, or to reject the manuscript for publication. In all cases the author will be notified of the decision, and a copy of the reviewers' comments will be provided. The review process is expected to take between 2–4 months. If you have any questions, please contact Dr. Michael Grant at mgrant2@memphis.edu or Dr. Krista Glazewski at glaze@indiana.edu.