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## Editor's Introduction

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# THE INTERDISCIPLINARY JOURNAL OF PROBLEM-BASED LEARNING

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## EDITOR'S INTRODUCTION

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In the last issue we said good-bye and thanks to the former IJPBL editor-in-chief, Michael Grant, who had served IJPBL for over 12 years. Since then I have assumed the role of the IJPBL co-editor as Krista Glazewski stepped up as the editor-in-chief. Prior to this new role, I had served the journal for over 10 years in various capacities, from being a manuscript reviewer and an editorial board member to serving as a guest editor for a special issue. Soon after I started out in this position, I realized that I had some big shoes to fill and a lot to learn. Yet, I believe that with your support, the support from contributors, reviewers, and readers, I will be able to do my best to serve the journal with the same level of quality, rigor, and integrity as my predecessors have served.

This issue features seven articles (including one article for “Voices from the Field”) on diverse research topics and research methods, from conceptual research to empirical studies, and from case analysis to quantitative analysis. In addition, there is a guest commentary and two book reviews. I would like to highlight a few themes that I have observed in this collection of articles, and particularly comment on their contribution to the PBL theory, practice, and research.

The first theme that has been identified is the adaptation of PBL process and models in various contexts, from elementary school students (Whitlock, 2019), to teacher preparation (Goodin, Caukin, & Dillard, 2019), and to in-service teachers (Lee & Blanchard, 2019). Goodin, Caukin, and Dillard (2019) illustrated with specific examples how they adapted PBL in the curriculum for teacher preparation. Goodin and colleagues' (2019) experience indicates that implementing PBL is not a rigid process of adopting an existing PBL model, but rather a flexible and contextualized process in response to the needs, target audience, goals, and contexts.

The second theme involves the design of scaffolding tools and systems to support learners' PBL experience. From their work, Korpi, Peltokallio, and Piirainen (2019) shared a pedagogical model concerning different dimensions and levels

of reflection to scaffold learners' reflective thinking in PBL. Particularly interesting to this reflection model is the level of confusion the students experienced during the PBL process, which seems to be an essential developmental process but an important issue to address as students make progress in PBL. Kim, Belland, and Axelrod (2019) proposed a design framework that addresses the issue of optimal challenge and allows autonomy for self-directed learning and peer support. Through an empirical study, Si, Kong, and Lee (2019) demonstrated the effectiveness of using concept maps to support argumentation as a way to support PBL. Liu, Liu, Pan, Zou, and Li (2019) focused on providing a meaningful PBL experience to at-risk middle school students and affecting a positive attitude change toward science learning through an immersive multimedia PBL environment.

Another feature I have noticed is the interest in studying PBL from the lens of motivational theories (e.g., self-determination theory and expectancy-value theory). Lee and Blanchard (2019) used the self-determination theory and expectancy-value theories to gauge middle and high school teachers' motivation in autonomy, relatedness and competence through their experience of implementing PBL. Their work indicates a need and importance for K–12 teachers to experience PBL themselves instead of just learning about PBL if we want to change teachers' perceptions about using PBL in their instruction. We have also noticed an increasing interest and effort in incorporating motivational factors (e.g., choices and autonomy) in the scaffolding framework for supporting PBL (Kim, Belland, & Axelrod, 2019).

The work by Kim and colleagues (2019) also points to the need for understanding and studying the optimal challenges in the PBL research. Just as important as the design of problem scenarios, which Hung's work (2006) focused on, optimal challenges is also one of many issues that need to be further investigated in the PBL research. Similarly, the issue on fading out scaffolding has also been under studied. Although

research on fading has gained some attention in recent years (e.g., Tawfik, Law, Ge, Xing, & Kim, 2019), we need more empirical studies along this line in the future.

Lastly, Whitlock's (2019) article indicates that PBL can be used as a powerful instrument to intersect school learning with service-learning, civic responsibility and citizenship. It increases our understanding of the role and value of PBL in addressing not only STEM education, but also STEAM education (Ge, Ifenthaler, & Spector, 2015). PBL can guide learners to see multiple perspectives and multiple solutions in situ (Brown, Collins, & Duguid, 1989), and we are reminded by Lucey and Henning (2019) through their guest commentary, that the conditions bringing possible solutions to the experience are perhaps more important and valuable than the solutions themselves in PBL.

The two book reviews (Bridges, 2019; and Sullivan, 2019) provide a summary and discussion for two interesting volumes about PBL. We encourage our readers to check out the two books, and we hope that you will find them useful and beneficial.

I hope you enjoy reading the articles in this issue and find them helpful!

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