



Interdisciplinary Journal of Problem-Based Learning

Volume 13 | Issue 1

Article 9

Published online: 2-27-2019

Extending the Challenge of Problem-Based Learning

Jessica J. Sullivan

Colorado STEM Academy, jessica.2.sullivan@ucdenver.edu

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

Sullivan, J. J. (2019). Extending the Challenge of Problem-Based Learning. *Interdisciplinary Journal of Problem-Based Learning*, 13(1).

Available at: <https://doi.org/10.7771/1541-5015.1861>

This document has been made available through Purdue e-Pubs, a service of the Purdue University Libraries. Please contact epubs@purdue.edu for additional information.

This is an Open Access journal. This means that it uses a funding model that does not charge readers or their institutions for access. Readers may freely read, download, copy, distribute, print, search, or link to the full texts of articles. This journal is covered under the [CC BY-NC-ND license](#).

THE INTERDISCIPLINARY JOURNAL OF PROBLEM-BASED LEARNING

BOOK REVIEW

Extending the Challenge of Problem-Based Learning

Jessica J. Sullivan (Colorado STEM Academy)

Beghetto, R. A. (2018). *What if?: Building students' problem-solving skills through complex challenges*. Alexandria, VA: ASCD.

What if routine classroom tasks could be reimagined and redesigned? What if problem-based learning could extend beyond the classroom and beyond the school year? In *What If?: Building Students' Problem-Solving Skills Through Complex Challenges* (2018), Ronald A. Beghetto invites educators to unleash the power of the unknown as they design and implement various levels of challenges in the classroom and beyond. By providing scaffolds, action principles, a process for “lesson unplanning,” and a how-to guide for designing “legacy challenges,” Beghetto prepares readers to engage and enhance students’ problem-solving skills in any content area and with any topic. As an internationally known expert on creativity in educational settings, Beghetto situates his ideas in research, examples from real classrooms and students, and his previous work on creativity in the classroom. This book is relevant for teachers, school leaders, and designers of problem-based learning (PBL).

The ideas presented within the book are grounded in the notion that “providing students with opportunities to learn how to respond productively to uncertainty will help prepare them for the kinds of real-world challenges they face now and will face in the future” (p. 2). *What If?* provides an in-depth look at various levels of challenges and provides a process for “adding complexity to existing lessons and classroom structures” through what Beghetto calls “lesson unplanning” (p. 43). Beghetto utilizes a four-part framework (problem, process, product, and criteria) to describe the basic structure of all challenges, whether they are simple or complex. While all challenges include the same four features, the degree of uncertainty is what moves a challenge along the continuum of complexity. Beghetto asks readers to “remember: the more uncertainty students face, the more complex the challenge is” (p. 8), while also being mindful of the importance of scaffolding challenges and utilizing check-ins so that students don’t disengage when faced with uncertainty.

The key to utilizing the power of the challenge lies in “providing students with a structured and supportive learning environment” (p. 3). One such support is the “stop-think-learn-do” approach that can help both teachers and students “tackle just about any challenge” (p. 41). These action principles, along with their corresponding sub-actions, are fully explained and illustrated via case studies and checklists for students and teachers to use with each action. Through his lesson unplanning idea, Beghetto explains how teachers can add uncertainty to the lessons and activities they have already prepared. Beghetto gives teachers three guidelines to follow for lesson unplanning:

1. start with a dead (or dreaded) lesson
2. get clear on the ‘nonnegotiables’
3. anticipate the need for adaptive challenges (p. 44)

Lesson unplanning is enhanced by a form, which is available for download online, that teachers can use to identify existing activities and assignments they want to keep, modify, or replace with more complex challenges. Part 1 of *What If?: Building Students Problem-Solving Skills Through Complex Challenges* is a primer for the beyond-the-classroom challenges presented in “Part 2- Legacy Challenges: Going Beyond the Classroom.”

Beghetto defines “legacy challenges” as “student-directed creative endeavors that aim to make a positive, lasting contribution. Students’ overarching goal is to identify and develop a solution to an open-ended problem facing them, their school, their community, or the world beyond” (p. 55). *What If?* walks readers through the process of implementing legacy challenges (introducing the challenges, identifying and refining the problem, determining why the problem matters, creating a plan for addressing the problem, documenting the learning that takes place through the challenge, and figuring out the lasting contribution of the challenge) while providing real-life examples of each step. As legacy challenges are

student-directed and student-designed, Beghetto provides a *Legacy Challenge Planning Canvas* that helps students design the challenge, keep track of the core components, and keep track of changes they make as the challenge morphs with students' new knowledge, understanding, and ideas. As a living document, the Legacy Challenge Planning Canvas becomes an integral part of the challenge process and helps students "share the story of how their challenge took shape over time" (p. 63). An essential element of legacy challenges is that they have a lasting impact and can be carried on by future groups of students when students move up a grade. "For example, sixth graders who started a community lending library in partnership with a local used bookstore can involve interested fifth graders, who then continue managing the lending library once they become sixth graders and eventually pass it on to the next cohort of students" (p.136). Succession plans such as this, along with the students' work in the community, push students' learning beyond the confines of the classroom.

In addition to Beghetto's in-depth examination of challenge's potential in the classroom, an assortment of helpful components is incorporated in each chapter. From student activities, chapter summaries, getting started guides, and examples from real classrooms to dozens of figures for teacher and student use, the book contains nearly everything an educator needs to begin implementing complex challenges in the classroom. The addition of a FAQs section further assists with implementation and addresses questions that may arise as readers begin designing challenges. Beghetto clearly

kept his readers in mind by carefully designing the structure, length, and content of *What If?: Building Students' Problem-Solving Skills Through Complex Challenges*.

Though Beghetto does not clearly connect his work with PBL, the content is readily applicable and aligns with the goals of PBL, one of which, according to the Buck Institute of Education (BIE), is to ready "young people to rise to the challenges of their lives and the world they will inherit" (2018). BIE's essential project design elements include a challenging problem, revision, an authentic audience, and authenticity, all of which are incorporated in Beghetto's legacy challenges. The book concludes with the author asking readers to reimagine classroom opportunities: "What if you started today by transforming a routine activity into a more complex one? What if you used complex challenges to unleash students' learning, problem-solving, and creativity? What if you embarked on a legacy challenge with your students?" (p. 137). There is great potential for educators who are ready to add complexity and challenge to their classrooms. Reading *What If?: Building Students' Problem-Solving Skills Through Complex Challenges* is an excellent first step along the path of unleashing students' problem-solving potential.

References

- Beghetto, R.A. (2018). *What if?: Building students' problem-solving skills through complex challenges*. Alexandria, VA: ASCD.
- Buck Institute of Education. (2018). What is PBL? Retrieved from http://www.bie.org/about/what_pbl