



Published online: 7-31-2017

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Recommended Citation

Dias, M. , & Brantley-Dias, L. (2017). Setting the Standard for Project Based Learning: A Proven Approach to Rigorous Classroom Instruction. *Interdisciplinary Journal of Problem-Based Learning*, 11(2).

Available at: <https://doi.org/10.7771/1541-5015.1721>

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THE INTERDISCIPLINARY JOURNAL OF PROBLEM-BASED LEARNING

BOOK REVIEW

Setting the Standard for Project Based Learning: A Proven Approach to Rigorous Classroom Instruction

Michael Dias and Laurie Brantley-Dias (Kennesaw State University)

Larmer, J., Mergendollar, J., & Boss, S. (2015). *Setting the standard for project based learning*. Alexandria, VA: ASCD. 240 pp. ISBN 978-1416620334. \$27.95 (Paperback). \$26.99 (E-book).

Keywords: book review, standards, project based learning

Setting the Standard for Project Based Learning (PjBL) is both the title and intention of the book authored by John Larmer, John Mergendollar, and Suzie Boss. Their subtitle claims that PjBL is “a proven approach to rigorous classroom instruction.” This is supported by a chapter devoted to reviewing PjBL research, followed by chapters on designing, managing, and leading PjBL. At the outset, Larmer, Mergendollar, and Boss list the benefits of PjBL for students, teachers, and administrators, adding to discussion of PjBL’s merits (Boss & Krauss, 2014; Dean, 2012; Remijan, 2016). PjBL motivates students and prepares them for college, careers, and citizenship, while also helping learners meet standards and succeed on tests that require critical thinking and deep knowledge. PjBL’s benefits for education leaders include greater satisfaction for teachers and new ways to communicate and connect with parents and other stakeholders in the community. The promise of these rewards is fulfilled only through educators who possess the sustained commitment to work at PjBL, despite pressures to enact more traditional, teacher-centered pedagogies. For these innovative educators and those who seek to support them, Larmer, Mergendollar, and Boss provide a path to rigorous PjBL.

Readers find a clear, research-based argument for the value of PjBL in *Setting the Standard for PjBL*, followed by procedures for planning and leading in-depth projects that build on student voice and choice. Central to the authors’ argument is their certainty that only high-quality versions of PjBL will reap the broad range of benefits. The authors engage the readers’ attention by casting a vision of PjBL at its best. This is referred to as Gold Standard PjBL, an “aspirational goal” derived from synthesis of “the best research-based and classroom-proven project design elements and instructional practices” (p. 34).

This model for Gold Standard PjBL is informed by a historical perspective that predates Dewey and progressive education, reaching back to the *progetti* (projects) of 16th century Italian architects and sculptors who built scale models of buildings and monuments as a problem-solving exercise for learners of the Accademia di San Luca. The authors’ vision of Gold Standard PjBL is reinforced as they point out the five essential PjBL elements evident in 16th century *progetti*, “a challenging problem or question, authenticity, student voice and choice, critique and revision, and a public product” (p 26). The authors then trace the development of PjBL to John Dewey’s articulation of iterative action guided by reflective analysis of results, and again, reaffirm their vision of PjBL in alignment with their vision of effective problem-based teaching. Principles of problem-based learning derived from medical education in the second half of the 20th century and the role of metacognitive modeling in problem-based tutoring and project-based teaching add the final historical element contributing to the authors’ high standard of PjBL.

Three long-term advocates of PjBL merged their expertise to create this book. The authors devote much of their talent to The Buck Institute for Education (BIE), a mission-driven organization widely known for providing PjBL resources and professional development. As BIE’s editor-in-chief, John Larmer’s influential publications include the *Project Based Learning Handbook*, BIE’s *PjBL Toolkit Series*, and *PjBL for 21st Century Success*. John taught high school social studies and English for a decade, serving students and coaching teachers at a restructured (Coalition of Essential Schools) small school. He holds MA degrees in educational technology and in educational administration from

San Francisco State University. John Mergendoller was the founding research director for BIE (1989) and has served as BIE executive director since 2000. Dr. Mergendoller earned an MA and PhD in psychology and education from the University of Michigan. His publications can be found in the educational technology, PjBL, science education, and middle school reform literature. Journalist and PjBL-advocate Suzie Boss has authored several books on innovation in education, including *Project-Based Learning: Your Field Guide to Real-World Projects in the Digital Age* and *Bringing Innovation to School: Empowering Students to Thrive in a Changing World*. Suzie is a regular contributor to *Edutopia* where she communicates the potential of innovative teaching and learning to transform communities.

Setting the Standard for Project Based Learning opens with an initial chapter that lays the foundation by defining project-based learning and its outcomes. The first chapter details the benefits of PjBL, establishing the authors' working definition of PjBL as an instructional strategy that empowers teachers and their students to "go beyond content coverage and develop deep understandings and success skills needed to thrive in today's complex world" (p. 22–23). The outcomes of PjBL are detailed, including student motivation, college/career/citizenship preparation, and helping students meet standards and succeed on rigorous tests. The authors relate PjBL to both the Common Core State Standards (CCSS) for English/language arts and the Next Generation Science Standards (NGSS). Readers will take note that the authors' claim PjBL is one of the best ways to achieve the goals of the CCSS, extending earlier arguments for the transformative power of PjBL (Lenz & Kingston, 2015). They urge teachers to take up PjBL as "one of the key methodologies in every teacher's toolbox" (p. 11). The authors argue that PjBL as a "good fit" for meeting the NGSS because this latest wave of science education reform emphasizes understanding and application levels of learning, as well as engineering design tasks that require projects.

Chapter 2 provides the previously described historical development of PjBL from *progetti* to current practices informing "Gold Standard PjBL." This standard of PjBL articulated by Larmer, Mergendoller, and Boss requires student learning goals in two domains: deep subject-matter knowledge and the ability to transfer learning to new problems and contexts. In Gold Standard PjBL, these learning goals are reached via "7 project design elements: (1) a challenging problem or question, (2) sustained inquiry, (3) authenticity, (4) student voice and choice, (5) reflection, (6) critique and revision, and (7) a public product" (p. 37). Chapter 3 follows with a review of PjBL research written for the intended practitioner audience. The authors selected research studies from a recent 25-year period that met their criteria for

high quality. The criteria required that studies be published in peer-reviewed academic journals, and leaned heavily on student-outcome studies of randomized controlled trials or quasi-experimental designs. A possible shortcoming is seen in the fact that the authors do not specify what they considered project-based learning when they chose studies, instead choosing to lump project-based, problem-based, and inquiry-based learning together. Nevertheless, the comparison of the impact of PjBL and traditional teaching in K–12 science, mathematics, and social studies makes a strong case for PjBL. The argument for feasibility of PjBL is extended via references to research on teachers' and students' experiences with PjBL, and the relation between PjBL and conceptions of student learning and motivation.

Following the first three foundational chapters, the remaining four chapters mentor readers on designing, managing, and leading PjBL in school and informal settings. Fifteen "Project Snapshots" spanning K–12 grade levels and subject areas are provided in the 45-page appendix. These ground the authors' message in the realities of teaching, greatly increasing the likelihood that readers will relate PjBL principles to the particulars of their practice and context. In *Designing a Project* (chapter 4) the authors first provide examples and non-examples of PjBL; then lead the reader through project design steps (Considering Context, Generating an Idea, Building the Framework). In our view, readers of chapter 4 would benefit from a design model illustrating the steps and tasks of project design. This is in contrast to chapters 2 and 5, in which the authors provide graphic models depicting Gold Standard PjBL and project management, respectively. Chapter 5, *Managing a Project*, addresses assessing student readiness for PjBL with regard to critical thinking and collaboration skills. Project management is divided into four phases with milestones, examples, and resources. Readers will need to look elsewhere should they need suggestions for developing collaboration skills for students working in PjBL settings. The authors provide helpful visual organizers and charts for planning the project path and deciding how to form teams, and also provide tables depicting a student learning guide and a formative assessment plan. In chapter 6 the authors discuss how leaders should initiate and support PjBL within their school or district, providing talking points to help PjBL leaders bring stakeholders along. Chapter 7 expands the message, relating the authors' PjBL standard to informal learning spaces by showing the alignment between imperatives of informal learning and elements of PjBL. The authors make a clear case regarding the unique affordances of after school and summer programs for rich PjBL experiences. Clear articulation of the highest standard of PjBL is the great strength of this book. The authors present online resources and cases as scaffolds to help the readers implement PjBL tasks.

Two aspects of this book gave us pause. First, the final PjBL design step, *Building a Framework*, starts with *Setting Learning Goals*, which makes good design sense. We find it odd that the next two steps, *Selecting Major Products* and *Deciding How Products Will Be Made Public*, precede the *Writing Driving Question* step. We are inclined to design instruction with the learning goal followed by driving question following, which would inform product thinking. Perhaps our perspective is influenced by an instructional-design, learning-outcome focus, while the authors' sequence of steps (goals-products-questions) is better aligned with the learners and what drives them: the product. Second, the authors tend to equate project- and problem-based learning as one in the same, noting "that often the distinction between *problem based* and *project based learning* is academic and possibly arbitrary" (p. 30). They also equate inquiry learning as project based. Some researchers will see this as an oversimplification (see Savory, 2006, for definitions and descriptions of problem-based versus project-based versus inquiry-based instruction). On the one hand, avoiding that distinction seems appropriate for the intended audience, in order to simplify things; alternatively, we see a missed opportunity for these influential scholars to address and reduce enduring ambiguities between PjBL and PBL. Nevertheless, the authors clearly and efficiently articulate their working definition of project-based learning, and readers will see that PjBL in this book overlaps with problem- and inquiry-based learning.

Setting the Standard for Project Based Learning has been available for two years. Amazon.com reader reviews align with our conclusion that the authors have achieved their goal of providing a practical, how-to guide to PjBL for K–12 and informal educators. We find their articulation of "gold-standard PjBL" nested within the broader standards movement to be visionary, equipping, and inspiring for readers to design and enact fuller, more productive project-based instruction. The writing clearly evidences Larmer, Mergendoller, and Boss's deep commitment to the Deweyan ideal of educative experiences that are relevant, engaging, and student-interest-centered. The authors have directed their message to a broad audience of educators. They do a great service to primary and secondary learners across the subject areas

by providing this practical guide that speaks to the teachers who implement PjBL and the administrators who support PjBL. Moreover, the authors look beyond K–12 schools to describe PjBL in informal settings. *Setting the Standard for Project Based Learning* is a research-based guide that will benefit innovative educators who work toward a rigorous standard of project-based instruction to create more meaningful learning experiences for students and their teachers.

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