



WHITE
PAPER

Professional Learning for PBL



How to improve teachers' capacity
to lead project-based learning



Implementing project-based learning (PBL) effectively isn't a simple undertaking. Although PBL has been proven to boost student engagement and achievement, as well as helping students develop 21st century skills such as problem solving and critical thinking,¹ doing it well requires a number of key elements working in harmony.

For instance, teachers need well-designed projects built around an authentic problem or question. They should give students a voice and choice in their learning. They must develop a clear rubric for assessing projects. Students should work together in the creation of a public product or performance, and they should have a chance to reflect on their projects and what they've learned.

This can be a lot for teachers to manage, especially if they're new to PBL. High-quality

professional learning is essential for giving teachers the knowledge and skills they need to implement PBL effectively in their classrooms.

“Educators tend to teach as they were taught in school. But most teachers didn't experience project-based learning for themselves,” says educational consultant and PBL expert John Larmer. “They might remember group projects from their own education, but they probably haven't experienced full project-based learning and all of its components.”

When done well, professional development can help teachers understand what PBL is and how to lead it effectively. This white paper explores what high-quality professional learning looks like and how school systems can apply it to PBL to ensure success.



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Seven Elements of Effective PD

In 2017, the nonprofit Learning Policy Institute published a review of nearly three dozen studies on teacher development to identify common success factors. In its research, LPI discovered seven widely shared features of effective professional learning²:

Focuses on content. PD that focuses on teaching strategies associated with specific curriculum content supports professional learning within the context of teachers' own classrooms. Teachers need to see how the skills and pedagogies they're learning can be used within their own content area. Applying this idea to PBL, educators should learn how to create, manage, and assess projects within the actual subjects they teach.

Incorporates hands-on, active learning. Active learning engages teachers directly in trying out new teaching strategies, giving them an opportunity to experience the same style of learning they're designing for their students. For instance, teachers should learn about PBL by experiencing it firsthand like their students would—and what better project might teachers undertake than creating authentic learning tasks for their own classrooms?

“Professional development should be practical rather than theoretical in nature,” Larmer observes. “It shouldn't just be an expert talking about project-based learning with a PowerPoint presentation.” Hands-on, active instruction gives teachers highly contextualized learning, while enabling them to emerge with projects and lessons they can actually use in their classrooms.

Supports teacher collaboration. High-quality PD creates opportunities for teachers to share ideas and collaborate in their learning. For instance,

teachers should be given the time and space to work with their colleagues in creating engaging PBL-based lessons. This gives teachers a built-in support network and allows them to learn from (and alongside) their peers. By working collaboratively, teachers can create communities that positively change the culture and instruction of their entire grade level, department, school, and/or district.

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Uses models of effective practice. Modeling of instruction gives teachers a clear vision of what best practices look like. In professional development that supports PBL, this modeling might include sample lesson plans, unit plans, project ideas, scoring rubrics, examples of student work, observations of peer teachers, and video or written cases of exemplary PBL-based instruction.

Provides coaching and expert support. This involves the sharing of expertise about content and evidence-based practices, focused on teachers' individual needs. For example, master teachers might mentor their colleagues in leading project-based learning in their classrooms, or learning coaches might work with teachers to provide guidance and support.

Offers feedback and reflection. High-quality professional learning should provide built-in time for teachers to think about, receive input on, and





make changes to their practice by giving them feedback and facilitating reflection. Feedback and reflection help teachers thoughtfully improve their practice.

Is of sustained duration. Effective PD gives teachers adequate time to learn, practice, implement, and reflect upon new strategies that facilitate changes in their practice. One-time workshops aren't enough to accomplish this transformation; instead, teachers need ongoing learning and support. "PBL isn't a simple strategy, like giving students exit tickets at the end of a lesson," Larmer says. "It's a big shift philosophically, and teachers need opportunities to think, discuss, plan, try, reflect, and revise their practice. If professional development isn't a sustained effort, then change won't happen."



Administrative support is critical

School district leaders play a critical role in ensuring the effectiveness of professional learning by creating the right environment for instructional transformation to take root and removing any structural barriers that could hinder success.

For instance, leaders need to foster a culture in which it's okay for educators to step outside their comfort zone and take risks. Teachers must feel comfortable in trying new strategies such as PBL without being afraid to fail. This

culture comes from leaders setting the right tone with both their words and actions.

K-12 leaders can also facilitate collaborative planning and PD by building time for these activities into the school schedule.

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Common PD Models

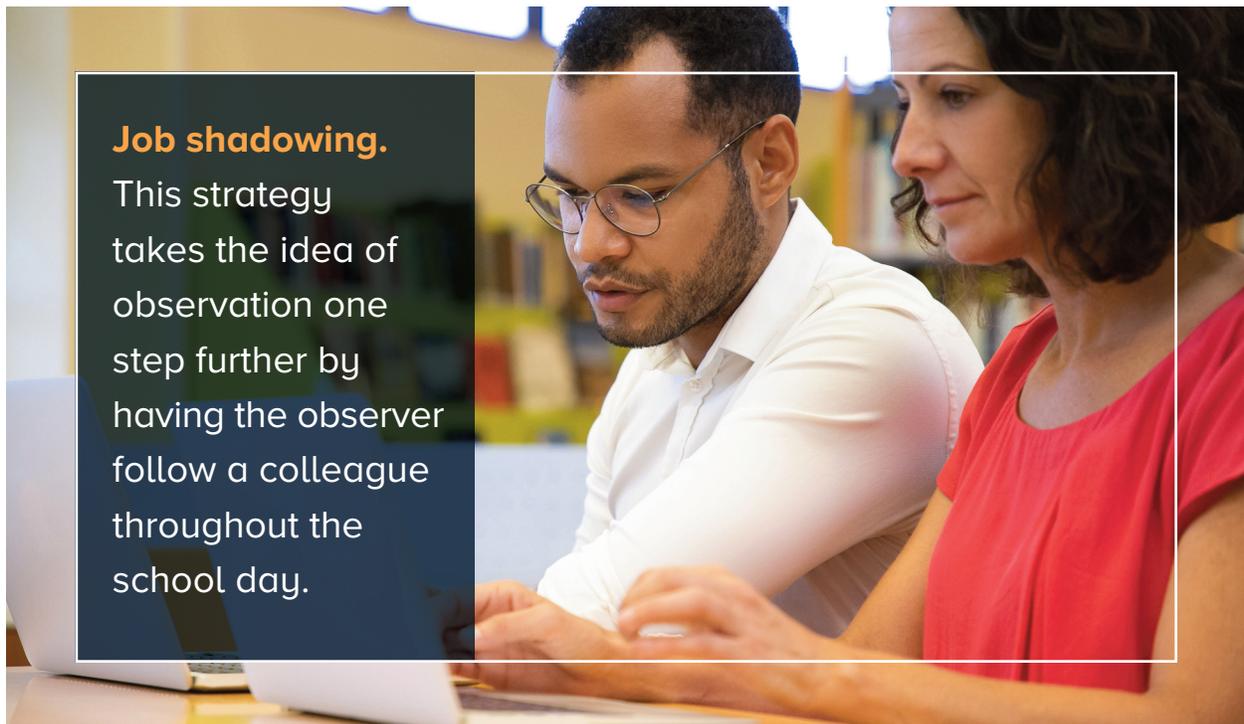
There are many professional learning strategies available to help teachers implement PBL effectively, regardless of where they are in their journey. Here are some common models.

Train-the-trainer. In this model, school systems choose a cadre of experienced teachers to receive PBL training, and these teachers in turn train their colleagues. This model offers a number of advantages; for example, because it employs peer instruction—widely recognized as an effective strategy for learning in all subject areas—teachers are more likely to buy in. The teachers who are training their colleagues have a firsthand appreciation for the struggles that someone new to PBL might experience, and they can address these concerns head-on. Often, school systems will choose their “early adopter” teachers to receive training and then share it with others, and these educators typically receive a stipend or other incentive for their participation.

Observations and site visits. Teachers can learn a lot from watching colleagues who are skilled at leading PBL in their classrooms. This observation can occur within a teacher’s own school, another school within the district, or even at a different district altogether. This strategy is most effective when the observation is followed by a period of discussion and reflection, giving the observers a chance to ask questions of the teachers they’ve just watched in action.

Job shadowing. This strategy takes the idea of observation one step further by having the observer follow a colleague throughout the school day (or even over a series of days) to see how he or she approaches all aspects of PBL instruction.

Mentoring and coaching. This could be either a formal or informal process, carried out within the context of an ongoing relationship in which a teacher who’s experienced in leading PBL coaches, encourages, advises, counsels, and otherwise supports a less experienced colleague.





Online learning. Learning about PBL through a series of online courses and workshops allows teachers to learn when it's most convenient for them. It enables teachers to fit professional learning into their already busy schedules, making PD more manageable and putting educators in charge of their own development.

Micro-credentialing. This is a form of certification—often represented by the awarding of a digital badge—that indicates mastery of a particular skill. As teachers demonstrate their mastery of a skill (such as designing or assessing student projects), they earn a micro-credential that rewards their progress.

Professional learning communities. A PLC is a group of educators who meet regularly, share expertise, and work collaboratively to improve their teaching skills. These professional networks might meet in person, or they might exist online. A PLC is a great way for teachers to support each other in implementing PBL, especially when they're new to the concept.

A Multifaceted Approach Works Best

Ideally, school systems should adopt a comprehensive approach to teacher PD that involves several of these strategies. A multifaceted approach is more likely to ensure that teachers' professional learning needs are met when districts are implementing PBL, as officials at the Fort Wayne Community Schools in Indiana have learned.

When Fort Wayne Superintendent Mark Daniel and his staff wanted to incorporate more experiential, project-based learning, they knew that high-quality PD would be essential to making this approach work successfully. "We believe in supporting our adult learners from the time we hire them," says Ramona Coleman, assistant superintendent for professional learning.



Fort Wayne schools participate in 3DE, a national Junior Achievement program that redesigns the high school experience to be more relevant and grounded in authentic learning experiences for students. For instance, one high school teacher in the district has students create their own business. The school system is also working to bring PBL into the younger grades.

"We're bringing the curriculum to life as much as possible for our students," Daniel says.

The district has partnered with Defined Learning to help teachers incorporate PBL into instruction. Defined Learning's professional learning program, Defined Academy, offers professional learning across all levels of experience, from foundational knowledge to deeper learning and micro-credentialing that counts toward an educator's PD certification.

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Defined Academy instructors have modeled exemplary PBL for Fort Wayne learning coaches and have led voluntary training sessions for teachers after school. The district has also introduced micro-credentialing for PBL instruction. In addition, teams of teachers who are well-versed in PBL methodologies have created exemplary lessons, units, and assessments for their grade-level peers to use or modify as desired.

This multifaceted approach has been highly successful in meeting teachers at their level of need and ensuring that everyone has opportunities to learn and apply PBL for instruction.

Daniel's advice for other school district leaders? "Be patient, but provide systematic professional

learning opportunities for teachers," he recommends. "I've found that if you mandate something, you'll get pushback. However, if you take a softer approach and let it build organically, that tends to catch people on fire. When teachers see the engagement of students in classrooms where their colleagues are using project-based learning, they naturally want to learn more about it for themselves."

Driving Transformation

High-quality professional learning is essential for implementing PBL successfully. By following the proven best practices described here, school systems can effectively deliver professional learning that transforms teaching and learning and results in long-term changes to instruction.

About Defined Learning

Defined empowers educators to engage their students in high-quality project-Based Learning (PBL) that builds future-ready skills. Through our Defined Learning and Defined Careers solutions, we provide teachers with the essential project design elements they need to implement high-quality PBL; standards-aligned projects, real-world videos, hands-on experiences, and more. With Defined Academy, we offer skill-building professional learning courses to help teachers get started and go further with PBL. Defined helps teachers bring the real world to the classroom and empowers students to build critical future-ready skills.

To learn more, visit www.definedlearning.com.

¹ Speziale, Kerry. "Study Confirms Project Based Learning Has a Positive Impact on How Students Learn Science and Math." <https://blog.definedlearning.com/blog/project-based-learning-research>

² Darling-Hammond, L., Hyster, M. E., Gardner, M. (2017). *Effective Teacher Professional Development*. Learning Policy Institute. https://learningpolicyinstitute.org/sites/default/files/productfiles/Effective_Teacher_Professional_Development_REPORT.pdf

