

Frequently Asked Questions about Project Based Learning

What is PBL?

- *What is a short, simple definition of PBL?*
 - PBL is a teaching method that uses "projects" to organize the curriculum. Students are motivated by the project to learn knowledge and skills through an extended process of inquiry. To meet the Buck Institute for Education's definition of Gold Standard PBL as opposed to older conceptions of "doing projects," several essential features must be included. A well-designed project:
 - **is organized around an Challenging Problem or Question.** Authentic and significant questions, issues, and/or problems focus students' work and deepens their learning. It is the heart of a project – what it is "about," if one were to sum it up – it is a problem to investigate and solve, or a question to explore and answer.
 - **sustains student inquiry as they learn key content and skills.** PBL begins with the vision of an end product or presentation which requires students to acquire specific knowledge, understand concepts and employ various skills. This gives students a context for their work and a reason to learn. Inquiry is iterative; when confronted with a challenging problem or question, students ask questions, find resources to help answer them, then ask deeper questions – and the process repeats until a satisfactory solution or answer is developed.
 - **is authentic.** Authenticity increases student motivation and learning. A project can be authentic in several ways, often in combination. It can have an authentic context, such as when students solve problems like those faced by people in the world outside of school. It can involve the use of real-world processes, tasks and tools, and performance standards, such as when students plan an experimental investigation or use digital editing software to produce videos approaching professional quality. It can have a real impact on others, such as when students address a need in their school or community (e.g., designing and building a school garden, improving a community park, helping local immigrants) or create something that will be used or experienced by others. Finally, a project can have personal authenticity when it speaks to students' own concerns, interests, cultures, identities, and issues in their lives.
 - **allows some degree of student voice and choice.** Having a say in a project creates a sense of ownership in students; they care more about the project and work harder. The opportunity to make choices, and to express their learning in their own voice, also helps increase student engagement in their education.

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- **engages students in the process of reflection.** Throughout a project, students – and the teacher – should reflect on what they’re learning, how they’re learning, and why they’re learning.. Reflection on the content knowledge and understanding gained helps students solidify what they have learned and think about how it might apply elsewhere, beyond the project. Reflection on success skill development helps students internalize what the skills mean and set goals for further growth. Reflection on the project itself – how it was designed and implemented – helps students decide how they might approach their next project, and helps teachers improve the quality of their PBL practice.
 - **engages student in Critique & Revision** Students are taught how to give and receive constructive peer feedback that will improve project processes and products, guided by rubrics, models, and formal feedback/critique protocols. In addition, real-world subject matter experts can be used to support the critique process as well.
 - **requires critical thinking, problem solving, collaboration, and various forms of communication.** To answer the Driving Question or meet a challenge and produce high-quality work, students need to do much more than remember information—they need to think deeply about what and how they are learning. A project provides opportunities for students to learn how to work together in a team effort, and use old and new forms of communication to create and present their work.
 - **results in a public product.** First, like authenticity, a public product adds greatly to PBL’s motivating power and encourages high-quality work. Students need to demonstrate what they have learned by showing and explaining their work to others for scrutiny and critique. When students have to present or display their work to an audience beyond the classroom, the performance bar raises. By creating a product, students make what they have learned tangible and thus, when shared publicly, discussable. Instead of only being a private exchange between an individual student and teacher, the social dimension of learning becomes more important. This has an impact on classroom and school culture, helping create a “learning community,” where students and teachers discuss what is being learned, how it is learned, what are acceptable standards of performance, and how student performance can be made better. Finally, making student work public is an effective way to communicate with parents, community members, and the wider world about what PBL is and what it does for students.
- ***Are there different kinds of PBL?***
 - PBL is a constructivist-based instructional strategy that goes by many names and has many variations. Although there are subtle differences, these variations have more in common than they diverge. BIE considers Gold Standard PBL an umbrella term (or "big tent") that includes Problem Based Learning, Anchored

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Instruction, Performance Based Learning, Place Based Learning, Self-regulated Learning, Authentic Pedagogy, Intentional Learning, Strategic Learning, and educational simulations. All of these instructional approaches attempt to encourage students to be responsible and resourceful for their own learning. Most require students to solve problems or create artifacts as demonstrations of their learning.

- o See the [Gold Standard Project Design Elements](#) and the [Gold Standard Project Based Teaching](#) blogs.
- ***What is the difference between Project Based Learning and Problem Based Learning?***
 - o These terms are sometimes used interchangeably, but they often differ according to the emphasis placed on creating a product to demonstrate learning. Gold Standard Project Based Learning always involves the creation of a product (e.g., PowerPoint presentation, museum exhibit, skit, website, essay, press release, etc.), and generally focuses student attention beyond the classroom to issues and problems found in the school, community or world. Problem based learning generally focuses on a prepared problem or simulation, and emphasizes the problem-solving process and the quality of the solution rather than the product that represents and communicates the solution.
- ***Does PBL require lots of changes in the school system to be effective?***
 - o PBL can be done in any classroom by a committed teacher. It is easier, however, and undoubtedly more effective, to do PBL in a school environment that supports it. Factors that support PBL implementation include longer periods or block schedules, opportunities for teachers to collaborate during the regular day, available laptops and other technology, a school culture and administrators committed to PBL, and a grading format that includes 21st century competencies as well as traditional academic content.
- ***Is PBL appropriate and effective for a wide variety of students?***
 - o The simple answer is yes -- although PBL done poorly will not be effective for any type of student. Teachers report that PBL engages students who are below grade level and find typical school tasks to be a challenge -- or students who may be highly skilled but bored by traditional types of assignments. It provides opportunities for oral language development by English Language Learners. Gifted students can go beyond the standard curriculum and delve more deeply into areas that interest or excite them.
- ***What does research show about PBL's effectiveness?***
 - o No two teachers do PBL just the same way. This makes it difficult to define exactly what is PBL and then study PBL's effectiveness. What we can do is infer from a great number of studies that have focused on one or another variety of PBL (see comments above about the "big tent" nature of PBL). Taking these as a

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whole, we can say (conservatively) that PBL is at least as effective as traditional instructional approaches, and there are many studies that show PBL to be superior. Specifically, PBL type instruction has been shown:

- to increase understanding of concepts and the ability to apply knowledge as measured by standardized tests of subject matter
- to enable students to remember what they have learned longer and use that knowledge in new situations
- to enable students to learn how to work in groups, solve problems and communicate what they have learned (e.g., 21st Century Skills)
- to improve attitudes, and motivation
- to be especially effective with lower-achieving students

Does PBL provide the skills and knowledge my child needs for college?

- o Students often have difficulty in college because they haven't learned to problem solve and take responsibility for their own learning. PBL provides students with opportunities to build these competencies where they have to make decisions, monitor their progress, work with other students, and communicate what they have learned. Nothing can guarantee college success, but PBL provides more opportunities than traditional instruction for students to develop the competencies they will need to succeed in college.
- ***Does PBL require more work for teachers?***
 - o PBL requires teachers to distribute the time they put into teaching in a different manner, but overall, it is not more demanding nor time consuming. Most of the work in PBL is done when planning a project and assembling resources before students begin working. In contrast, once students have begun the project, the load on the teacher is lighter. In traditional instruction, the preparation to dispense knowledge and keep students busy is continual. It is important to note however, that when teachers are new to PBL, the planning process may be more time consuming, as there are other considerations to make beyond what is happening in the day-to-day. Also, PBL is a continual learning process, so BIE encourages teachers to engage in protocols to support reflecting, critiquing and revising project design and implementation in working towards the Gold Standard.
- ***Do parents accept PBL as a worthwhile teaching method?***
 - o Although parents may be suspicious at first -- after all, most parents didn't learn using PBL -- they often become converts and vocal supporters once they see the quality of work students produce. The [videos](#) available at [bie.org](#) show the extraordinary projects students can complete. It is up to the teacher and principal to explain to parents how PBL differs from traditional instruction and highlight students' accomplishments. Many charter schools make a point of emphasizing PBL. The continued growth of these schools suggests this approach is working, at least for families who have chosen this approach to teaching and learning.

How do I use PBL in my classroom?

- ***Can PBL work in a standards- and test-focused educational system?***
 - PBL focuses on learning in depth, and requires teachers to focus projects on the facts, ideas and concepts that are most essential to learn. These are the same facts, ideas and concepts that will (or at least should) be on standardized tests and state assessments. As long as projects are aligned with the "power standards," PBL will be at least as effective as traditional instruction in preparing students for standardized tests and longer term learning. (Short-term cramming, on the other hand, is effective only for short-term learning. Even if it can superficially boost test scores in the short term, what is "learned" is not remembered and so is of little lasting value.)
- ***Is PBL appropriate for teaching basic skills and content knowledge?***
 - PBL is less effective than traditional instruction in areas where memorization of facts or algorithms is essential, such as math facts, verb conjugation or presidential lineage.
- ***Is PBL appropriate for all subjects?***
 - It is not the subject itself that defines the appropriateness of PBL, but rather the nature of the knowledge within that subject. As noted, multiplication facts are better taught with flashcards or arrays than PBL. On the other hand, a project could be designed to help students understand more about the concept of multiplication and apply what has been learned.
- ***Is PBL appropriate for all grade levels?***
 - Yes, kindergartners can do amazing projects, as can graduate students.
- ***Do I need to do PBL all the time, or can I mix it with other teaching methods?***
 - PBL generally incorporates a variety of teaching methods -- lectures, videos, library/Internet research, group investigation, etc. The project, designed to motivate students to answer a question and exhibit what has been learned, serves as an umbrella that can contain any number of different instructional approaches and activities.
 - Some teachers do a series of projects with their students; others use projects to divide traditional instructional units. Whichever way a teacher proceeds, it is important to assess whether students have the skills needed to successfully complete a project, and understand how this type of learning is different from what they usually do. The more projects students do, the better they generally get at doing them. These skills can be taught and assessed using a variety of methods, generally after students are motivated by the project.

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- ***Does PBL require more money, special facilities, or technology?***
 - PBL is done more easily in large classrooms where the furniture is movable, there is adequate storage space for keeping work, bells do not ring at 42 minute intervals, and Internet access is available. That said, projects can be done in less accommodating conditions with appropriate thought and planning and although technology can be a tremendous tool or resource, many great projects do not require high tech software or computers.

For more information, check out these articles from Edutopia:

- ❖ <http://www.edutopia.org/blog/pbl-pet-peeves-common-misconceptions-andrew-miller>
- ❖ <http://www.edutopia.org/blog/pbl-debunking-myths-fallacies-bob-lenz>
- ❖ <http://www.edutopia.org/blog/debunking-five-pbl-myths-john-larmer>