What is Project Based Learning?

Project Based Learning (PBL) is an evidence based strategy for actively engaging students in the learning process. It asks students to work in collaborative groups to respond to complex problems and challenges while simultaneously encouraging them to develop key skills that will help them succeed in school and as adults. It is inherently interdisciplinary.

As you can see from the graphic (left) PBL includes a driving question or challenge, a need to know, inquiry and innovation, 21st century skills, student voice and choice, feedback and revision, and a publicly presented product. Furthermore meaningful project based learning is intended to teach significant content, meaning that goals are derived from content standards and key concepts core to the discipline.

Let’s look at the concepts from the graphic more in-depth:

**Driving Question or Challenge** – Students are presented with a teacher derived driving question or challenge that focuses their inquiry and deepens their learning. Although the problem is defined in advance by the teacher, it tends to be complex and can be solved in a multitude of ways.

**Need to Know** - PBL can be extremely motivating and engaging for students because it places academic content in context, allowing students to work through problems that adults in that field often face. As a result students are inspired to obtain deeper knowledge of the subjects they are studying because the problem requires a need to do so.

**Inquiry and Innovation** – Students engage in inquiry by asking questions, searching for answers, and drawing conclusions. This process leads them to construct something new such as an idea, interpretation, or product.

**21st Century Skills** – Through PBL, students develop valuable skills such as collaboration, problem-solving, communication, critical thinking, and navigating and evaluating information through technology. These skills as well as others obtained through PBL are known as 21st century skills because they are necessary for success in the 21st century workplace.
**Student Voice and Choice** – By presenting students with an open ended question, students have multiple ways to engage in the content which in turn can tailor content to individual needs, interests, and strengths. Thus PBL offers a way for educators to personalize the learning experience.

**Feedback and Revision** – In order to solve complex problems, students must give and receive feedback and be given multiple chances for revision so that they can learn from their mistakes.

**Publicly Presented Product** – Requiring students to present their work to people beyond their teacher and classmates, either online or in person, adds authenticity to the project and drives students to produce higher quality work. Ideally projects are presented to adults working in the field of study.

PBL may sound like a rather new idea but it has been around for more than half a century and is based on the educational philosophies of famous scholars such as Aristotle, Socrates, John Dewey, and Maria Montessori. It was originally developed and introduced as a practical teaching strategy for medicine, engineering, and other disciplines but has long since found wider practice and application.

In K-12 education, project-based learning has evolved as a method of instruction that addresses core content through rigorous, relevant, hands-on learning. PBL emphasizes active student-centered learning, placing students in charge of asking questions and discovering answers.
Project-Based Learning is not the same as doing projects but many people have trouble grasping this distinction. With PBL, the project in itself is how students learn. It is not a culminating authentic assessment to see if your students have met your objectives, rather it is the vehicle through which students learn. You are teaching through the project, not teaching and then doing the project. This more traditional process of teaching and then assigning a project for students to do describes “doing projects” and should not be confused with PBL.

Furthermore teachers who engage in PBL will notice a role shift for both themselves and their students much different from their roles while “doing projects.” In classrooms using PBL, the teacher is the facilitator and the students take control of their own learning. As you can see from the graphic (right), teachers are no longer the sole questioners, planners, and researchers in the classroom. PBL allows students to take on and develop these skills. The teacher is no longer the only transmitter of knowledge. Instead students use each other, technology, and other resources to access the curriculum and teachers guide them through the learning process.

Teachers, in turn, act as facilitators by developing the problem/project, overseeing, guiding, and encouraging students during the process, and assessing the project’s success and student progress. Teachers teach students how to go about this process of questioning, analyzing, and so forth through direct instruction and modeling. Teachers often become co-learners in the process, working with student to solve complex issues and thus showing them that learning is a life-long pursuit.
Why Use PBL?

PBL encourages deep content understanding while motivating students to succeed through meaningful projects and increasing their confidence as learners. These projects also help students build valuable skills (see Skill-Building section, left) and learning habits. PBL projects are opportunities for students to change their communities, explore career options, use technology, and present their work to an outside audience. This strategy often engages those students who find school boring because it clearly connects academic work to real-world problems. Furthermore, the cooperation and collaboration promoted by PBL can help build a more inclusive classroom environment.

Compared to traditional teaching, PBL is more effective for:

- Increasing academic achievement on standardized tests
- Long-term retention, skill development and teacher/student satisfaction
- Preparing students to apply and explain concepts
Does PBL Work?

The effectiveness of PBL has been cataloged for over 40 years through countless studies and research projects. Some research articles that provide evidence for the effectiveness of PBL are:


So in short, yes it does work but like any teaching method it can be used both effectively and ineffectively. When done well, PBL can engage learners in a dynamic way by creating a context for learning and empowering students to be masters of their own learning. However when implemented incorrectly PBL can be disorganized and waste valuable time. This brochure will touch on a few ways you can have a successful PBL experience but you can learn even more by using the Resources section.
Who Benefits from PBL?

All students at all grade levels can benefit from PBL because it allows them to work together to reach a common goal. That being said, studies show that PBL may be particularly beneficial to students who are often labeled as low-achievers and those who are talented and gifted. Research has also shown the potential PBL has to engage mainstreamed groups because it encourages students with special needs to work in inclusive groups, increasing their social confidence. It should be noted that students who are struggling may need more teacher supports than those who are not but that is the beauty of PBL; it gives students flexibility and allows teachers to differentiate and scaffold so that all students can access the curriculum.

PBL can benefit so many students because it places students in mixed ability groups, which have long been show to increase student achievement, and allows each student to play a role that supports the group while showcasing his/her talents.

Expert Testimonials on PBL

"Students of today enter an increasingly globalized world in which technology plays a vital role. They must be good communicators as well as great collaborators. The new work environment requires responsibility and the ability to self-manage as well as the interpersonal and project-management skills needed for teamwork and leadership. Enter project-based learning, designed to put students into a students-as-workers setting in which they learn collaboration, critical-thinking, and written- and oral-communication skills along with the values of a strong work ethic, all while meeting state or national content standards. But don't confuse PBL with simply doing activities injected into traditional education to enliven things as a culminating event for a learning unit. Real PBL, in contrast, is deep, complex, rigorous, and integrated." – Bob Pearlman, Strategy Consultant for 21st-century school development

"PBL...offers students what they cannot find or arrange as readily elsewhere -- opportunities to collaborate with peers and subject-matter experts on interesting projects, on making a difference in one's community, on learning valuable and transferable skills. PBL starts from the standpoint that information technology cannot and should not be ignored and gives digital natives a compelling reason to keep coming to school: to discover new knowledge. New knowledge is created by applying known information to unsolved problems, and, eventually, through new knowledge may even come wisdom." – Eeva Reeder, Education Consultant

"Research has shown that students learn content as well or better using PBL than with traditional instruction. It also shows that students remember what they have learned longer and are better able to use what they have learned. PBL provides the opportunity to learn and practice skills that traditional instruction often ignores -- working in groups, making choices, monitoring progress, thinking deeply about a problem or challenge, and communicating what has been learned. In short, PBL helps students not only learn content but also the 21st-century skills they will need to thrive in a quickly changing, globally connected world." – John Mergendoller, Executive Director at the Buck Institute for Education
Using PBL in the Classroom

Some teachers use PBL as their primary method of instruction while others use it only occasionally during the school year. Projects can vary in length from several days to several weeks or even a semester. It’s entirely up to you how you choose to use PBL but there are a few key steps to keep in mind:

1. Choose a compelling topic that covers standards and has an authentic connection to the local community if possible. The topic should be something that requires deep inquiry and connects to core concepts in the discipline as well as be something students are interested in.
2. Design a comprehensive final product that all students can produce or work together to produce. It should be as close as possible to a real world example in the field.
3. Set the stage for students with real-life examples of the work they will be doing whether that means a newspaper or architectural plan. Students need to see similar products others have produced.
4. Make sure students have the tools to properly research and engage in the inquiry necessary to search for background information and meet the proposed challenge or goal.
5. Involve professionals in the field, either virtually or in person, whenever possible so that students can use them as resources and learn what it means to be a professional in that field.
6. Work with your students to determine the criteria for evaluating their projects.
7. Identify, organize, and obtain all necessary materials. Students can help you determine which materials they will need to succeed. Students should have access to the same or nearly the same kinds of tools and technology adults in the field would use in order to add authenticity to the experience.
8. Give students ample time to work on and revise their projects as needed. Students and teachers should share feedback often and understand what constitutes meaningful feedback.
9. Help students prepare to present their projects.
10. Plan a culminating event where students can showcase and be evaluated on their work.
11. Allow time for students to reflect on the process and self-evaluate using the established criteria.

Further information on how to implement PBL in your classroom can be found through the Resources presented at the end of this brochure.
Using PBL in Secondary English

There are a variety of ways teachers can use PBL to teach and support English standards. Below are just a few basic ideas of how to implement PBL in the classroom:

- **English Language Pamphlet**: Students develop a pamphlet or brochure of American idioms, slang, and important phrases for the English Language Learner (ELLs) population in their school.

- **Literary Blog**: Students can produce audio and written book reviews for a class blog and invite responses from readers across the world.

- **Literary Profiles and Resumes**: Students choose an author or literary character to research. They then produce social media profiles and a resume for that character or author as well as a list of potential jobs that person might apply for.

- **Modernizing a Classic Play or Piece of Literature**: Students choose a classic play or work of literature that they believe has a theme that is still relevant today. They then modernize the story and produce either a play or movie.

- **Newspaper**: Students choose a setting from a book they have read and create a faux newspaper based on events in the book and what they know about the setting.

- **Nonfiction Children’s Book**: Students can research nonfiction topics and create children’s books for students in their district’s elementary school.

- **Personal History Narratives**: Students publish a collection of narrative nonfiction writing in which they tell specific family stories of growing up and coming of age by using journalistic, creative writing, and publishing techniques.

- **Resilience and Slam Poetry Performance**: Students study the connection between art and resiliency by researching and reading stories of resilience and interviewing people with similar stories in their community. They then produce poems, either traditional or spoken word, that connect the history of this phenomenon with the courageous people in their community. The poems are performed at a poetry slam/reading where the community members written about are invited.

*With PBL the possibilities are limitless and can sometimes be overwhelming. Be sure to use the Using PBL in the Classroom section of this brochure as well as the Resources section to make sure that your students receive the best PBL experience possible.*
Buck Institute for Education (http://www.bie.org/) has lots of PBL resources from articles about the basics of PBL to how PBL works in inclusion classrooms. Check out their Project Essentials Checklist when planning your next PBL project.

Edutopia (http://www.edutopia.org/project-based-learning?gclid=CJXvhe6m3boCFW_NOgodPCcACg) has tons of videos and articles on PBL such as tips for getting started, why to use PBL, and a history of PBL.

*How to Use Problem-Based Learning in the Classroom* by Robert Delisle is a book that explains some of the key elements of PBL. Excerpts are available for free online here (http://www.ascd.org/publications/books/197166.aspx).

PBLU (http://www.pblu.org/) offers classes on PBL as well as project ideas for various subject areas and grade levels.

*Problem-Based Learning: A Promising Strategy for Gifted Students* by Barbara Swicord (http://www.nsigt.org/problem-based-learning/) is an article on the National Society for the Gifted and Talented website that discusses why PBL may benefit students who are gifted and talented.

Thoughtful Learning (http://www.thoughtfullearning.com/resources/what-project-based-learning) has additional information about PBL including places educators can go to see PBL in action.

*Teachers as Classroom Coaches* by Andi Stix and Frank Hrbek contains some examples of PBL as well as what they deem the nine basics components of PBL. Free excerpts are available here (http://www.ascd.org/publications/books/106031.aspx).