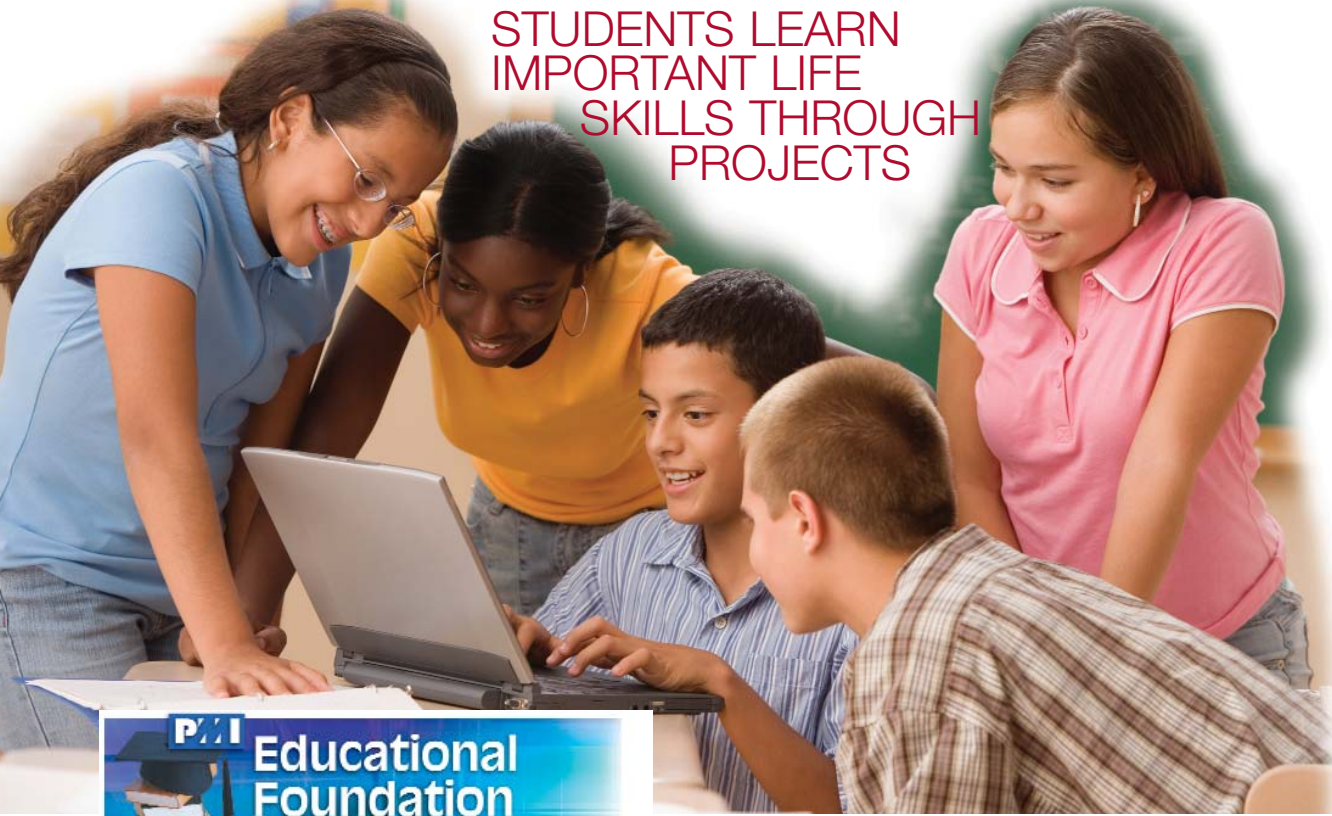


PROJECT-BASED LEARNING:

STUDENTS LEARN IMPORTANT LIFE SKILLS THROUGH PROJECTS



Editor's Note: The PMI Educational Foundation has launched a Project Learning Partnership with a number of organizations. This article is about the partnership and incorporating project principles into project learning for primary and secondary education.

Any successful business worker knows today's "anytime-anyplace" work environment demands sophisticated communication skills, a flair for teamwork, respect for diversity, a talent for ad hoc decision-making and good project management skills. Whether it is an entrepreneur launching a new product, an architect unveiling a new building, or a photo journalist introducing a new exhibit, people in business and industry around the globe are achieving remarkable accomplishments one project at a time.

But, according to the report, *Learning for the 21st Century*, "Today's education system faces irrelevance unless we bridge the gap between how students live and how they learn." To address this need, a growing number of innovative education systems around the United States and worldwide are engaging their students in project-based learning (PBL). Through PBL, students learn many skills that employers seek including working in teams, complex problem-solving and taking initiative.

PBL is an instructional methodology in which students learn important skills by doing actual projects. Students apply core academic skills and creativity to solve authentic problems in real-world situations.

Students use a wide range of tools, and the culminating projects are tangible and observable "artifacts" that serve as evidence of what the students have learned. Examples of PBL artifacts include videos, artwork, reports, photography, music, model construction, live performances, action plans, digital stories and websites.

PBL is based on the "constructivist" learning theory, which finds that learning is deeper and more meaningful when students are involved in constructing their own knowledge. Students are given the opportunity to select a topic that interests them within the required content framework, and then are responsible for creating their project plan. Rather than a lecturer, typically, the teacher's role is that of an academic adviser, mentor, facilitator, "task master" and evaluator.

Project Learning for Every Age and Subject Area

PBL opportunities are diverse, challenging and innovative—ranging from understanding terrorism, computing the mathematics of music and exploring innovative waste management solutions, to creative storytelling, disaster preparedness and studying global warming. There are learning projects for every age, and projects to support every subject area.

There are numerous implementation models for PBL. Students can work either offline or online. They

can work alone on individual projects, or they can work collaboratively as part of a project team. And, with the availability of the Internet and technology tools, their project partners can be across the table or around the globe.

Students can interact with one another in meaningful educational, cultural and scientific projects that provide deep learning experiences. Compared with learning solely from textbooks, this approach has many benefits for students because it involves critical thinking, knowledge application, time management, organizational skills and increased student responsibility for their own learning.

According to a study conducted by the Center for Research in Educational Policy in 1999, PBL students improved test scores in all subject areas over a two-year period, out-performing control schools by 26 percent. In the March 2006 report, *Results That Matter*, the Partnership for 21st Century Learning Skills emphasizes the importance of critical-thinking and problem-solving skills, communication skills, creativity and innovation skills, collaboration skills, contextual learning skills, and information and media literacy skills.

Project learning opportunities abound. For example:

California teacher Jennifer Wagner describes herself as a "cheerleader for teachers to use online projects to expand their curriculum." Ms. Wagner is probably most famous for helping her primary students improve their math and science skills by using cookies as manipulatives. They count, stack, graph and share their cookie results with other children around the world via the Web.

Marsha Goren teaches sixth grade at Ein Ganim School in Petach Tikva, Israel. Ms. Goren launched the Global Dreamers project to "inspire children to take a deeper look at the world and to help children to be more tolerant individuals in a multicultural society. Seeking to motivate students has brought me into the world of online projects and I

have become a global educator," said Ms. Goren. "It is a great feeling knowing that thousands of children and hundreds of educators are implementing our projects, and our classroom has no borders."

Rene de Vries teaches in Haarlam, Netherlands, and engages his primary students in future-thinking authentic research about wildlife preservation, historical communities and service-learning. His unique projects include Animal Diaries and CityQuest. A year ago he launched the Ukunda schools project to raise awareness about life in the small Kenyan village of Ukunda, and to provide help for Ukunda schools.

Global SchoolNet's International Schools CyberFair annual competition and exhibition challenges students to produce projects that showcase special aspects of their local community. One recent project told about the unique history of Bucharest, Romania through its monasteries, gardens and traditional restaurants, while New Jersey students explored their history through the traditions of the U.S. flag. San Diego youth collaborated with their global partners in Ghana, as they addressed local environmental concerns by creating organic gardens and monitoring water quality. Taiwanese projects ranged from the amazing accomplishments of indigenous mountain dwellers, to the building of the colossal Taipei 101 skyscraper, to the endearing story of the sweet potato.

The U. S. Department of State sponsors an annual Doors to Diplomacy project challenge to encourage middle school and high school students around the world to produce online projects that teach others about the importance of international affairs and diplomacy. Students work in small teams with teacher-coaches, and compete for scholarships and cash awards.

ThinkQuest, sponsored by the Oracle Foundation, is an international competition in which students practice their skills in research, writing, technology and teamwork, and create web-based projects that can be used as educational resources by students worldwide.

The Challenge of PBL

Despite considerable potential, project-based learning is not without its challenges. Project management, whether it is on the job or in the classroom, requires structure, skills and process. Lacking adequate support, this innovative educational approach will not be widely adopted by students or teachers.

Educators who are new to project-based learning need assistance in choosing appropriate project-based learning content, and in introducing, managing and assessing educational projects that support their required curriculum standards. Students need help in planning and organizing their projects.

If you are interested in assisting the Project Learning Partnership in reaching out to schools, please let us know. We are working on a number of initiatives that require project management volunteers.

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A number of organizations believe project-learning and project management should be a key part of the educational process. Under the leadership of the Project Management Institute Educational Foundation (PMIEF), these organizations have recently joined together to form the Project Learning Partnership (PLP) in an effort to promote project management as a life skill.

- Buck Institute for Education
- Delaware Technical and Community College
- Denver Metro Project Management Education Foundation
- FIRST IMAGE® Corporation
- Foothill College Krause Center for Innovation
- George Lucas Educational Foundation
- Global SchoolNet
- iEARN (International Education and Resource Network)
- Make It Happen!
- Media Options Inc.
- New Technology Foundation
- Oracle Education Foundation
- PMI Educational Foundation
- Project Lead The Way®
- Project 21st Century
- Stone Tablet Education
- Technology Information Center for Administrative Leadership
- WestED