

Jefferson's Gardens: A Landscape of Opportunities
Introduction to Project-Based Learning for the Unit



Photo: Darla Gerlach, EdD



Introduction to the teaching strategy for this unit:
project-based learning

It is important for students to become aware of their potential and capabilities in completing tasks. Project-based learning offers one teaching strategy which not only allows students to independently set and accomplish goals, but also provides them with an avenue in which to explore their choices when completing both personal and academic goals. An essential element for project-based learning is a student's ability to set goals for him/herself and to become self-motivated to complete these goals. Middle school students in particular are metacognitively ready to set goals for themselves by independently monitoring and assessing their own learning by using a variety of study tools to prepare themselves for tests (Rafoth, 1999, p. 22). A project-based learning experience creates a classroom environment that supports the development of students' self-regulatory behavior.

My experience in implementing project-based learning in my classroom over the past twenty years has led me to recognize the importance of students' developing metacognitive skills that enable them to understand how they perceive their learning skills in a social context. This teaching strategy has also provided students the opportunity to further examine the processes in

which they engage to develop self-regulatory and self-motivational behaviors that facilitate their educational achievement.

It is imperative for a teacher to create a strong concept of community within the classroom, to be aware of students' maturity levels, and to develop an environment of mutual respect (Caine, Caine, and McClintic, 2002). In order for students to feel that they are a part of a community in a classroom, it is also essential for the teacher to encourage self-reflection, have the students participate in group work, and allow students to make decisions in the classroom (Caine, Caine, and McClintic, 2002).

Teaching strategies today must reflect society's demand for flexible, competent, and resourceful individuals. Educators should reflect on classrooms as communities of practice (Lave and Wenger, 1991) in which students have the opportunities to practice their decision-making skills, express their thoughts, and share their experiences about the curriculum in an open-minded forum with their peers and teachers. Students need to develop tolerance and create a repertoire of resources that they can utilize in problem-solving situations not only in the classroom but also in their own personal lives. These resources include guidance and mentoring by, or apprenticeships with, more experienced individuals such as teachers and members of the community. Resources such as guest speakers are invaluable as they cannot be found in a classroom textbook.

Within the context of a social studies class, students investigate ideas important to them in their lives, and anticipate what they would be motivated to engage in the process of learning. The success of project-based learning requires involvement that includes cognitive, metacognitive, and collaborative factors. These factors define self-regulated learning. It has been demonstrated (Zimmerman, Bandura, and Martinez-Pons, 1992) that a "significant causal path exists between self-efficacy for self-regulated learning, efficacy for academic achievement, and academic attainment" (p. 674). As a result, students develop and utilize self-regulatory skills and become autonomous managers of their own learning as they accomplish their project goals.

Project-based learning has proven to increase student's motivation by allowing them to do the following: "own the questions" and explore their individual/unique talents or interests; have a choice in their learning process; increase their ability to become self-directed learners; increase achievement by giving them the opportunity to practice higher levels of thinking; and accommodate different intelligences, learning preferences, and learning styles (Fleming, 2000, pp. 1-6). Many researchers have been interested in why students disengage themselves from the classroom. In my teaching experience, I have found that this can be attributed to students feeling a lack of voice in their education—namely, the inability to make choices in their curriculum which contributes to their perception that the curriculum is irrelevant in their lives. Students express this dissatisfaction with questions such as "Why is this important?" or "Why will I ever need to know this again?" Project-based learning is a teaching/learning model that allows students to create a connection between what occurs in their classroom to real life opportunities in the outside world. Csikszentmihalyi (2002) notes the relevancy of constructing effective

learning strategies for students so that they can create this connection, especially with today's standards-based, traditional teaching strategies:

To educate means to lead out. And we don't lead kids out. We kind of stop them. To educate is to expose kids to many possibilities until they find a connection between what's really important to them and the world out there. And then we must nurture and cultivate that connection. (p. 17)

In my work with students, I have found that this method of learning has afforded my students a unique opportunity to share their accumulated knowledge and personal educational experiences with their peers and other individuals. This teaching and learning strategy is conducive to an open, comfortable learning environment in which students can communicate individual perspectives, develop a voice in their curriculum, and empower themselves to become self-motivated, goal-directed, and independent learners. When students engage in this type of learning, they potentially gain a sense of self-efficacy. They also become "resourceful" learners in that they acquire skills to tap into various types of resources that provide valuable information to help them in the process of completing their projects.

Defining Project-Based Learning

Project-based learning is derived from a teaching/learning model that empowers students to be more creative and more receptive to becoming independent thinkers and problem solvers. This approach to teaching is a change from traditional teaching practices as it provides students with the opportunity to establish self-motivational capabilities, maintain their own learning process, and set goals for their performance or task/activity completion which eventually leads to a strong sense of self-efficacy. In comparison to learning basic skills by memorization and recitation in a traditional curriculum, project work depends on intrinsic motivation (Katz and Chard, 1989, p. 11). Katz and Chard (1989) further support this principle:

When children are intrinsically motivated, they respond in ways that encourage their disposition to work independently of the teacher, for example by helping one another. They can determine for themselves what they want to find out from books, reference materials, adults at home, and other children. By experimenting, children can determine the most appropriate methods of inquiry and sources of information. (p. 12)

Problem-based learning is a method which enhances traditional teaching practices. Students use their prior knowledge, investigate resources that unfold new knowledge, and synthesize both forms of data in the context of the problem. Both project-based and problem-based learning involve a driving question that requires reaching a conclusion or creating a solution through an educational journey or inquiry process. The philosophy embedded in both project and problem-based learning is that students learn more by applying knowledge that is familiar to them as well as new information toward resolving a problem.

A Framework for Project-Based Learning

Teaching young children to become engaged in learning strategies that are both challenging and motivating is one of the positive outcomes of project-based learning. To keep children's minds engaged in an in-depth project, which can last for several days, requires planned activities and sustained effort rather than "spontaneous play" (Katz and Chard, 1989, p. 2).

Two central elements of project-based learning are a student's ability to 1) set goals for him/herself and 2) become self-motivated to complete these goals. In order to foster students' independent learning skills, it is critical for the middle school classroom teacher to be cognizant of a child's potential metacognitive skill capacity and to implement effective teaching strategies that enable a student to succeed academically and socially. These teaching strategies include the teacher's responsiveness to students' questions and activities and reinforcement of study skills throughout the curriculum (Rafoth, 1999, p. 21). With the implementation of effective instructional strategies and with the support of a teacher, students can become more motivated and confident to independently achieve academic success (Rafoth, 1999; Katz and Chard, 1989; Kessler, 2000; Dewey, 1938).

One important aspect of project-based learning, which is also a component in problem-based learning, involves the approach students utilize in their endeavors to identify a solution to a problem or to complete the goals of a project. Lambros (2002) believes the aim of utilizing a project-based learning method in the classroom is to focus on "multiple solutions rather than on correct answers;" project-based learning affords students the opportunity and freedom to become creatively successful in a way that traditional teaching methods do not give them (p. 6).



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