Project-Based Learning That Makes a Difference

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Individual passion projects are just one type of PBL. Projects students do collaboratively to make a difference in the community also build agency.

Project-based learning is widely seen as a teaching method that promotes student agency—and student agency is associated with words like *choice, ownership*, and *autonomy*. While choice and autonomy *are* part of project-based learning, this approach also often involves students working together, collaborating to solve a problem or create positive change. And student groups don't do it alone: Teacher guidance is needed to instill in students the skills and confidence to undertake significant projects.

Not Just Following a Passion, But Making a Difference

PBLWorks/Buck Institute for Education, the organization we work with, has long championed project-based learning (PBL), which we define as a teaching method in which students gain knowledge and skills by working for an extended period of time to investigate and respond to an authentic, engaging, and complex question, problem, or challenge. There's a stereotype that project-based learning (PBL) always means students are each investigating a topic or creating something purely of their own choice, working on a "passion project," either during classroom time or during some kind of "genius hour." Projects carried out by individual students can have a valuable place in a school's program. But individualized passion projects are only one type of PBL. They often reflect a limited view of what student agency means. Agency is not just about making a choice, it's about making a difference. And it's often about working with others to make positive change in the broader community. A definition of student agency put forth by thought leader Tom Vander Ark in a blog post (2015) better captures the kind of agency we at PBLWorks promote when we work with teachers to design and implement high-quality projects:

> Agency is the capacity and propensity to take purposeful initiative—the opposite of helplessness. Young people with high levels of agency do not respond passively to their circumstances; they tend to seek meaning and act with purpose to achieve the conditions they desire in their own and others' lives.

We see such agency take root in students at all grade levels as we help schools implement PBL. Three recent projects we've been involved with reflect what's possible in terms of empowering students.

Three Empowering Projects

The "Taking Care of Our Environment" Project

Sara Lev's kindergarten students at Citizens of the World Charter School in Los Angeles launched a project to improve their school campus. Their teacher led them to identify places on campus where students were littering or not taking care of playground equipment or their belongings. The four- and five-year-olds invented or arranged for tools to fix the problems, such as brooms, trash picker-uppers, and storage spaces. They made a how-to picture book about taking care of the campus to share with 1st graders and created videos to teach future kindergarten students how to continue their effort.

Kindergartners at Citizens of the World Charter School in Los Angeles work on a campus environment project. Photo by Sara Lev.

Reducing Car Pollution After School

In a 6th grade science project at John C. Dempsey Middle School in Delaware, Ohio, teacher Jonathan Kelley's students studied the problem of tailpipe emissions from cars idling at their after-school pick-up area. Working with two local experts, the students made observations and collected data, and learned about negative health effects caused by car emissions. Fired up about the problem, these students planned and carried out a campaign to raise awareness of emissions from cars at school dismissal. This included creating a Facebook group to gather hundreds of pledges of support from parents and others, and convincing the school district to put up signs at every school asking drivers to turn their vehicle off while waiting.

The "Border-lands" Project: Learning About Immigration

In San Antonio, Texas, high school teacher Ryan Sprott and his students collaborated with academics and artists to explore the issue of immigration. Students heard from U.S. Border Patrol agents, politicians, immigrants, and many others about their unique viewpoints on the situation at the time with immigration in southwest Texas—which helped the students understand the complexity of the issue and see the importance of dialogue over debate. Students shared their learning with the broader community by creating artwork related to immigration that they exhibited and producing 2,000 copies of a newsprint publication compiling their artwork, which they disseminated locally and sent to national policy and education leaders. (For more information on this project, visit borderlandcollective.org.)

Students listen to a border patrol officer explain the agency's methods. Photo courtesy of Jason Reed.

After the project, Sprott noted, "many students took additional action, volunteering with organizations that offer aid to asylum seekers. Some students even pursued internships and college programs focused on immigration."

As part of the border-lands project, students and teachers dialogue in the Santa Ana Wildlife Refuge, along the banks of the Rio Grande. Photo by Jason Reed.

A Crucial Element to Agency: Teachers

Note that as students took on these innovative projects, teachers taught the necessary skills, built knowledge of content, and arranged many of the learning experiences involved. This refutes another stereotype about project-based learning—that it must be completely student-directed once the teacher sets a project in motion. When imagining project-based learning, people picture teams of students working smoothly and productively, with a high degree of autonomy, as people do in a high-functioning workplace. This is a worthy goal, and it's possible to achieve with older students, given enough time to build their skills in a culture that emphasizes collaboration and high-quality PBL. But it sets a very high standard for student agency. Most projects cannot be expected to match this ideal.

Both stereotypes we've described reflect a misunderstanding about the role the teacher plays in developing agency in project-based learning. In our work with teachers and schools, we've seen that agency is built over time, with teachers taking an active role. Rather than throwing students into the deep end of the pool, we recommend teachers start them in the shallow end, designing appropriate challenges and providing scaffolding that prepares students to swim on their own.

Key ways teachers can build agency and support students as they take on collaborative, creative projects include:

1. Design projects that make an impact on the school, community, or wider world. One of the six criteria that the Framework for High-Quality PBL lists as characteristic of students' experiences in a good project is *authenticity* (this framework was developed by a group of educators facilitated by PBLWorks/Buck Institute for Education; HQPBL, 2016). Projects can be authentic in several ways (Larmer, Mergendoller, & Boss, 2015) and are especially powerful when students see real-world results of their work. These results could be seen on the school campus—as in the project by the Los Angeles kindergarten class—or on fellow students struggling with some challenge, such as when 5th graders at Eliza B. Kirkbride School in South Philadelphia wrote and published a book of poetry to help peers coping with

depression. The high school students in the Border-lands project saw that they could take action locally on a significant national issue.

Students do an activity reflecting on questions about borders while on a field trip to the U.S.-Mexico border in McAllen, Texas. Photo courtesy of Jason Reed.

For even greater student agency and meaningfulness, teachers can guide students to identify the real-world problems that *students* most want to tackle, then co-design a project with them that addresses those problems.

2. Use student questions to guide inquiry. A key practice in project-based learning is generating student questions about the topic at hand, which guide the inquiry process. Generating questions about the project topic starts right from the beginning, after a "project launch" activity that engages students and provokes their curiosity or concern, and students add new questions to their list as they delve deeper into the project.

In our PBL workshops, we call students' questions a "need to know list." We make sure teachers understand that the questions should not reflect what *they* think students need to know. The questions have to come from students and be written in their voice. Again, however, the teacher plays an active role, facilitating a question-generation process and coaching students to ask questions about aspects of the project they might be missing.

3. Provide students with choices. Student agency can start small, with small choices. In the "Taking Care of Our Environment" project, for instance, the kindergartners had a role in choosing which problems they wanted to solve, what tools they invented, and what they said in their videos.

For younger students, provide a menu of choices for the kind of products students can create. For older students, teachers can build agency by working with students to establish criteria for making choices about how they'll establish their answer to the project's driving question, what products to create, what resources to use, and how they will share their work with a public audience.

4. Teach project management skills. Another criterion in the Framework for High-Quality PBL is project management, which means students take an active role in thinking about, planning, and carrying out activities to complete the project. As a research brief accompanying the Framework explains, "This intentional, decision-making role distinguishes HQPBL

from more typical learning activities where teachers pre-specify what is to be done, by whom, in what manner, and in what order."

For young students, PBL teachers typically scaffold project management by having them take small steps. Primary students might decide, for example, what three things they will do today to work on creating their product. Older elementary students can be taught how to play roles on their team and set goals for when they will accomplish specified tasks. Secondary students can, with teacher support (or even on their own), learn to use online project management tools to collaborate in planning and self-monitoring the progress of their project work.

Agency for *All*

Developing a sense of agency should be one of our top goals for all students as they move through public education. We're seeing agency listed more and more often in "graduate profiles" created by school districts. There's no better way to accomplish this goal than through project-based learning.

For students who are furthest from educational opportunity, a project (or many throughout their K–12 career) can be transformational. Many low-income and minority students don't see themselves as having much power over their lives. These students often experience systemic oppression, and education can feel like something being imposed on them. In schools that partner with PBLWorks, we observe low-income students feeling more positively about school. As they engage in projects like the ones described here, students take charge of their learning. They gain 21st century success skills that will help them navigate college and prepare for careers, and they build confidence in themselves.[1] They become empowered: ready, willing, and able to meet the challenges of their lives.

References

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Endnote

[1] Researchers and educators affiliated with the Deeper Learning Network report similar observations about how low-income and minority youth respond to learning through meaningful projects (American Institutes for Research, 2014).

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