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Project-Based Learning in Michigan

by Nell K. Duke, University of Michigan

Project-based approaches to learning have been around since at least the early 1900s (Dewey, 1902; Kilpatrick, 1918), but they seem to be enjoying increased attention in recent years (e.g., Ellison & Freedberg, 2015). This may be due in part to their perceived potential for developing 21st century skills (e.g., Boss, 2012) or addressing the Common Core State Standards (e.g., Markham, 2012). Michigan has also experienced increased attention to project-based approaches. In this article, I address five questions about project-based learning (PBL), with particular attention to the Michigan context:

> **What** is PBL?
> **Why** PBL?
> **When** is PBL used?
> **Where** is PBL used?
> **How** is PBL done?

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has promoted and supported implementation of project-based learning for 25 years, identifies eight elements of what they call "gold standard" PBL (2015):

1. **"Key Knowledge, Understanding, and Success Skills"**- This means that the project isn't addressing content that is tangential or marginal to the core curriculum, but rather is part of the core curriculum, aligning to standards, to 21st century skills, and to students' personal learning goals.
2. **"Challenging Problem or Question"**- The purpose of the project is to address a problem or question (or, I would add, opportunity) that is meaningful and appropriately challenging.
3. **"Sustained Inquiry"**- A project doesn't

What is PBL?

Project-based learning is a broad term that refers to educational practice in which students are engaged, over an extended period of time, in building or creating something and/or addressing a question, problem, or need. Within the project, the teacher is addressing standards and other educational goals, but in the students' minds, the project's goals are paramount.

The Buck Institute for Education (BIE), a non-profit organization that

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take place in a day, but over an extended period of time. According to BIE, students are posing questions and then addressing them through research; in my vision of PBL, students can also be posing a purpose (e.g., providing information books to homeless children in the community) and conducting research to meet that purpose.

4. **"Authenticity"-** Projects intentionally center on things that students are doing and the tools they are using in the world outside of schools; their purpose goes beyond simply 'doing school'.

5. **"Student Voice & Choice"-** In motivation research this would be referred to in part as "autonomy." The student has some control over the project. For example, students might decide what strategies they will use to try to persuade others to donate to a local community organization and which organization they would donate to.

6. **"Reflection"-** As it sounds, this involves students and the teacher(s) reflecting on the project both during and after project completion.

7. **"Critique & Revision"-** This will sound very familiar to Michigan Reading Journal readers: it is the time when students give one another feedback and address the feedback they receive through revisions to their project, much as we hope to see in a writers' workshop.

8. **"Public Product"-** This involves sharing the work with an audience beyond the classroom. In my view, the audience should be particularly appropriate to the project's purpose. For example, if students are doing a project on improving water quality in their community, it would make more sense to present the project to local businesses that consume a lot of water than to their grandmothers and other family members.

Why PBL?

You've already read that some argue PBL is particularly well-suited to addressing the CCSS and for developing 21st Century Skills. The motivational aspects of PBL are also often touted. Concept-Oriented Reading Instruction (CORI), developed by John Guthrie and colleagues, can be seen as a project-based approach; it is highly effective at fostering not only achievement, but also learning and literacy engagement as well as motivation (e.g., Guthrie, McRae, & Klauda, 2007). Indeed, PBL has considerable relevance to literacy education. Most notably, in the terms employed in the previous section, *inquiry* often involves reading in the form of inquiring of texts—books, magazine articles, websites, videos, experts who are interviewed, and so on. And sharing a *public product* often involves oral presentation or writing, or both. Studies conducted right here in Michigan suggest that reading and writing real-world texts for an *authentic* purpose and audience is associated with greater growth and performance in literacy (Block, 2013; Purcell-Gates, Duke, & Martineau, 2007). A study of project-based units that integrate social studies and content literacy skills, also conducted right here in Michigan, found that second graders in high-poverty school districts made statistically significant growth after participating in two such units. In the end, these students were statistically on par with students in two affluent school districts on standards-aligned content literacy and social studies measures (Halvorsen, et al., 2012).

Another set of reasons to use PBL has to do with teachers, rather than students. Many teachers I have talked with who use PBL report feeling reinvigorated about teaching, being energized by students' enthusiasm and engagement, and feeling more agency as educators. At a time when morale in the teaching profession seems, understandably, quite low, I am really drawn to approaches that can lift our spirits as educators while fostering student growth in important areas.
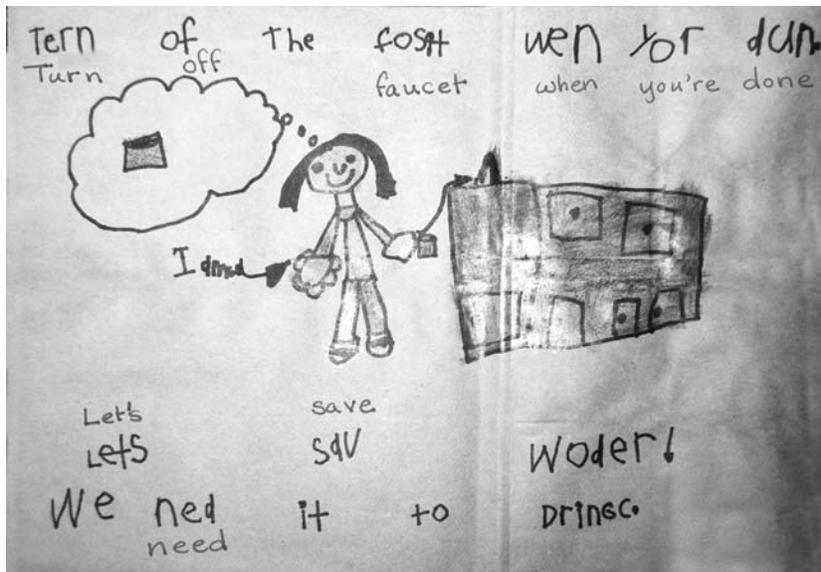
to make a goal this year of trying just one project. Once you try one project, I think you will see lots of reasons to try another!

Where is PBL used?

You might be interested to know about places in Michigan where PBL is being carried out. Myla Lee, an educator based in Michigan and on the National Faculty for the Buck Institute for Education, suggests these places to check out:

"-Novi Community Schools. There is a growing number of elementary teachers who have been designing and implementing project-based learning units for the past three years. First- and second-grade teachers in this district seek to integrate reading and writing workshop experiences into social studies and science content areas. Fourth-grade teachers recently designed a powerful "Shark Tank" PBL experience in which students wrote to local entrepreneurs and tried to persuade others to invest in their team prototypes.

-Northside Elementary in Ann Arbor: This Science Technology Engineering Arts and Mathematics (STEAM) school designs and implements PBL units integrating literacy consistently. In its second year, its staff has reflected and revised to help develop more authentic and rigorous PBL experiences.

-ZQuest in Zeeland: This school intentionally focuses on project-based learning. In its 4th year, this school continually strives to integrate their literacy lessons focusing on the authentic audience of their PBL units. As one teacher said, 'Authenticity is important to our students and to us. We want our students to see the connection between their work and the real world.'"

When is PBL used?

One of the myths about PBL is that in order to do it, you need to do it all day and all year. If you reread the eight "gold standard" elements of PBL proposed by the Buck Institute that were listed earlier, you will see that none require full-day or full-year implementation. Rather, here are some examples of how you could fit PBL into your day or year:

- PBL can occur only during your science and/or social studies block.
- PBL can be one part of your literacy block.
- PBL can rotate through science, social studies, reading, and writing blocks depending on the focus of the project at a given point in time.
- PBL can occur during a "project-hour" on Tuesdays and Thursdays or Mondays, Wednesdays, and Fridays, or the like.
- PBL can occur intensively for one or two months of the year, for example November and March.

Given its benefits for learning and motivation, I would eventually like to see PBL occur daily, but I often encourage educators who are new to PBL

How is PBL done?

Some people believe that in PBL, each project has to 'come from' the students, arising naturally from that year's class and context, but notice that that is not required even in the "gold standard" elements of PBL identified by the Buck Institute. I believe that it is possible to reuse projects from year to year or to share projects from teacher to teacher and still include the elements listed earlier. For example, colleagues and I have written a project for kindergarteners in which they learn about reducing, reusing, and recycling. Students then decorate grocery bags with messages and drawings designed to persuade grocery store customers to reduce and reuse (Duke, 2014b). Bags are borrowed from the store, imbued with the persuasive messages and drawings, and then returned to the grocery store for use. Although the main project stays the same, kindergartners have choice and autonomy to determine what message they send to customers (e.g., stop the drippy faucet; use the other side of your paper) and how they send it. They can even vote on the grocery store or market with whom to work (with hopes that the first-choice venue agrees). But there is no reason that the central elements of the project cannot be repeated year after year—in fact the reduce/reuse message reaches more people that way. And notice that the project was written by me to be shared with teachers who want to use it rather than 'coming from' the students. In my observations, students are nonetheless considerably motivated to engage in the project.

One reason I advocate sharing and reusing projects is that I do not think it is practical, the way most U.S. schools are currently set up, for teachers to develop all brand-new projects every year, especially if we want projects to be carefully aligned to specific standards and thoughtfully aligned with findings from research. I am not sure it is even advisable. We often teach something better the second time around (or even the third or fourth time . . .). If we develop all brand-new projects every year, we are less likely to be able to take advantage of that learning curve effect. This is not to say that we should never develop new projects based on the particulars of a given year's class or context. For example, if you have a class that has become extremely interested in the birds they see from the classroom window, I suggest seriously considering developing a project on that topic with that year's class. Similarly, I have written about a beautiful project that occurred after Hurricane Katrina (Duke, 2014c). That project cannot be repeated, at least not in its particulars, and yet it was so powerful, I think it was well worth developing even for one-time use.

One move that I believe will make it easier to reuse and share projects—as well as address other pitfalls of PBL (Duke, 2014a)—is using a consistent structure for projects, for each session within projects, and for the texts used within projects. That way, colleagues will know what to expect and how to 'read' documents about a project. I recommend these five phases for a project involving informational text, described in much greater detail in a recent book (Duke, 2014c):

Project Launch: Teacher and students establish the purpose, text type, and audience for the project

Reading and Research: Students gather information and build necessary background knowledge for the project while developing their informational reading skills

Writing and Research: Students plan and draft their projects, conducting additional research as needed.

Revision and Editing: Students receive feedback from the teacher, peers, and, in some cases, representatives of the target audience, and then refine projects using revision and editing strategies.

Presentation and Celebration: Students deliver the final product to the intended audience and celebrate their accomplishment

Similarly, I suggest a consistent structure for each project session—one that may look familiar to you because it is similar to how many teachers structure writers' workshop sessions.

"Whole-class lessons (10–15 minutes): The teacher provides explicit instruction about one or more teaching points aligned with the standards and related to the unit project, often reading aloud a text or text excerpt as part of this teaching.

Small-group, partner, and/or individual work (25–30 minutes): The teacher provides instruction and support for needs-based small groups and/or circulates throughout the classroom coaching students as they engage in work related to the unit project.

Whole-class wrap-up (about 5 minutes): The teacher pulls the class back together as a whole, reviews key instructional points from the whole-class lesson, and leads the sharing of student work as it reflects those key points"

(Duke, 2014c, p. 23).

The language I recommend for texts used within projects (Duke, 2014c), with "texts" broadly defined to include not only written texts but videos, photographs, interviews, and so on, is:

Launch text: text—often just one per project/unit—that is used to help inspire the project

Source texts: texts with which students gather information for their project

Mentor text: text that can serve as a model or mentor for students' writing (or video or other text)

I believe having this common language can help teachers support one another in projects. For example, one teacher might say to another: "I'm struggling to find source texts at an early second-grade reading level," or, "Do you have any ideas for a mentor text for informative/explanatory brochures?" and so on.

Of course, carrying out project-based units involving informational text is more complicated than putting consistent language and structures in place. There is much to learn about specific informational reading and writing knowledge and strategies that should be targets of instruction, how to support students in productive peer feedback, and so on. In fact, I recommend at least a year of intense professional learning community (PLC) meetings focused on learning to teach project-based units to develop informational reading and writing. But certainly these structures are a start to help all of us do AOK PBL in MI!

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