"Research & Practice," established early in 2001, features educational research that is directly relevant to the work of classroom teachers. In this article, Walter Parker describes his work with University of Washington colleagues and teacher collaborators in transforming a traditional AP U.S. Government and Politics course with an emphasis on test preparation into a dynamic project-based course that focuses on student engagement with selected concepts and skills through simulations. The process Parker describes is applicable to other courses and subject areas.

-Patricia G. Avery, "Research and Practice" Editor, University of Minnesota

# **Projects as the Spine of the Course:**Design for Deeper Learning

Walter C. Parker

When projects are the spine of a course, they are systematically sequenced one after the other, and they do the heavy lifting of the course. They teach its core content and skills.

My colleagues and I have been testing this model of course design for several years, aiming for experiential learning that is tied to deep rather than superficial learning of core subject matter. We call the combination "Knowledge in Action." It encourages whole-course planning rather than stopping at lesson and unit planning. The course is centered on a series of projects; the projects accomplish the main intellectual work of the course; and, student learning is deep and complex rather than thin and cursory.

We tested the model on the most challenging platform we could find: Advanced Placement. AP courses are known for breadth at a fast pace, not deep experiential learning. The allimportant AP test often leads to testprep teaching and learning rather than sustained engagement with key ideas. We figured that if the knowledge-in-action model could succeed in AP where a breadth-speed-test model is the norm, then it could succeed elsewhere, too. Accordingly, we began developing a course with AP teachers in 2007 and have been implementing and revising it each year since then, in both suburban and urban high schools. Elsewhere in this issue, two teachers from this project

provide some tips for doing this work.

I present in this article the five main design elements of the model. They can be helpful starting points for teachers wanting to design their own deeper learning courses.

- Projects are the spine of the course
- Concepts are the curricular emphasis
- Depth occurs through looping
- Learning from texts is mandatory
- Engagement comes first

## 1. Projects are the spine

Students are immersed in projects sooner rather than later, and these projects drive the core learning of the course. In our work in the AP U.S. Government and Politics course (APGoPo), the projects are all simulations:

Founders' Intent (3 weeks). Students are delegates to the Constitutional Convention, deciding whether to recommend ratification to their constituents.

**Elections** (6 weeks). Students are candidates, voters, journalists, and leaders of interest groups and political parties.

Supreme Court of the United States (4 weeks). Once the president is sworn in, students become attorneys and judges in appellate courts, first circuits and then SCOTUS:

Congress (4 weeks). Students are legislators, drafting bills and seeing how politics influence public policy. In committees and floor debates, students navigate political pressures for and against legislation.

Government in Action (5 weeks). Students are consultants to interest groups with strong positions on a current policy controversy (e.g., immigration, health care, gun violence).

As John Larmer explains elsewhere in this issue, projects do not need to be simulations (and probably most are not). Still, simulations—from mock trials to moot courts, and from Model UN to MicroSociety-hold a venerable place in social studies classrooms, and for good reason. Simulations afford curriculum-focused experiential learning: Students step into the shoes of delegates, candidates, judges, legislators, agency heads, interest group members, and so on-political agents making history. "It's like jobshadowing," one student said. "You get to experience what it's actually like."

The public products that are necessary in PBL are present, too, and here they depend on the roles. As legislators, students produce laws and arguments delivered in congressional floor debates. They take questions and complaints at town halls when returning to their home districts. As attorneys and judges, they

produce arguments and decisions. As consultants to interest groups, they give political advice. As agency heads, they produce government services—disease prevention and control, space travel, and disaster relief.

## 2. Concepts are emphasized

Deeper conceptual learning is the goal. Concepts are the ideas we think with when we think about problems. There are two kinds of concepts. Each of us has a mind stocked with the ideas that filled our homes and everyday life when growing up—this is culture. But we go to school to learn ideas of a different sort. These are the ideas of the natural sciences, social sciences, arts, and humanities. This is disciplinary knowledge. These ideas transcend the limits of personal experience; they help us think outside the box of our upbringing. Disciplinary concepts are powerful because they are

dynamic and generative; "they lead on and out." They open windows on the world. Concepts are at the heart of any course of study, and they need to be the focus of PBL, too.

Identifying core concepts is challenging. Most courses are crammed with too many concepts for a mortal to keep track of, and this is doubly the case in an AP course, where the box of flash cards can number in the hundreds. Consequently, we worked across several years with our teacher collaborators to figure out which concepts were core concepts. We eventually identified a handful, chief among which for APGoPo were federalism, separation of powers, elections, interest groups, and civil rights. We were not choosing these *instead* of others; rather, we were organizing the conceptual territory, managing it, and distinguishing between concepts that were central and those that were peripheral. Peripheral

concepts orbit around central concepts like moons and planets around suns, but they are not kicked out of the solar system.

Core skills are needed too, of course. We eventually decided that constitutional reasoning and perspective taking were the disciplinary skills students had to develop if they were to succeed in APGoPo. Whether becoming justices of the Supreme Court or consultants to interest groups, students needed to base their thinking on the rules and procedures set forth in the Constitution and subsequent Court decisions, not simply on their own (often unexamined) preferences; furthermore, they needed to appreciate the astonishing plurality of political opinion and ideology of American political culture.

# 3. Depth through looping

It should be evident that designing deeper

The course at a glance



PBL is mainly about curriculum decision making, not instruction. This is counterintuitive. Teaching for depth means, above all, deciding which concepts and skills are depth-worthy in the context of a particular course. Once these decisions are made, we can turn to instruction.

First, it is crucial that we build bridges between these core disciplinary concepts and skills, on the one hand, and students' everyday knowledge and experience, on the other. Geneva Gay calls this "culturally responsive teaching" and warns that it does not appear out of thin air nor does it follow naturally from being a caring and altruistic person. Rather, teachers need to work at it persistently by studying students' home lives, studying cultural diversity, and becoming aware of themselves "as cultural beings and cultural actors."

But deeper learning requires also a kind of instruction that affords iteration of core concepts and skills. This means revisiting them periodically in different contexts. This quasi-repetitive cycling results in knowing them in a more complex and adaptive way. This is deeper learning. Cyclical or "spiral" curriculum development across grade levels has an honored place in the social studies,<sup>3</sup> but here it is done across units within a single course. Our collaborating teachers dubbed this "looping."

Accordingly, a core concept like federalism is learned first in the initial project, "Founders Intent," and then revisited and deepened in subsequent projects. As delegates to the Constitutional Convention of 1787, students take the perspective

of Federalists and Anti-Federalists and argue for and against a strong central government; then, they take the argument back home to the ratification convention in their state. In "Elections," students work with the platforms of the two major political parties, arguing for and against states' rights or a stronger role for the national government, depending on the current political climate. Federalism is looped again in the mock Congress, again in moot courts, and then again in "Government in Action" where students, now political consultants, decide which level and branch of government their client—an interest group such as the National Rifle Association or Planned Parenthood—should approach to achieve its policy goals. Similarly, the core skills of constitutional reasoning and perspective taking are looped through the projects; they are used again and again, in different contexts, and in this way refined and reinforced across the course.

This learning cycles approach or spiral instruction allows the core concepts and skills to be applied in different scenarios. This adds complexity, thanks to the novelty of each context (the national bank debate of 1791, the marriage equality debate of 2015, the health care debate today), and it affords adaptivity: students' understanding of federalism has to be strong enough to be deployed across scenarios without getting derailed by the differences; that is, flexible enough to incorporate the variation of the idea (e.g., federalism) across, say, banking, marriage, and health policy.

#### 4. Learning from texts

There can be an astonishing range of reading ability, particularly comprehension, in a de-tracked urban high school classroom. Our research found, generally, that students could decode the texts they were asked to read but often couldn't understand them. They could read but had trouble comprehending. Limited prior knowledge of government and politics barred many of them from understanding phrases like "the Reagan years" or "power devolved back to the states again," not to mention "party platform" and "judicial activism." Understandably, students and teachers alike began to avoid texts and rely almost solely on oral communication. Texts were assigned, but students could count on their teacher beginning the class period with a PowerPoint on last night's assignment. They could get by without reading. Role-playing suffered, test performance was put at risk, and, perhaps worse of all, neither poor nor better readers improved their reading ability. For deeper learning, multiple sources of information are needed—and the teacher is only one of them.

Consequently, in successive years of design and revision, we strategized with our collaborating teachers to help students read and learn from texts in addition to learning from the teacher and project activities. A four-point routine evolved:

 Text selection: Teachers read the text selection that is to be assigned (typically not a whole chapter but

## Research on Which This Article is Based

Parker, W. C., and Lo, J. C. (2016). "Reinventing the High School Government Course: Rigor, Simulations, and Learning from Text." *Democracy & Education* 24, no. 1, Article 6. Free download at http://democracyeducationjournal.org/home/vol24/iss1/6

Parker, W. C., and Lo, J. C. (2016). "Give Us Your Best Advice': Assessing Deep Political Learning." Social Education 80, no. 4, 227–231.

Parker, W., Lo, J., Yeo, A. J., Valencia, S. W., Nguyen, D., Abbott, R. D., ... Vye, N. J. (2013). "Beyond Breadth-Speed-Test: Toward Deeper Knowing and Engagement in an Advanced Placement Course." *American Educational Research Journal* 50, no. 6, 1424–1459.

Parker, W. C., Valencia, S. W., and Lo, J. C. (2017). "Teaching for Deeper Learning: A Design Experiment." Journal of Curriculum Studies, 10.1080/00220272.2017.1343386.

Valencia, S. W., and Parker, W. C. (2016). "Learning from Text in an Advanced Government and Politics Course." *Citizenship Teaching and Learning* 11, no.1, 87–103.

a section), and they know what information it will convey and how that information is related to both the project activity and the AP test.

- Purpose setting: Knowing the text selection well allows teachers to state explicitly the purpose for reading it when giving the assignment. For example, "Read this to find out the meaning of the term *federalism*. Be ready to give multiple examples that show you understand this concept." (Close reading requires not only a text but a purpose for reading it.)
- Text-task alignment: Information from the text is used subsequently in a project task. Literacy researchers have demonstrated that text-task alignment helps get students both to do assigned reading (compliance) and to comprehend it (understanding).<sup>4</sup>
- Multiple resources: Underscoring the fact that learning from the text is actually necessary, teachers do not cover the same material in a class lecture.

### 5. Engagement first

We come to the fifth design element. At what point in a sequence of instructional activities should teachers assign textbook reading or give lectures? The best time is when students are already engaged in a task for which the information from the text or lecture will be useful. The issue isn't whether to lecture or assign reading, but when.

The research on this point concludes that there is a readiness for learning from textbook readings or lectures after some understanding has been generated in other ways.<sup>5</sup> The reading or lecture has somewhere to go because there is already something going on. The information isn't floating free of the action, but needed in order to act well. As one student said when asked if he typically read the assignments, "Of course I did

the homework reading—so that I won't embarrass myself the next day."

This means that engagement in project work (e.g., stepping into the role of a legislator with the task of forming and advancing a legislative agenda) should normally precede telling (e.g., an in-class lecture or a reading on how Congress works). The purpose of this sequence is to create a need-to-know so that the information students gain from reading or listening is required to perform well in the role. Before a moot Supreme Court hearing on Obergefell v. Hodges, students are assigned to the role of an attorney or a justice. Then, to learn how these players act at an appellate hearing, so that their performances are authentic, students play "Argument Wars" from iCivics. Then, to learn what to argue, they read the texts at Oyez and Street Law. Finally, they use this material during their performance in the moot court. The point is that engagement comes before telling.

#### Conclusion

Despite the dramatic departure from testprep instruction, students in Knowledge in Action classrooms typically do as well on the AP test as students in traditional classrooms. And, thanks to looping, students' understanding of the main ideas and skills is deepened—it becomes complex and adaptive.

A good motto for designing deeper PBL might be Lead with curriculum decision making, follow with cyclical teaching and *learning*. That is, once the core concepts and skills have been selected, embed them in projects and loop them through the course. But here's the secret sauce: At the heart of deeper learning is curriculum, not instruction. Before implementing instructional strategies, teachers need to make strategic decisions about the content and skills to be learned—those that will be learned deeply, iteratively, rather than only "covered." The trick is to select from the universe of possibilities a handful of core concepts and skills and then subject them to study and practice across the course. These ideas and skills need to

be depth-worthy—powerful and central to unlocking the discipline.

Let me close by extending this model from government to history courses. History courses focus on inquiry-based curriculum and instruction where making and evaluating claims about the past is at the core—the sun around which orbit the rest of the concepts and skills, events and stories, names and dates. Thanks to the C3 Teachers initiative (www.c3teachers. org/) and Reading Like a Historian (https://sheg.stanford.edu/rlh), resources for inquiry lessons and units are available online at no cost. But in terms of whole-course planning, history teachers can select several inquiry plans and sequence them across a U.S. or world history course. Inquiries will replace simulations as the spine of the course, but the other four design elements remain the same. Such an approach would teach students, cyclically, the core disciplinary ideas and skills of history (causation, claim, evidence, sourcing, contextualizing, corroborating) and, at the center of it all, making evidence-based arguments about the past and evaluating the quality of the arguments made by others.

#### Notes

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