

EXECUTIVE SUMMARY

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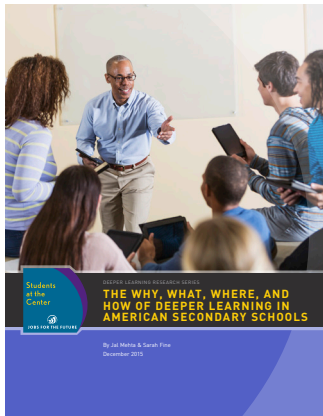


JOBS FOR THE FUTURE

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THE WHY, WHAT, WHERE, AND HOW OF DEEPER LEARNING IN AMERICAN SECONDARY SCHOOLS

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Calls to improve the nation's middle and high schools are nothing new. However, in recent years they have grown louder than ever before, and they have taken on a distinct new timbre, as well. For growing numbers of advocates, the imperative is not just to help much greater numbers of students to succeed but to help them learn in *deeper*, more sophisticated ways than in the past.

A large body of evidence suggests that the existing education system falls short of preparing most students to successfully navigate the demands of contemporary life. Today's adults require far more than the basic academic knowledge and skills that have dominated classroom instruction for decades. They must be able to tackle open-ended problems in critical, creative, and collaborative ways and to quickly learn new skills as job markets change. But high schools, in particular, tend to ask only the most capable students to engage in ambitious thinking; students in lower tracks and in high-poverty schools are the least challenged.

This paper argues that the current determination to move beyond the basics is more than just another swing of the ideological pendulum. It is fueled by discontent with the No Child Left Behind accountability movement and its emphasis on low-level reading and math tests; the recognition that students from all backgrounds are capable of engaging in critical and creative thinking; and the widespread adoption of the Common Core

State Standards, which, despite some controversy, places an unprecedented emphasis on higher-order skills. Most of all, though, the movement to promote deeper learning is borne out of the understanding that there is simply no going back to the 20th century. Given today's economic, technological, and cultural realities, it is no longer an option to provide most—or any—students with low-level instruction in reading, 'riting, and 'rithmetic.

IDENTIFYING DEEPER LEARNING

There is no consensus on exactly how to define deeper learning. For example, it has often been described as the integration of academic, inter-, and intrapersonal skills and knowledge. Recent research findings strongly suggest that in order to succeed in college, careers, and all aspects of adult life, young people require more than just a command of academic content. They also need to be able to solve complex real-world problems, collaborate, communicate effectively, monitor and direct their own learning, and develop an academic mindset.

Among many cognitive psychologists, however, deep learning—or what they might call *learning for understanding*—refers to the ability to *transfer* knowledge. The idea is that knowledge becomes deeper when one can use it not only to address a problem in the context in which it has been taught, but also to understand or explain something in a different but related context. Rather than seeing isolated facts, deep learners see patterns and connections because they understand the underlying structures of what they're exploring.

The authors of this paper suggest that deeper learning requires the ability to transfer knowledge, *and more*. It often emerges at the intersection of *mastery* (knowledge of substantive content, including the ability to transfer), *identity* (driven by relevance to the learner), and *creativity* (the ability to act or make something from the knowledge).

However one defines it, though, deeper learning poses a multipronged challenge to current classroom practice and educational systems. It will require a major increase in the cognitive demand of the tasks that most students, particularly in high-poverty schools, are asked to complete.

FINDINGS FROM A STUDY OF AMBITIOUS SCHOOLS

Four years ago, the authors began to “map the landscape” of non-élite public high schools that explicitly embrace the goals of deeper learning for all of their students. In their visits to and observations at such schools, they found little evidence that deeper learning opportunities are being offered at the whole-school level, as yet. At school after school, there were startling gaps between aspirations and realities. In most classrooms, students still sat passively and listened. Most academic work involved tasks that asked students to recall or minimally apply what they'd been told.

However, they also noted that deeper learning is happening somewhere in virtually every school they visited. Whatever the level of implementation school-wide, *individual classrooms* were joyful, engaging, and/or intellectually rich places to teach and learn. In a few schools, entire departments and programs consistently embodied some or all of these qualities, and a few were moving toward consistent depth.

A key challenge, the authors found, is that few schools have the mechanisms to translate their values into practice. Engaging students in sustained, authentic, high-cognitive-

demand tasks requires structures and supports that many high school teachers simply do not have. Compared to their elementary school counterparts, they teach many more students and see each student for fewer hours each day, making it difficult to build relationships and to create opportunities for sustained inquiry. Another major constraint—the one most frequently cited by teachers—is the pressure to cover the content measured by state tests, SAT Subject Tests and some AP exams.

The study revealed that these schools are making some progress in breaking down the isolation that historically has plagued teaching, but the authors saw little evidence that professional learning communities and other forms of teacher collaboration focused on increasing rigor or depth of instruction. If teachers yearn to infuse their classrooms with greater depth (and many teachers said they do), they appeared to lack rich models for doing so.

In some of the schools visited, teams of teachers were able to arrive at clear, shared agreements about the kind of teaching and learning they wanted to provide. Further, they were able to make strategic choices about how to use space, time, and personnel; to begin developing the kinds of materials and processes that would support teachers in learning and growing; to curate examples of excellent work that helped students and parents to understand the school's vision and standards; and to develop a new organizational culture. If these steps were adopted by entire systems of schools, they would go a long way toward creating the conditions under which deeper learning might become the norm.

BUILDING A SYSTEM TO SUPPORT DEEPER LEARNING

The paper concludes with suggestions for re-envisioning the industrial model of public schooling inherited from the early 20th century in order to build an educational system that supports and sustains deeper learning. Priorities include:

- **Rethink curricula:** Many deeper learning advocates are calling for reformers to rethink academic curricula, particularly high school curricula, with the goal of moving away from disciplinary silos to more integrated problem-based investigations.
- **Rethink the credit system:** Problem- and project-based work generally require longer blocks of time, but “block scheduling” is only a partial fix. State policies could

support this shift by revising requirements for a certain number of instructional hours in disciplinary subjects, and by developing a more flexible way of offering credit for integrated problem- or project-based work.

- > **Rethink real-world connections:** Schools interested in authentic problems should connect better with the outside world, both by bringing in outside experts and placing students in well-supervised internships. Policy could support this shift by creating a more formal way of providing credit for these “extended learning opportunities.”
- > **Rethink educator learning:** The most important priority is to develop teachers and leaders who themselves have experienced some version of deep learning, and to provide opportunities to continue to grow and to

collaborate with colleagues. Principals also need deeper learning experiences to guide them.

- > **Rethink accountability systems:** A more sensible accountability system might emulate those in other nations, in which schools are periodically visited by an expert team of educators, who rely on a range of data—from interviews, student and parent surveys, and test scores—to suggest improvements.
- > **Rethink student assessment:** The U.S. could follow the lead of the International Baccalaureate program and develop systems of district or state-level assessments that measure deeper learning competencies. For example, the IB usually features a culminating exam that entails a series of essays or other open-ended problems, or a portfolio of work or longer scientific investigation.



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Students at the Center—a Jobs for the Future initiative—synthesizes and adapts for practice current research on key components of student-centered approaches to learning that lead to deeper learning outcomes. Our goal is to strengthen the ability of practitioners and policymakers to engage each student in acquiring the skills, knowledge, and expertise needed for success in college, career, and civic life. This project is supported generously by funds from the Nellie Mae Education Foundation and The William and Flora Hewlett Foundation.

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