DEEPER LEARNING STRATEGIC PLAN SUMMARY EDUCATION PROGRAM

THE WILLIAM AND FLORA HEWLETT FOUNDATION

December 2012 Update

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THE WORLD IS CHANGING RAPIDLY. COMMERCE, POLITICS, AND TECHNOLOGY ARE defined in international terms. Competition—and opportunities for collaboration—come from around the world. And this increasingly complex world demands much more of its students. In almost every aspect of their lives, young people are being asked to learn more, process more, and produce more.

In this more complex, more global environment, success in the workforce and effective democratic participation require strong content knowledge and skills—learning that increasingly comes from some form of postsecondary training or college and not from a high school diploma alone. Indeed, jobs that require just a high school diploma have been rapidly shrinking for the past thirty years, and—looking forward—nearly 80 percent of jobs in the future are projected to be "middle-skilled" or "high-skilled." According to the Brookings Institution, jobs in these two categories will require some additional education beyond high school—such as an associate's, bachelor's, or professional degree or industry-recognized certifications (http://www.brookings.edu/papers/2009/02_middle_skill_jobs_holzer.aspx).

But U.S. students are increasingly ill-prepared for these challenges, even as other countries and school systems—including Singapore, Finland, Canada, and Shanghai—have been improving their education systems to focus on higher expectations and prepare students for the global workforce. Indeed, these countries now lead the world on the Programme for International Student Assessment (PISA), an international test of 15-year-olds that assesses the critical thinking in reading, math, and science in the world's major developed countries. In contrast, U.S. high school students rank between "average" and "below average" on the test when compared to their peers worldwide. These statistics mask inequity within the system, however. The top students in the U.S. do perform at high levels; the top 10 percent of U.S. schools outperform Singapore; but the lowest 10 percent—those with high concentrations of poverty—are located at the bottom.

Recognizing the critical need to upgrade the U.S. education system, and the skills and knowledge of students, the Hewlett Foundation Board of Directors in March 2010 adopted a new seven-year strategy to guide its Education Program. Under this new strategy, the majority of the Program's resources are directed toward making grants to organizations that support setting new standards for equity and excellence in U.S. public education. The strategy also focuses on

improving the conditions for education reform in California and on promoting open educational resources.[1]

Deeper learning is the shorthand phrase that the Foundation has adopted to describe this initiative. The term refers to the higher-order skills and academic knowledge that are the surest path to postsecondary education and that students will need to succeed in twenty-first century work and civic life. A recent report by the National Research Council described deeper learning as "the process through which a person becomes capable of taking what was learned in one situation and applying it to new situations; in other words, learning for 'transfer.'" These skills include critical thinking and problem solving, communication, collaboration, and learning to learn—all applied to the mastery of rigorous academic content.

The Foundation believes the nation's K–12 education systems will require a major overhaul if they are to engage more students in deeper learning. For example, accountability systems now focus on basic skills and basic measures—not on the problem-solving and communication skills that matter for success in college, in the workforce, or as an active member of a democratic society. Educators aren't expected to teach all students to higher standards, nor do they receive the support they would need. Technology remains under-utilized, even as it promises to reduce the costs and to speed the dissemination of high-quality teaching tools and to engage students in new ways of learning.

The Program's 2010–2017 strategy lays out a plan for confronting these challenges through investment in three areas:

- *Deeper Learning*: Increase economic opportunity and civic participation through deeper learning—improving what students learn, how they learn it, and how they demonstrate their knowledge.

- *Open Education Resources*: Equalize access to knowledge for teachers and students around the globe.

- *California Education*: Improve the conditions for education reform in California.

The logic model illustrated in Figure 1 broadly describes the three key grant-making components of the Program's strategy.

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[1] Although some of the key indicators and activities discussed in this strategic plan summary may reflect legislative activity or the passage of legislation, they do not represent actions to be taken by Hewlett Foundation staff or by its grantees at the Hewlett Foundation's direction. In particular, the Hewlett Foundation does not expend funds or earmark its funding for prohibited attempts to influence legislation (i.e., lobby) within the meaning of the federal tax.

Goal: *To increase economic opportunity and civic participation by educating students to succeed in a changing world.*

Competition from every corner of the world is raising the bar for what young people need to learn in school to be successful after graduation. Economic trends and education statistics make the case plainly:

- MIT and Harvard researchers found that increased computerization and outsourcing have left fewer U.S. workers in jobs involving routine manual or simple cognitive tasks, while a growing portion of the nation's workforce is employed in jobs requiring sophisticated communication and abstract thinking.[2]

- A 2006 Conference Board survey of 400 employers identified deeper learning competencies as some of the most important for new entrants to the workforce. Essential capabilities included oral and written communications and critical thinking/problem solving. (The survey also found that most young people without college diplomas lacked these skills.)[3]

- Ninety percent of higher education faculty cite critical thinking as the key goal of a university education.[4] Yet many believe students enter college woefully unprepared to succeed. For example, California faculty report that as many as two-thirds of incoming freshmen can neither synthesize information from multiple sources nor analyze information or arguments based upon reading.[5]
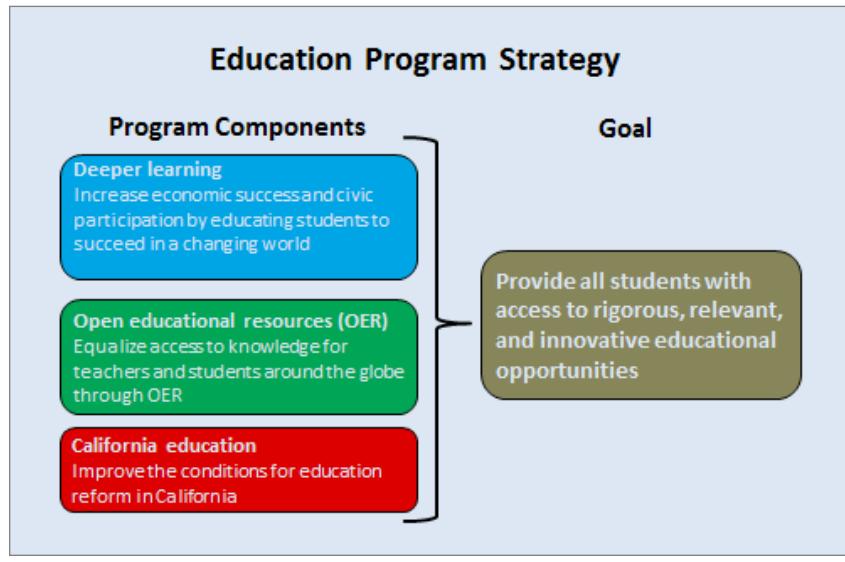

FIGURE 1 Hewlett -Foundation Education Program Strategy

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[2] D. Autor, F. Levy & R. Murnane,; The Skill Content of Recent Technological Change: An Empirical Exploration. *Quarterly Journal of Economics, 118(4),* November 2003, 1279–1334. R. Murnane & F. Levy, The New Division of Labor: How Computers are Creating the Next Job Market, *Princeton University Press* and *Russell Save Foundation,* June 2004.

[3] See http://www.p21.org/storage/documents/FINAL_REPORT_PDF09–29-06.pdf.

[4] Derek Bok, *Our Underachieving Colleges: A Candid Look at How Much Students Learn and Why They Should Be Learning More (Princeton: Princeton University Press, 2006).*

[5] See this survey of California public universities, colleges, and community colleges (p. 23): http://www.universityofcalifornia.edu/senate/reports/acadlit.pdf.

Preparing students well will require innovative instruction coupled with a relentless focus on developing more rigorous habits of learning and deeper understanding of content. This type of instruction will equip students to:

- *Master core academic content*: Students will develop a baseline set of disciplinary knowledge. This includes facts and theories in a variety of domains—and the language and skills needed to acquire and understand this content.

- *Think critically and solve complex problems*: Students will know how and when to apply core knowledge by employing statistical reasoning and scientific inquiry to formulate accurate hypotheses, offer coherent explanations, and make well-reasoned arguments, along with other skills. It also includes creativity in analyzing and solving problems.

- *Work collaboratively*: Students will cooperate to identify or create solutions to societal, vocational, and personal challenges. This includes the ability to organize people, knowledge, and resources toward a goal, and to understand and accept multiple points of view.

- *Communicate effectively*: Students will be able to understand and transfer knowledge, meaning, and intention. This involves the ability to express important concepts, present data and conclusions in writing and to an audience, and listen attentively.

- *Learn how to learn*: Students will know how to monitor and direct their own work and learning.

These competences are best developed by studying rich content in such disciplines as mathematics, literature, the natural sciences, the social sciences, and the arts —and, indeed, they help increase learning of content.

However, as designed today, U.S. public schools inadequately teach most students in these core skills. In an attempt to cover a long list of basic facts and skills in a short academic year, they sacrifice depth of learning for breadth of coverage and pay scant attention to cultivating skills that students will need to thrive as adults.. Moreover, schools disproportionately fail to prepare all of our students; for example, a 2012 ACT study found that in a cohort of high school students graduating in 2009, 82 percent of white students graduated, compared to 66 percent of Hispanic students and 64 percent of African American students. They also found that only 52 percent of white students in this cohort went on to earn an associate's or bachelor's degree; for the African American and Hispanic students, these numbers were only 21 and 16 percent respectively.

For decades, the missions of many top private schools have included teaching deeper learning skills (this has been true of a small minority of public schools as well and may occur in small pockets within other public schools). But, as the results from PISA—which specifically measures these skills—demonstrate, the U.S. school system is not educating enough students in these higher-order skills. The large majority of school districts currently lack not only the incentives and accountability measures that would induce them to teach these skills, but also the capacity to deliver them.

The federal No Child Left Behind Act (NCLB)[6] demonstrated that school-system accountability tied to standards and tests can dramatically affect what gets taught in the classroom. Testing and accountability alone, however, will not improve student outcomes. Schools and teachers also must have the ability to deliver deeper learning skills, and students must be motivated to develop them.

The Education Program seeks to provide funding to organizations that will work to make deeper learning the norm in U.S. schools in order to reach our ultimate goal: students' success in work and civic life. The Program's strategy and activities are designed to work within school systems (rather than around them, as in after-school programs, for example). They also are designed to better prepare more students for postsecondary education, which is increasingly a gateway to success in the twenty-first century economy.

Deeper Learning for More Students: 8 Million by 2017

The Program's goals for deeper learning are ambitious. Within fifteen years, the Program hopes that its grantmaking in this area will create both a more robust national commitment to deeper learning for all students and to catalyze the broad-based capacity to deliver it within the nation's K–12 education system.

What will this success look like? More public schools will be better preparing students not just to graduate from high school but to succeed in higher education, find satisfying work that pays a living wage in a fiercely competitive global job market, and tackle increasingly complex problems such as global warming, the effects of new technology, or finding ways to ensure civil rights. Specifically, the Program's very long-term objective calls for 80 percent of all U.S. students to be in schools committed to deeper learning by 2025.

In the near term, the goal of the Program's grantmaking is to ensure that 8 million students (about 15 percent of the K–12 public school population) are taught deeper learning skills by 2017.[7]

Grantmaking Scope and Priorities

The Program's grantmaking supports organizations that work to influence and improve both education policies and classroom practices, helping more schools successfully focus on deeper learning.

Altering education system incentives and accountability—what is asked of schools—and building their will to change will require:

[6] A 2001 law governing the distribution of federal support for education, NCLB focuses heavily on setting standards and establishing measurable goals to improve student performance, using assessments in basic skills to measure improvement.

[7] Ideally, the measure of this strategy's success would center on whether students acquire deeper learning skills. At this early phase, however, the Program will measure success in terms of how many students are assessed with tests that measure core deeper learning skills.

- Academic standards that focus on acquiring knowledge through critical thinking and other higher-level skills, rather than just recalling facts and formulas.

- A variety of tests and other measures that assess both the skills and knowledge needed for success in school and the workforce.

- Accountability policies that hold schools, students, and educators responsible for achieving these outcomes.

In order to successfully implement new standards and help students succeed on measures aligned with those standards, schools need:

- Teachers with great teaching skills as well as deep content knowledge.

- Tools aligned with deeper learning, such as curricular and instructional materials, in-class tests, data, and feedback mechanisms that give teachers timely information on student performance.

- Strong leadership, peer learning, and shared practice among teachers; good facilities; and a culture of continuous improvement.

To accomplish these changes, the Program has clustered its grantmaking to support organizations that will work to advance four specific, related outcomes, as described in the logic model illustrated in Figure 2. Together, these areas are designed to create systemwide incentives and accountability for a shift to deeper learning, while building the capacity and tools that educators need to respond to this new direction.
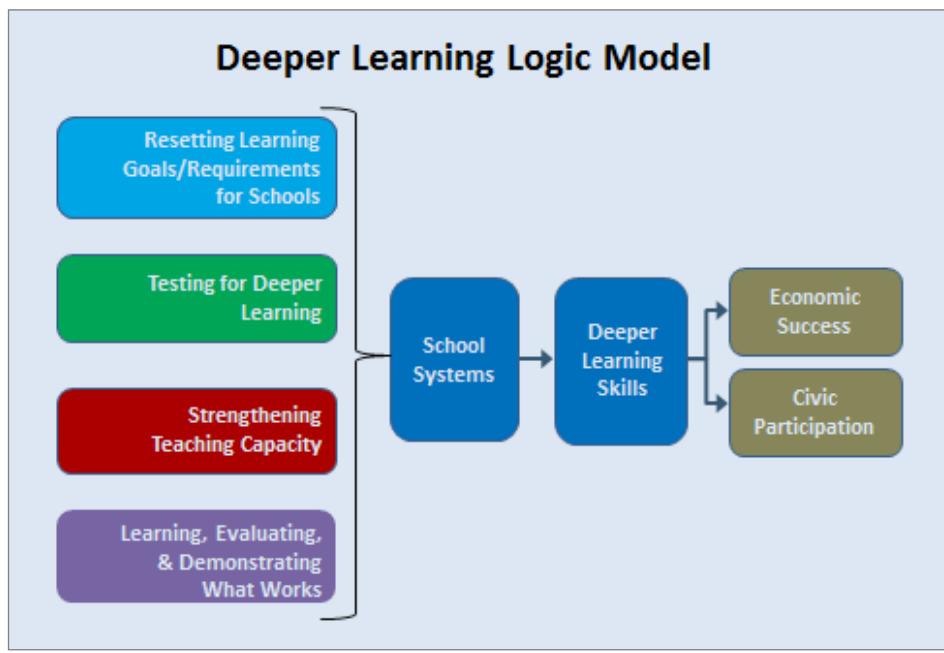

FIGURE 2 Deeper Learning Logic Model

Because the Foundation's resources are limited, the Program has identified several specific high-leverage investment criteria that are used to inform grant-making decisions:

- Where possible, build on existing reform initiatives, including the new K–12 Common Core State Standards[8] and tests, as well as their related implementation activities.

- Support the use of technology to expand the most promising practices to large numbers of students and teachers, often by making relatively early stage investments.

- Identify grantmaking opportunities that are critical to the long-term success of our goals but are not being addressed by other actors in the field.

- Recognizing the fiscal constraints under which states are operating, work to embed reform initiatives within existing funding models.

In particular, the Common Core standards for K–12 schools—which now have been adopted by nearly every state—establish a shared set of academic expectations for students in English language arts and mathematics for the first time in the nation's history. These standards are explicitly designed to prepare students for postsecondary education and workforce success, and are benchmarked against the standards of top-performing nations around the world. Because they weave critical thinking and problem-solving with fluency and understanding of essential principles, the Common Core standards are strongly aligned with deeper learning—and represent an especially promising leverage point for the Program to help advance its goals.[9]

The most explicit links between Common Core and deeper learning are in core content knowledge, problem solving, and written communication; while less explicit, opportunities also exist to embed oral communication, collaboration, and learning-to-learn skills in classroom activities that implement the Common Core. For example, the English language arts portion of the standards specifies that students should become independent learners, know how to communicate to different audiences, and use evidence to promote a point of view. As part of its grantmaking, the Program will strongly support a few select leverage points focused on implementation of the standards—with fidelity to deeper learning—in states and schools and will invest in tools, curricula, and classroom assessments to support educators in teaching them.

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[8] The Common Core State Standards specify what K–12 students should know and be able to do in two key subjects: mathematics and English language arts. The standards are designed to be robust and relevant to the real world, reflecting the knowledge and skills students need for success in college and careers. States have created two consortia—funded with large grants from the federal government—to develop next-generation assessments that will measure these new standards; the goal is for new assessments to be ready for states to integrate into their own testing and accountability systems by the 2014–2015 school year.

[9] Research conducted by the Educational Policy Improvement Center and by Achieve have documented a close alignment between the Common Core and deeper learning.

The Program recognizes that students who are proficient in the Common Core standards will be ready for a wide range of postsecondary opportunities, but these standards are not intended to be a comprehensive definition of what it takes to be college or career ready. Because there are other important dimensions of deeper learning that are not covered by the Common Core, the Program will also make grants to support changes to education policies and practices that reinforce other skills, such as communications and collaboration.

The following sections describe the Program's work and priorities in each of the Deeper Learning grantmaking areas.

Resetting Learning Goals and Requirements for Schools

The Program's policy investments support organizations that promote state and federal policies that can help remove barriers to—and provide incentives for—deeper learning goals throughout the K–12 and postsecondary education systems.[10] Grants are focused on helping state and federal policymakers first articulate a commitment to deeper learning and then identify and implement initiatives that systematically support this vision.

Changing K–12 System Goals

K–12 policy grants build on the strong foundation of the Common Core standards now adopted by most states. Policy makers can successfully implement these standards with fidelity to deeper learning by:

- Designing new assessment and accountability systems for schools, teachers, and students that prioritize the skills and knowledge essential for college and career readiness.

- Prioritizing alignment of teacher training and support to facilitate student mastery of deeper learning.

- Supporting innovations that reimagine the use of time in schools, so students can engage with content in new and deeper ways.

- Deploying tools and technologies that build local system capacity.

In recent decades, federal policies have largely shaped education priorities for states. Unfortunately, many of these policies have discouraged deeper learning. For example, NCLB focused heavily on proficiency in basic skills, using

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multiple-choice tests as high-stakes measures of student progress. Prior to its passage, states had begun to experiment with richer forms of assessment keyed to a broader range of student performance; these were shut down in the NCLB era.

But the center of gravity for policy reform is shifting from the federal to the state level. At the same time, the goals of the education system are moving from basic skills to readiness for college and careers, especially as forty-five states and the District of Columbia now have adopted the new Common Core standards and nearly all have joined two assessment consortia to develop new tests aligned to these standards.

To unleash the potential of the new standards and testing to advance deeper learning, the Program will support five to ten states in adopting policy changes that support deeper learning by 2017. These states will serve as laboratories for reforms and act as beacons to other states. In these leading states, grants will provide access to ideas, research, and educational outreach to policymakers in implementing the Common Core standards with fidelity to deeper learning, supporting changes to accountability systems and graduation requirements, and experimenting with innovations and new models in schools and districts.

To facilitate this deep work in targeted states, the Program is primarily supporting technical assistance to the ten states called the Innovation Lab Network. Network members are committed to pursuing policy innovations that can foster a next generation of learning design and delivery and improve students' college- and career-readiness. The Program also will seek out other opportunities to educating state leaders about the benefits of pursuing new policies aligned to the goals of deeper learning.

While the Program capitalizes on the shift to state leadership, it still will fund organizations that promote federal policies in support of higher-order skills, with the aim of ensuring that deeper learning is the goal of the nation's education system as a whole.

Aligning K–12 Standards with Postsecondary Entry Requirements

The Program's deeper learning strategy recognizes that strong connections between K–12 and postsecondary institutions are a crucial ingredient for success. For K–12 education systems, the preparation of students for college is a major source of incentives and accountability. Therefore, the Program is encouraging higher education to play a strong leadership role in informing and implementing the new assessments aligned with the Common Core. Specifically, grants are assisting postsecondary institutions to explicitly use new Common Core assessments in decisions about students' readiness to do college-level course work.

For example, in 2011, the Hewlett Foundation joined with the Lumina and Gates foundations and the Carnegie Corporation to launch Core to College, an

initiative to promote better alignment between higher education and K–12 over the definition of college readiness. Beginning in ten states, Core to College is supporting faculty, university presidents, and state executive officers to improve student achievement in both K–12 and postsecondary education, including reducing the number and percentage of students requiring remedial education upon college enrollment and increasing college graduation rates.

Core to College is supporting higher education institutions in their use of Common Core assessments to make postsecondary decisions about incoming students' readiness for college-level work. Additionally, institutions may work on other supporting activities, such as improving first-year postsecondary course work by deepening K–12 and postsecondary faculty collaborations to create aligned courses that reflect deeper learning expectations.

Engaging Key Stakeholders in Reform Discussions

Although data and research make the need for deeper learning competencies objectively clear, U.S. policymakers need to hear these realities validated by the business and postsecondary sectors, among others. Through their support, higher education leaders can help ensure that students gain the skills that colleges actually require of them. Business leaders can reinforce how necessary policy reforms are for the career success of workers; further, they can lend their weight to the argument that deeper learning is essential to the economic competitiveness of industries, states, and the nation.

As states engage in policy reform, other organized groups are speaking to vital educational interests such as equity for students and the engagement of teachers and school system leaders. The Program plans to fund carefully important constituency organizations to convey the importance of deeper learning to their audiences and members.

Testing for Deeper Learning Skills

Aligning testing to deeper learning competencies improves incentives and accountability. To assess the full range of deeper learning expectations, the educational system needs to shift to tests that include essay writing, problem solving, and even portfolios of student work, including student-developed research papers and performances.

Ensuring the widespread use of valid, reliable, affordable, and meaningful assessments of deeper learning is critical to implementing the Program's strategy. Strong assessments—both the comprehensive, year-end summative tests traditionally used for accountability systems, as well as the diagnostic assessments used day in and day out in classrooms—help influence curriculum and support teaching practices.

The Program is taking advantage of the momentum created by two state-led assessment consortia—recipients of $350 million in federal funding—that are remaking state summative assessments in math and English language arts. This

clear opportunity to redesign the state assessment systems in most states—and to ensure they are infused with deeper learning measures—is significant.

To support each consortium, the Foundation's grantmaking supports filling their gaps in sustainability planning, innovation research and design, and communications, and it is funding other grantees in a "watchdog" role. For example, grants have supported communications efforts by both consortia to explain the new tests—and their likely results—to policymakers and the public. Other grantees are conducting an independent evaluation of the consortia's work to determine how well their assessments are maintaining fidelity to deeper learning competencies.

Outside of the consortia, the Program is making grants to support leading-edge tests that can advance the assessment of deeper learning skills, such as the PISA-based test for schools—which is adapted from OECD's PISA program— to allow for individual school administration and results. Looking ahead, the Program is examining other options for additional summative assessments of deeper learning, including the development of new tests aligned to emerging "next generation" science standards.

In addition, the Program is sponsoring a series of awards, modeled on the X Prize, to encourage more rapid innovation in testing, such as greater use of technology to reduce the cost of grading in-depth student responses to complex questions. Because such cost-saving innovations could increase the likelihood of states adopting more demanding tests, both the assessment consortia and the U.S. Department of Education are closely watching this work.

Strengthening Teaching Capacity

While tests themselves don't improve teacher knowledge or system capacity, history has demonstrated that what gets measured gets taught. As a result, ensuring that tests measure more advanced skills and knowledge is an essential step toward inducing education systems to focus on deeper learning. However, the Program also is making grants that support more direct activities to build the capacity of teachers and strengthen the ability of schools to deliver deeper learning to all their students.

Our teacher capacity efforts capitalize on the window of opportunity created by the Common Core and state assessment consortia which are the most promising vehicles to influence the development of the next generation of deeper learning teaching materials. Overall, there is high demand for Common Core-aligned materials, but low supply of high-quality, truly aligned resources. Our investment strategy takes advantage of this dearth of high-quality teacher materials by stimulating the production of and demand for deeper learning teaching tools and professional development. We are helping to create savvy, well-informed, "smart demand" states that will drive supply by funding the development of quality standards that, in turn, increase the production of new materials and ultimately the adoption of new curricula by states.

We are also creating a small number of high-quality teaching material exemplars that align with the Core and that give states concrete examples of the next generation of deeper learning materials that are Common Core-aligned. In this vein, the Program is funding states and nonprofits to create high-quality Common Core-aligned model curricula, lesson plans, classroom assessments, and other instructional tools that can be widely disseminated and adopted using technology and that can help educators transform the classroom experience. For example, with Foundation support the state of New York, Expeditionary Learning, and Buck Institute for Education are creating model lesson plans, instructional tasks, curriculum-embedded formative assessments, and model professional development modules that exemplify deeper learning in the context of Common Core standards.

The Foundation recognizes that current teacher capacity is not adequate to deliver deeper learning to large numbers of students, so we are venturing into this area, albeit on a small scale. For instance we supported the Strategic Literacy Initiative, which trains hundreds of high school teachers in four states to help 50,000 students get ready for college by becoming better readers, thinkers, and writers. But overall, all the Foundation's strategy relies on others to bring best practices to larger scale. For example, the Gates Foundation is spending hundreds of millions of dollars to upgrade teacher skills and measure teacher performance. States that have won federal Race to the Top funds also are investing heavily in increasing teacher capacity and improving instructional support systems. At the same time, many states are beginning to redirect billions of dollars to the professional development of teachers to implement the Common Core standards.

Learning, Evaluating, and Demonstrating What Works

Diffusion of deeper learning throughout the U.S. public school systems will require capable teachers, good tools, and a supportive school environment. The Program is making grants to a number of school models that integrate all three elements to help students achieve deeper learning outcomes in a variety of settings, especially in high-poverty communities. These model schools help make deeper learning reforms concrete for policymakers, provide a source of effective practices, and also create opportunities to learn what works and what doesn't. Without clear examples of deeper learning instruction in practice and clear evidence of its success, the deeper learning policy agenda is unlikely to hold sway among policymakers and educators.

With Foundation support, a new national "Deeper Learning Network" of more than 400 schools in thirty-five states is beginning to serve as a source of innovation and tools for deeper learning. Drawn from ten school networks—a mix of charter and traditional public schools—that collectively serve large numbers of low-income students. Encompassing schools from networks as diverse as Envision Education and Internationals Network of Public Schools, each has a unique approach to delivering deeper learning.

The Program is now working to strengthen the ties between these schools in order to stimulate further improvement in their teaching practices and build the core of a national campaign for deeper learning. Also, it is funding EdLeader21, a similar network focused on school districts with commitments to delivering deeper learning to all their students.

What ultimately matters, of course, is whether these schools are succeeding in imparting higher-order skills and what difference this makes in the lives of young people and their communities. To address this question, the Program has commissioned the American Institutes for Research to conduct a three-year evaluation of the Deeper Learning Network schools and their impact on student success, including their rates of college attendance. The study is designed to answer several questions, including:

- Do students in deeper learning network schools achieve significantly better outcomes (graduation, postsecondary success, and higher-order skills) than do students in comparison schools?

- Are some deeper learning practices more successful than others in delivering these outcomes?

- Do students who have opportunities at the classroom level to engage in deeper learning pedagogy (i.e., frequent collaboration, managing one's learning) learn more than students in traditional classrooms?

In addition, the Program will continue to underwrite new research and literature reviews to clarify the link between students' deeper learning competencies and their ultimate economic success and civic engagement. One such recent report from the National Research Council, entitled "Education for Life and Work: Developing Transferable Knowledge and Skills in the 21st Century," reviewed the state of the evidence base to date and made recommendations for future research, practice, and policy.

Although at this point the Program does not plan to fund the expansion of the Deeper Learning Network, it does foresee making small-scale investments to seed innovative practices that might help the system learn more about or evaluate deeper learning.

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