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EFFECTIVE SCHOOLS FOR DEEPER LEARNING
AN EXPLORATORY STUDY

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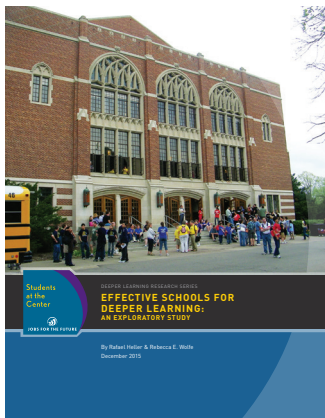
To become truly well prepared for college, careers, and adult life writ large, adolescents need far more than just academic content knowledge and skills. A wealth of evidence—from psychology, education, economics, and other fields—suggests that they also need to be able to solve complex and unscripted problems, to be persistent in the face of challenges, to be adept at monitoring their own learning and regulating their own behavior, to be able to communicate and collaborate with diverse peers and colleagues, and more. That is, they need to develop the full range of skills that have been grouped together under the umbrella term "deeper learning."

But while recent studies have provided powerful insights into what it means for individuals to be "college and career ready," researchers have only just begun to focus on what it would mean for schools and districts to use deeper learning as a guiding framework for policy and practice. Most important, can inter- and intrapersonal skills be *assessed* reliably and *taught* effectively, at scale?

This paper proposes one strategy by which to strengthen the nascent research base on deeper learning's implications for secondary school improvement. Specifically, it describes an exploratory study designed to test the idea that a particular kind of whole-school assessment, involving site visits by teams of trained observers, can provide useful data about students' opportunities for deeper learning. Further, it argues that this sort of assessment makes it possible to identify schools that—while unremarkable according to test-based measures of school performance—are particularly effective at teaching certain inter- and intrapersonal skills. In turn, this suggests a myriad of new opportunities to study and replicate best practices in teaching for deeper learning.

BUILDING A RESEARCH AGENDA: EARLY STEPS

In 2014, the American Institutes for Research (AIR) concluded a three-year study that followed the progress of a random set of students attending high schools that explicitly pursue deeper learning, and comparing their outcomes to those of similar students at a matched set of "non-deeper learning" schools.

As AIR describes in its trio of reports on the study, the results were encouraging: relative to the comparison group, students who attended the self-identified "deeper learning" schools were more likely to finish high school on time, went on to four-year colleges in greater numbers, got higher scores on state achievement tests, did better on assessments of problem solving, and rated themselves higher on measures of engagement, motivation, and self-efficacy.

However, AIR also took pains to note that this was an early "proof of concept" study, meant in large part to see whether the personal and social aspects of deeper learning that have been proposed by the Hewlett Foundation and others (including *critical thinking skills, collaboration skills, communication skills, and independent learning skills*) are clear and specific enough to be used as the basis for rigorous empirical analysis and, by extension, policymaking and practice. Indeed, AIR found them to be distinct, stable, and robust indicators, suggesting that is in fact possible to conduct reliable research into the extent to which individual schools influence their students' development of these inter- and intrapersonal capacities.

According to the study's directors, this methodological finding is likely to be of greater consequence, in the long run, than any immediate findings about student outcomes. Because this was the first significant, sizable, empirical study of deeper learning practices and outcomes, the positive results garnered considerable attention in the field. But the real value of schools' efforts to promote deeper learning will become clearer over time, through the accumulation of evidence. Looking forward, then, the real import of the AIR study is to pave the way for future research.

FROM SELF-IDENTIFIED TO FOUND: LOOKING FOR DEEPER LEARNING SCHOOLS

The AIR study was designed to measure the outcomes of students attending well-regarded schools that identify themselves as belonging to a larger movement to promote and pursue deeper learning. In educational research, there is a long tradition of studying such exemplary schools, in order to identify best practices, assess their impact, and distill lessons for others to consider.

However, and looking back to the Effective Schools research of the 1970s and 80s, we reasoned that it would also be useful to start from the other direction: Instead of studying schools believed to exemplify deeper learning, we asked, could we comb through existing data to find schools that belong to no movement, have no special resources, and are not widely regarded as exemplars but which, nonetheless, show evidence that they are providing their students with strong opportunities for deeper learning?

If so, then a host of follow-up research questions will present themselves. For example, and like the Effective Schools researchers, we might ask whether those schools share any distinguishing characteristics (a particular kind of mission statement, for example, or a particular sort of community involvement), and whether those features overlap with the so-called "correlates of effective schooling" (such as strong leadership and a safe and orderly environment) identified by previous studies.

The Effective Schools researchers began by looking for schools that that posted high scores on reading and math achievement tests despite serving children from low-income backgrounds. However, to identify schools providing deeper learning opportunities, we require data that will allow us to go beyond tests scores to include richer information about a wider range of classroom practices.

Our solution was to contract with AdvancED, the nation's largest school accrediting agency, to perform a retrospective analysis of the more than 750 public high schools (excluding overseas Defense Department schools and new charter schools) it had assessed during its 2013-2014 accreditation cycle. From this data, we asked, would it be possible to identify regular, comprehensive, non-selective high schools that show particularly strong evidence of teaching the inter- and intrapersonal dimensions of deeper learning?

AdvancED's accreditation process features multi-day site visits by teams of veteran educators, who review school materials, interview stakeholders, and conduct structured observations of classroom practice, following well-tested assessment protocols. We reasoned that this data would include significant amounts of reliable information about students' opportunities to engage in collaborative work, classroom discussion and oral presentation, systematic reflection on their own learning, engagement in solving complex, unscripted problems, and other aspects of deeper learning.

While the indicators included in AdvancED's assessment protocol do not line up perfectly with the deeper learning dimensions used in the AIR study and elsewhere, a crosswalk analysis found that 10 (out of 33) the organization's performance indicators, and 23 (out of 30) of its observational items, were directly relevant to specific deeper learning competencies. Using these proxy measures, AdvancED was able to rate each school on the extent to which it provides opportunities for each six aspects

of deeper learning (see table 1), as well as calculating a combined score, indicating the strength of the school's overall emphasis on deeper learning.

FINDINGS AND FOLLOW-UP QUESTIONS

> Like the AIR researchers, AdvancED found that deeper learning's component parts—to be more specific, the proxy measures that AdvancED was able to construct from its existing indicators—were clear and consistent enough to allow for statistically reliable (though not necessarily valid) ratings of performance. Presumably, the results would be even more reliable, and valid, if site visits and observational protocols were specifically designed to elicit evidence of inter- and intrapersonal learning, rather than having to be retrofit for this purpose. In short, this study leaves us optimistic about the use of trained observers—whether involved in accreditation, school inspections, school quality reviews, or another sort of structured observation—to assess schools on the six dimensions of deeper learning. We see no reason why observational data cannot provide reliable evidence of students' opportunities to develop these skills.

> Of the inter- and intrapersonal competencies included in this study, the mean Deeper Learning Index score was highest for "Work Collaboratively" and "Develop an Academic Mindset," and it was lowest for "Communicate Effectively" (see Table 1). In turn, these findings suggest some fruitful lines of follow-up research. One might ask, for example, which of the personal and relational aspects of deeper learning are most prevalent in typical American high schools? Why might opportunities to learn to communicate effectively be so much less in evidence than, say, opportunities to collaborate? And which aspects of deeper learning are likely to be easiest, or hardest, for schools to pursue?

> Of the schools whose overall Deeper Learning Index score ranked in the top 10 percent, most were selective high schools (e.g., science-themed schools with admissions tests), early college high schools, and small charter schools. On one hand, this may be nothing more than an example of selection bias, having to do mainly with the kinds of students and teachers who tend to be found in such schools. Then again, it may also suggest that when it comes to the teaching of personal and relational skills, certain kinds of schools are doing something right. It is conceivable, for example, that

a study of early college high schools would find that enrolling 11th and 12th graders in college classes tends to have a positive effect on their academic mindsets, or perhaps the prospect of earning college credit promotes greater academic persistence. In short, further research in this area may lead to valuable insights about particular school designs and curricula and their association with certain deeper learning outcomes.

> Perhaps most important, AdvancED was able to identify a handful of regular comprehensive high schools, serving lower-income populations, that scored in the top 10 percent on the overall Deeper Learning Index. (We describe two of those schools in the full report.) These schools, we argue, are particularly ripe for further analysis: What explains their unusual degree of focus on teaching skills such as collaboration, problem solving, and self-directed learning? Have they made an explicit decision to emphasize these deeper learning skills, or are there other explanatory factors at work, such as students' cultural backgrounds, parental involvement in the school, district-level policies, or high-quality professional development? Further, it may be particularly interesting to study those schools that score relatively high on the personal and social dimensions of deeper learning while performing at a middling or low level on traditional indicators such as test scores and graduation rates. How, we wonder, should the "quality" of such schools be assessed? Could they invite useful discussion of what it means to be a "good" school, and whether, in some cases, teachers and administrators should be lauded for their focus on personal and social development, even if students continue to struggle academically?

In sum, this exploratory study was designed not to show whether certain teaching practices lead to deeper learning outcomes, nor to show how students fare at "deeper learning schools." Rather, our aim was to build on the methodological groundwork begun by AIR, specifically to test the idea that data from systematic, on-the-ground observations of local classroom practice can be used to identify schools—as yet unrecognized and unheralded—that are providing students with strong and consistent opportunities to develop academic mindsets, monitor and direct their own progress, work in teams to solve complex problems, and otherwise learn deeply. The results leave us cautiously optimistic that they can. And we suspect that further study of those schools will lead to important lessons for secondary education in general.

JOBS FOR THE FUTURE

Jobs for the Future works with our partners to design and drive the adoption of education and career pathways leading from college readiness to career advancement for those struggling to succeed in today's economy. We work to achieve the promise of education and economic mobility in America for everyone, ensuring that all low-income, underprepared young people and workers have the skills and credentials needed to succeed in our economy. Our innovative, scalable approaches and models catalyze change in education and workforce delivery systems.

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.