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StraightA's

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TEACHERS KNOW BEST: New Teacher Survey Identifies Challenges Teachers Face When Using Digital Instructional Tools

Ninety-three percent of K–12 public school teachers regularly use digital tools to guide instruction, but two-thirds of them say that they are not fully satisfied with the effectiveness of the data or the tools for working with the data, according to a new report from the Bill & Melinda Gates Foundation. Released at a June 3 event cohosted by the Alliance for Excellent Education and the Gates Foundation, the report, *Teachers Know Best: Making Data Work for Teachers and Students*, presents the findings from a survey of more than 4,600 teachers about the challenges they face when using digital instructional tools and provides recommendations about how to support teachers to effectively use data to personalize instruction.

"The goal of *Teachers Know Best* is to bring the perspectives of teachers to product developers who are creating digital tools for the classroom," said **Vicki Phillips**, **Director of Education, College Ready at the Bill & Melinda Gates Foundation**. "We want to move from anecdotes about what teachers want and need to data. And we want to provide actionable information that ed-tech entrepreneurs and investors can use to create instructional tools that help accelerate learning."

According to the report, teachers overwhelmingly value data as a tool, with 78 percent saying that data can "help validate where their students are and where they can go." Additionally, nearly 70 percent of teachers surveyed said that tailoring instruction to meet the needs of individual students is required to improve student achievement.

At the same time, however, teachers noted several challenges that limit their ability to track student progress and tailor instruction. They believe that current digital tools to collect, analyze, and use data are often overwhelming, with large amounts of data from disparate sources that are incompatible with each other and difficult to aggregate. They also believe that they do not receive data in enough time to modify instruction in meaningful ways.

"The challenge, then, is maximizing the limited time teachers have by making the process of collecting data, analyzing them, and putting them to use more efficient," the report notes.

"Creating digital tools that better meet teachers' needs could help personalize learning for students by empowering them to identify where students are in their understanding and tailor instruction to their skills, needs, and interests."

The challenge of not enough time was a frequent issue raised by panelists at the June 3 release event, with Phillips saying that "finding ways to streamline data analysis and save teachers time is one of the biggest contributions that digital tools can make."

Nicole Cerra, cofounder, director of curriculum and instruction, and teacher of English and design at Design Tech High School in California, agreed with Phillips. "Teachers need more time to work together and look at the data and make decisions about how to respond," she said. "If you aren't given that time within your school day, it doesn't happen." To that point, Cerra suggested a need for more fluidity from the creator to the classroom to ensure tools are as effective as possible.

Teachers Know Best finds that teachers want tools that support the "three key phases of data-driven instruction"—accessing data, analyzing data, and pivoting instruction based on the data. The report offers several recommendations for how product developers, teachers, school leaders, and funders can better address teachers' needs.

For product developers, the report suggests that data tools be designed to be compatible with each other so that teachers can "focus on teaching instead of time-consuming data management and aggregation." It also calls for tools that do not "just report what has happened, but also use current and historical performance data to anticipate student learning trajectories and personalize instruction based on each student's performance."

The report recommends that school and district leaders restructure learning environments so that teachers "have access to rich data every day" and recognize that the depth of data-driven instruction is "dependent on the availability of high-quality tools that keep teachers from being overburdened with administrative tasks."

"Good teachers have always sought to know their students, identify the most effective learning strategies, and decide how to engage the student to create the maximum learning environment," said **Alliance for Excellent Education President Bob Wise**. "I appreciate this report because through the teachers' voice, I hear firsthand how data transforms a classroom. Suddenly the esoteric discussions about 'big data' are eclipsed by the importance of 'small data,'—the effective application by one teacher of one student's data to transform an individual learning experience."

Archived video from the June 3 release event is available at http://all4ed.org/webinar-event/jun-3-2015/.

More information on *Teachers Know Best: Making Data Work for Teachers and Students* is available at http://www.TeachersKnowBest.org.

PROTECTING STUDENT DATA IN A DIGITAL WORLD: Increasing Use of Student Data Could Boost Global Economic Value by $1.2 Trillion, New McKinsey Report Finds

Increasing the use of student data in education could unlock between $900 billion and $1.2 trillion in global economic value, with $300 billion of that total coming from improved instruction, according to a new report from McKinsey & Company. The report, *Protecting Student Data in a Digital World*, outlines several data and privacy challenges for schools in unlocking this value, but it offers lessons from other industries as a guide for how to do so.

"Policy makers, school administrators, teachers, parents, and organizations that are responsible for collecting and protecting data can learn from other industries that use data to improve and personalize the user experience and … can embrace the transparent use of data as a path to improved educational achievement for students," the report notes.

The report notes that the effective use of data in K–12 schools is "nascent" due to several issues, including constrained school budgets that limit investments in data-driven tools and technologies, complex systems that make it difficult to implement new programs, and questions about student privacy, data collection, and data usage, both inside and outside the school system.

To "reap" the benefits of data-enabled tools, the report says that schools must understand parents' concerns about increased data collection, such as direct harm to students, companies "profiteering" from student data, and compromises to students' privacy. To address these concerns, schools should look to companies that have "learned how to manage similar risks" and "made consumers more comfortable with the collection and analysis of personal information for specific purposes." The report offers three lessons that schools could learn.

Using the example of Netflix, which offers personalized suggestions on what customers should watch based on their viewing habits, the report says schools should make clear the tangible benefits of sharing data. It notes that a school district in the western United States adopted learning modules that adapt to student needs in real time and dashboards that track student progress toward learning objections. At first, some parents opted their children out of the program, but nearly all parents changed their minds within six months of seeing how the tools were helping students progress.

"Such an illustration of the benefits of using data to improve student learning—and in particular how it can actually enhance the effectiveness of the teacher—can be a powerful tool in overcoming concerns that data-enabled tools might lower the quality of education that students receive," the report notes.

Second, schools should be transparent about what data will be collected and how it will be used, similar to how smartphone-application builders ask individuals if it is okay to track their location information. The report also urges schools to give families access to the data being collected about their children and make sure that parents know exactly who has permission to view and edit student data.

Finally, schools must earn the trust of parents, teachers, and students. The report cites banks, which have access to a great deal of sensitive personal data but have gone to great lengths to build trust, including spending heavily on cybersecurity and submitting to rigorous regulations and oversight. It suggests that schools also engage qualified cybersecurity firms or "build trust on the front line." For example, a California school district held a three-day learning summit where it invited its technology learning partner to speak with teachers, parents, and community members about its mission and motives.

"As the type and volume of student data increase, so do concerns about who exactly will have access to the information and how it will be used," the report notes. "To get the benefits of data-enabled instruction, schools would need to collect and analyze more student data than they have in the past. They would also need to collect this information more often and more rigorously, and then make relevant portions of it available to more people and organizations. The risks are real, but they can be managed, leading to real rewards in the form of better student learning and achievement."

Protecting Student Data in a Digital World is available at http://mckinseyonsociety.com/protecting-student-data-in-a-digital-world/.

EXPANDED SUCCESS INITIATIVE: New York City Program Targets College Readiness for Young Men of Color

Research shows that, compared to other groups, young men of color face higher rates of school dropout, unemployment, and incarceration, and a growing number of local and national initiatives are attempting to address these inequities. As part of these efforts, the New York City Department of Education launched the Expanded Success Initiative (ESI) in August 2012 to improve college readiness among the city's African American and Latino male students. After just two years of implementing ESI, educators in the forty participating schools have seen improvements in their schools' cultures and student discipline, according to a report from the Research Alliance for New York City Schools (Research Alliance).

"There is strong evidence that these schools are doing something different as a result of ESI," states **Adriana Villavicencio**, **lead author of the report**. "We are seeing important shifts in the tone and culture of the schools."

ESI is the educational component of New York City's Young Men's Initiative (YMI), a multi-agency program designed to address disparities in numerous outcomes related to education, health, employment, and the criminal justice system between young men of color and their peers. The Research Alliance is conducting a four-year evaluation of the implementation and impacts of ESI. Its latest report, *Changing How High Schools Serve Black and Latino Young Men: A Report on New York City's Expanded Success Initiative*, focuses on ESI's impact on tenth graders during the second year of the program, School Year 2013–14.

Results from the evaluation show that students in ESI schools are more likely than students in traditional schools to receive various college-related support, including preparation courses for the PSAT, SAT, and ACT, and instruction on specific college-readiness skills, such as writing

research papers. Additionally, ESI students are more likely to participate in activities designed to encourage a college-going mindset, such as college visits, college advising workshops and information sessions, and mentoring programs.

ESI appears to affect school discipline practices as well. "While suspension rates for behaviors categorized as 'violent' and 'aggressive' remained constant in both ESI and comparison schools, there is evidence that ESI schools are reducing the number of suspensions related to 'disruptive' infractions, which include 'minor altercations,' vandalism, and academic dishonesty," the report states. Many ESI schools have implemented alternative discipline practices, such as peer mediation and conflict resolution training; thirteen schools reported a decrease in student suspensions or discipline problems since implementing ESI, according to the report.

Each participating ESI school received professional development and $250,000 to create and/or expand programming designed to prepare African American and Latino young men for success in college and a career. ESI does not prescribe specific programs or strategies schools must follow; instead, it requires participating schools to implement their own programs in four focus areas:

- strengthening academics;
- supporting youth development and improving discipline;
- creating a college- and career-focused school culture; and
- incorporating culturally-relevant education that recognizes students' perspectives in all aspects of their learning.

"The hope was that the ESI would spur innovation in these schools and improve outcomes for the students they serve—while also generating larger lessons about preparing young men of color for success in college and beyond," the report states. "ESI expects schools to shift their mindset from dropout prevention to college and career readiness."

The Research Alliance report evaluates how well each school's programming aligns with ESI's four focus areas (described as implementation "fidelity") and also evaluates the frequency, duration, and number of programs offered (described as implementation "intensity"). Three-quarters of the ESI schools implemented the program with high fidelity, meaning their programs aligned with ESI's tenets. Meanwhile, 85 percent of ESI schools implemented the program with high intensity, meaning they offered some ESI programs at least weekly to ninth- and tenth-grade male students during the school year. The Research Alliance report does not assess the quality of the programs; it simply documents the presence or absence of various programs and services.

Despite the high levels of implementation fidelity and intensity, ESI has not improved students' access to rigorous academic content or improved student academic achievement. Although fifteen ESI schools reported adding Advanced Placement or other college-level classes to their course offerings, results from the study show limited evidence of schools increasing academic rigor in other ways. Additionally, the study did not find any impacts of ESI on students' grade point averages, credit accumulation, or rates of passing the New York Regents exams. While it is possible that ESI's focus areas may not influence student academic outcomes directly, the

program simply may need more time to produce academic gains, the report notes. Additionally, the current report focuses exclusively on ESI's impact on tenth graders and the researchers point out that "the most important measures of success—college readiness and enrollment—cannot be determined until students' twelfth-grade year or later."

Changing How High Schools Serve Black and Latino Young Men: A Report on New York City's Expanded Success Initiative is available at http://steinhardt.nyu.edu/research_alliance/publications/esi_year2.

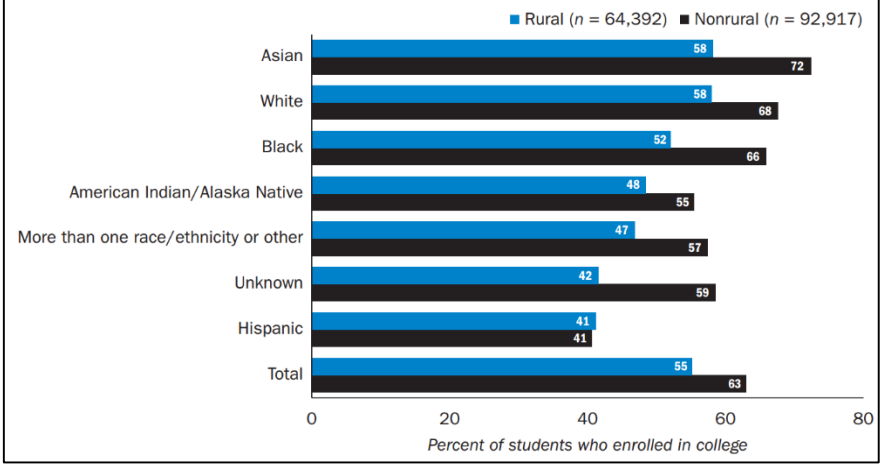
NOT QUITE COLLEGE BOUND: Oregon's Rural Students Lag Behind Nonrural Peers in College Attendance

Students who attend rural high schools in Oregon are less likely to enroll in postsecondary education than students who attend the state's urban and suburban high schools, according to a study conducted by the Regional Educational Laboratory Northwest (REL) for the Institute of Education Sciences. Furthermore, when rural students do enroll in college, they are less likely than nonrural students to make it to their second year, according to the study, *Comparing Postsecondary Enrollment and Persistence Among Rural and Nonrural Students in Oregon*.

Of Oregon's 200 school districts, 158 qualify as "rural districts," according to the REL report. These districts educate nearly 180,000 pre-K–12 public school students, approximately one-third of the state's total public school population. In 2009, the Oregon State Senate required the Oregon State Board of Education and the Oregon State Board of Higher Education jointly to explore ways to increase postsecondary enrollment and persistence among rural students.

But the REL study finds that Oregon's rural students still lag behind their urban and suburban peers. Researchers examined data from students who attended ninth grade at an Oregon public high school in 2005, 2006, or 2007 and who graduated or left school between 2005 and 2012.

Figure 2. Among rural students, White and Asian students had the highest postsecondary enrollment rates



As shown in the report graph to the right, 55 percent of rural students enrolled in postsecondary education after high school, compared to 63 percent of nonrural students. Rural students had lower rates of enrollment than nonrural students across all high school academic achievement levels and across all racial categories, except for Hispanic students. Results from the study show that rural Hispanic students were slightly *more likely* than their urban and suburban peers to enroll in postsecondary education.

Although rural students had lower college enrollment rates overall, their likelihood of enrolling in postsecondary education immediately—meaning during the first term after leaving high school—compared favorably to that of nonrural students with similar characteristics. There was one exception: rural African American students were less likely than their suburban and urban counterparts to enroll in postsecondary education immediately after high school.

Overall, though, students who did not enroll immediately in postsecondary education still accounted for the largest share of rural students. Only 34 percent of rural students enrolled in postsecondary education during the first term after high school, while 21 percent delayed enrollment, and 45 percent did not enroll at all. Among nonrural students, though, 42 percent enrolled in postsecondary education immediately after high school, while 21 percent delayed enrollment, and 37 percent did not enroll at all.

Rural students who enrolled in postsecondary education also had lower persistence rates than nonrural students, regardless of whether they delayed college enrollment or enrolled immediately, according to the REL study. Among rural students, 78 percent made it to their second year of college, compared to 83 percent of nonrural students. Rural students had lower persistence rates across all high school academic achievement levels and in all college categories: two-year, four-year, private, public, in-state, and out-of-state institutions. Additionally, access to financial aid did not influence college persistence among rural students. Both rural and nonrural students who received financial aid were equally likely to continue to their second year of college.

"Previous research has shown that rural students … may experience different barriers to accessing postsecondary education, such as fewer advanced course offerings, a shortage of highly qualified teachers, and more financial constraints at the high school level," the report states. "Given the national emphasis on improving access to and enrollment in college for all students, highlighting differences between nonrural and rural students is particularly important to ensure education policies are serving rural communities and promoting rural educational attainment as well as attainment in urban and suburban locations."

Comparing Postsecondary Enrollment and Persistence Among Rural and Nonrural Students in Oregon is available at http://ies.ed.gov/ncee/edlabs/regions/northwest/pdf/REL_2015076.pdf.

Straight A's: Public Education Policy and Progress is a free biweekly newsletter that focuses on education news and events in Washington, DC, and around the country. The format makes information on federal education policy accessible to everyone from elected officials and policymakers to parents and community leaders. Contributors include Jason Amos, editor; Ariana Witt; Kristen Loschert; and Kate Bradley.

The Alliance for Excellent Education is a Washington, DC–based national policy and advocacy organization dedicated to ensuring that all students, particularly those traditionally underserved, graduate from high school ready for success in college, work, and citizenship. For more information, visit www.all4ed.org. Follow the Alliance on Twitter (www.twitter.com/all4ed), Facebook (www.facebook.com/all4ed), and the Alliance's "High School Soup" blog (www.all4ed.org/blog).