



Giving Every Student Access to Excellent Teachers

A Vision for Focusing Federal Investments in Education

By Public Impact November 2013

Center for American Progress



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The Center for American Progress Education Policy team joined with Public Impact to create a report with new federal policy options for extending the reach of excellent teachers and the teams they lead to all students. Both organizations are dedicated to finding ways to ensure that all students receive the best instruction available and are interested in identifying ways that great teaching can reach more students.

Introduction and summary

Despite constraints on federal resources and authority in education policy, the federal government has a pivotal role to play in identifying a compelling, high-impact focal point that aligns policy priorities at the federal, state, and local levels.

A great candidate for such a focal point is expanding student access to excellent teachers. Excellent teachers—those in the top 20 percent to 25 percent of the profession in terms of student progress—produce well more than a year of student-learning growth for each year they spend instructing a cohort of students. On average, children with excellent teachers make approximately three times the progress of children who are taught by teachers in the bottom 20 percent to 25 percent.¹ Students who start behind their peers need this level of growth consistently—not just in one out of four classes—to close persistent achievement gaps. Students in the middle of the academic-achievement continuum need it to exceed average growth rates and leap ahead to meet rising global standards.

Today, even students who have good, solid teachers every year—and therefore make about a year’s worth of learning growth annually—end up where they started relative to both their U.S. and international peers. Meanwhile, the higher-order thinking that excellent teachers develop so well in their pupils is increasingly important to students’ future employment prospects.²

These sobering facts have driven U.S. policymakers and advocates at the local, state, and national levels to focus intently in recent years on boosting the number of excellent teachers in America’s schools. Efforts to increase the number of excellent teachers in U.S. classrooms have focused primarily on recruiting more high achievers into the teaching profession, creating incentives for better teachers to stay in teaching and teach less-advantaged children, and dismissing the least-effective teachers. But even if these efforts are extremely successful, they will not close our nation’s achievement gaps in the near future or enable most students in

the United States to surge ahead and meet rising global standards. The reality is that a majority of U.S. students still will not have excellent teachers.³ Furthermore, the changes described above will not enable large numbers of good, solid teachers to make the leap to excellence—at least not while working in the traditional one-teacher-one-classroom model.⁴

The federal government could play a critical role in expanding students' access to excellent teaching. In the process, federal policies could also help transform teaching into a profession that attracts and keeps even more talented people and provides rich opportunities for on-the-job development and sustainably paid advancement for all teachers.

In this report, we present the following four principal levers that the federal government can employ to focus our nation on dramatically increasing student access to excellent teaching:

1. **Structure competitive grants to induce districts and states to shift to transformative school designs that reach more students with excellent teachers and the teams that these teachers lead.** Incentivize innovation by awarding funds to districts and states with strong, sustainable plans to transform staffing models in ways that dramatically expand access to excellent teaching and make the teaching profession substantially more attractive.
2. **Reorient existing formula grants to encourage transition to new classroom models that extend the reach of great teachers, both directly and through leading teaching teams.** Dramatically improve student outcomes by putting excellent teachers in charge of the learning of all students in financially sustainable ways. By teaching more students directly and leading teams toward excellence, great teachers could take responsibility for all students, not just a fraction of them.
3. **Create a focal point for federal research and development efforts.** Spur rapid progress by gathering and disseminating evidence on policies and practices that extend the reach of excellent teachers, directly and through team leadership, and accelerate development of best-in-class digital tools.
4. **Create and enforce a new civil right to excellent teachers,** fueling all districts and states—not just the winners of competitive grants—to make the changes needed to reach all students with excellent teachers and their teams.

Excellence in teaching and learning for all students must become the new goal. New school models that extend the reach of great teachers, directly and through leading and developing peers, make it possible. A federal policy focus on enabling successful and wide-scale implementation of these models is crucial. Together, federal use of these four policy levers could transform the American education model, dramatically expanding students' access to excellent teaching while turning teaching into a profession full of opportunities for sustainably paid career advancement and rigorous on-the-job learning.

But ultimate success will depend on the concrete policy actions—and the resulting changes at the school level—that accompany statements from the bully pulpit. These policy actions must overcome some substantial barriers to large-scale reform, including policy constraints that hinder educators' efforts to try new classroom and school models; a lack of exposure to and knowledge about alternative ways of organizing schools and classrooms; the still-early stage of digital tools that need to be fully developed to implement the models that require quality technology; and the fact that, in many cases, school and district leaders have been unable or unwilling to take on the massive change-management effort needed to truly transform schools and provide students access to excellent teaching through new classroom models.

In the pages that follow, we outline an initial set of ideas that, taken in whole or in part, could position federal policy and programs to better assist state and local education agencies that put excellent teachers in charge of student learning by implementing transformative school models and accelerating the development of the tools necessary to support them.⁵

Federal government: Does it have a role to play in transforming America's public education system?

Some would argue that when it comes to transforming America's schools, we should not expect much from the federal government. Federal dollars represent only 10 percent of total education spending in the United States, with state and local authorities retaining primary jurisdiction over key reform decisions. Prior waves of federal policymaking have been controversial and achieved only limited success, prompting some to conclude that there is no real place for an ambitious federal role in public education.⁶

We have a different take. Despite constraints on federal resources and authority in education policy, the federal government has a pivotal role to play in identifying a focal point that aligns policy priorities at the federal, state, and local levels.

That focal point is expanding student access to excellent teachers. As noted earlier, on average, students with excellent teachers make approximately three times the progress of students with teachers in the bottom 20 percent to 25 percent.⁷ Every child needs and deserves excellent teachers consistently, to close persistent achievement gaps and help them meet rising global standards.

What difference does consistency make?⁸ Research shows that children who start out one year behind their peers can close the achievement gap if they have excellent teachers two years in a row. Children starting out two years behind can pull even with their peers if they have excellent teachers four years in a row.⁹ But without consistent access to those excellent teachers, children who start out behind are likely to stay behind, even with good, solid teachers who produce a year of progress each year.

Clearly, federal policy has already increased its focus on excellent teaching. Indeed, a recent hallmark of federal policymaking has been encouraging schools, districts, and states to more meaningfully evaluate teacher effectiveness and to link a range of human resource decisions—promotion and retention determinations, for example—to those evaluations. Federal Race to the Top competitions and waivers from certain requirements of the Elementary and Secondary Education Act, or ESEA, both included provisions to increase state focus on teacher effectiveness. State responses to federal leadership on this and other issues indicate the influence that federal policy exerts, even if indirectly, over the decision making of state education agencies and local education agencies, or SEAs and LEAs, respectively.

How can federal policy increase its focus on excellent teaching? Furthermore, how can it transition from simply encouraging the basics of good measurement and common-sense human resource practices to actually dramatically increasing student access to excellent teaching?

Federal resources can help schools transition to new school models that allow excellent teachers to reach more students, both directly and through leading teaching peers. By restructuring traditional classrooms and teacher roles and selectively employing age-appropriate digital resources to deliver content and assess student progress, schools can extend the reach of excellent teachers and personalize each student's learning experience. At the same time, schools can transform the teaching profession into what we call an "Opportunity Culture," in which teachers have the chance to collaborate in teams, learn from peers, develop their craft, advance in their careers, and earn more pay without the necessity of leaving the classroom to gain these opportunities.¹⁰

Models for extending the reach of great teachers are key to an Opportunity Culture. They unlock opportunity for the sustainably funded, well-paid career-advancement paths needed to attract and keep more of our nation's outstanding teachers teaching longer. Such models also promote accountable team-teaching models that help good teachers learn from and then perform like great teachers.

Together, these can enable increased selectivity about who enters and who stays in the profession, benefitting not just students but also existing teachers who need strong peers on their teams. Without changes that boost career opportunities, pay, and on-the-job support and development, increased selectivity is not likely by itself to influence who enters and who stays in teaching.

As school culture shifts toward a focus on teaching excellence, more schools will adopt team-teaching models that are structured to achieve the caliber of instruction students need. More education spending can then be reallocated from supplemental instructional roles and other costs to significantly increase the pay of classroom teachers, whom the public increasingly holds accountable for student outcomes.¹¹

In our recommendations here, we focus on the key that unlocks the potential for opportunity, selectivity, and much higher pay: models that extend the reach of excellent teachers, directly and via their teams.

Opportunity Culture: Redesigning schools to extend the reach of excellent teachers¹²

How to ensure every student has excellent teachers every year

Extending the reach of excellent teachers requires schools to redesign jobs, use technology in new ways, or both. The options listed below can be implemented in different combinations.

Specialization: Excellent teachers specialize in their best subjects and challenging roles.

Multiclassroom leadership: Excellent teachers lead and develop instructional teams.

Time-technology swaps: Digital instruction replaces enough of top teachers' time to allow them to reach more students without having to increase class size. Students have digital instruction for 25 percent or more of their learning time in select subjects for as little as one hour daily. Some digital time is spent doing off-line skill practice and projects.

Remote teaching: Technology enables excellent teachers to engage directly—though not in person—with students, bringing top teaching to places that lack sufficient local talent.

Classroom-size changes: Excellent teachers teach larger classes—within limits and by choice. Alone, this is the least transformative

option. Implementers thus far have combined it with other models to reduce instructional group sizes to offset class size increases.

In addition to benefitting students by increasing the number of them who experience teaching excellence, these models hold immense value for teachers. When designed correctly, they give teachers more opportunities to use their time for collaboration with teammates, develop materials and teaching guides for others, and plan for more-personalized small-group and individual instruction that develop higher-order thinking.¹³ These models also offer career-advancement opportunities that allow all teachers to develop and contribute to excellence immediately, with sustainably funded, increased compensation for teachers who take on greater responsibilities through the reach-extension roles described above.¹⁴ As schools offer more of these opportunities, they will be able to recruit and retain more excellent teachers, further increasing student access. Schools that implement these reforms school wide can reallocate even more funding to increase the pay of all teachers, while still paying excellent teachers even larger stipends for multiclassroom leadership.

Thus, these models pave the way for a fiscally sustainable cycle of excellence,¹⁵ enabling schools to pay teachers more, within budget, and reach more students with excellent teachers and their teams.

Focus competitive grants to expand access to excellence and transform the teaching profession

Structure competitive grants to induce districts and states to shift to transformative school designs that reach more students with excellent teachers and the teams that these teachers lead. Incentivize innovation by awarding funds to districts and states with strong, sustainable plans to transform staffing models in ways that dramatically expand access to excellent teaching and make the teaching profession substantially more attractive.

Competitive grants target funds to incentivize change and harvest the best ideas from a range of players. Thoughtfully designed competitive grants—with well-designed selection criteria, informed application reviewers, rigorous impact evaluations, and accountability for truly financially sustainable approaches—could engage public- and private-sector partners to develop the innovative approaches, tools, and content needed to give every student access to excellent teachers.

In recent years, competitive grants have targeted a growing number of reform partners at the state, district, and school levels to achieve a diverse set of reform objectives. While the shortcomings of existing grants with respect to selection, impact evaluation, and sustainability serve to highlight needed improvements in grant design, results also demonstrate the power of competitive grants to influence the content of federal, state, and local policy.¹⁶

The future funding stream for current competitive grants is subject to changing political winds. ESEA reauthorization has been delayed persistently in past years.¹⁷ This uncertainty presents both a challenge and an opportunity—a challenge to anticipate the best platform for the promotion of future competitive-grant proposals and an opportunity to think creatively about what that platform might be.

Capitalizing on that opportunity, we first propose a competitive grant specifically designed to dramatically increase the number of students with access to excellent teachers and transform teaching into a higher-paid, more opportunity-rich profession. We follow that proposal with a set of more narrowly targeted ideas that could nevertheless make significant progress toward giving every child access to excellent teachers.

A competition focused on access to excellence and transforming the profession

Although existing federal competitive grants such as the Investing in Innovation, or i3, Fund; the Race to the Top-District competition; and the Teacher Incentive Fund, or TIF, all induce districts and schools to emphasize teacher effectiveness, federal leaders could see more progress toward reaching all students with excellent teachers and transforming the profession by specifically focusing a competition on goals such as those indicated in our “Reach-Extension Principles” text box.

Reach-Extension Principles

Increasing teachers’ reach, leadership, and pay sustainably

Reach more children successfully with excellent teachers—who produce high-growth learning and more—through redesigned school and classroom models.

Pay excellent teachers—and eventually all teachers—far more for reaching more children successfully.

Achieve permanent financial sustainability, after transition, by funding new models within regular budgets.

Include roles that develop other teachers by working with excellent peers to produce excellent outcomes immediately.

Identify the teachers accountable for each student’s outcomes and clarify what people, technology, and other resources they are empowered to choose and manage.

Here’s how such a grant competition might work—similar to Race to the Top, either states or school systems—including charter networks—could be designated as the eligible applicants. Proposals would be judged primarily by the ability of plans submitted to advance three metrics:

1. The increase in the percentage of students who have highly effective teachers,¹⁸ as defined by a teacher-evaluation system that meets federal standards, in charge of their learning
2. The increase in the percentage of teachers with highly effective teachers in charge of and accountable for their development
3. The percentage increase in sustainable compensation offered to highly effective teachers who reach more students. Applicants could garner even more points if they also raised the pay of all teachers sustainably.

A key phrase in metric one is “teachers ... in charge of their learning.” Applicants would need to present a plan for increasing the percentage of students who have highly effective teachers as their teachers of record—the teachers who take formal responsibility for students’ achievement gains. Successful applicants would clearly define how teachers would be held accountable for student progress.

The key concept in metric two is “highly effective teachers accountable for development.” Proposals would gain points for demonstrating how all teachers, not just those who are already highly effective, would have the chance to develop their teaching capabilities as a result of the proposed changes. Under the above design, applicants would get a leg up in the competition by proposing to transform their schools around collaborative teams led by excellent teachers who take charge of other teachers’ professional growth.

A key word in metric three is “sustainably.” Applicants would have to commit to fund increases in teacher pay, not out of the competition’s grant or other temporary sources but via budget reallocations made possible by the applicants’ proposed redesign of staffing models. Successful petitioners would present clear financial models to show how they would be able to continue paying more to highly effective teachers who extend their reach, to their team members who are also extending their reach, and perhaps to all teachers beyond the term of the grant.

To maximize the impact of these grants nationally, federal grant makers would organize a grantee-wide impact evaluation to document strategies implemented across grantees, the success grantees achieve in advancing the key metrics over the course of the award, and the actual sustainability of the approaches beyond the grant period. With such an evaluation, the competition could foster a true laboratory that could yield lessons for other states and school systems intent on similar reforms.

Refocusing existing competitions

Even in the absence of a competitive grant specifically geared toward reach extension, existing grant structures could be leveraged to chip away at the changes needed to put excellent teachers in charge of all students’ learning. In initial and ongoing reviews of competitive-grant implementation strategies, federal staff could explicitly seek and accept plans that extend the reach of excellent teachers within the five Reach-Extension Principles: reaching more students with great teachers; providing more pay for excellent—and eventually all—teachers; providing sustainable funding; creating new roles so all teachers learn from great teachers while they excel in teams; and enhancing the great teachers’ authority and credit for reaching more students.

As currently structured, the TIF already provides resources to high-need schools to pay teachers more for various purposes, including taking on new roles. Some simple adjustments to the application criteria could ensure that TIF dollars are directed to high-impact, sustainable compensation reforms. TIF competitions, for example, could prioritize applications that create and expand roles that put highly effective teachers in charge of more students' learning, rather than fewer. In addition, grant guidelines could require schools to use TIF awards to design and transition to sustainable compensation models that pay excellent teachers more for reaching more students, rather than use federal dollars for unsustainable supplemental pay that disappears once TIF funds run out.

Focus formula grants on increasing student access to excellent teachers

Reorient existing formula grants to encourage transition to new classroom models that extend the reach of great teachers, both directly and through leading teaching teams. Dramatically improve student outcomes by putting excellent teachers in charge of the learning of all students in financially sustainable ways. By teaching more students directly and leading teams toward excellence, great teachers could take responsibility for all students, not just a fraction of them.

Formula grants encompass the great majority of federal funding distribution to states and schools. In 2012, for example, Congress appropriated nearly \$17 billion for ESEA’s “Title I, Part A” and “Title II, Part A” formula grants, which represented 78 percent of the total appropriations of the Office of Elementary and Secondary Education. These funds are distributed to states and schools according to formulas and guidelines legislated under ESEA. While formula grants are intended to improve learning for all students, with a special focus on disadvantaged students under Title I, the funds too often end up supporting ineffective strategies that fail to achieve the intended impact.

The federal government can reinvent formula grants as targeted, impactful tools for increasing the number of students with excellent teachers. Reinvented formula grants would also more effectively direct funds to the students who need them most. Below, we list three policy approaches and then discuss the mechanisms within each for turning ESEA spending into investments likely to pay off in educational and economic benefits.

Policy approaches to putting excellent teachers in charge of more students’ learning

- **ESEA reauthorization.** Congress has the opportunity to fundamentally rethink the assumptions and incentives that are embedded in previous versions of the legislation when it reauthorizes ESEA. The to-be-authorized version could focus

formula funding specifically on maximizing excellent teachers' reach and making the teaching profession substantially more attractive through new classroom models and the use of digital tools that enable career advancement, higher pay for teachers, and on-the-job development. At the time of this paper, ESEA reauthorization is several years overdue. Although reauthorization promises the largest long-term impact, intermediate actions could improve the effectiveness of formula grants even if ESEA reauthorization remains on hold.

- **ESEA waiver renewal.** The renewal process for existing ESEA waivers could serve as an interim platform for changing the way states use formula funds until ESEA is reauthorized;¹⁹ the federal government could require that states change their policies and plans for funds before renewing waivers.
- **Guidance revisions.** Even nearer term, revising the guidance associated with each formula grant to encourage different models for education reform could prompt different uses of funds.²⁰ Following this approach, guidance could specify that funds can be used to build out schools' technology infrastructures to support differently designed classroom or staffing models or implement blended-learning models so teachers have more time to plan, develop, and collaborate with colleagues.

Mechanisms to increase the effectiveness of ESEA policies

All of these policy approaches could drive funds toward activities that increase the number of students with excellent teachers by making revisions to eligibility requirements, allocation approaches, and/or accountability metrics.

Eligibility requirements

Formula grants require states to meet eligibility criteria to receive federal funds. ESEA, for example, allows states to award LEAs funding only if state and local funds support comparable programs and services in both Title I and non-Title I schools.²¹

Along these lines, the federal government could restructure formula-grant eligibility requirements to address potential state policy barriers to building an Opportunity Culture in every school. Federal formula-funding eligibility conditions could require that state policy enable excellent teachers to reach more students for more pay through:²²

- **Funding** that is flexible and weighted by student need, so that schools may invest in the people and technology that best advance their students' learning
- **People policies** that let schools hire, develop, deploy, pay, advance, and retain excellent teachers and collaborative teaching teams to reach every student with excellent teachers
- **Accountability**, using increasingly better measures, that drives excellence and improvement, so that teaching teams get credit for designing instruction that leverages high-quality digital tools to give all students access to excellent teaching.
- **Technology and student data** that are available for all students, allowing differentiated instruction for all students without regard for their economic circumstances

In designing new criteria, federal policymakers would need to take care to ensure that they did not unintentionally handicap states or districts with the highest disadvantaged-student populations, as one overriding aim of these changes would be to increase access to great teachers for exactly those students.

Allocation approaches

Ninety-five percent of formula funding passes through SEAs and is funneled directly to LEAs, even though states are in a better position to push higher-leverage projects.²³ SEAs have the capacity to develop information-technology, or IT, systems or professional-learning content to support new team-based staffing models statewide or oversee large-scale implementations of new classroom models over multiple schools or entire districts. Change of this magnitude would be difficult to achieve through grants to LEAs.

The federal government could adjust funding allocations to encourage higher-leverage projects. States could be permitted to retain a larger portion of current funding to implement large-scale initiatives, or funds could be set aside for competitions geared toward higher-impact reforms.²⁴ Either approach would enable larger-scale, innovative projects. But flexibility such as this must be coupled with an obligation to implement strategies for reaching far more students with excellent teachers, providing these teachers and their teams with more pay, and funding it sustainably.

Accountability metrics

If the federal government changes formula-grant eligibility requirements and allocation approaches, it will also need to define accountability metrics to track the number of students with excellent teachers. It should require states that receive funds to track the number of students with excellent teachers who are formally accountable for their learning, and it should hold states accountable for increasing this number from one year to the next. Furthermore, states should measure impact achieved with the following simple formula:

$$\textit{Teacher Impact} = \textit{Student Outcomes} \times \textit{Number of Students Reached}$$

“Student Outcomes” are measured, at a minimum, by the growth that a teacher’s student demonstrates. As measures improve, outcomes may also include advancement in higher-order thinking and other developmental areas important to life-long success that teachers can influence. “Number of Students Reached” refers to the number of students who receive instruction either delivered or directed by the teacher, who is formally accountable for each student’s outcome.

This formula goes beyond measuring the number of excellent teachers each school employs to address the more crucial question: What impact did those excellent teachers have?

Federal revisions to formula-grant eligibility requirements, allocation approaches, and accountability metrics would prompt policy changes at the state and local levels that could meaningfully increase the number of students with excellent teachers.

Next, we discuss Title I, Part A and Title II, Part A of ESEA and propose different ways funds could be used to invest in the start-up and transition costs needed to increase the number of students with excellent teachers.

Title I, Part A

SEAs receive Title I, Part A funds to “help ensure that all children meet challenging state academic standards,” which, via grants to LEAs, they funnel to schools with high numbers or percentages of children from low-income families.²⁶ Schools in which children from low-income families make up at least 40 percent of enrollment can use Title I, Part A funds for school-wide programs that serve all children in the school.²⁷ School-wide programs are in more than 48,000 schools, reaching 50 percent of all K-12 students.²⁸

School-wide programs present opportunities for implementing models that would transform schools.²⁹ Currently, most schools use the majority of their Title I resources to hire additional teachers, paraprofessionals, or instructional coaches,³⁰ with the assumption that extra adults will increase student learning. While recent data show that achievement among Title I students has improved over the past decade,³¹ the improvements resulted in only small declines in measured achievement gaps between disadvantaged students and other students.³² To achieve the dramatic gains in student learning necessary to meet rising global standards, we need to do more than simply hire more adults. Research clearly demonstrates that excellent teachers improve student outcomes. Allocating Title I funds to better support instructional excellence would do more to close achievement gaps.

Title II, Part A

Federal grants made with Title II, Part A funds are intended to increase the number of highly qualified teachers, principals, and assistant principals, as well as increase teacher and principal effectiveness. Grants are made to SEAs, which then distribute most of those funds via subgrants to LEAs. LEAs and schools frequently

Measuring impact

To understand why measuring impact is important, consider two districts, both of which increase their percentage of excellent teachers from a baseline of 25 percent to a much-improved 40 percent. District A uses a traditional, one-teacher-one-classroom model and reaches 40 percent of students with excellent instruction. District B, on the other hand, redesigns roles and employs technology so that its cadre of excellent teachers reaches 80 percent of the district’s students. Redesigned roles enable these excellent teachers and their teams to earn more in a manner that is sustainable for District B. In turn, the higher pay provides incentives for them to stay longer and attracts strong peers to join them. Over time, the quality of District B’s teaching force improves.

If accountability measures look at the percentage of teachers a district deems “excellent,” the districts look the same. It is only when the measure reflects the number of students reached that we see the transformative nature of District B’s activities.²⁵

use Title II, Part A funds to either reduce class size by hiring more teachers or to fund professional development.³³ But again, research has failed to demonstrate that student learning is meaningfully improved by class-size reductions of the magnitude Title II funds typically produce³⁴—or that the professional development that teachers receive actually improves teaching.³⁵ Schools and districts need to shift the focus away from increasing the quantity of adults in schools toward increasing the quality of teachers based on measures of the effectiveness of those who are accountable for student learning. Likewise, more professional development needs to be in the hands of teachers who have already demonstrated instructional excellence and who are accountable for the student outcomes their mentees produce.

Using formula grants to fund transitions to new models

New staffing models need to be—and can be—sustainably supported by regular, reliable funding streams, not special grants. Still, shifting to new models requires investment in technology, systems, and people. Targeting Title I and Title II to fund these initial investments could pay dividends for years to come as teachers and students benefit from new models.

- **Transform systems needed to support differentiated staffing roles.** Team-based teaching models likely will not fit neatly in existing finance, accountability, and human resources systems. Invest in adapting systems to accommodate the pay scales, evaluations, and supports unique to each new staffing role.³⁶
- **Make facilities and furniture changes in existing schools.** Schools may find that classrooms need to be altered to incorporate digital labs, which could require removal of walls and installation of electrical, cable, and wireless connection gear. Some schools may need new furniture, such as computer- and project-friendly tables.³⁷
- **Invest in personalized learning platforms to customize instruction.** Personalized learning platforms enable teachers to monitor each student's progress, offer next-step learning tasks for students learning in a digital environment, diagnose student challenges with certain skills or content areas, and share usable data with other teachers, parents, and students. With the information that these platforms provide, schools can assign students to the teachers best equipped to meet their needs. With personalized learning platforms in place, all students receive instruction tailored to their own needs and progress.
- **Purchase the technology teachers need to support new classroom models.** Schools need reliable computers and high-quality, interactive digital content before teachers can put time-technology swaps to work.
- **Bring more interaction with excellent teachers to students in urban schools and hard-to-reach rural schools via remote instruction.**³⁸ This way, location is no longer a barrier to receiving an excellent education. Invest in developing the systems through which remote teachers are selected, assigned, and delivered to students across a district or state. Design the school-building routines and hire the staff needed to integrate remote teaching into students' school days.
- **Use blended-learning models to increase the number of hours that teachers have to plan, develop, and collaborate with colleagues.** The best professional learning happens when it is embedded in daily activities, frequent, and related to curricula teachers will cover in their classrooms.³⁹ Having additional time with teaching teams gives good teachers a daily opportunity to learn from great teachers, and it gives great teachers—teacher leaders—the opportunity to increase their impact by directly influencing the teachers they lead.⁴⁰ Invest in designing teaching schedules that will fully leverage blended-learning technology to accommodate additional time with teaching teams.
- **Design professional learning to support teachers in the different roles that new models require.** Teachers engaging with new digital content and analytical capabilities need training on how best to use these tools. Likewise, teachers who are taking responsibility for coaching and managing other teachers need to develop additional and different competencies than they needed as solely classroom teachers. Invest in designing high-quality professional-learning experiences for teachers using new tools and taking on new roles.
- **Obtain design assistance.** Some schools and districts may need design and facilitation assistance to choose and tailor reach models that best utilize their teachers' strengths and meet their students' needs.⁴¹

Focus investments in research and development to create a federal focal point for education research

***Create a focal point for federal research and development efforts.** Spur rapid progress by gathering and disseminating evidence on policies and practices that extend the reach of excellent teachers, directly and through team leadership, and accelerate development of best-in-class digital tools.*

The long-term impact of extended-reach models hinges on research that continuously enhances the selection and development of teachers, as well as the content, diagnostic tools, and instructional roadmaps that support consistent differentiation and high standards for student-learning advancement.

- **Invest in a research agenda to inform the selection and development of excellent teachers and the design of roles that extend their reach.** In the past several years, the Measures of Effective Teaching, or MET, project has focused research on identifying correlations between numerous potential measures of classroom-teaching effectiveness. Additional research is needed, however, along two frontiers not explored by MET. First, MET concentrates on factors that can be observed or measured for teachers already in the classroom. It does not focus on another important question: What pre-service characteristics predict future success as a teacher? A well-honed set of research tools has been used in other sectors to measure competencies that predict future success on the job. Competencies such as “achievement orientation” and “impact and influence,” for example, predict success in many professional jobs and can be measured reliably in individuals before they take those jobs.⁴² Conducting this kind of research on K-12 teachers would reveal predictive competencies that could then serve as the basis for much stronger selection of individuals into teaching and inform teachers’ development of these capabilities.

Research could also determine what indicators of teaching performance can be measured before a teacher has full responsibility for students in real classrooms and used to predict a teacher's later success in unsupervised settings. If all new and aspiring teachers, for example, worked on teaching teams led by excellent teachers, performance assessment in the first year might predict future performance.

A comprehensive research agenda should also systematically assess the impact of reach models on student achievement and use that evidence to encourage adoption of those classroom models that put excellent teachers in charge of student learning. These research efforts would be best funded at the national level.

- **Accelerate development of great digital content aligned with college- and career-ready standards.** As mentioned above, blended learning extends the reach of excellent teachers by leveraging digital instruction for a portion of students' learning time. Federal research funds could be allocated for grant competitions designed to spur development of high-quality digital content. Federally sponsored research could reduce the burden on teachers, schools, LEAs, and SEAs to develop content and enable the elevation and distribution of the best digital content educators have to offer.

Designating a federal focal point for content development may also uncover research efforts in other federal agencies with potentially high-impact applications for K-12 education.⁴³ Research conducted by the Defense Advanced Research Projects Agency, or DARPA, for the U.S. Navy, for example, yielded a 16-week blended-learning training module that prepared new IT specialists to handle problem tickets with success rates that far exceeded that of personnel with five to seven years of field experience. Actively identifying such successes and retooling them to address persistent K-12 education challenges maximizes the efficiency and impact of federal research and development efforts and promises substantial benefits to students nationwide.⁴⁴

- **Invest in digital tools and instructional roadmaps that personalize content.** One of the promises of a well-executed blended-learning environment is the ability of excellent teachers to customize instructional content based on student progress. Federal research and development funds could be allocated to sponsor competitions or provide incentives for software developers to create the cutting-edge tools essential to personalize learning experiences for all students.⁴⁵ Potential priority items include:⁴⁶

Supporting digital initiatives through federal partnerships

The White House and the U.S. Department of Education hosted the first-ever “Education Datapalooza” in 2012, featuring several open-data initiatives supported by federal partnerships:

- **The MyData initiative** is a collaborative effort between the Department of Education and software developers that seeks for every student—or parent of an underage student, as appropriate—to have access to his or her own academic data, wherever those data are stored, in both a machine-readable and human-readable format. By going online and clicking a MyData button, students can securely download copies of their transcripts, course grades, and/or demonstrated competencies.⁴⁷
- **The Learning Registry**, available at www.learningregistry.org, and the Federal Registry for Educational Excellence, or FREE, available at free.ed.gov, were developed in partnership with numerous federal agencies and private and nonprofit entities to provide a new way to identify and access educational resources online. Together, the sites bring together publishers, developers, and educators to offer both a platform for innovation and a portal for accessing information about the content area, curricular alignment and ratings of online resources.⁴⁸
- **Open Badges**, available at www.openbadges.org, is an innovative infrastructure that allows colleges and industry organizations to award micro-credentials, or badges, to students who demonstrate proficiency in specific competencies. Open Badges started as a collaborative project between the John D. and Catherine T. MacArthur Foundation; the Humanities, Arts, Science and Technology Advanced Collaboratory, or HASTAC; and Mozilla, and it has continued to grow through collaboration with a broad community of contributors, including the National Aeronautics and Space Administration, the Smithsonian Institution, the Intel Corporation, and more.⁴⁹

- **Data tools** that capture and display data from digital learning on dashboards that allow excellent teachers to responsibly monitor and manage student progress
- **Instructional roadmaps** to help students and teachers match next-step digital learning to each individual student’s needs. Excellent teachers spend far too much time searching for and cobbling together differentiated instructional materials, time they could better spend reaching more students and leading peers. Maps could include both next-step learning levels and identification and recommendations for indicators of learning differences and disabilities, making successful instruction of all students easier for great teachers and their teams.
- **Creation platforms** that let excellent teachers develop their own content such as video lessons, which students can use when they’re not with teachers

- **Provide infrastructure to enable easy access to digital-learning tools and content.** Developing high-quality digital tools and content is the first challenge, but putting them in the hands of excellent teachers nationwide is equally important. In 2010, the Department of Education and the Department of Defense—in partnership with the White House and numerous federal agencies, nonprofit organizations, international organizations, and private companies—launched a joint effort to create an open-source directory that collects information about the location, ratings, and curricular alignment of digital-learning content. The Learning Registry is an open source platform that connects publishers willing to share content with developers looking to build innovative tools and apps. The Learning Registry also powers the Federal Registry for Educational Excellence, or FREE, which provides educators, parents and students with easy access to nearly 300,000 publicly available online resources. Federally funding such infrastructure projects ensures broad access to cutting-edge content and tools and extends the reach of federal research and development funds to support state and local education initiatives.

Designating a federal focal point could also position the federal government to go one step further by aggregating demand to more cost-effectively acquire digital resources from third-party providers. States could elect to participate in federally coordinated consortia to negotiate contracts, with positive repercussions for state and local education budgets and the private sector.⁵⁰ Aggregated demand offers market stability for private companies and prompts investments in parallel research agendas,⁵¹ magnifying the impact of federal research and development dollars.⁵²

- **Concentrate efforts to facilitate knowledge transfer across federal, state, and local agencies.** Untapped sources of education-related innovation exist within other federal agencies and in numerous state and local reform efforts. The DARPA initiative described above is one high-profile example, but others are waiting in the wings.

A handful of states have established education-oriented innovation clusters, modeled on practices in other knowledge-intensive sectors that bring together education, research, and private partners to foster innovation ecosystems. Some of these, such as Digital Promise's League of Innovative Schools,⁵³ reach across states to deepen their impact. The League of Innovative Schools is a national

coalition of 32 school districts in 21 states that serve more than 2.5 million students. Through partnerships with start-ups, research institutions, and one another, League of Innovative Schools districts commit to demonstrate, evaluate, and scale-up innovations that deliver better results for students.

The federal government could play an important role in encouraging innovation clusters to focus on evaluating and scaling the classroom models and digital resources that support an Opportunity Culture. Enhanced partnerships between federal authorities and innovation clusters would leverage expertise from a wide range of sectors and provide a federal platform for disseminating results to a wider audience and elevating education solutions that could benefit millions of children.

- **Increase research and development funding, putting education research and development on par with other departments and sectors of the economy.**

The ideas discussed earlier sketch a new role for the federal government to play in focusing education-related research and development efforts. To make this vision a reality, federal investments in research and development would have to be expanded.

Although education is the most important investment we can make in our country's future, funding for education research and development pales in comparison to that in other federal agencies and knowledge-intensive sectors. The Department of Defense spends \$70 billion per year on research and development,⁵⁴ while the Department of Education spends less than \$1 billion, not even a quarter of a percent of the total education budget.⁵⁵ In contrast, other knowledge-intensive sectors, such as the computer- and electronic-product industries, devote more than 10 percent of their budgets to research and development.⁵⁶

Recent proposals speak to the need to federally fund so-called breakthrough projects in educational technology, teaching, and learning systems and to track and share implementation results,⁵⁷ but they fall short on political support and funding. Sufficient funding would position the federal government to act as a wholesaler of evidence, supporting SEAs and LEAs in the selection and iteration of reforms geared toward granting every student access to excellent teachers.

Focus on access to excellent teachers as a new civil right

In the past half century, the right to a decent education has mostly involved enabling access through mandated busing, individualized education-plan requirements for students with disabilities, and adequate funding levels. Still, major economic and racial achievement gaps remain within and among schools of all types. Yet no civil right mandates the one thing that we know from research closes even the widest achievement gaps: excellent teachers for multiple, consecutive years.⁵⁸

Legislating a new civil right to excellent teachers obligates federal and state governments to enforce what should be a fundamental guarantee. For any child who did not make grade level in the previous school year, who did not make at least one year's worth of growth in any designated subject in the previous school year, or who has not been assigned an excellent teacher in a designated subject during the prior two school years, policymakers should require schools and districts to put a consistently excellent teacher in charge of instruction. That teacher must be fully accountable for the child's learning outcomes, in person, online, or in combination. If schools and districts do not provide such a child with an excellent teacher, the child should be empowered to take legal action to enforce the right.

Recent federal announcements concerning ESEA waiver renewals have signaled that equitable distribution will be a guiding principle going forward. But formal establishment of access to excellent teachers as a new civil right would connect that signal to an equity agenda with far-reaching repercussions. Fortunately, we already have the resources we need to make it happen. Through strategic redesign of classroom models and teacher roles, along with the judicious deployment of digital instruction, we can extend the reach of excellent teachers to all students and stay within budget. Federal policy can and should play a pivotal role in getting us there.

Conclusion

Excellence for all students must become the new goal of America's public education system. The good news is it is entirely achievable if federal policy focuses investments on extending the reach of the nation's best teachers. The consequences for children, good and excellent teachers, and our national economy would be unparalleled.

Reaching more children with the best teachers, within budget, is not only possible; it is also essential for ensuring a strong economic future for our nation. As a first step, we must generate far more national will to succeed: Access to excellent teachers must become a right, not a privilege of the lucky few. Unimaginable in prior decades, job redesign combined with improved technology make a right to excellent teaching possible today.

Although federal dollars constitute a small slice of total education spending, the federal government has a crucial role to play in focusing policy priorities to systematically expand student access to excellent teachers. Pursuing the policy changes described in this report would increase career-advancement opportunities, on-the-job development, and pay of teachers, who are increasingly accountable for achieving complex, high standards with a diverse student population. In addition to creating new career opportunities, companion policies to increase teacher selectivity and pay would carry our nation much closer to the high-caliber, excellence-focused teaching population that characterizes educationally high-performing nations.

Federal policy changes to support state and local education agencies in providing all students with excellent teaching could flip the odds students now face. While today's students can expect an excellent teacher in about one out of every four of their classrooms, new school models could, at a minimum, reverse that fraction, and have the potential to put excellent teachers in charge of all U.S. classrooms. That kind of consistent access to great teaching is just what students need to succeed in school, college, and, most importantly, life.

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The views expressed here are not necessarily those of our interviewees. Any mistakes are the authors'.

Endnotes

- 1 Study results vary, but the top 20 percent of teachers produce about three times the progress of the bottom 20 percent of teachers, and a poor or black student who has a top 25 percent teacher rather than a bottom 25 percent teacher four years in a row will close the achievement gap with his or her nonpoor or white peers. Sources include William L. Sanders and June C. Rivers, "Cumulative and residual effects of teachers on future student academic achievement" (Knoxville, TN: University of Tennessee Value-Added Research and Assessment Center, 1996); Thomas J. Kane, Jonah E. Rockoff, and Douglas O. Staiger, "What does certification tell us about teacher effectiveness?" Working Paper 12155 (National Bureau of Economic Research, 2006), available at http://www.nber.org/papers/w12155.pdf?new_window=1; Robert Gordon, Thomas J. Kane, and Douglas O. Staiger, "Identifying teacher performance on the job" (Washington: The Hamilton Project, 1996), available at http://www.brookings.edu/views/papers/200604hamilton_1.pdf.
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- 9 Stanford economist Eric Hanushek has found that teachers at the 84th percentile achieve average student gains equal to about 1.5 years worth of progress. See Eric A. Hanushek, "The Trade-off between Child Quantity and Quality," *The Journal of Political Economy* 100 (1) (1992): 84–117. Based on this estimate, the number of years a child needs to catch up equals the number of years behind divided by 0.5. Thus, two years behind divided by 0.5 equals four years. This formula is an approximation, and a teacher at the 75th percentile produces less progress, on average, than one at the 85th or 95th percentile. Which of these teachers a child has each year will affect the actual catch-up time.
- 10 For more on Opportunity Culture, see Opportunity Culture, available at www.opportunityculture.org (last accessed October 2013).
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- 14 Public Impact, "Teacher Pay & Career Advancement: A Leader's Guide to Sustainably Funded Excellence" (Chapel Hill, NC: Public Impact, 2012), available at http://opportunityculture.org/wp-content/uploads/2012/10/Teacher_Pay_and_Career_Advancement-Public_Impact.pdf. Using less-costly paraprofessionals to save teachers time for reach, shifting academic-resource teachers back into fully accountable, higher-paid teaching roles, and reallocating existing and new spending to higher teacher pay can together make teaching a six-figure profession.
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- 24 Ibid.
- 25 Hassel and Hassel, "Seizing Opportunity at the Top."
- 26 U.S. Department of Education, "Title I, Part A Program Description," available at <http://www2.ed.gov/programs/titleiparta/index.html> (last accessed October 2013).
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