BROWN CENTER on Education Policy at BROOKINGS

TO:	President-elect Trump
FROM:	Pamela Grossman (University of Pennsylvania)
	Susanna Loeb (Stanford University)
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RE:	Improving the teacher workforce

Teachers are among our most valuable school resources for improving student learning. They are the adults who interact most with students, and we rely on teachers to deliver curriculum and instruction. The research evidence is clear that teachers have long-term effects on students' later well-being, including on their academic achievement, how far they go in school, and their wages once working. One large study, for example, found that students assigned to particularly effective teachers in a single year were more likely to attend college (1.25 percent), earned higher salaries ($25,000 in cumulative lifetime income), and were less likely to have children as teenagers (1.25 percent).

THE SITUATION

In order for students to benefit from good teachers, school systems must *recruit, prepare, improve, and retain* excellent teachers and *distribute* these excellent teachers equitably across schools and communities. We currently face challenges across these areas. These challenges are exacerbated for teachers of math, science, special education, and English as a second language, and for teachers in high-poverty schools and other schools serving high-needs students. One study, for example, found that schools received more than three times as many applications for elementary school teaching jobs than for secondary school positions, and more than two times as many applications for secondary history teaching jobs as for math, science, or special education jobs. Moreover, a report from the U.S. Department of Education found that teacher turnover rates are much higher in high-poverty schools (22 percent) than low-poverty schools (13 percent).

Over the past 15 years, federal policy has addressed issues of teacher quality through the Highly Qualified Teacher provisions of No Child Left Behind (NCLB) and by incentivizing states to develop teacher evaluation systems. The Highly Qualified Teacher Provision of NCLB required states to staff their classrooms with teachers who hold a bachelor's degree, have full state certification or licensure, and prove that they know each subject they teach in order for the state to receive Title I funds. This provision likely had little effect on existing teachers, though it did create a minimum standard for entering teachers. States determined their own certification requirements, so this standard varied across states.

The Every Student Succeeds Act (ESSA) eliminated this provision and reduced the incentives for states and districts to develop teacher evaluation systems that could be used to support teacher and program improvement. In contrast to NCLB, ESSA only requires that states report differences in teachers' professional qualifications between high-poverty and low-poverty schools and the strategies they will use to ensure that low-income and minority students are not more likely to have ineffective, out-of-field, or inexperienced teachers. The elimination of the threat of reduced funding might reduce states' efforts to recruit teachers in more difficult-to-staff schools.

ESSA also reduced the role of the federal government in maintaining teacher quality by stepping back its focus on building teacher evaluation systems based on student performance and observational measures of teaching. While both Race to the Top and the NCLB waiver process encouraged states to use such evaluation systems—and required states that were granted waivers to use them—ESSA does not include such a requirement. The new law explicitly permits states to use Title II funds to develop and improve such systems, but it does not require them to do so. The Teacher Incentive Fund remains in place (now called the Teacher and School Leader Incentive Fund), providing grants to states to implement evaluation systems and build human capital management systems more generally. However, these are competitive grants (so not as widespread as the main provisions in ESSA) and they focus on performance pay (which has generally not proven effective) instead of evaluation for decisionmaking more broadly.

RECOMMENDATIONS

The federal government can increase the effectiveness of the teacher workforce through efforts to recruit, prepare, improve, retain, and more equally distribute excellent teachers. In keeping with the broader federal role in education, the federal role in teaching policy involves investments in capacity building and knowledge generation. We add to that a special role for the president in elevating the importance of teaching through the bully pulpit provided by the presidency.

Capacity building

The federal government builds capacity in education through direct funding for specific schools or programs, minimum requirements tied to funding, and incentives to develop

innovative programs. While the goal of federal policy should be to improve the recruitment, preparation, development, retention, and more equal sorting of teachers, the policy approach does not need to address each of these areas separately. A well-coordinated capacity-building agenda to improve teaching could affect all areas through the improvement of talent management systems.

1. **Incentivize effective talent management systems that use well-validated measures of educator effectiveness.**

   The Teacher Incentive Fund has provided grants for projects that develop and implement performance-based teacher and principal compensation systems in high-need schools. We recommend a similar approach to support projects that develop talent management systems more broadly. These systems would collect and use consistent and validated measures of educator performance to provide regular feedback to teachers, and make human resource decisions such as whom to hire, whom to promote, how to support, and how to target retention efforts. Federal programs should incentivize district and state reforms that build effective systems that lead to informed human resource decision-making and that provide supports for teacher improvement, including both information and time for development.

   Teacher preparation: Districts, and even states, can use talent management systems to assess the qualities of teachers from different teacher preparation pathways. The measures in these systems could contribute to understanding the effectiveness and sustained retention of graduates from various teacher preparation programs, as well as the extent to which each teacher preparation program is providing teachers for difficult-to-staff subject areas and schools. These measures could support state-level accountability system for teacher preparation programs. In particular, the federal government should incentivize the collection and reporting on these measures as part of talent-management systems.

   Teacher recruitment: Recruiting people into teaching is likely to be a challenge in the coming years. First, recruiting new teachers is more difficult when the economy is strong. Second, the number of college students applying to teacher preparation programs has decreased rapidly over the past few years, as has the number of college graduates applying to alternative teacher preparation programs such as Teach for America (TFA). Applications to TFA alone have fallen 35 percent in the past three years. Finally, increased retirements have also created a need for additional teachers. However, the supply of new teachers is not uniform across subject areas or for teaching positions in different regions and neighborhoods. Talent management systems can help districts and school leaders to identify and select the most promising candidates. For example, recent research shows that information collected from applicants for teaching positions predicts how effective teachers are when entering the classroom, yet few principals use this type of information when selecting teachers.

Teacher improvement: Public schools employ more than three million teachers, making teaching the largest public occupation in the U.S. With such a massive teacher workforce, policy that focuses solely on new teachers is not an effective approach for improvement; policies also need to focus on improving the abilities of current teachers. Simple silver-bullet solutions, such as performance pay for teachers, have not produced the intended improvements. Large studies in Tennessee and Texas, for example, find no benefit of performance pay systems. Nonetheless, teacher evaluation for the purposes of providing feedback for improvement and improving human capital decisions has proven beneficial. For example, one study of teacher evaluation in Cincinnati, Ohio, found that students assigned to a teacher after she participated in the evaluation system scored about 10 percent of a standard deviation higher in math than similar students taught by the same teacher prior to participation. In another study, in Tennessee, researchers studied a system in which teachers received specific feedback on their teaching and had incentives to improve. They found that less effective teachers who were paired with more effective teachers improved their teaching substantially relative to those without the additional support. These findings suggest that any talent management system should include both well-validated measures of teaching practice for teacher evaluation and support for teacher improvement that includes regular feedback to teachers.

Teacher retention: Although most schools do not have trouble retaining teachers, teacher retention is a significant problem for some schools, particularly those serving high-need populations. Moreover, teacher turnover negatively affects even the teachers who stay, so retaining strong teachers has the double benefit of keeping good teachers and reducing the negative impact on their colleagues (although some turnover can be beneficial, especially if a given teacher is not benefiting a school). High-quality talent management systems would provide information on which schools need help in retaining teachers, and then would identify teachers who are particularly important and target resources toward their retention. For example, a recent paper shows that when principals received information from the district about the effectiveness of their teachers, they were differentially more likely to retain the more effective teachers.

While investment in talent management systems could address each of the mechanisms producing highly effective teachers, investments by the federal government specifically in recruitment and retention would benefit the teacher workforce.

2. **Create and sustain financial incentives for entering teaching in high-need subjects and schools.**

The supply of teachers depends in part on the affordability and attractiveness of a teaching career. While teaching may have substantial non-monetary rewards, teachers (like most adults) respond to financial incentives. For example, interest in teaching increases when salaries are higher. The federal government has a role

to play in making teaching more affordable by reducing the financial hurdles to teaching.

The federal government can support teachers by reducing the costs of entering the field, such as by providing forgivable loans for students who want to become teachers. Currently, the federal government provides both Teacher Education Assistance for College and Higher Education (TEACH) grants and forgivable loans for prospective teachers who commit to teaching in Title I or other high-needs schools. The federal government should continue to support such programs. This funding will best address today's needs if it is targeted to subject areas and schools that are difficult to staff. Policymakers could also use these types of investments to better align the background characteristics of teachers and students (e.g., with respect to race and ethnicity). Currently, black and Hispanic adults, in particular, are underrepresented in the teacher workforce relative to the student population. We recommend continuing the current policies of federal government support for efforts to diversify the teaching force, especially with forgivable loan programs and particularly for recruiting black and Latino males into teaching.

3. **Support retention bonuses or salary increases for highly effective teachers in high-needs schools.**

To further support high-quality talent management, we recommend targeting retention bonuses or salary increases for highly effective teachers who remain in high-needs schools. One approach we recommend is to incentivize states to include such bonuses in their talent management systems. The measures of highly effective and high needs would need to be clearly defined in order to assure that the bonuses are maximizing benefits. The Teacher Advancement Program (TAP) provides an example of such a differentiated pay structure. In the case of TAP, differentiated pay is tied to differentiated roles and selection into the roles is tied to demonstration of effectiveness.

This focus on retaining teachers within high-needs school is important for a number of reasons. First, it has proven difficult to move highly effective teachers in easier-to-staff schools to difficult-to-staff schools. For example, the Talent Transfer Initiative offered $20,000 over two years for highly effective teachers to move, and only 22 percent of eligible teachers applied. Moreover, teachers who are effective in one type of school are not necessarily effective in another type of school. A study of the Talent Transfer Initiative found that [transfers increased student performance in elementary schools but not in middle schools](). Second, the few studies of retention incentives have found positive effects. For example, a recent study in Florida found that a $1,200 one-time retention bonus offered to high school teachers in targeted subject areas decreased teacher attrition by as much as 25 percent and one in North Carolina with an $1,800 bonus reduced attrition by 18 percent. We recommend letting Title I dollars be used for salaries as well as including retention bonus as a part of talent management systems incentivized by federal dollars.

Knowledge generation

The federal government also plays, and should continue to play, a critically important role in investing in the generation of new knowledge to improve educational quality through strategic investments in research.

4. **Invest in the development of new measures of talent and new knowledge about their effective use in talent management systems.**

   Educational quality is largely a function of the quality of human resources within schools and districts. Doing a better job of identifying talented teachers, administrators, and other professionals will be critical to creating robust talent management systems. The last ten years have brought many advances in the measurement of teaching effectiveness, but the development of valid and reliable measures and how best to use them are still in their early stages. Further investment by the federal government in the development of measures—and in improving knowledge of how to use them effectively—could benefit schools across the country.

5. **Invest in research that provides new evidence on excellent preparation for teaching**

   Although we have some evidence on how to recruit, support, and retain teachers, our evidence on how to prepare teachers before they enter the classroom is far weaker. Research has shown that teachers obtaining certification through only an online exam (American Board for the Certification of Teacher Excellence) are, on average, not as effective as teachers with more intensive preparation. However, we have little information on the best practices for pre-service training, aside from some evidence that high-quality field experiences, such as those in highly effective schools and including regular supervision and feedback, can make a difference.

   The federal government is in the best position to improve this knowledge base by investing in systematic research in this area. Teacher education programs provide a lot of data on their programs through Title II, but these data are not useful for answering questions about what models of teacher preparation are best. Under ESSA, Title II will continue to provide funding to states and local districts to support teacher preparation. However, the new federal regulations provide greater latitude to develop innovative programs to prepare teachers, including residency programs, alternative routes, and free-standing "teacher academies." The intent of the legislation is to provide more innovation in teacher preparation. However, this innovation should be accompanied by investments in research that generate knowledge from such experimentation and inform efforts to improve teacher preparation more broadly.

   The federal government could invest in programs of research that produce high-quality evidence of how best to prepare teachers. This research would need to include experimental evidence on the relative benefits of different types of

training—such as student teaching with feedback, classes on subject-specific pedagogy, classes on classroom management, and classes on learning and learning differences. It would also benefit from more useful data collection that includes information on the backgrounds and experiences of teacher candidates as well as their career paths as teachers, enabling studies of the interactions between teacher characteristics, preparation experiences, and school contexts.

Such a research program could then inform accreditation and accountability efforts in teacher education. Current efforts to improve teacher preparation have also stressed accountability principles that require programs to be evaluated on the effectiveness of their graduates. Understanding how to link various indicators of educator effectiveness (including teacher knowledge, classroom practice, and student achievement) back to their preparation programs will require more sophisticated research that could build on the research base from teacher evaluation. Because teachers work in wildly different contexts, such efforts to tie teacher performance to their preparation will need to take into consideration the schools in which teachers from different preparation programs work.

The bully pulpit

Finally, the presidential office provides an opportunity to influence decision-making separate from direct investments or investments in knowledge generation. We urge the new president to use this opportunity to support the teaching profession.

6. **Directly promote teaching careers.**

Direct recruitment of teachers on college campuses, and in advertisements on public transportation and on the radio have proven effective for alternative certification programs such as Teach for America and the New York City Teaching Fellows. These approaches emphasize the importance and satisfaction of teacher careers. The president is in a unique position to raise the appeal of teaching simply through promotion. Teachers have received blame in recent years for low student performance, and this blame can discourage strong candidates from entry. The president can highlight the importance of teaching and contributions of teachers, as well the joys of teaching and helping students.

The federal government can also make teaching more appealing by making it easy for college students and graduates to learn about teaching and to pursue a teaching career. Lack of information can create unnecessarily strong barriers to entry. Going beyond the bully pulpit, we recommend federal investment in programs that provide early experiences in teaching that encourage people to think of teaching as a career. Examples of such programs include UTeach (aimed at STEM teachers), City Year, and Breakthrough Collaborative.

CONCLUSION

Teachers are the most important school resource for improving educational opportunities for students. We recommend six steps for the federal government to improve the teacher workforce, particularly in the most difficult-to-staff schools:

- Use a competitive funding program to incentivize effective talent management systems that use well-validated measures of educator effectiveness.
- Create and sustain financial incentives for entering teaching in high-need subjects and schools.
- Support retention bonuses or salary increases for highly effective teachers in high-needs schools by allowing the use of Title I dollars for salaries and by prioritizing the inclusion of retention bonuses in talent management systems incentivized by federal dollars.
- Invest in the development of new measures of talent and in new knowledge about their effective use in talent management systems.
- Invest in research that provides new evidence on excellent preparation for teaching.
- Use the presidential platform to directly promote teaching careers.

Taking these steps would substantially improve the teacher workforce by addressing teacher recruitment, preparation, development, and retention, particularly in the schools that would benefit the most from these improvements.