



*How states pay their teachers, why it matters for students, and what state boards can do about it.*

**by Karen Hawley Miles and Nicole Katz**

## Teacher Salaries: A Critical Equity Issue

Quality teachers are one of the most important factors in student achievement.<sup>1</sup> Yet since the recession, the real value of teacher salaries (adjusted for inflation) has decreased in the majority of states.<sup>2</sup> In about half of all U.S. states, the average teacher does not even earn a living wage needed to support a family. Inadequate compensation has predictable consequences for attracting and retaining the skilled professionals so crucial to student outcomes—especially in schools and subjects that are

hard to staff. The strikes and protests that erupted last spring in West Virginia, Kentucky, Oklahoma, Arizona, and Colorado are visible manifestations of this troubling reality.

At the heart of the teacher salary issue are growing funding inequities among the states. Some states may need to invest more in education to raise baseline levels. But it will not be enough just to throw more money at the problem—states also need to take a thoughtful look at how well and how equitably all resources are

allocated. When teachers are compensated fairly and strategically and when they are supported in their growth as professionals, students have a better chance to succeed.

## Funding Trends over the Last 50 Years

From 1969–70 until 2014–15 (the most recent year of data available), the *national* average of inflation-adjusted per-pupil spending increased by more than 140 percent. But the recession of 2008 marked a watershed event where funding patterns across the states diverged: In more than 30 states, inflation-adjusted per-pupil K-12 funding actually decreased. In more than 20 states, this funding dropped 5 percent or more, and it fell 10 percent or more in five states.<sup>3</sup>

Throughout the years of spending growth and even after the recession, relatively few dollars went toward real salary increases for teachers.<sup>4</sup> Although student enrollment increased by about five million students between 1969–70 and 2014–15, staffing levels outpaced that trend, reducing both pupil-to-staff and pupil-to-teacher ratios. The number of staff per student increased by over 70 percent and the number of teachers per student by nearly 40 percent.<sup>5</sup> Meanwhile, average inflation-adjusted teacher salaries grew only 7 percent since 1970 and have remained mostly flat since the 1990s—with a crucial dip after the recession.

The decline in inflation-adjusted per-pupil funding since 2008 has hit some states harder than others. The states in the bottom quartile of K-12 funding in 2009–10 saw the greatest losses in total spending (adjusted for inflation). In contrast, average per-pupil revenue in the highest funded states increased over that period, widening the funding gap between “have” and “have-not” states.

There is also a correlation between states that reduced education funding and states with a decline in inflation-adjusted teacher salaries. Real teacher salaries declined in 40 states between the 2009–10 and 2014–15 school years—by 5 percent or more in 24 states. As figure 1 demonstrates, the states that cut per-pupil funding tend to be the same ones where the real value of teacher salaries declined.

## Low Salaries and Teacher Shortages

Are today’s teacher salaries enough to attract and retain a high-quality workforce? Some data suggest not. Several recent studies, accounting for factors such as hours worked, gender, and race, conclude that teacher salaries today are 14 to 25 percent lower than those for other professions available to college graduates.<sup>6</sup> One study by the Economic Policy Institute found that this gap has grown over time: Teachers in 1998 earned about 8 percent less than professionals with similar education and experience. By 2015, teachers underearned their peers by 17 percent.<sup>7</sup>

At the same time, districts across the country are facing significant teacher shortages. Virtually all states report shortages in numerous subject areas—including in elementary education, where there historically have been more than enough qualified applicants.<sup>8</sup> The pipeline of teacher applicants is also drying up, judging by the sharp decline in the number of U.S. college students enrolling in teacher certification programs—from 684,000 in 2011 to 419,000 in 2015.<sup>9</sup> The number of long-term crisis substitutes, emergency or provisionally certified teacher hires, and unfilled vacant positions in schools has dramatically risen over the past several years, particularly in low-income and rural communities.<sup>10</sup>

The depth of the salary gap appears most dramatically when the average teacher salary in each state is compared with a living wage metric that was created at Penn State and is maintained by Amy Glasmeier at the Massachusetts Institute of Technology (MIT). The MIT researchers calculate the living wage as the minimum income needed to cover basic expenses (including food, child care, medical costs, housing, transportation, and a miscellaneous “other”) based on local costs and across a variety of family structures.<sup>11</sup> To get a sense of the value of a teacher’s salary, we looked at MIT’s living wage for one- and two-parent households with a single salary earner and one to three children and created a weighted average to account for the prevalence of different family types. We call this metric a “family living wage.”<sup>12</sup>

In about half of all states, the average teacher salary is less than the family living wage (figure

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**Figure 1. Relationship between the change in per pupil funding and change in average teacher salaries, from 2009–10 to 2014–15**



Source: ERS analysis using data from NCES Table 211.50. Estimated average annual salary of teachers in public elementary and secondary schools: Selected years, 1959–60 through 2015–16; NCES Elementary and Secondary Information System <http://nces.ed.gov/ccd/elsi/>, Revenue per pupil by source 1987–88 through 2013–14; NCES Revenues and Expenditures for Public Elementary and Secondary Education: School Year 2014–15 (Fiscal Year 2015); NCES Table 106.70. Gross domestic product price index, Consumer Price Index, education price indexes, and federal budget composite deflator: Selected years, 1919 through 2015.

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2). This aligns with other research findings. For example, the Center for American Progress found that in 35 states, teachers with 10 years of experience or more who head families of four would qualify for multiple public assistance programs to make ends meet.<sup>13</sup> Colorado has the greatest gap, with the average teacher salary 25 percent less than the family living wage (which translates to about \$12,000 below, adjusted for geography), whereas in Massachusetts, the average teacher salary is already 25 percent above the family living wage (nearly \$18,000 above, adjusted for geography). Those states highlighted in orange and red have experienced a recent decline in real inflation-adjusted per-pupil funding (from 2009–10 to 2014–15) of greater than 5 percent (orange) or greater than 10 percent (red). Notably, most of the states with salaries below the family living

wage are the same ones that cut education funding after the recession.

**Lower Pay, Greater Hiring Challenges**

Not surprisingly, states with the greatest gap between salaries and a family living wage showed the most significant signs of an unhealthy labor market for teachers. Those with salary levels more than 15 percent below the family living wage exhibited the following characteristics, compared with states that pay teachers more than 10 percent above the living wage:<sup>14</sup>

- about two and a half times the number of shortages in subjects and grades that should be easier to staff, like elementary school or English language arts (2.3 versus 0.9);
- an average teacher turnover rate of 16.6

percent, 54 percent higher than in states with average teacher salaries of more than 10 percent above the living wage; and

- more than twice the percentage of uncertified teachers (2.3 percent versus 1.1 percent) and a more than 50 percent higher rate of novice teachers (14 percent versus 9.1 percent).

The majority of states where teachers earn less than the living wage are also most likely to have lower K-12 spending as a percentage of state GDP.

Yet all states show signs of labor market problems, since even states where teacher salaries are above the family living wage pay on average only 9 percent above.

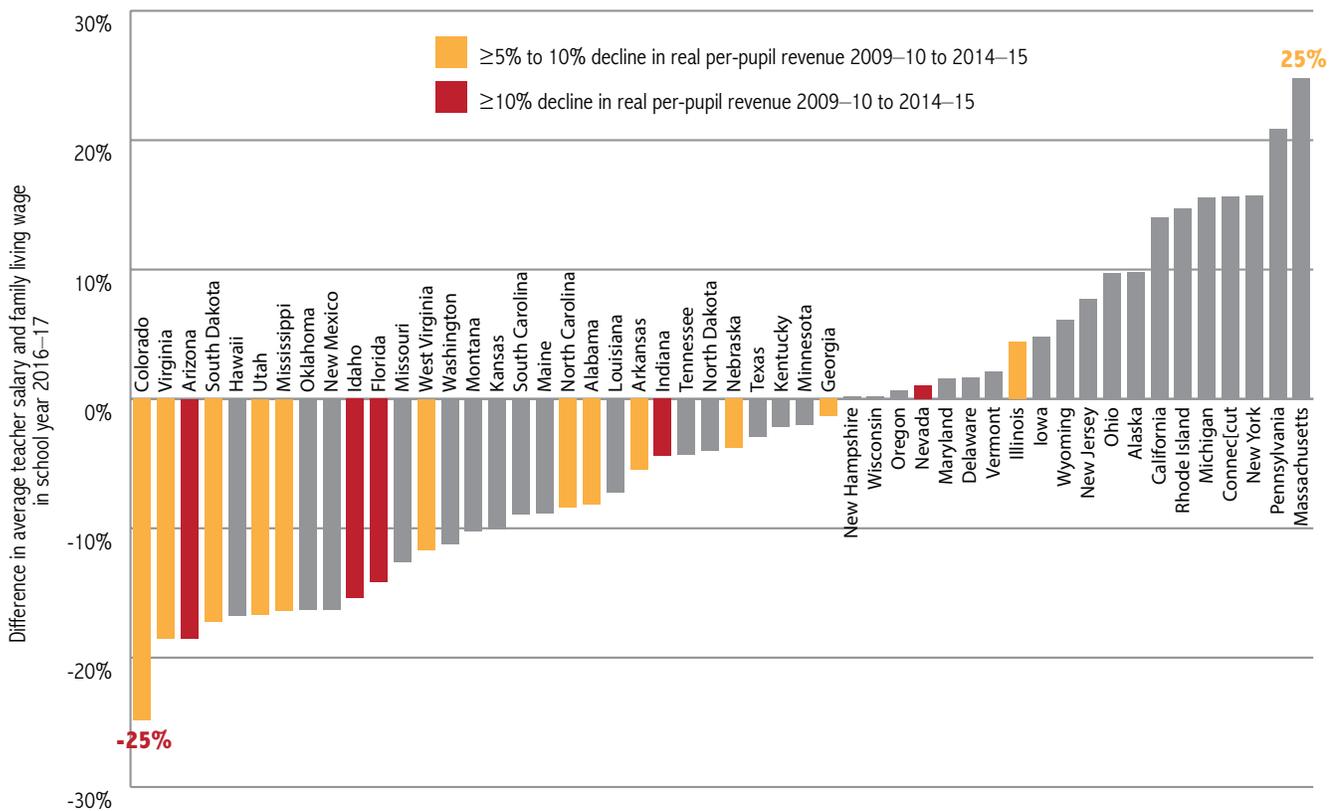
## New Approaches for Salary Equity

In their role as advocates for educational quality and equity, state boards of education can help guide state agency policymakers and legislators toward funding strategies that address the problem of stagnating teacher salaries. They can call attention to the need for improving the entire value proposition for teachers—salary, benefits, and working conditions—rather than merely putting more money into existing structures. State boards’ efforts to set high standards for teachers will be for naught if highly skilled individuals do not want to enter the teaching profession in the first place.

As a first step, state boards can start the

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**Figure 2. Gap between the average teacher salary and the family living wage in each state, 2016–17**



Source: ERS analysis using data from NCES Table 211.60. Estimated average annual salary of teachers in public elementary and secondary schools, by state: Selected years, 1969–70 through 2016–17; MIT Living Wage Calculator <http://livingwage.mit.edu/>; NCES Elementary and Secondary Information System <http://nces.ed.gov/ccd/elsi/>, Revenue per pupil by source 1987–88 through 2013–14; NCES Revenues and Expenditures for Public Elementary and Secondary Education: School Year 2014–15 (Fiscal Year 2015); NCES Table 106.70. Gross domestic product price index, Consumer Price Index, education price indexes, and federal budget composite deflator: Selected years, 1919 through 2015.

policy conversation by seeking answers to the following key questions:

1. Where does my state rank in terms of overall funding levels?
2. Are average teacher salaries in my state below a living wage? How big is the gap?
3. Does my state have any policies in place to ensure that districts with the highest concentrations of student need have the necessary resources to attract and retain high-quality teachers?
4. Does my state invest in pilots or otherwise encourage new ways of organizing schools to professionalize teaching? What about new forms of teacher career paths or compensation structures?

Innovative approaches for increasing teacher salaries to maximize impact on student performance can include the following:

**1. Invest new revenue in teacher salaries benchmarked against comparable professions rather than staff increases.** As spending rises with GDP growth, states and districts can raise teacher salaries to keep pace with benchmarks from comparable professions instead of adding services and staff. This would mark a strategic shift. Over time, teacher salaries should rise relative to inflation.

**2. Rethink teacher compensation structures. For example, “frontloading” teacher compensation and linking salaries to teachers’ roles, responsibilities, and contributions.** This strategy could include increasing starting salaries, shifting raises to earlier in a teacher’s career, reducing the number of step increases but increasing their size, and shifting to defined contribution [such as 403(b)] retirement plans that vest more quickly—whichever makes sense depending on the market context and the existing salary structure. In addition, states and districts can expand the role of high-performing teachers and reward those who take on greater challenges with stipends and leadership opportunities. These strategies could help attract and retain young teachers by helping them achieve a family living wage earlier in their careers.

**3. Link salary reform to other key initiatives to improve teaching and learning.** As states

invest to close the salary gap between teachers and other professions open to college graduates, they can tie salary increases to other important reform initiatives, such as extending the school day or year and increasing time for teacher professional learning and collaboration.

## Resource Equity

To provide an excellent education to all students, states must not only ensure funding adequacy, they must also pay attention to resource equity—how people, time, and money are allocated to create learning experiences that enable all students to succeed.

In states struggling to attract and retain high-quality teachers, state boards of education can advocate for improving the “value proposition” of becoming and staying a teacher, particularly for the least experienced teachers, who have the highest turnover. Within states, some districts may have a harder time than others in attracting and keeping great teachers, especially those serving high concentrations of student need, which often have lower funding levels. Creating this strong value proposition will require redesigning schools—organizing people, time, and money differently.

The current unhealthy state of the labor market for teachers is a challenge that must be met. But it is also an opportunity to modernize the teaching profession and to adopt practices that foster innovation and lead to more effective use of all K-12 resources. Supporting teachers as the professionals they are is a critical step that will lead the way to achieving student performance goals. ■

<sup>1</sup>Jonah E. Rockoff, “The Impact of Individual Teachers on Student Achievement: Evidence from Panel Data,” *American Economic Review* 94, no. 2 (2004): 247–52; Steven Rivkin, et al., “Teachers, Schools, and Academic Achievement,” *Econometrica* 73, no. 2 (2005): 417–58; Thomas J. Kane and Douglas O. Staiger, “Estimating Teacher Impacts on Student Achievement: An Experimental Evaluation,” National Bureau of Economic Research Working Paper no. 14607 (Cambridge, MA: NBER, 2008), doi: 10.3386/w14607.

<sup>2</sup>Using data from the National Center for Education Statistics, table 211.50, “Estimated Average Annual Salary of Teachers in Public Elementary and Secondary Schools: Selected Years, 1959–60 through 2015–16.” See also Karen Hawley Miles et al., “Low Teacher Salaries 101: How We Got Here, Why It Matters, and How States and School Systems Can Pay Teachers More Fairly and Strategically” (Watertown, MA: Education Resource Strategies, June 2018).

<sup>3</sup>Ibid.

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## What can other state boards learn from your experience?

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**Porter:** Develop a vision that is bold—that takes the responsibility for moving each child into the middle of the 21st century. Keep that vision in mind for all your decision making.

**McNiece:** Two things I'd add: We have worked very hard as a board—Jim especially and others—to have open-minded communication and build relationships, and that has served us well. But we've also been realistic in our expectations. By the way, the relationship isn't just with the legislature, it's with groups that sometimes we don't always agree with: It's the teacher's union, the school boards association, the administrators, the local boards. Having a really good commissioner of education helps, too. He's smart, he's personable, and he's got a vision of where he wants to take us. He is trusted by the legislature and the governor, and that makes a big difference. I think we're trusted overall by both, but it's a different kind of trust. We're not over here saying we know the answer. We're saying we've got part of the answer, and you've got part of the answer, and we've got to work together.

**Porter:** A real advantage that we have is not only being elected, but we choose the commissioner. We have a vision that requires us—in this case, that's not a problem at all—to work together toward a common vision. In some cases, if the board is appointed by somebody else and the chief is elected, they could be diametrically opposed philosophically and have a difficult working relationship. Our arrangement is very important to us properly working together. It doesn't mean we agree all the time on some issues. We did not join hands and sing Kumbaya. Another thing I think is important is that even though we have some philosophical differences, we like each other.

**McNiece:** I'm going to throw a little kick-in for NASBE here: Most of our board members have gone through New Member Orientation, and that helps them be better board members. We adhere to "take a vote, make a decision, don't hold a grudge." Move onto the next. You win some, some you don't. Getting along is important. We certainly have differences on our board, but we don't let those differences get in the way of doing the right thing and being good board members.

**Porter:** That's something we sometimes forget. The training that we got, the resources we have available—both in person and in substance and data—they help us in these instances. Every state has to figure this out for themselves, within their constitutions and their political realities.

We have more challenges awaiting us, but the House will be all elected this year, the governor will be new, other leaders will be new. There are no Supreme Court justices up for approval, but there is a push immediately by a leadership faction to bring a constitutional amendment that would basically disqualify the courts from making any kind of ruling about finance. But you can't win a game by changing officials. ■

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<sup>4</sup>NCES, table 211.60, "Estimated Average Annual Salary of Teachers in Public Elementary and Secondary Schools, by State: Selected Years, 1969–70 through 2015–16."

<sup>5</sup>Using data from NCES, table 213.10, "Staff Employed in Public Elementary and Secondary School Systems, by Type of Assignment: Selected Years, 1949–50 through Fall 2015"; NCES, table 208.20, "Public and Private Elementary and Secondary Teachers, Enrollment, Pupil/Teacher Ratios, and New Teacher Hires: Selected Years, Fall 1955 through Fall 2025"; and NCES, table 211.50.

<sup>6</sup>Sylvia A. Allegretto and Lawrence Mishel, "The Teacher Pay Gap Is Wider Than Ever," report (Washington, DC: Economic Policy Institute, August 9, 2016). A note from the report on their methodology reads, "Regression-adjusted estimates include controls for age (quartic), education, race/ethnicity, geographical region, marital status, and gender for the pooled sample. Data are for workers age 18–64 with positive wages (excluding self-employed workers). Non-imputed data are not available for 1994 and 1995; data points for these years have been extrapolated and are represented by dotted lines."

<sup>7</sup>Ibid.

<sup>8</sup>U.S. Department of Education, Office of Postsecondary Education, "Teacher Shortage Areas Nationwide Listing, 1990–1991 through 2017–18" (2017).

<sup>9</sup>Lee Hale, "Behind the Shortage of Special Education Teachers: Long Hours, Crushing Paperwork," National Public Radio, November 9, 2015.

<sup>10</sup>NCES, table 211.50.

<sup>11</sup>Amy K. Glasmeier and the Massachusetts Institute of Technology, "MIT Living Wage Calculator," MIT, 2018, <http://livingwage.mit.edu/>.

<sup>12</sup>For a full description of our methodology, see Miles et al., "Low Teacher Salaries 101."

<sup>13</sup>Ulrich Boser and Chelsea Straus, "Mid- and Late-Career Teachers Struggle with Paltry Incomes" (Washington, DC: Center for American Progress, July 23, 2014).

<sup>14</sup>Using data from NCES, table 211.60; Glasmeier and MIT, "Living Wage Calculator"; U.S. Department of Education, "Teacher Shortage Areas"; "A Coming Crisis in Teaching? Teacher Supply, Demand, and Shortages in the U.S." (Palo Alto, CA: Learning Policy Institute, 2016). We consider typically easy-to-staff fields to be elementary education, early childhood, the arts, English language arts, and social studies/humanities.