

PERCENTAGE-BASED TEACHER RAISES: WHY A FIXED-DOLLAR ALTERNATIVE MAKES MORE SENSE

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Teacher compensation is driven largely by teacher longevity. Aside from a pay bump for graduate credits, teachers earn more each year just by sticking around. While it's true that wages in many fields generally increase with experience, what differs in teaching is the degree to which pay is linked to seniority. And compared to other professions, teaching has more heavily back-loaded pay – meaning a disproportionate share of earnings comes late in a career. The biggest raises go to the most senior teachers – those in the years before retirement who are least likely to leave their posts.

This analysis explores the extent to which teacher salary policies favor the most senior teachers, examines the consequences of this tradition, and discusses how districts might distribute the same total salary dollars via fixed-dollar increments to all teachers (instead of using fixed percentages). This would raise salaries in teachers' earlier years, without changing their lifetime earnings. Doing so could help school systems strengthen their teaching forces in several ways, without costing the district more, creating a fairer arrangement that may help school systems in the long run.

This matters for many reasons:

- Better pay earlier in a career could help draw new teachers into the profession, especially highly qualified candidates with other (better paying) career prospects.
- Since most teacher turnover happens in the first five years of teachers' careers boosting early-career salaries could help districts retain top talent.
- Early-career teachers with fewer than ten years' experience are often financially strained at a time of life when they are starting to raise families and looking to buy a home. It's not uncommon for teachers to find themselves priced out of the housing markets where they teach.¹
- Dramatic pay differences between early- and late-career teachers may endanger district fiscal sustainability (if a district finds itself with an overwhelmingly veteran teaching corps).
- Big end-of-career raises drive up final salaries and long-term pension obligations.

1. See for example: Conor Dougherty, "Where Can a Teacher Afford to Buy a Home," *The Wall Street Journal*, March 17, 2014, http://blogs.wsj.com/economics/2014/03/17/where-can-a-teacher-afford-to-buy-a-home/_or_Lillian_Mongeau_; Lillian Mongeau, "Is Silicon Valley Driving Teachers Out?," *The Atlantic*, July 21, 2015, <http://www.theatlantic.com/education/archive/2015/07/silicon-valley-housing-tough-on-teachers/399071/>

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This analysis doesn't attempt to solve all issues around teacher salaries (or address whether they are too low or too high as has been well researched elsewhere).² Rather, this work examines one slice of the salary pie that school districts potentially have the power to adjust regardless of how many new dollars are available to raise wages.

Teacher pay practices compound awards for seniority

With the standard across-the-board percentage-based raises, districts routinely award senior teachers pay raises that are double the dollars or more than those doled out to junior teachers. Longevity drives raises in two ways.³ First, the typical salary schedule awards "step" increases associated with experience. For example, Baltimore County Public Schools' 2014-15 salary schedule shows a teacher with a master's degree and 30 years' experience earns \$82,344 — that's \$35,283 more than another teacher with a master's but only five years' experience.⁴ Each year, layered on top of these salary steps are annual cost-of-living increases (COLAs) that apply a percentage of salary increase. Because every teacher in the system receives the same percentage increase, this system favors teachers with higher salaries, further widening the pay gap each year between veteran and more junior teachers. After one year of COLA increase, the veteran Baltimore teacher now earns \$86,464 — totaling \$37,049 more than the teacher with five years under her belt.⁵

Table 1: Teacher pay differences widen over time

Baltimore County Public Schools' Teacher Salaries with an MA Degree ⁶			
	30 years' experience	5 years' experience	\$ Gap
2014	\$82,344	\$47,061	\$35,283
2015	\$86,464	\$49,415	\$37,049

Teacher pay trends are an anomaly among other professions

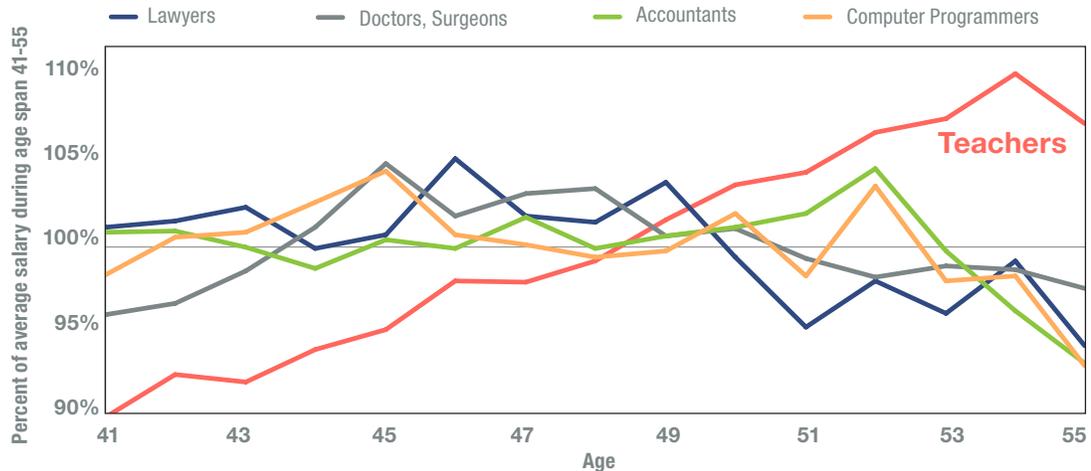
The combination of the step pay schedule with annual COLA adjustments awarded as percentage of salary results in a pay curve that climbs steeply beyond the early years, particularly relative to that of other fields. Figure 1 explores how teachers and other professions' salaries vary with age.⁷ Using U.S. Census Bureau data, the figure demonstrates the earnings trend between age 41 and 55 (in constant dollars) for several professional occupations relative to each profession's average over that age span.⁸ Lawyers, doctors,

- Ulrich Boser and Chelsea Straus, "Mid- and Late- Career Teachers Struggle with Paltry Incomes," Center for American Progress, July 23, 2014. <https://www.americanprogress.org/issues/education/report/2014/07/23/94163/mid-and-late-career-teachers-struggle-with-paltry-incomes/>
- Teacher salary schedules award annual pay raises to teachers based on three main components: years of experience, or "steps" on the salary schedule; level of educational attainment, or "columns" on the schedule; and cost of living adjustments (COLAs) intended to maintain the purchasing power of earnings.
- The 2014-15 BCPS teacher salary schedule is available at http://www.nctq.org/docs/Baltimore_County_72880.pdf
- The 2015-16 BCPS teacher salary schedule is available at <http://www.bcps.org/offices/payroll/pdf/scales/TABCO-10-Month-Payscale.pdf>
- Author's calculations based on Baltimore County Public Schools salary schedules.
- Professional fields displayed here represent careers where professional responsibilities remain relatively stable across a career.
- Data were compiled from the U.S. Census Bureau, American Community Survey, 2009 (5-year Estimates - Public Use Microdata 2005-2009 dataset).

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accountants, and computer programmers tend to have flatter earnings in their 40s and 50s with a dip in real-dollar earnings as these professionals enter their 50s. The dip doesn't necessarily mean they've seen their actual dollar wages reduced, but rather that wage growth doesn't keep pace with inflation (so earnings dip in constant dollars).

Figure 1: Among several professions, teaching stands out as atypical, with a larger share of pay diverted to late-career pay raises.



As Figure 1 demonstrates, the pattern for teachers is markedly different. The longevity-based mechanisms that pervade the teaching profession result in a back-loaded salary curve. Individuals in comparable professions reach their peak salaries by age 40 (or with 10-15 years' experience). In contrast, teachers enter their 40s with much lower earnings on average than they will make each year if they stay in the profession for another decade, and don't hit their peak earnings until age 55 (or with 25-30 years' experience).

Percentage-based COLAs drive uneven pay raise allocation

Teachers' steeper salary curves can be attributed to the compounding effects of receiving both a *percentage* longevity raise from moving one step to the next on school district salary scales and another *percentage* raise from an across-the-board COLAs. While the basic step and lane salary structure is rigidly embedded in public education pay structures (remaining intact for decades), the COLAs are renegotiated more frequently and serve as the means by which districts apply new funds on top of the base scale. Without much consideration given to how to deploy these funds, districts tend to apply the new dollars in percentage terms, as shown in the examples below.⁹

9. The COLA is often delivered in percentage terms with the thinking that with inflation, an employee's wages must increase by a fixed percent to keep purchasing power constant. That said, with teacher salaries, salaries also grow each year with step raises, so the percentage based COLA has a compounding effect. Further, in many districts, the COLA doesn't function so much as a COLA (keeping pace with the CPI) but rather works to adjust pay to keep pace with changes in labor market values (which doesn't necessarily require a percentage basis).

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Table 2: Annual COLA percentage raises are the norm in many of the country's largest districts¹⁰

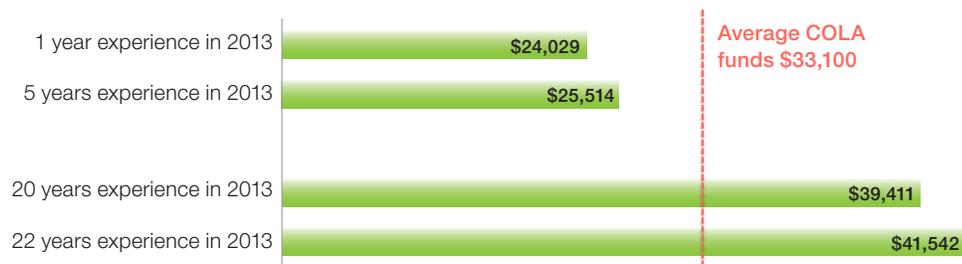
District	Percentage terms of raise	Years effective
Atlanta	2%, 4%, 3%, 2.5%	2005-2009
Charlotte-Mecklenburg	3%	2014 (proposed)
Chicago	3%, 2%, 2%, 3%	2012-2016
Clark County	1%	2014
Hawaii	3.2%, 3.2%	2014-2015, 2016-2017
Houston	2%	2012-2013
New York City	2%, 3%, 3.5%, 4.5%, 5%	2013-2018
San Diego	5%	2014

In one sense these “percentage” raises may seem to be the fairest way to divvy up new salary dollars. Every teacher gets the same percentage raise. But the system fails to distribute dollar amounts evenly (because percentages yield different dollar amounts per teacher). And the percentage practice exacerbates inequities in salary schedules.

Consider teachers in New York City (NYC). In the 2014 labor contract, NYC teachers received annual COLA raises of 2%, 3%, 3.5%, 4.5%, 5% for the years 2013-2018 (some retroactively).¹¹ The COLA dollars awarded over these five years amounts to \$33,100 in new pay on average for all NYC teachers in the classroom. But, that average masks substantial variation in what each teacher actually receives.

As Figure 2 shows, a teacher with five years’ experience in 2013 gets raises totaling \$25,514 in COLAs versus \$41,542 for a peer with 22 years’ experience. Looked at another way, the junior teacher receives just 77% of the average raise over the five years, while the senior teacher receives 126% of the new monies.

Figure 2: Cumulative COLA pay raises awarded to NYC teachers, 2013-2018



Source: Author's calculations based on United Federation of Teachers, Salary Schedules for Proposed 2009-2018 Contract

10. Sources: Atlanta Public Schools Human Resource Services Salary Scales; Charlotte-Mecklenburg Schools Proposed Budget Recommendation 2014-2015. April 8, 2014; Chicago Teachers Union and the Chicago Board of Education July 1, 2012 to June 30, 2015 Summary Term Sheet; Clark County School District 2013-2014 Annual teacher salary schedule; Hawaii State Teachers Association 2013-2017 Salary Movement; Houston Independent School District Compensation Manual 2012-2013; United Federation of Teachers Contract 2014 Pay & Benefits Chart; San Diego Unified School District SEA Bargaining Unit Salary Plan 0160. All accessed June 24, 2014.

11. From 2013-2018, teachers will receive percentage COLA raises of 2%, 3%, 3.5%, 4.5%, 5% (some retroactively). Our analysis is based on these revised NYC teacher salary schedules and national average teacher demographic data (years of experience and level of education). “Salary Schedules for Proposed 2009-2018 Contract,” United Federation of Teachers, accessed June 14, 2014 at <http://www.uft.org/files/attachments/secure/teacher-schedule-2009-2018.pdf>; “Public School Teacher Data File”, U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), 2011-12.

The case for “fixed-dollar” raises versus “fixed-percentage” raises

School districts are increasingly exploring modifications to the standard salary schedule. Some are restructuring bonuses for master’s degrees. Others are awarding funds for garnering positive evaluations, meeting student-performance thresholds or taking on heavier workloads. Yet most districts still rely on the standard fixed-percentage COLA.

Our research suggests that a different strategy, divvying up COLA monies on a fixed-dollar basis that provides all teachers with COLAs of the same dollar amount, has important advantages for teachers, districts, and states alike.

In the case of the NYC teachers (Table 2), the fixed-dollar COLA would yield a flat \$33,100 for every teacher who taught continuously between 2013 and 2018.¹² Clearly, not all teachers would win in this scenario; senior teachers would anticipate smaller raises than under the fixed-percentage arrangement. But a teacher would earn the same total dollar amount over a lifetime career, with greater earnings up front and a gentler salary curve than today’s norm. Rather than take home the \$26,000 in COLAs for a five-year span early in career with the promise of \$42,000 in COLAs later, teachers would take home \$33,000 in COLAs over any five-year period during their careers. Note: The district isn’t paying teachers less money overall, but rather parceling out funds more evenly across all teachers and across career time.

The benefits of allocating COLAs in this way are compelling:

- A. **Fixed-dollar raises drive more money to combat attrition where it is greatest — among newer teachers.** Figure 3 displays data from the National Center on Education Statistics’ School and Staffing Survey showing teacher turnover is highest in the first five years on the job and declines steadily until teachers log 29 years of experience.¹³ And the turnover rate for first-year teachers has increased by about a third in the past two decades.¹⁴ Therefore, it makes sense to use pay structures to help stem the hemorrhaging where it’s worst. Percentage-based COLA raises do precisely the opposite, driving more money to senior teachers — those least at risk of leaving.¹⁵

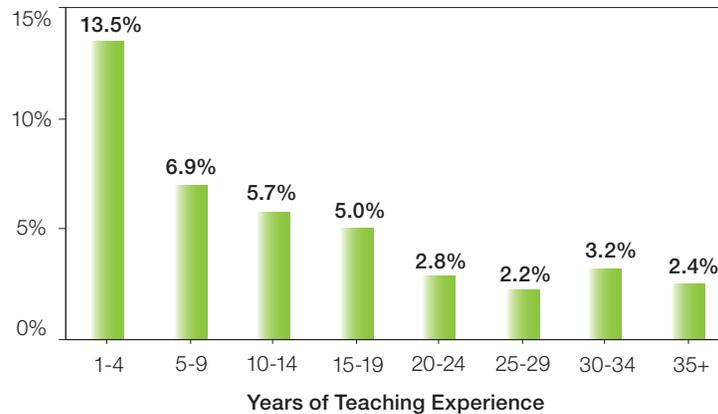
12. The fixed dollar average for each year is calculated as an average of the percentage raise awarded to all teachers in that year.

13. Data are from the National Center for Education Statistics’ Teacher Follow-up Survey, 2008-9

14. Richard M. Ingersoll, “Beginning Teacher Induction: What the Data Tell Us,” *Education Week*, published online May 16, 2012, accessed June 24, 2014, http://www.edweek.org/ew/articles/2012/05/16/kappan_ingersoll.h31.html

15. Ulrich Boser and Chelsea Straus, “Mid- and Late- Career Teachers Struggle with Paltry Incomes.” *Center for American Progress*. July 23, 2014

Figure 3: Teacher turnover is highest in the first 5 years on the job.



- B. **Fixed-dollar raises more equitably distribute funds across schools.** As has been widely documented, schools serving more affluent students in a district tend to attract and retain more experienced (and therefore higher paid) teachers than schools serving primarily poor students, creating salary inequities across schools within a district.¹⁶ Fixed-percentage raises exacerbate these disparities. Since poorer schools have lower average teacher experience, each time COLA raises are awarded on a percentage basis more money winds up in service of wealthier students. Fixed-dollar raises, in contrast, equitably distribute COLA dollars across classrooms.¹⁷
- C. **Fixed-dollar raises may improve district financial sustainability.** In the short-run, districts' expenditures are the same for fixed-dollar or percentage-based raises. The fixed-dollar raise modeled here allows the budget to stay whole by doling out the same total sum as would have been doled out under percentage terms.

But in the long run, paying out uneven sums with percentage raises could threaten district financial health if districts find themselves with disproportionate shares of very senior teachers. Districts with declining enrollment, for instance, may stop hiring newer teachers (or even reduce their teaching force by laying off junior teachers) as they downsize. When they are left with a more-senior teaching force, salary costs may prove unsustainable, as Detroit, Newark, and other shrinking districts have learned. A district is particularly financially vulnerable when senior teachers remain at higher salaries and the percentage raises compound the situation.

16 Hamilton Lankford, Susanna Loeb and James Wyckoff. "Teacher Sorting and the Plight of Urban Schools: A Descriptive Analysis," *Educational Evaluation and Policy Analysis*, Spring 2002, Vol. 24, No 1, pp37-62.

17 Roza, Marguerite. "How the teacher pay raise formula could worsen Seattle's equity." *Crosscut*, Sept. 15, 2015. Available online at <http://crosscut.com/2015/09/how-the-teacher-pay-raise-formula-could-worsen-seattles-inequity/>

- D. **Percentage-based COLAs drive up end-of-career salaries, increasing pension obligations.** Percentage raises drive up near-retirement teachers' final average salaries, which determine their pensions. By 2018, the average NYC veteran teacher will see her final average salary (an average of the last three years used for pension benefit computations) increase by \$12,200 — \$2,500 more than if she had received level-dollar raises.¹⁸ This incremental difference translates into an increase of \$46,000 in future pension allowances over her lifetime. When discounted into an equivalent present-day value, New York City's five-year COLA scheme would generate approximately \$27,100 more in new pension obligations for each late-term teacher than if the raise had been structured as a fixed-dollar amount.

For those worried that teachers would take a hit on pension benefits under a fixed-dollar raise plan, note that teachers would get more money earlier in their career. Increased earnings for an early-career teacher improve her private retirement security by giving her more money to invest up front. Since most districts require teachers to work for a set number of years (often 10) before vesting in their retirement benefits, teachers who leave in the early years of their careers suffer additional financial consequences.¹⁹

Importantly, shifting to a fixed-dollar COLA model enables these benefits without requiring districts to completely overhaul their salary schemes, which typically presents daunting political challenges. Salary structures are often deeply embedded in district policies and union contracts and may even be woven into state policy.

Some states have steeper late-career salary patterns than others

The fixed-dollar COLA doesn't eliminate a steep salary structure; it just prevents it from becoming even steeper. The COLA structure is more a symptom than a cause of the root problems raised in this analysis. At the heart of the matter is the steep step and column salary ladder that is out of sync with patterns in other professions. Some pay scales are steeper than others, as shown in state-by-state trends in Table 4. The table compares the average salary for a teacher with ten years' experience and a master's degree to the salary for a teacher at the highest step on the wage ladder.

In some states, like New York and New Jersey, districts spend \$25,000-plus more on their most veteran teachers than on those teachers' mid-career peers. The differential is high even in some states with more modest cost of living. In North Carolina and West Virginia, for

18 Final average salary in NYC is the average of a teacher's earnings during her last three years of employment and pensions are determined using a multiplier of 1/50 for each year of service. In this example, we consider a veteran teacher to have 25+ years of experience at the time of retirement. See Marguerite Roza and Jessica Jonovski, "How Late-Career Raises Drive Teacher Pension Debt," Edunomics Lab at Georgetown University, December 2014, for an explanation of the teacher pension formula, future pension calculations, and present value calculations.

19 A recent study found that in the median state, only 44.5% of new teachers stay in the profession long enough to receive any retirement benefits for their years of work and fewer than 10% of teachers receive the maximum benefits available. Chad Aldeman and Andrew J. Rotherham. "Friends without Benefits: How States Systematically Shortchange Teachers' Retirement and Threaten Their Retirement Security," Bellwether Education Partners. 2014 accessed on August 8, 2014, http://bellwethereducation.org/sites/default/files/BW_PensionPaper_031314.pdf

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example, the gap is more than \$20,000. By percentage, Mississippi teachers have one of the steepest curves (with teachers at the highest point on the scale earning 161% of the mid-career teacher with a decade of experience and a master's, whereas Rhode Island has a much flatter scale, at only 112%). States with the steepest salary schedules likely face the greatest urgency to stem raises that exacerbate that gap in pay between veterans and their mid-career peers.

Table 4: Some states have steeper salary schedules than others: Differences (in dollars and percentages) between highest salary on schedule and that of a teacher with ten years' experience and an MA degree.²⁰

	Dollar difference	Highest salary as a percentage of salary of 10 year plus MA		Dollar difference	Highest salary as a percentage of salary of 10 year plus MA
United States Average	\$15,600	132%			
Alabama	\$14,100	129%	Montana	\$11,600	129%
Alaska	\$11,800	118%	Nebraska	\$10,100	122%
Arizona	\$12,000	129%	Nevada	\$14,400	128%
Arkansas	\$9,400	122%	New Hampshire	\$14,000	127%
California	\$17,500	130%	New Jersey	\$25,400	141%
Colorado	\$15,700	138%	New Mexico	\$13,200	129%
Connecticut	\$18,400	129%	New York	\$30,000	149%
Delaware	\$19,800	135%	North Carolina	\$20,600	148%
District of Columbia	\$13,800	124%	North Dakota	\$10,700	126%
Florida	\$19,000	145%	Ohio	\$15,700	129%
Georgia	\$23,000	147%	Oklahoma	\$8,800	123%
Idaho	\$10,600	125%	Oregon	\$12,500	126%
Illinois	\$22,000	145%	Pennsylvania	\$21,800	140%
Indiana	\$15,000	131%	Rhode Island	\$8,300	112%
Iowa	\$14,300	132%	South Carolina	\$21,800	149%
Kansas	\$12,300	130%	South Dakota	\$8,300	124%
Kentucky	\$11,800	125%	Tennessee	\$14,200	133%
Louisiana	\$11,700	122%	Texas	\$9,600	123%
Maine	\$14,900	134%	Utah	\$11,700	126%
Maryland	\$26,800	148%	Vermont	\$14,800	130%
Massachusetts	\$12,700	120%	Virginia	\$18,400	140%
Michigan	\$11,000	119%	Washington	\$15,000	131%
Minnesota	\$11,300	123%	West Virginia	\$20,400	149%
Mississippi	\$24,700	161%	Wisconsin	\$11,800	124%
Missouri	\$14,200	137%	Wyoming	\$14,300	126%

20 Author's computations based on National Center for Education Statistics' Schools and Staffing Survey 2012-13.

The value of rethinking COLAs

Because traditional longevity-based step-and-column raises are deeply embedded in the pay structures of many school districts, the political barriers to shifting them are substantial. COLAs, on the other hand, are renegotiated by labor and management more frequently and thus may provide a more promising route to raising pay in the earlier years.

The potential benefits of shifting teacher compensation forward in this way are substantial. Fixed-dollar COLAs would allow teachers to earn the same amount over the course of their careers as they do now under percentage-based COLAs. But they would help reduce the high turnover among early-career teachers, where the problem is most acute; attract new, highly qualified teachers into the profession; create fairer compensation for younger teachers; and help make district finances more sustainable over the long run.



THIS SERIES OF RAPID RESPONSE BRIEFS IS DESIGNED TO BRING RELEVANT FISCAL ANALYSES TO POLICYMAKERS AND EDUCATION LEADERS AMIDST THE CURRENT ECONOMIC ENVIRONMENT.

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