

HOW TO BUILD An Economy that Works for All



ATTRACT—AND KEEP—HIGH-QUALITY TEACHERS IN THE CLASSROOM WITH COMPETITIVE PAY

Teachers are the most important classroom factor when it comes to improving student performance. Unfortunately, North Carolina has failed to ensure that teachers receive adequate pay and support. North Carolina’s average teacher pay ranking has fallen from 22nd in FY 03-04¹ to 41st in FY 15-16², and enrollment in teacher preparation programs is plummeting³.

Other nations with successful school systems offer policymakers models for creating a competitive pay plan for North Carolina teachers. These countries have demonstrated that raising teacher pay to levels competitive with other professions can attract high-quality candidates to teaching, retain effective teachers in the classroom, improve outcomes for students. Competitive teacher pay is a necessary first step towards boosting student achievement, increasing lifelong earnings, and delivering widespread economic growth to North Carolinians.

High-performing education systems offer competitive teacher pay

Countries with high-performing education systems understand the value of high-quality teachers and have developed teacher compensation policies with measurable goals for recruitment and retention.

In high-performing countries, teaching is a highly competitive field, attracting the best and brightest students. An influential 2010 report by McKinsey & Company⁴ details how top-performing countries, such as Singapore, Finland, and South Korea, recruit 100 percent of their teachers from the “top third” of the academic cohort. By contrast, only 23 percent of U.S. teachers come from the top one-third of students. In high-poverty U.S. schools, only 14 percent of teachers come from the top third.

Singapore, Finland, and South Korea are able to recruit and retain the best into the teaching profession because they have made deliberate policy choices to make high-quality teachers the foundation for their education systems. In particular, these countries have implemented a number of common policies:

1. **Teacher compensation levels are competitive with salaries in other professions**
2. **Admission to teacher training programs is highly-selective (and often provided tuition-free)**
3. **Teachers are provided opportunities for professional growth**

Competitive compensation is the most important factor; without it, tightened teacher training admission requirements will decimate the supply of teaching candidates. School-based initiatives to create opportunities for professional growth are much easier to implement when funds are available to compensate teachers taking on additional responsibilities.

Compared to countries with more successful education systems, schools in the United States do a poor job of offering competitive salaries for teachers.

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Of the 32 countries analyzed by the OECD, the United States ranks 27th in terms of competitiveness of teacher salary,⁵ as measured by how teacher salaries compare to the salaries of similarly educated workers in each country.

The United States' unwillingness to invest in teachers impedes economic growth. Increasing student achievement one standard deviation above average can increase future earnings by 10 to 15 percent. Replacing the bottom 5 to 8 percent of teachers with average teachers

would lift the annual growth rate of GDP by over 1 percent,⁶ while closing just half of the performance gap with Finland could add more than \$50 trillion to the national GDP over the next 80 years.

Teacher Pay Is Best Measured Against Other Professions

Much of the recent debate over teacher salaries in North Carolina has focused on North Carolina's average teacher salary ranking compared to other states, even though there is relatively little competition for teachers between states.¹¹ Average salary rankings also fail to take into account the composition of a state's teaching force. Growing states like North Carolina tend to have younger, and therefore less expensive, teachers, which brings down average salary. Finally, and most importantly, state rankings fail to take into account differences in the labor markets across states.

To determine the salary required to attract and retain talented candidates to the teaching field, the more important measurement is how salaries of North Carolina teachers compare with the salaries of other professionals in North Carolina with a bachelor's degree or higher or other similar educational requirements. This measure better aligns with the data a talented university student considers when deciding which profession to pursue.

Of course, teaching offers a number of benefits beyond pay. And for a number of teachers, salary may not be an important factor keeping them in the classroom. North Carolina's non-competitive teacher salaries continue to attract numerous high-quality teachers. It is important to keep in mind, however, that competitive salaries appear to be a necessary element for attracting and retaining a system full of high-quality teachers. Salaries affect the decision to enter teaching and the duration of their teaching career just as in any other profession, and higher salaries attract and retain higher-quality teachers.⁷

Finally, the teacher pay system must provide incentives for individuals to teach in underserved schools to ensure an equitable distribution of high quality teachers. As the landmark 1966 Coleman Report⁸ explained, "The effect of good teachers is greatest upon the children who suffer most educational disadvantage in their background, and that a given investment in upgrading teacher quality will have most effect on achievement

in underprivileged areas." Recent research confirms⁹ the conclusion that policies improving teacher quality have greater effects on disadvantaged students than on other students.¹⁰

North Carolina's teacher salaries are extremely un-competitive with other professions

While American teacher salaries are, on average, inadequately competitive, North Carolina's teacher salaries are even less so. According to research from the Economic Policy Institute (EPI),¹² North Carolina's wage competitiveness is tied for 49th, with only Arizona offering less-competitive teacher salaries. Traditional teacher pay rankings placing North Carolina's teacher salaries at 41st in the country under-sell the extent to which the state's teacher salaries are inadequate.



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FIGURE 1: Salary ratio of teachers to all full-time workers, NC and US, by age level

| | North Carolina | United States |
|--------------|----------------|---------------|
| Ages 25-44 | 0.60 | 0.67 |
| Ages 45-54 | 0.52 | 0.59 |
| Ages 55-64 | 0.58 | 0.64 |
| Total | 0.57 | 0.64 |

Drawing upon a different U.S. Census data source comparing only full-time workers shows that North Carolina’s teacher salaries might be even less competitive than indicated by EPI.¹³ By this measure, North Carolina teachers’ wages are just 57 percent of the wages of other full-time workers in North Carolina with at least a bachelor’s degree, compared to a 64 percent ratio nationwide.

Using this data allows an examination of wage competitiveness by age group. The data runs somewhat contrary to the conventional wisdom that the biggest weakness of North Carolina’s teacher salary schedule is beginning teacher salaries. Instead, it appears that experienced teachers are the most under-paid.

While the age ranges are rather broad, these findings are consistent with EPI’s national analysis showing a smaller wage gap for young teachers, as compared to more experienced teachers.

A competitive teacher salary schedule would attract workers and elevate teaching as a profession

Bringing North Carolina teacher wages to levels equal to other similar professions in the state would require raises between 54 percent and 77 percent, requiring budget increases of \$3-\$4 billion.¹⁴ The good news is that countries such as Finland have shown that it is possible to attract high quality teachers without paying salaries exactly equal to other professions when coupled with policies boosting the prestige of the teaching profession. According to data from the OECD, Finland’s teachers earn approximately 81 percent of salaries in other professions. Making North Carolina’s teacher salaries similarly competitive would require increases between 25 percent and 43 percent and would cost \$1.3-\$2.3 billion – a substantial yet reasonable investment given that recent tax cuts reduced State revenue by approximately \$1.4 billion per year.

Researchers are nearing consensus¹⁵ that teacher salary schedules ought to increase quickly in early years and level off in later years. Converting North Carolina’s relatively flat teacher salary schedule to one with a concave shape has the benefit of providing greater raises to middle-to-late career teachers for whom existing salaries are least competitive with other professions.

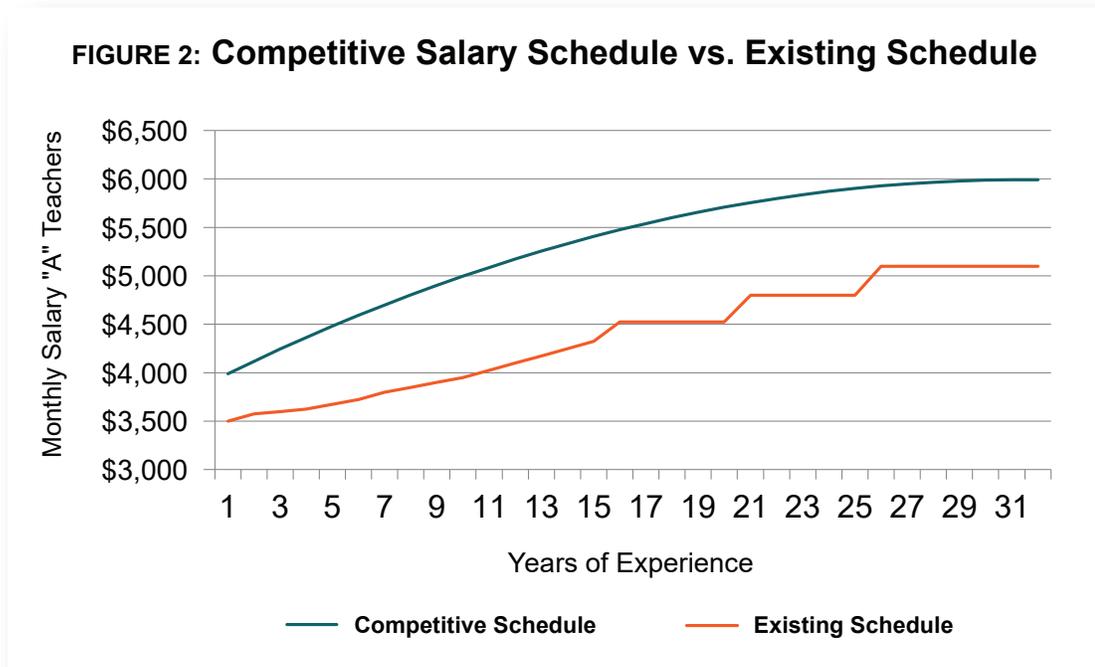
By investing \$1.4 billion in teacher pay, North Carolina could set aside a portion of these funds for differentiated pay plans that would allow school districts to provide additional pay to fill hard-to-staff positions, attract and retain the highest-performing teachers into hard-to-staff schools, and implement career pathways for teachers taking on additional responsibilities.



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Retention bonuses have been used to reduce departures at high-need schools,¹⁶ and are likely to be effective for high-need subjects. Of course, different districts will have differing staffing needs; in turn, any state funds for differentiated pay should provide districts with significant flexibility to direct additional pay in order to meet district-specific labor shortages.

Figure 2 represents one option for providing a competitive teacher salary schedule in North Carolina. The schedule below would dedicate \$1.1 billion to increasing base salaries for all teachers, allowing \$300 million to be set aside for locally-determined, differentiated pay initiatives.



This salary schedule would increase salaries by an average of 24 percent, while the amount set aside for differentiated pay could support additional salary increases averaging 5 percent. The 29 percent increase in teacher salaries would bring North Carolina’s teacher salaries to levels similar to those offered by Finland. Consistent with research on optimal schedule design, the proposal creates a concave teacher salary schedule, where pay increases more quickly in early years and levels off for teachers with 30 years of experience.

As demonstrated by Finland, Singapore, and South Korea, such a schedule would set the conditions to allow North Carolina to consistently select from teachers in the top-third of candidates. By offering teacher salaries that are more competitive with those offered by other professions in North Carolina, the state could implement additional policies to boost teaching’s prestige. Policymakers could begin tightening admission and graduation standards of teacher preparation programs, and create new professional opportunities for teachers taking on additional responsibilities.



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Policy recommendations for providing competitive teacher pay in North Carolina

North Carolina policymakers can take a number of steps to create a competitive pay system for North Carolina teachers:

- **Significantly increase investments in teacher pay:** Bringing North Carolina teacher salaries to levels that are just 80 percent of the salaries offered by other professions will require increasing teacher pay by at least \$1.3 billion, approximately 25 percent above current levels.
- **Create a concave salary schedule:** Effective salary schedules increase rapidly in early years and level off in later years.
- **Allow state funds to be used on locally-determined differentiated pay plans:** School districts would benefit from additional funds to provide additional pay for positions in hard-to-staff schools or subject areas. Districts should be allowed to deploy these funds flexibly in order to meet unique district needs.
- **Seek better data on wage competitiveness:** Existing data sources on wage competitiveness are based on several years of data and do a poor job of precisely reflecting competitiveness by years of experience, age, and degree type. Policymakers should support the Department of Commerce to gather wage competitiveness data that is more precise and timely.

While competitive wages are the bedrock upon which successful countries have built their education systems, it is important to consider additional steps these countries take to recruit and retain the best teachers. Competitive teacher salaries in these countries are coupled with tightened entry standards for teacher preparation programs, limiting or eliminating the cost of teacher preparation programs, supporting inexperienced teachers with additional training and mentors, improving teacher working conditions, and providing teachers with opportunities for professional growth without having to leave the classroom.

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1. <http://www.nea.org/assets/docs/HE/06rankings.pdf#page=36>
 2. http://www.nea.org/assets/docs/2016_NEA_Rankings_And_Estimates.pdf#page=110
 3. <http://wunc.org/post/not-worth-it-why-nc-college-students-are-turning-away-teaching#stream/0>
 4. <http://mckinseysociety.com/closing-the-talent-gap/>
 5. <http://www.oecd.org/edu/education-at-a-glance-19991487.htm>
 6. <http://hanushek.stanford.edu/publications/valuing-teachers-how-much-good-teacher-worth>
 7. <http://ilr.sagepub.com/content/55/4/686.short>
 8. <http://files.eric.ed.gov/fulltext/ED012275.pdf>
 9. <http://www.suttontrust.com/wp-content/uploads/2011/09/2teachers-impact-report-final.pdf>
 10. [http://hanushek.stanford.edu/sites/default/files/publications/Hanushek%201992%20JPE%20100\(1\).pdf](http://hanushek.stanford.edu/sites/default/files/publications/Hanushek%201992%20JPE%20100(1).pdf)
 11. http://blogs.edweek.org/edweek/rick_hess_straight_up/2015/08/research_vs_conventional_wisdom_competition_for_teacher_labor.html?qs=goldhaber+inmeta:Cover_year%3D2015
 12. <http://www.epi.org/publication/the-teacher-pay-gap-is-wider-than-ever-teachers-pay-continues-to-fall-further-behind-pay-of-comparable-workers/>
 13. Rather than examining full-time workers, the EPI analysis looks at any workers with a bachelor's or master's degree and positive wages.
 14. Lower bound based on EPI analysis of all workers with a bachelor's or master's degree and positive wages. Higher bound based on author's analysis of full-time workers.
 15. <https://aefpweb.org/sites/default/files/webform/39th/TeacherPaySelectionEffects.pdf>
 16. <http://www.edpolicyinca.org/blog/highly-effective-teacher-retention-bonuses>