

March 9, 2015

Members of the House Education Committee:

For more than a decade, I have had the opportunity in my professional capacity to read and review numerous academic research reports on K-12 educator compensation policies. The following findings are among the most relevant to the discussion about House Bill 1200:

1. Teachers instructing poor and minority children are much more likely to have less experience and less background in the subject area taught. (Hanushek, Kain, and Rivkin, "Why public schools lose teachers," *Journal of Human Resources*, Spring 2004.)
2. At best, only the first few years in the classroom improve the average teacher's effectiveness. Subsequent experience demonstrates no discernible improvement on average. Additional educational credentials offer almost no evidence of any positive effect on student achievement. (Rockoff, "The impact of individual teachers on student achievement: Evidence from panel data," *American Economic Review* May 2004; Hanushek, Kain, and Rivkin, "Teachers, Schools, and Academic Achievement," *Econometrica*, March 2005.)
3. One year of a teacher with measurably greater effectiveness adds more than \$400,000 to a classroom of 20 students' future lifetime earnings. (Hanushek, "The economic value of higher teacher quality," *Economics of Education Review*, 2011.)
4. "Among teachers who switched between schools with substantially different poverty levels or academic performance levels, we find no change in those teachers' measured effectiveness before and after a school change." (Xu, Ozek, and Corritore, "Portability of teacher effectiveness across school settings," American Institutes of Research, 2012.)
5. For each extra \$1,000 in salary increase, teacher attrition dropped by 6 percent in high-risk schools. (Kirby, Berends, and Haftel, "Supply and demand of minority teachers in Texas: Problems and prospects," *Educational Evaluations and Policy Analysis*, 1999.)
6. Female teachers required a 25 to 43 percent salary increase to leave the suburbs for a low-performing, inner-city school. Male teachers required a 9 to 12 percent pay increase to leave the suburbs for a low-performing, inner-city school. (Hanushek, Kain, and Rivkin, "The Revolving Door," *Education Next*, 2003.)

Please feel free to contact me for any additional information on the above citations.

Sincerely,



Ben DeGrow  
Senior Education Policy Analyst, Independence Institute



## HB 15-1200: Highly Effective Teachers & Low-performing Schools

**Bill Sponsors: Representative Priola and Senator Hill**

**Bill Supporters:**

- Colorado Children's Campaign
- Colorado Succeeds
- Hispanic Chamber of Commerce

### What does the bill do?

The bill will enable school districts, boards of cooperative services that operate public schools, and charter schools to offer salary bonuses to attract highly effective teachers to teach in elementary, middle, or junior high schools that are implementing priority improvement or turnaround plans for low-performing schools. The Department of Education and the State Board of Education will implement the program by distributing grants in 2-year cycles. The amount of a grant is based on the number of highly effective teachers that meet the requirements for receiving salary bonuses and that the local education provider employs in low-performing schools. Each local education provider that applies and meets the requirements for a grant will receive a grant, subject to available appropriations.

A local education provider may use the grant only to pay nonbase-building salary bonuses to eligible highly effective teachers. A local education provider that receives a grant and is already paying incentives to highly effective teachers who teach in low-performing schools must pay the bonuses funded by the grant moneys in addition to the other incentives. A highly effective teacher must meet specified criteria to receive the salary bonus. The amount of the salary bonus depends on whether the teacher was working in a high-performing local education provider and changed employment to work in a low-performing school or is continuing to work in a low-performing school and whether the highly effective teacher works in a low-performing elementary, middle, or junior high school. The bill creates the highly effective teacher incentives fund, which consists of a one-time appropriation of \$4 million from the state education fund. The state board will disburse approximately one-half of the moneys in the fund in the first grant cycle and approximately one-half of the moneys in a second grant cycle. By December 15, 2019, the department must submit to the education committees of the general assembly a report concerning the implementation and effectiveness of the program.

### Why is this necessary?

Research shows that an effective teacher is the most effective school based factor impacting school performance.<sup>1</sup> Unfortunately it is the low performing schools that have the most difficult time attracting and retaining effective teachers.<sup>2</sup> This bill is based off of the Talent Transfer Initiative (TTI),

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<sup>1</sup> Amy M. Hightower, et al., Improving Student Learning by Supporting Quality Teaching: Key Issues, Effective Strategies (Dec. 2011) [http://www.edweek.org/media/eperc\\_qualityteaching\\_12.11.pdf](http://www.edweek.org/media/eperc_qualityteaching_12.11.pdf)

<sup>2</sup> National Center for Education Evaluation, Do Low-Income Students Have Equal Access to the Highest Performing Teachers? (April 2011) <http://ies.gov/necc/pubs/20114016/pdf/20114016.pdf>



which is a proven method of bringing high quality teachers into low performing schools through salary initiatives<sup>3</sup>.

**Have other states or institutions implemented similar policies?**

- Referred to above TTI was a program funded by the US. Department of Education that gave a \$20,000 incentive for teachers to move to low performing schools in 10 different cities including: Los Angeles, Miami and New York. The results were impressive and cost effective:
- The program increased the math and reading test scores of elementary students by 4 to 10% points
- TTI had a positive impact on teacher retention rates during the first two years, while transfer teachers were receiving bonus payments.
- 93% of teachers remained in their positions during that period versus 70% of traditionally hired teachers.
- 60% of the teachers in the TTI group continued to teach in the low performing school in their 3<sup>rd</sup> year, after the payments ended
- It was \$13,000 cheaper per grade to implement this program than to hire another teacher to reduce class size.<sup>4</sup>

As a result of this program, testing scores went up and there was a higher teacher retention rate even after the incentive bonuses expired.

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<sup>3</sup> "Talent Transfer Initiative: Attracting and Retaining High Performing Teachers in Low-Performing Schools.", Mathematica Policy Research, <http://www.mathematica-mpr.com/education/tti.asp>.

<sup>4</sup> "New Study: Teachers with High Value Added Can Boost Test Scores in Low Performing Schools," Mathematics Policy Research, accessed, [http://www.mathematics-mpr.com/newsroom/releases/2013/talent\\_initiative\\_11-13/asp](http://www.mathematics-mpr.com/newsroom/releases/2013/talent_initiative_11-13/asp).



# InFOCUS

## Transfer Incentives for High-Performing Teachers

\$20,000 incentive for high-performing teachers to move to low-performing elementary schools helped raise math and reading tests scores

**4 to 10**

percentile points

Many education policy experts have raised concerns that disadvantaged students, who are often concentrated in low-performing schools, do not have the same access to highly effective teachers as other students. To address this issue, the U.S. Department of Education, Institute of Education Sciences (IES) sponsored an evaluation conducted by Mathematica Policy Research of an intervention known to study participants as the Talent Transfer Initiative (TTI).

### ABOUT THE INTERVENTION

TTI offered a financial incentive to the teachers with the highest scores year after year on value-added measures (estimates of their ability to raise test scores, after accounting for differences between students) if they would transfer to a lower-achieving school in the same district and remain there for at least two years.

### KEY FINDINGS

Evaluation of the TTI intervention revealed that a \$20,000 incentive for high-performing teachers to move to low-performing schools has helped raise the math and reading test scores of elementary students by 4 to 10 percentile points. Although there was no evidence of impacts in middle schools, the combined impact on elementary and middle school grade teams was positive and significant for reading by the second year after the transfer. In comparison to reducing class size (a policy designed to achieve similar impacts), the cost of producing these gains through TTI were estimated to be \$7,000 cheaper for each team than it would have been to reduce class size by adding enough teachers to produce a similar effect. In elementary schools, TTI was \$13,000 cheaper than the class-size reduction benchmark.

**About 22% of the selected teachers applied for the transfer, and 5% (81 teachers) ultimately transferred.** These teachers filled 88% of the targeted teaching vacancies in low-performing schools.

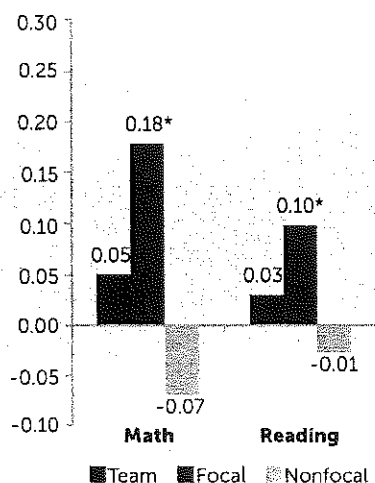
**TTI increased test scores in elementary schools, but not in middle schools.** In classrooms targeted by TTI, impacts on elementary math and reading scores ranged from 10 to 25 percent of a standard deviation, depending on the subject and year. This is equivalent to increases of 4 to 10 percentile points. Impacts on the grade team as a whole were positive in the second year, equal to 8 and 7 percent of a standard deviation in math and reading, respectively—or about 3 percentile points. Although there was no evidence of impacts in middle schools, the combined impact on elementary and middle school grade teams was positive and significant for reading by the second year after the transfer. Researchers also found that different outcomes in elementary versus middle schools could in part reflect differences between districts, which varied considerably in terms of impacts and where they offered TTI (elementary or middle schools).



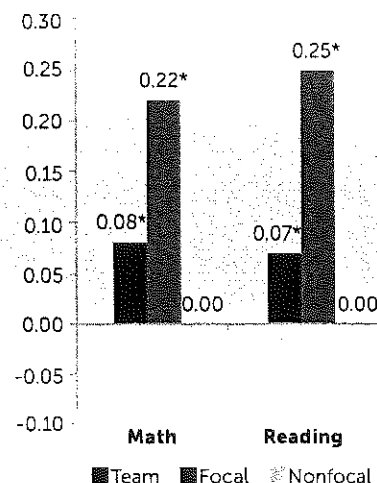


The largest impacts were in elementary schools, where the cost savings could be as large as \$13,000 per grade at a given school.

### Test-Score Impacts in Elementary Schools (Year 1)



### Test-Score Impacts in Elementary Schools (Year 2)



Source: District administrative data.

Note: A team consists of all classroom teachers in the grade and subject for a school. Focal teachers are those who filled study vacancies. Nonfocal teachers are the rest of the teachers on the team.

\*Statistically significant at the 0.05 level, two-tailed test.

**Most TTI teachers stayed on the job even after payments ended.** TTI had a positive impact on teacher-retention rates during the first two years, while transfer teachers were receiving bonus payments. Ninety-three percent of TTI teachers remained in their positions during that period, versus 70% of traditionally hired teachers. Moreover, most (60%) of the teachers in the TTI group also continued to teach in the low-performing schools in their third year, after the payments ended.

**Compared with similar interventions, TTI was more cost-effective.** The largest impacts were in elementary schools, where the cost savings could be as large as \$13,000 per grade at a given school, compared with other interventions that can be equally effective in raising test scores, such as reducing class size. Including middle schools, where achievement impacts were not significant, and assuming that the total impacts persist into a third year, the cost savings exceeded \$40,000 per grade.

## ABOUT THE STUDY

Sponsored by IES, this multisite randomized experiment was used to study the TTI intervention in 10 large, economically diverse school districts across seven states. The districts identified schools with the lowest test scores and singled out grade-subject teams with teaching vacancies. The researchers randomly assigned each team to either a treatment group, where the principals could interview and hire a TTI-transfer candidate eligible for \$20,000, or to a control group, where the school principals filled the vacancies however they normally would. Researchers then followed the students and teachers in both the treatment and control groups for two years and compared their outcomes.

To view the full report, *Transfer Incentives for High-Performing Teachers: Final Results from a Multisite Randomized Experiment*, please visit Mathematica's website [www.mathematica-mpr.com](http://www.mathematica-mpr.com) or the U.S. Department of Education Institute of Education Sciences website: <http://ies.ed.gov/>

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## Examining Educator Equity in Colorado

Posted on January 9, 2015 Leslie Colwell, Vice President, K-12 Education Initiatives Colorado Children's Campaign

The U.S. Department of Education recently released profiles of "educator equity" in each state to shine a light on gaps in the numbers of effective teachers in high-poverty schools compared to schools in low-poverty areas. All kids need to have great teachers to have the best chance at success, no matter where they live or their race or ethnicity.

Drawing on data for the 2011-12 school year, the profiles show that nationally teachers in schools with high percentages of low-income and minority students are more likely to be uncertified, to be newer to the profession, to be considered "not highly qualified," to be at the low end of the salary scale, and to be absent 10 or more days per school year.

In Colorado, schools with the highest percent of students in poverty had 6.8 percent of teachers in their first year of teaching, compared to 4.3 percent in low-poverty schools. Schools with high percentages of minority students also saw similar gaps. In addition, educators earned \$1,000 less annually in high-poverty schools, but \$2,000 more annually in schools with high percentages of minorities.

Addressing issues of educator equity will not be easy, as states have a limited authority and capacity in how districts distribute teachers. Additionally, states (including Colorado) are still in the process of developing teacher evaluation systems that determine whether a teacher is "effective," which takes into account student achievement, as opposed to "highly qualified," which takes into account certification and subject knowledge. The publication of data profiles provides an opportunity to take stock of the important problem of unequal access to quality teachers and work toward equity. [Check out Colorado's Educator Equity Profile here.](#)

The U.S. Department of Education has asked states to create or rewrite plans to guarantee that all students have access to effective educators. Fewer than half of states have separate teacher equity plans on file with the department, and those that do exist are in many cases several years old or found to be lacking in quality.

U.S. Education Secretary Arne Duncan recently [asked states to revisit plans](#) first created in 2006 as part of the federal No Child Left Behind law. The plans have gone largely unenforced until now, but the administration's goal is to put some teeth into the requirement that low-income and minority students get access to as many great teachers as their more advantaged peers.

Plans must be submitted by June 1 of this year, using data and discussions with educators and parents to devise local solutions. More than \$4 million will be used to establish a support network to help states develop and implement their plans.

### About Leslie Colwell

Leslie Colwell serves as the Vice President of K-12 Education Initiatives, leading the Campaign's work to improve education in the state of Colorado. Before joining the Children's Campaign in August of 2014, Leslie worked to facilitate partnerships and produce policy agreements, especially in the area of education, as an Associate at The Keystone Center. Her professional experience includes working as Legislative Director for State Senator Mike Johnston, managing his education policy portfolio (including his office's work on HB12-1238, Colorado's READ Act, and SB13-033, ASSET) and directing a policy fellowship for educators for three summers. Leslie has also worked on Teach For America's alumni team, and before that taught 6th grade Math and Earth Science as a TFA corps member at Mary McLeod Bethune Middle School in Los Angeles.

This entry was posted in [K-12 Education](#), [KidsFlash](#) and tagged [educator equity](#). Bookmark the [permalink](#).

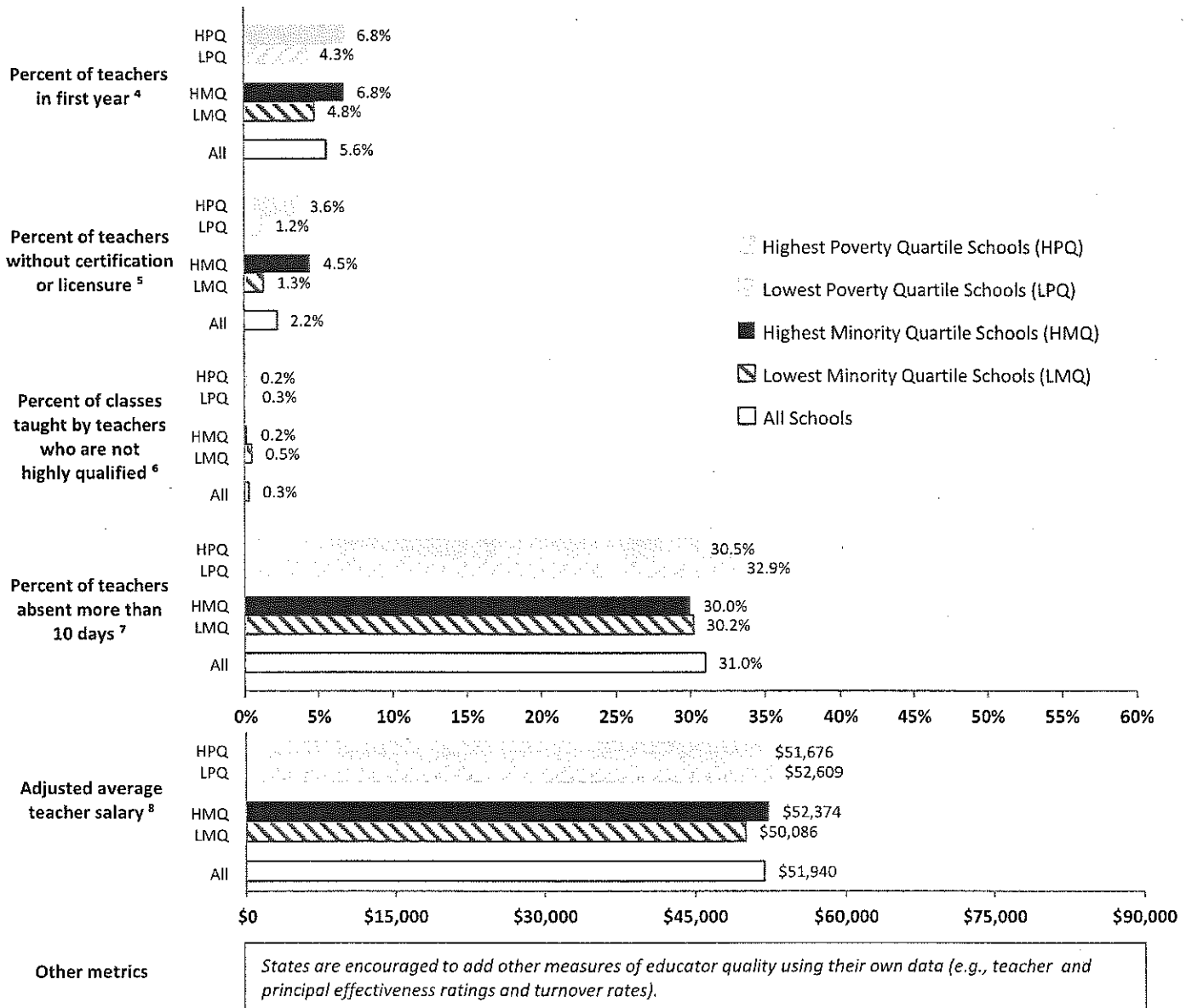


This profile compares certain characteristics of educators in schools with high and low concentrations of students from low-income families and minority students. These data are the best available to the Department. In working to ensure that all students have access to excellent teachers and leaders, states and districts are encouraged to supplement these data with additional measures of educator quality.

**About this State**

Number of Schools <i>In each quartile</i>	1,810 <i>about 453</i>	Average Percent Students in Poverty <sup>2</sup>		Average Percent Minority <sup>3</sup> Students	
		All Schools	41%	All Schools	44%
Number of Districts	183	Highest Poverty Quartile Schools (HPQ)	82%	Highest Minority Quartile Schools (HMQ)	82%
Total Student Enrollment	853,669	Lowest Poverty Quartile Schools (LPQ)	11%	Lowest Minority Quartile Schools (LMQ)	16%
Total Number of Teachers <sup>1</sup>	47,573				

**Educator and Classroom Characteristics**



**Chart reads:** In the quartile of schools with the highest percentage of students in poverty (HPQ), 6.8 percent of teachers were in their first year of teaching, compared to 4.3 percent of teachers in the quartile of schools with the lowest percentage of students in poverty (LPQ). In the quartile of schools with the highest percentage of minority students (HMQ), 6.8 percent of teachers were in their first year of teaching, compared to 4.8 percent of teachers in the quartile of schools with the lowest percentage of minority students (LMQ). Among teachers in all schools, 5.6 percent were in their first year of teaching.

**Note:** Average teacher salary data are adjusted to account for regional cost of living differences as measured by differences in salaries of other college graduates who are not educators.

State's Highest Poverty Schools – by District and Locale

	Number of State's highest poverty schools	Total number of schools	Percent of teachers in first year in State's highest poverty schools	Percent of teachers without certification or licensure in State's highest poverty schools	Percent of classes taught by teachers who are not highly qualified in State's highest poverty schools	Percent of teachers absent more than 10 days in State's highest poverty schools	Adjusted average teacher salary in State's highest poverty schools
<b>District</b>							
Denver SD No. 1	118	163	2.5 ✓	10.8	0.0 ✓	27.7 ✓	\$59,840 ✓
Aurora Joint District No. 28	34	59	6.5	0.0 ✓	0.0 ✓	16.1 ✓	\$52,033
Jefferson County SD No. R-1	25	163	5.0	1.0 ✓	0.0 ✓	26.7 ✓	\$46,779
Pueblo SD No. 60	24	37	7.2	2.8	0.0 ✓	63.4	\$50,329
Colorado Springs SD No. 11	21	60	6.5	3.1	0.0 ✓	26.7 ✓	\$49,349
Harrison SD No. 2	18	25	22.5	2.1	1.5	12.8 ✓	\$60,879 ✓
Westminster SD No. 50	17	19	1.3 ✓	0.0 ✓	0.0 ✓	47.0	\$52,278
Mapleton SD No. 1	14	17	6.7	0.0 ✓	0.0 ✓	32.5 ✓	\$47,884
Greeley SD No. 6	14	30	9.9	0.8 ✓	0.3 ✓	50.3	\$38,126
Adams 12 Five Star Schools	13	54	2.5 ✓	1.0 ✓	0.0 ✓	56.6	\$51,264
Adams SD No. 14	12	13	23.8	0.0 ✓	0.3 ✓	3.5 ✓	\$36,998
St. Vrain Valley SD No. Re1j	9	52	7.7	0.0 ✓	0.4	31.0 ✓	\$46,778
Fort Morgan SD No. Re-3	7	8	10.3	2.1	0.0 ✓	19.2 ✓	\$48,991
Mesa Co. Valley SD No. 51	6	46	2.6 ✓	0.0 ✓	0.4	37.4	\$43,872
Montrose County SD Re-1j	5	15	0.0 ✓	0.7 ✓	0.0 ✓	16.7 ✓	\$51,887
<b>Locale<sup>9</sup></b>							
City	231	529	5.6	5.5	0.1 ✓	30.0 ✓	\$55,602 ✓
Suburb	112	467	7.8	0.4 ✓	0.1 ✓	32.0 ✓	\$46,999
Town	39	225	8.8	0.7 ✓	0.3 ✓	33.5	\$46,311
Rural	70	589	10.1	3.4	0.6	27.0 ✓	\$46,197
<b>For comparison</b>							
<b>State average for lowest poverty schools</b>			<b>4.3</b>	<b>1.2</b>	<b>0.3</b>	<b>32.9</b>	<b>\$52,609</b>

How to read this table:

Among the State's highest poverty schools, 118 are located in Denver SD No. 1. In those schools, 2.5 percent of teachers were in their first year; this is lower than the percentage of teachers in their first year in the lowest poverty schools in the State (4.3 percent). Among the State's highest poverty schools, 231 are located in cities. In those schools, 5.6 percent of teachers were in their first year; this is higher than the percentage of teachers in their first year in the lowest poverty schools in the State (4.3 percent).

**Note:** Average teacher salary data are adjusted to account for regional cost of living differences as measured by differences in salaries of other college graduates who are not educators.

✓ Indicates that the State's highest poverty schools in that district (or locale) have equal or lower percentages for each characteristic (or higher salary), on average, than the lowest poverty schools across the entire State.

State's Highest Minority Schools – by District and Locale

District	Number of State's highest minority schools	Total number of schools	Percent of teachers in first year in State's highest minority schools	Percent of teachers without certification or licensure in State's highest minority schools	Percent of classes taught by teachers who are not highly qualified in State's highest minority schools		Adjusted average teacher salary in State's highest minority schools
					Percent of teachers absent more than 10 days in State's highest minority schools	Percent of teachers who are not highly qualified in State's highest minority schools	
Denver SD No. 1	129	163	2.4 ✓	11.3	0.0 ✓	26.7 ✓	\$59,329 ✓
Aurora Joint District No. 28	50	59	7.0	2.9	0.4 ✓	14.7 ✓	\$50,572 ✓
Pueblo SD No. 60	30	37	6.2	2.4	0.0 ✓	61.6	\$50,610 ✓
Harrison SD No. 2	19	25	20.8	2.7	2.0	15.4 ✓	\$61,207 ✓
Westminster SD No. 50	18	19	1.3 ✓	0.0 ✓	0.0 ✓	47.8	\$52,278 ✓
Greeley SD No. 6	17	30	10.6	0.8 ✓	0.3 ✓	53.1	\$39,918
Mapleton SD No. 1	16	17	7.7	0.0 ✓	0.0 ✓	31.9	\$47,755
Jefferson County SD No. R-1	16	163	5.3	1.8	0.0 ✓	28.1 ✓	\$47,687
Adams 12 Five Star Schools	14	54	2.1 ✓	0.6 ✓	0.0 ✓	54.4	\$52,816 ✓
Adams SD No. 14	13	13	23.7	0.0 ✓	0.3 ✓	3.5 ✓	\$37,018
Colorado Springs SD No. 11	9	60	5.3	3.7	0.0 ✓	21.8 ✓	\$46,468
State Charter School Instit.	8	25	18.4	7.4	0.0 ✓	7.5 ✓	\$37,229
Eagle County SD No. Re 50	7	20	20.8	1.8	2.1	59.7	\$50,678 ✓
St. Vrain Valley SD No. Re1j	7	52	7.5	0.0 ✓	0.6	33.3	\$46,705
Cherry Creek SD No. 5	7	58	6.9	0.0 ✓	0.2 ✓	23.5 ✓	\$63,766 ✓
<b>Locale<sup>9</sup></b>							
City	254	529	5.8	6.2	0.2 ✓	29.3 ✓	\$55,615 ✓
Suburb	98	467	8.0	0.5 ✓	0.1 ✓	33.4	\$47,736
Town	45	225	9.2	0.8 ✓	0.4 ✓	33.6	\$47,261
Rural	55	589	9.3	4.9	0.4 ✓	23.2 ✓	\$46,820
<b>For comparison</b>							
State average for lowest minority schools			4.8	1.3	0.5	30.2	\$50,086

How to read this table:

Among the State's highest minority schools, 129 are located in Denver SD No. 1. In those schools, 2.4 percent of teachers were in their first year; this is lower than the percentage of teachers in their first year in the lowest minority schools in the State (4.8 percent). Among the State's highest minority schools, 254 are located in cities. In those schools, 5.8 percent of teachers were in their first year; this is higher than the percentage of teachers in their first year in the lowest minority schools in the State (4.8 percent).

**Note:** Average teacher salary data are adjusted to account for regional cost of living differences as measured by differences in salaries of other college graduates who are not educators.

✓ Indicates that the State's highest minority schools in that district (or locale) have equal or lower percentages on each characteristic (or higher salary), on average, than the lowest minority schools across the entire State.

## State and District Profile Definitions:

- <sup>1</sup> **Total number of teachers:** The number of full-time equivalent (FTE) classroom teachers; all teacher data are measured in FTEs.
- <sup>2</sup> **Highest and lowest poverty schools:** "Poverty" is defined using the percentage of students who are eligible for free or reduced-price lunch. The highest poverty schools are those in the highest quartile in a State. In Colorado, the schools in the highest poverty quartile have more than 66 percent of students eligible for free or reduced-price lunch. The lowest poverty schools are those in the lowest poverty quartile in the State; in Colorado, these schools have less than 21 percent of students eligible for free or reduced-price lunch.
- <sup>3</sup> **Highest and lowest minority schools:** "Minority" is defined for purposes of this profile as all students who are American Indian/Alaska Native, Asian, Black, Native Hawaiian/Pacific Islander, Hispanic, or Two or More Races. The highest minority schools are those in the highest quartile in a State. In Colorado, the schools in the highest minority quartile have more than 63 percent minority students. The lowest minority schools are those in the lowest quartile in a State; in Colorado, these schools have less than 20 percent minority students. Note: There is no statutory or regulatory definition of "minority" in Title I of the Elementary and Secondary Education Act of 1965, as amended. The Department has created this definition of "minority" only for purposes of presenting data in this Educator Equity Profile, which is intended to improve transparency about educator equity in each State. In developing its educator equity plan, including analyzing resources for subpopulations of students, each State should exercise its own judgment as to whether this definition of "minority" is appropriate in describing the student racial and ethnic demographics in the State. For further information about developing a State definition of "minority" for the purpose of a State's educator equity plan, please see the document titled "State Plans to Ensure Equitable Access to Excellent Educators: Frequently Asked Questions."
- <sup>4</sup> **First year teachers:** The number of FTE classroom teachers in their first year of teaching. The number of year(s) of teaching experience includes the current year but does not include any student teaching or other similar preparation experiences. Experience includes teaching in any school, subject, or grade; it does not have to be in the school, subject, or grade that the teacher is presently teaching.
- <sup>5</sup> **Teachers without certification or licensure:** The total number of FTE teachers minus the total number of FTE teachers meeting all applicable State teacher certification requirements for a standard certificate (i.e., has a regular/standard certificate/license/endorsement issued by the State). A beginning teacher who has met the standard teacher education requirements is considered to meet State requirements even if he or she has not completed a State-required probationary period. A teacher with an emergency, temporary, or provisional credential is not considered to meet State requirements. State requirements are determined by the State.
- <sup>6</sup> **Classes taught by teachers who are not highly qualified:** In general, a "highly qualified teacher" is one who is: (1) fully certified or licensed by the State, (2) holds at least a bachelor's degree from a four-year institution, and (3) demonstrates competence in each core academic subject area in which the teacher teaches. When used with respect to any teacher teaching in a public charter school, the term "highly qualified" means that the teacher meets the requirements set forth in the State's public charter school law and the teacher has not had certification or licensure requirements waived on an emergency, temporary, or provisional basis. Teachers participating in alternative route programs that meet basic conditions may be considered fully certified for purposes of this highly qualified teacher requirement for up to three years provided they are making satisfactory progress toward completing their program [34 CFR 200.56(a)(2)]. Classes taught by teachers who are not highly qualified are core academic classes taught by teachers who do not meet all of these criteria. Core academic classes are: English, reading/language arts, mathematics, science, foreign languages, civics and government, economics, arts, history, and geography.
- <sup>7</sup> **Teachers absent more than 10 days:** The total number of FTE teachers who were absent more than 10 days of the regular school year when the teacher would otherwise be expected to be teaching students in an assigned class. Absences include both days taken for sick leave and days taken for personal leave. Personal leave includes voluntary absences for reasons other than sick leave. Absences do not include administratively approved leave for professional development, field trips or other off-campus activities with students.
- <sup>8</sup> **Adjusted average teacher salary:** Total school-level personnel expenditures from State and local funds for teachers divided by the total FTE teachers funded by those expenditures. Personnel expenditures for teachers include all types of salary expenditures (i.e., base salaries, incentive pay, bonuses, and supplemental stipends for mentoring or other roles). Personnel expenditures for teachers exclude expenditures for employee benefits. Teacher salary is often dependent on the number of years of experience, education, and other credentials. Average teacher salary data are adjusted, using the Comparable Wage Index (CWI), to account for regional cost of living differences as measured by differences in salaries of other college graduates who are not educators. Adjusted salary data are not comparable across states.
- <sup>9</sup> **Locale:** Based on National Center for Education Statistics urban-centric locale code. A city is a territory inside an urbanized area and inside a principal city. A suburb is a territory outside a principal city and inside an urbanized area. A town is a territory inside an urban cluster that is not inside an urbanized area. A rural area is a Census-defined rural territory that is not inside an urbanized area and not inside an urban cluster.

**Sources:** Data for teachers in their first year, teachers without certification or licensure, teachers who were absent more than 10 days, and adjusted average teacher salary come from the 2011–12 Civil Rights Data Collection. Data for classes taught by highly qualified teachers come from 2011–12 EDFacts. Data on number of schools, number of districts, total student enrollment, total number of teachers, free or reduced-price lunch eligibility, student enrollment by race/ethnicity, and locale come from 2011–12 Common Core of Data school universe file. The Comparable Wage Index (CWI) for the 2012 fiscal year comes from [http://bush.tamu.edu/research/faculty/Taylor\\_CWI/](http://bush.tamu.edu/research/faculty/Taylor_CWI/).



## Supporting Quality School Options in Colorado

Colorado's business leaders have long understood that the success of their companies - and Colorado's economic strength - is deeply connected to the quality of education that our state is providing those in the current and future workforce. We know that for Colorado to remain competitive in today's global economy, we need an education system that fuels the workforce pipelines of our existing industries and brings the jobs of tomorrow here today by ensuring that a strong workforce is in place and ready to fill those jobs. That's why we are calling on policymakers to join us in pursuing immediate and continuous improvement to our state's education system to ensure every student, regardless of their background or zip code, has access to a high-performing school. Below are a few commonsense opportunities that Colorado should pursue to make this happen.

### SCHOOLS SHOULD HAVE EQUAL ACCESS TO FUNDING

Colorado has a robust system of public school choice intended to personalize educational options and improve school quality through competition. As parents exercise their right and responsibility of school choice, it has to be on an even playing field. Charters schools, innovation schools, magnet schools, and traditional schools should receive dollars based on the students they serve, not their school type. Currently, there is a significant funding gap between traditional district schools and public schools of choice. Charter schools have to take capital construction and transportation costs out of the per-pupil funding that they receive, which means less money ends up in the classrooms. We can create more quality school options by directing additional resources to charter schools for capital construction and transportation funding. By taking these steps, Colorado will also become more attractive to high-quality charter school management organizations, which have a track-record of success in improving academic outcomes.

*How would equitable funding create more quality school options?*

- Giving charters access to equitable funding will direct more dollars into their classrooms where they can have the greatest impact on student achievement.

*How would an ADM system improve schools?*

- Making money follow the kid promotes healthy competition between schools to better meet individual students' needs.

### EVERY KID SHOULD COUNT, EVERY DAY

Colorado should update its antiquated method for counting students from a single count date to a system that counts students on multiple days throughout the year, otherwise known as an average daily membership (ADM) count. A continuous, regular student count mitigates the high stakes nature of a single day student count, reduces the need for an expensive auditing scheme, and incentivizes schools to

keep kids in school all year. The counting mechanism should be flexible and predictive to ensure growing schools and districts are properly funded.

### SCHOOL FUNDING SHOULD BE TRANSPARENT AND ACCESSIBLE

Districts should report the amount of mill levy override revenues they receive and the dollar amount distributed to charter schools. Districts should also report costs at the school site level instead of the district level. The state should post this information online in a way that allows parents and stakeholders to view each individual school site's spending in a clear, concise, and easy-to-understand format. This will allow parents and school leaders to determine which schools' expenditures are leading to higher student achievement and identify best practices.

*Why is transparency important?*

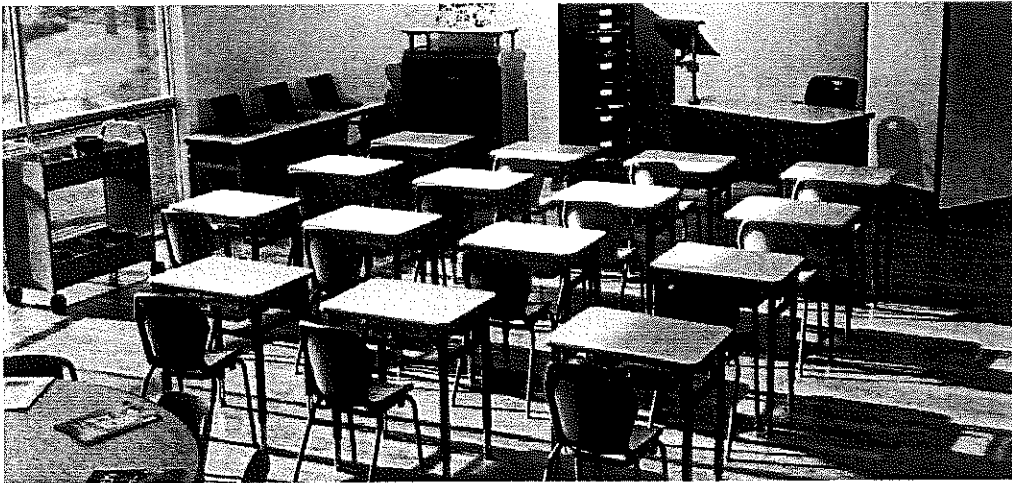
- Knowing how districts share local mill levy dollars is key to ensuring that charters receive equitable funding.
- Access to school site level data will also help parents, policymakers, and school leaders determine where we can get the greatest return on investment.



# The GREAT Act

## Informational Handout

"Highly Effective  
Teachers & Low-  
performing Schools"



**Highly Effective  
Teacher:** the  
highest rating for  
Colorado teachers  
based on multi-  
measures of  
performance

**Research shows that one of the most important factors in increasing student learning is the presence of an effective teacher in the classroom**

### **Purpose:**

Highly Effective Teachers are essential to closing the achievement gap.

Bill allows struggling school districts and charter schools to attract highly effective teachers to ensure that every student has access to a quality education.

### **Monetary Distribution:**

- **\$12 thousand annually if a highly effective teacher transfers to a low- performing elementary school**
- **\$8 thousand annually if a highly effective teacher transfers to a low-performing middle school**
- **\$6 thousand annually if the highly effective teacher remains in a low performing elementary school**
- **\$3 thousand dollars if a highly effective teacher remains at a low-performing middle school**

### **Timeline:**

**2015-2016 Budget Year:** The Education Department will publicize to teachers and local districts the bill and its goals.

**2016-2017 Budget Year:** Grants will be awarded to the local education provider (schools districts & charter schools).

Education providers may apply for grants at the beginning of each 2 year cycle.



# COLORADO TEACHER TRANSFER INITIATIVE

## CONCEPT PAPER

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### Introduction

An effective teacher represents the most important school-based factor impacting student performance.<sup>1</sup> Unfortunately, our least effective teachers often staff our lowest-performing schools, perpetuating a negative cycle of poor student achievement within certain schools and districts.<sup>2</sup> This paper describes some basic concepts for a new policy designed to incentivize highly effective teachers to transfer to low-performing schools. We hope that it will serve as a starting point for continued discussion.

### Research on Teacher Incentives

Historically, financial incentives for teachers have shown a mixed record when it comes to improving student achievement. For example, a program in New York City that offered teachers \$3,000 if the entire school's test scores went up failed to show improvement faster than scores at the control schools.<sup>3</sup> In another study from Tennessee, teachers were given the opportunity to volunteer for a merit pay experiment where they would receive \$5,000 to \$15,000 in bonuses if kids learned more, but students of those teachers performed no better on tests than students in a control group.<sup>4</sup> Finally, in Chicago, a program where teachers were paid more if they mentored their colleagues and produced learning gains for kids failed to improve student achievement.<sup>5</sup>

However, recently released research provides strong evidence that financial incentives targeted to encourage highly effective teachers to transfer to low-performing schools can significantly boost student achievement in those schools. The study, known as the Talent Transfer Initiative ("TTI"), was described by the study's authors this way:

[The TTI] was implemented in 10 school districts in seven states. The highest-performing teachers in each district—those who ranked in roughly the top 20 percent within their subject and grade span in terms of raising student

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<sup>1</sup> Amy M. Hightower, et al., *Improving Student Learning by Supporting Quality Teaching: Key Issues, Effective Strategies* (Dec. 2011) ("Teacher quality has been consistently identified as the most important school-based factor in student achievement . . . and teacher effects on student learning have been found to be cumulative and long-lasting." (citations omitted)) available at [http://www.edweek.org/media/eperc\\_qualityteaching\\_12.11.pdf](http://www.edweek.org/media/eperc_qualityteaching_12.11.pdf).

<sup>2</sup> National Center for Education Evaluation, *Do Low-Income Students Have Equal Access to the Highest Performing Teachers?* (April 2011) available at <http://ies.ed.gov/ncee/pubs/20114016/pdf/20114016.pdf>; Tim Sass, et al., *Value Added of Teachers in High-Poverty Schools and Lower-Poverty Schools* (Nov. 2010) available at <http://www.urban.org/uploadedpdf/1001469-calder-working-paper-52.pdf>.

<sup>3</sup> Matthew G. Springer and Marcus A. Winters, *New York City's School-Wide Bonus Pay Program: Early Evidence from a Randomized Trial* (April 2009) available at [https://my.vanderbilt.edu/performanceincentives/files/2012/10/200902\\_SpringerWinters\\_BonusPayProgram14.pdf](https://my.vanderbilt.edu/performanceincentives/files/2012/10/200902_SpringerWinters_BonusPayProgram14.pdf)

<sup>4</sup> Matthew G. Springer, et al., *Teacher Pay for Performance: Experimental Evidence from the Project on Incentives in Teaching* (Sep. 2010) available at [https://my.vanderbilt.edu/performanceincentives/files/2012/09/POINT\\_REPORT\\_9.21.102.pdf](https://my.vanderbilt.edu/performanceincentives/files/2012/09/POINT_REPORT_9.21.102.pdf)

<sup>5</sup> Steven Glazerman and Allison Seifullah, *An Evaluation of the Chicago Teacher Advancement Program After Four Years* (Mar. 2012) available at [http://www.mathematica-mpr.com/publications/PDFs/education/tap\\_year4\\_impacts.pdf](http://www.mathematica-mpr.com/publications/PDFs/education/tap_year4_impacts.pdf)



achievement year after year (an approach known as value added)—were identified. These teachers were offered \$20,000, paid in installments over a two-year period, if they transferred into and remained in designated schools that had low average test scores.<sup>6</sup>

The program only included elementary and middle schools from 10 large and economically diverse school districts in seven states.

The results of the study were impressive:

- The incentive program helped raise the math and reading test scores of elementary students by 4 to 10 percentile points.
- About 22% of the selected teachers applied for the transfer, and 5% (81 teachers) ultimately transferred. These teachers filled 88% of the targeted teaching vacancies in low-performing schools.
- Most TTI teachers stayed on the job even after payments ended. TTI had a positive impact on teacher-retention rates during the first two years, while transfer teachers were receiving bonus payments. Ninety-three percent of TTI teachers remained in their positions during that period, versus 70% of traditionally hired teachers. Moreover, most (60%) of the teachers in the TTI group also continued to teach in the low-performing schools in their third year, after the payments ended.
- Compared with similar interventions, TTI was more cost-effective. The largest impacts were in elementary schools, where the cost savings could be as large as \$13,000 per grade at a given school, compared with other interventions that can be equally effective in raising test scores, such as reducing class size. Including middle schools, where achievement impacts were not significant, and assuming that the total impacts persist into a third year, the cost savings exceeded \$40,000 per grade.<sup>7</sup>

But the study also showed the limits of teacher transfer initiatives:

- There was no evidence that the study had any impact on middle school student performance. However, the combined impact on elementary and middle school grade teams was positive and significant for reading by the second year after the transfer.
- Even this large financial incentive only encouraged 5% of the total number of teachers identified as effective to ultimately make the transfer (81 out of 1,513).

### **Concept for Colorado Teacher Transfer Initiative**

Using the TTI study discussed above as a template, it seems feasible that Colorado could adopt an incentive program designed to encourage highly effective teachers to transfer to low-performing schools. We suggest limiting participation to elementary schools and elementary school teachers because (1) the data from the TTI study showed that is where this sort of program is most likely to impact student achievement and (2) this helps keep the cost to a manageable level. A few of the initial details are fleshed out below.

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<sup>6</sup> Steven Glazerman, et al., *Transfer Incentives for High Performing Teachers*, p. xxv (Nov. 2013) available at [http://www.mathematica-mpr.com/publications/pdfs/education/tti\\_high\\_perform\\_teachers.pdf](http://www.mathematica-mpr.com/publications/pdfs/education/tti_high_perform_teachers.pdf).

<sup>7</sup> See *Mathematica Policy Research, TTI Factsheet* (Nov. 2013) available at [http://www.mathematica-mpr.com/publications/pdfs/education/tti\\_fact\\_sheet.pdf](http://www.mathematica-mpr.com/publications/pdfs/education/tti_fact_sheet.pdf).





### Identifying Low-Performing Schools

- Elementary Schools with “Priority Improvement” or “Turnaround” status under the School Performance Framework would be eligible to hire highly effective teachers and receive \$20,000 to increase those teachers’ base salaries over a two-year period (an extra \$10,000 per year).

### Identifying Highly-Effective Teachers

- Elementary Teachers would be eligible for the \$20,000 bonus program, payable over two years, if they:
  - Have three consecutive years of highly effective ratings under SB 10-191;<sup>8</sup>
  - Currently teach in either a district that is “Accredited with Distinction” or a school that has a “Performance Plan” under the School Performance Framework;<sup>9</sup> and
  - Agree to transfer to a school that has “Priority Improvement” or “Turnaround” status and stay there for at least two years.
- Elementary Teachers would be eligible for a \$10,000 bonus program, payable over two years, if they:
  - Have three consecutive years of highly effective ratings under SB 10-191;
  - Currently teach in either a school that has “Priority Improvement” or “Turnaround” status; and
  - Agree to stay in a school that has “Priority Improvement” or “Turnaround” status for at least two years.<sup>10</sup>

### Cost

- Using the participation numbers from the TTI study, we can expect about 5% of the eligible teachers to participate in the program. If we assume there are approximately 2,000 eligible teachers,<sup>11</sup> we would expect about 100 teachers to participate each year.<sup>12</sup>
- To provide participating teachers with a \$20,000 bonus for a two-year commitment (\$10,000 per teacher per year) we would need to secure about \$1,000,000 a year.

### Timeline

- Because the new teacher evaluation framework will be implemented for the first time this year (2013-2014 school year) we will not have teachers with three consecutive years of highly effective ratings until the end of the 2015-2016 school year. Thus, the earliest start date for the program would be the 2016-2017 school year.

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<sup>8</sup> The new framework is being implemented statewide for the first time this year.

<sup>9</sup> This is necessary to prevent highly effective teachers from merely transferring from one bad school to another bad school. It would undermine the entire purpose of the program if highly effective teachers left struggling schools.

<sup>10</sup> This is necessary to prevent the trend of highly effective teachers leaving low-performing schools.

<sup>11</sup> This number is based on rough estimates: 50,000 teachers; 20,000 elementary teachers, 10% of which meet the eligibility requirements.

<sup>12</sup> Because the SB 10-191 framework is being implemented for the first time this year, it is very difficult to determine how many teachers will meet the eligibility criteria outlined above. Thus, it is important to realize these are *very* rough cost estimates.



## **Moving Top Teachers to Struggling Schools Has Benefits**

Study probes moving talent to low-performing schools

By Stephen Sawchuk

The transfer of top elementary teachers to low-achieving schools can help boost students' performance, but there's a catch: getting them to agree to move.

A **new study**, seven years in the making, finds that elementary teachers identified as effective who transferred to low-achieving schools under a bonus-pay program helped their new students learn more, on average, than teachers in a control group did. They also stayed in the schools at least as long as other new hires.

But despite a large financial reward, only 5 percent of eligible teachers made the shift, the report concludes.

"It's a hard sell, even with \$20,000 on the table," said Steven M. Glazerman, a senior fellow at the Princeton, N.J.-based Mathematica Policy Research, the evaluation firm that conducted the study.

Education advocates have long deplored inequitable access by disadvantaged students to high-quality teaching. The federally financed study suggests there is promise in incentive programs, but highlights the logistical complexities in carrying them out, said Sarah Almy, the director of teacher quality for the Education Trust, a Washington-based group that advocates for poor and minority students.

"I think it's a reminder of how much we still have to understand about this issue, and that it is challenging," she said.

Called the Talent Transfer Initiative, the program and its study were financed by the U.S. Department of Education's statistical wing.

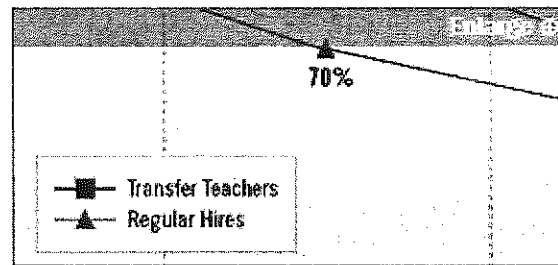
### **Project Spans 10 Districts**

The initiative examined some 165 teams of teachers in 114 schools, located in 10 districts across seven states. Seven of those districts were followed for two years, from 2009-10 to 2010-2011, and three for one year, from 2010 to 2011.

### **Staying Longer?**



When teachers with a track record of raising student achievement were given financial rewards to switch to teaching positions in low-performing schools, they tended to stay longer than other new hires. After the bonus payouts ended, they existed at statistically similar rates as other teachers.



SOURCE: U.S. Department of Education

Researchers used each district's "value added" measure to identify the most effective 20 percent of teachers in the districts. (Value-added is a statistical way to isolate teachers' contribution to student performance on standardized tests.)

The high-performing teachers were offered \$20,000 to transfer to a low-achieving school in the district and to stay there for at least two years. (Effective teachers already located in such schools got \$10,000 to continue teaching.) Payouts were made incrementally over the two-year period.

To examine the effects of the transfers, researchers randomly assigned teams of teachers in the same grade and subject with at least one vacancy to a treatment group, which got to hire one of the TTI teachers, or to a control group, which used its normal processes to fill the vacancy.

Then, the researchers compared how students taught by the TTI teachers and their counterparts in the control groups did academically.

At the elementary level, students taught by the TTI participants made greater gains, on average, in both reading and math than their counterparts. The results were even stronger after a second year. In all, the effect sizes ranged from 0.10 to 0.25 standard deviations, or enough to move up each student by 4 to 10 percentile points relative to peers in their state.

The teaching teams the TTI teachers joined also were more effective than those of their counterparts after two years, but those results were smaller, suggesting that the teachers did not have much effect outside their own classrooms.

### **No Gains at Middle School**

The study's findings support evidence from other studies showing that **the effectiveness of teachers is transferable**, even when they are instructing students with more academic challenges. That's good news, Ms. Almy said, because it helps dispel the idea that a teacher who is successful in one context can't be successful in another.



Teachers in the Talent Transfer Initiative were similar to their counterparts outside the program in most ways, but they were more experienced by about four years and were more likely to hold advanced certification from the National Board for Professional Teaching Standards, an independent nonprofit. Both factors may have contributed to their performance, but the study doesn't tease out whether such characteristics helped to make them better teachers overall.

Gains were not seen among middle schools teachers participating in the study, a finding the researchers struggled to interpret. The difference may be because of inconsistent results among districts, the authors say. Even at the elementary level, where the net effect of the transfers was positive, some districts had much better results than others.

"Future implementers [of transfer programs] should plan for the possibility of results that differ from the averages presented," the report says.

As for retention, the bonus payouts helped keep the transferring teachers on the job at higher rates. After the two-year initiative ended, the TTI teachers were neither more nor less likely to leave than their peers.

### **Teacher Selectivity**

The study points out, though, that it took a large pool—more than 1,500 eligible applicants—to secure the 81 teachers willing to transfer. Many eligible candidates did not attend information sessions, complete an application, or follow through with the interview process.

"There is an implication here that if you want to scale this up, it would be very hard to fill a lot of vacancies, because you would need to have that many more applicants," Mr. Glazerman said. "At some point, you run out of truly high-performing teachers, and there's a risk that if you lowered the bar on teacher selectivity, you wouldn't get the same results."

Ms. Almy of the Education Trust said the onus is on districts to improve working conditions and make lower-performing schools attractive places to work. Financial incentives are not enough, she said. And anecdotally, she added, teachers need to be surrounded by like-minded peers and leaders.

"We hear that even if teachers have what it takes and they're motivated [to transfer], they don't want to be there all by themselves banging their head against the wall," Ms. Almy said.

*Coverage of policy efforts to improve the teaching profession is supported by a grant from the Joyce Foundation, at [www.joycefdn.org/Programs/Education](http://www.joycefdn.org/Programs/Education). Education Week retains sole editorial control over the content of this coverage.*





## This school paid teachers \$125,000 a year — and test scores went up

Updated by [Libby Nelson](#) on October 24, 2014, 12:00 p.m. ET VOX MEDIA

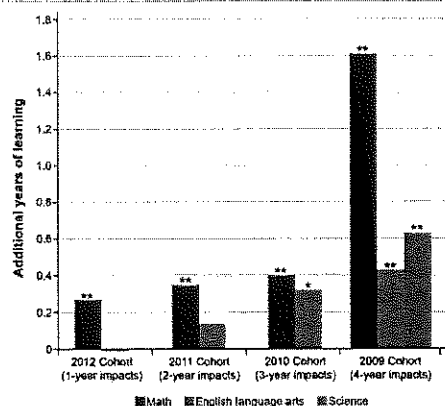
It's common to hear that teachers should be paid better — more like doctors and lawyers. In 2009, the Equity Project, a charter school in New York decided to try it: they would pay all their teachers \$125,000 per year with the possibility of an additional bonus.

The typical teacher in New York with five years' experience makes between \$64,000 and \$76,000. The charter school, known as TEP, would pay much more. But in exchange, teachers, who are not unionized, would accept additional responsibilities, and the school would keep a close eye on their work.

Four years later, students at TEP score better on state tests than similar students elsewhere. The differences were particularly pronounced in math, according to a new study from Mathematica Policy Research. (The study was funded by the Gates Foundation.) After four years at the school, students had learned as much math as they would have in 5.6 years elsewhere:

Figure IV.1. TEP students' additional years of learning

TEP students' additional years of learning in math, English language arts, and science relative to similar students over the same time period



\*Significantly different from zero at the 0.05 level, two-tailed test.  
\*\*Significantly different from zero at the 0.01 level, two-tailed test.

(Mathematica Policy Research)

The gains erased 78 percent of the achievement gap between Hispanic students and whites in the eighth grade.

The results are important in part because TEP also appears to have sidestepped some common concerns about charter schools. They didn't expel or suspend students out of school in the first four years. There is no evidence that the school encouraged problem students to leave or transfer on their own. And the students who attended were roughly as likely to be low-income, and to have had similar levels of academic achievement before they arrived. They could still differ in other ways — they could have more involved parents, who get them into the charter school lottery, for example — but TEP doesn't present some of the obvious factors that help explain other charter schools' success.

### How TEP hired and trained teachers

The \$125,000 number was eye-catching, but it was just the start of the school's approach to teaching. Teachers were also eligible for a bonus of between 7 to 12 percent of their salary. The teachers, who are not unionized, went through a rigorous selection process that included a daylong "audition" based on their teaching skills. The typical teacher already had six years of classroom experience before they were hired.

Teachers at TEP also get more time to collaborate and played a bigger role in school decision-making than teachers in other jobs. Teachers were paired up to observe each others' lessons and provide feedback, collaboration that experts agree is important but happens too infrequently. During a six-week summer training, teachers also helped set school policy.

The workload at TEP, where teachers also take on administrative duties and had an average of 31 students per class, is fairly heavy even with the extra pay. But the school also had more teacher turnover than usual. Nearly half of first-year teachers didn't return for their second year, either because they resigned or because they were not rehired. Teacher turnover has been found to have a slight effect on student achievement.

Overall, though, the results are promising. The researchers caution that this is just one study of a small school. It's not meant to prove that TEP's methods can work in every school nationally. But it appears to suggest that, at least, the approach worked at one school.

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