



## Shining the Light II:

### STATE OF TEACHER QUALITY, ATTRITION AND DIVERSITY IN COLORADO

EXECUTIVE SUMMARY, 2008



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## ALLIANCE FOR QUALITY TEACHING

*The mission of the Alliance for Quality Teaching is to be the guiding force in Colorado for teacher quality through researching best practices, educating citizens and policy makers, and advocating for the changes that will ensure that a quality teacher is present in every classroom.*

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## EXECUTIVE SUMMARY

Each child has but one chance to succeed in our educational system. But, have we given them the best chance for success? No. Not as long as gaps exist in the opportunities we provide for each child to achieve academic success.

Closing the achievement gap is a national priority and is the primary goal of the Federal No Child Left Behind legislation. For Colorado the issue is especially important: while Colorado students' scores rank among the highest on the National Assessment of Educational Progress, Colorado students also demonstrate one of the highest achievement gaps in the nation. While state and local policy makers have taken some action to close those gaps, progress is not nearly fast enough. Overall, there are few examples of significant improvement.

*Students of color in Colorado have a one in ten greater chance of having an inexperienced teacher than do white students.*

Our best chances for closing student achievement gaps lie with the teachers with whom our children are closely connected. Every day is another opportunity for our teachers to ignite the sparks of learning in our children. No child should be denied the opportunity to be taught by a quality teacher who can open doors to his or her future.

### 2006 - Shining the Light

In 2006, the Alliance for Quality Teaching (Alliance) launched a landmark study about the state of teaching in Colorado, *Shining the Light: the State of Teaching in Colorado*. The most significant finding from this report was the existence of a teacher quality gap. The study revealed that the greater the proportion of minority students or students eligible for the Free and Reduced Lunch Program (FRL) within a school or district, the lower the experience, education level and salary of the teachers and the greater the attrition rate. Students of color in Colorado have a one in ten greater chance of having an inexperienced teacher than do white students. The existence of this gap is particularly troublesome because these teacher characteristics are fundamental indicators of teacher quality and are positively correlated with student achievement. And, according to *Shining the Light*, this discrepancy by race and poverty has grown larger since 2000, with some gaps more than twice as large.

### Why another study?

In identifying characteristics of teacher quality in *Shining the Light*, it was clear that much more is involved in the teacher quality equation than the characteristics measured in our study. More evidence is needed to determine the characteristics that are good predictors of quality teaching. It was apparent that a deeper analysis of those characteristics would help us to understand their impact in Colorado.

### 2008 - Shining the Light II

*Shining the Light II* addresses two overarching questions which resulted from the previous study:

- What are the characteristics of a high quality teacher?
- What is the impact of teacher attrition and diversity on student achievement in Colorado?

## What are the characteristics of a high quality teacher?

The importance of the relationship of teacher quality to student achievement has been well documented. However, understanding **what we mean** by teacher quality has been the topic of considerable debate among policymakers, researchers, scholars, educators and parents. This report provides the scholarly and research context within which we begin to clarify what we mean by a high quality (or effective) teacher.

## What is the impact of teacher attrition and diversity on student achievement in Colorado?

One of the factors that affect student achievement is the classroom experience level of the teacher. When teachers leave the classroom, schools typically replace them with inexperienced teachers. This report documents the correlation of Colorado's lower performing schools with an inexperienced teacher workforce.

A growing body of research supports the impact of a teacher's ethnic background on the achievement of students with similar ethnicity. And yet, our study finds that the proportion of Latino students in Colorado is growing five times faster than the proportion of Latino teachers.

## KEY FINDINGS AND RECOMMENDATIONS

The findings and recommendations within this report shine the light on the extensive work that remains to be done in Colorado, at the state and local level, if we hope to close student achievement gaps and give each child the best chance of success.

### Key Findings

#### 1. Teacher Quality

Understanding what is meant by teacher quality is a fundamental issue to policymakers, researchers, scholars, educators and parents. The link between teacher characteristics and student achievement is complex and sensitive to the context within which teachers work. Based upon our review, we believe that the most important components of teacher quality include:

- Academic or intellectual ability
- Subject matter preparation
- Knowledge about how to teach
- Teaching experience
- Cultural competence

Of the characteristics on this list, we believe that experience, knowledge about how to teach, cultural awareness and knowledge of culturally relevant practices are the most important factors. Policy makers and school districts need to give careful consideration to these factors in the hiring, induction, and ongoing professional development of teachers, as well as to the policy and practice around preparing, supporting and retaining effective teachers in schools.

The environment in which teachers work, i.e., working conditions, also plays a major role in teacher quality. There are a number of features of the work environment that can enable teachers, especially novice teachers, to be more effective. These include:

- Teacher work assignments that are matched with what s/he knows (i.e., teacher content knowledge and experience)
- Focused training for new teachers (induction) and mentoring programs
- Ongoing professional development
- Aligned curriculum
- Adequate facilities and resources
- Teacher empowerment to best meet the needs of students and to align practice with teachers' work
- Principal leadership that supports continuous improvement of instruction
- Compensation practices that align teacher support with expected learning outcomes

## 2. Teacher Attrition

Teaching experience is a prime indicator of teacher quality and directly affects student achievement. Districts and schools with relatively high rates of teacher attrition are likely to have more inexperienced teachers and, as a result, instructional quality and student learning suffer.

In addition, the monetary cost of attrition is high. Our estimate is that in 2005 Colorado school districts spent over \$70 million dollars to replace teachers who left their employ. Teacher attrition also negatively impacts the development and growth of professional learning communities within schools that are so critical to the improvement of student achievement.

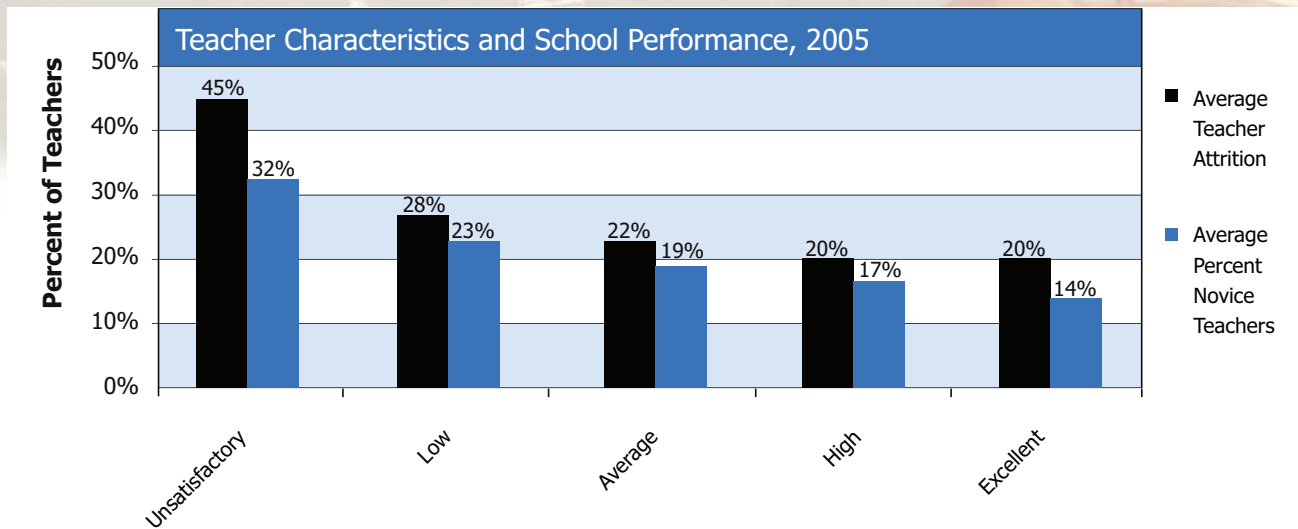
The teacher attrition rate in Colorado has varied between 1998 and 2004, ranging from 14% to 16%. An analysis of the 39 school districts in the state that employ 85% of the teachers indicates that high attrition rate districts are found throughout the state including both rural and urban areas, with attrition rates as high as 26%. And, attrition rates vary greatly across districts.

The research literature has identified a number of factors associated with teacher attrition including:

- Availability of employment opportunities outside of education
- Life events (e.g. marriage, pregnancy, spouse's job transfer)
- Teacher employment trajectory (i.e. attrition is higher at the beginning and end of teachers' careers)
- Salary
- School characteristics (e.g., minority enrollment, size, teacher experience level, school performance) and working conditions (e.g., teaching assignments, quality of induction and mentoring, quality professional development, aligned curriculum, adequate facilities and resources, principal leadership)

It is clear from our data that teacher attrition in Colorado is associated with many of these factors. For example, Colorado districts with lower salary schedules generally have higher attrition rates. In addition, small schools (less than 100 students) tend to have higher rates of attrition as do schools with more novice teachers and teachers over 55. Schools with higher minority enrollment also have higher attrition rates.



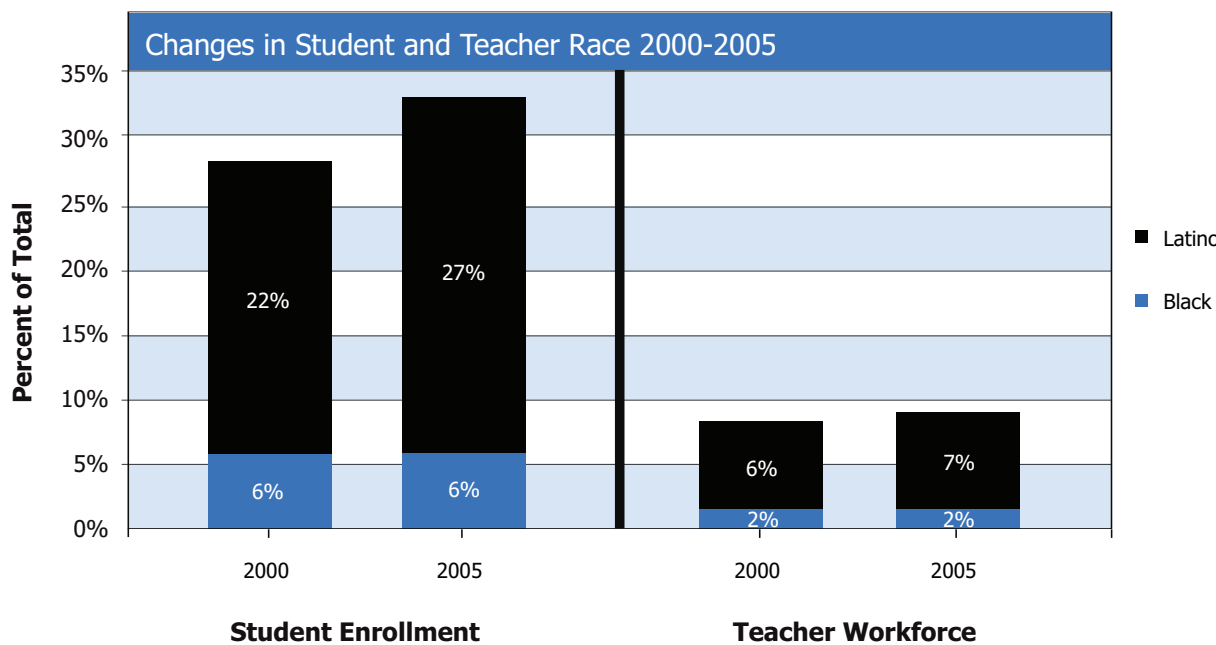


**School Performance**

The most troubling finding in regard to attrition was the relationship we observed between school performance and teacher attrition. Our analysis showed that the attrition rate in low performing schools is much greater than in their high performing counterparts. In fact, the attrition rate in schools with an “unsatisfactory” school accountability rating (SAR) was more than double that of “average” schools. Not only do lower performing schools have a greater turnover rate, but they also have a higher percentage of novice teachers than schools with a higher SAR rating. And, it is clear from the literature and our analysis that inexperienced teachers are generally less effective than more experienced educators. Thus, the least qualified teachers are often teaching those students with the greatest needs.

**3. Teacher Diversity**

*Shining the Light II* indicates that Colorado's K-12 student population is becoming more diverse. The percent of Latino students grew from 22% in 2000 to 27% in 2005. As a result, teachers will need a wider set of skills and expertise to be effective with all students in their classrooms. This is particularly true for teachers whose students and their families have a different social, ethnic, racial and/or linguistic background than their own.



Source: CDE

As indicated in the review of literature on teacher quality in this report, a teacher's ethnic/racial background is positively associated with the achievement of students with a similar background. This has major implications for Colorado given the large discrepancy between the rate of diversification of the student population and the teacher workforce. For example, the proportion of Latino students in Colorado is growing five times faster than the proportion of Latino teachers.

## Key Recommendations

### **1. Increase the retention of highly effective teachers, especially in underperforming schools, by focusing state and local resources on this issue.**

Supporting this recommendation is a series of actions for state and local policy makers to provide resources and support including funding, grants, technical assistance, data and accountability, and incentives.

### **2. Increase the ethnic diversity and cultural/linguistic competence of the teacher work force in Colorado.**

Supporting this recommendation are actions for state policymakers, teacher preparation institutions and local school districts to provide scholarships and incentives, and to build awareness, improve reporting requirements, revise teacher standards, provide pipelines for diverse students and offer training in cultural and linguistic competence.

### **3. Create structured feedback loops between K-12 local school districts and higher education (teacher preparation programs).**

This recommendation is based on a need for regular and systematic communication between those who prepare teachers and the schools and districts where they teach. Such communication will improve Colorado's ability to recruit, prepare, support and retain highly effective teachers. The recommendation is also based on a belief that improved communication will help Colorado reduce shortages of highly effective teachers in hard to staff schools and subject areas.

### **4. Establish a unique identifying number for each teacher (unique teacher identifier) in Colorado that includes protections against misuse as well as policies and guidance for appropriate uses.**

Colorado does not currently have a system of teacher identification that would allow policymakers to answer many questions about teacher preparation, induction and attrition. Such a system would provide data about the movement of teachers between and within schools and districts, building knowledge about the factors affecting teacher attrition and the impact of the teacher workforce on student learning.

### **5. Conduct a statewide survey of teachers to assess the working conditions that support teacher quality and the retention of highly effective teachers, particularly teachers of color and teachers in high need schools.**

Recent studies of teacher working conditions have identified a number of features that enable teachers, especially new teachers, to teach more effectively. In addition, Colorado does not have the data to provide answers about why teachers choose to leave or stay and how those factors might be addressed.





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