

2008 Study on Teacher Quality & School Improvement in Texas Secondary Schools

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THE PURPOSES OF THIS STUDY

Examine the effect of teacher qualifications (quality measures) and teacher distribution on academic achievement in Texas secondary schools and document the relationship between teacher quality and gains in achievement at high-improvement schools.

- Examine the distribution of teacher quality across Texas secondary Schools.
- Examine the relationship between changes in teacher quality and school outcomes on TAKS.
- Investigate the strategies used by “turnaround” schools to increase TAKS passing rates.



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Data Elements and Methodology

Quantitative study

Section 1: Analyze the distribution of teacher quality characteristics, defined by six teacher qualifications standards in Texas secondary schools (definition of measures on page 14)

- Percentage of teachers assigned out of field;
- Percentage of teachers not fully certified;
- Percentage of beginning teachers;
- Distribution of teacher experience;
- Teacher turnover; and
- Initial passing rates on teacher certification tests.



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Analyze the distribution of teachers against three characteristics of schools in 2007 (findings pages 13-27):

- Percentage of economically disadvantaged students;
- Percentage of minority students; and
- Percentage of students passing TAKS.

School sample: All secondary schools with regular accountability ratings from 2002-03 to 2006-07; middle schools had to offer grades 6-8 and high schools at least grades 9-11.



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Qualitative Study

Section I: Ordinary least squares regression analysis:

- a) Dependent variable: % of students passing all TAKS tests at all grade levels in 2007.
- b) A large number of independent variables related to demographics and other factors outside the control of the school (page 65 of the draft report) were included as control factors.
- c) Passing rates in 2003 were included to control for prior level of achievement.

Using the results, we identified those schools who performed better than and worse than expected based on their student and school characteristics. The 90 schools whose achievement *exceeded their predicted achievement by the greatest margin* were designated as high-improvement schools while the 90 schools whose performance *lagged their predicted performance by the greatest margin* were designated as low-improvement schools.

Section II: Compared the changes in teacher quality distribution and turnover rates at the 90 high-improvement and 90 low-improvement schools identified in the data set (findings pages 27-35).

Section III: Examined practices in 20 high-improvement secondary schools and compared those practices to a framework of best practices identified in literature on “turnaround” schools (findings pages 36 – 48, policy recommendations pages 49-51).



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Summary of Major Findings

1. As previous analyses in Texas have shown, we found that *teacher quality continues to be inequitably distributed across schools*, with high-poverty, high-minority, and low-performing schools having much lower teacher quality than low-poverty, low-minority, and high-performing schools. In fact, on almost every single measure, we found significant differences in teacher quality between these sets of schools.
2. The most acute areas of shortage and the largest gaps in teacher quality tend to be in the areas of *mathematics and science*.
3. There is a *positive association between the measures of teacher quality in this study and student achievement on TAKS*. Indeed, in every case, high-performing schools had a far greater aggregate teacher quality than low-performing schools.
4. Not only was teacher quality positively associated with levels of performance on the TAKS, but *changes in teacher quality were also positively associated with increases in performance on the TAKS from 2003 to 2007*.
5. High-improvement middle and high schools *employed many of the best practices* found in the literature on “turnaround” schools.



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Policy Recommendations

(pages 7-8)

1. Provide monetary and non-monetary incentives for the most qualified teachers to teach in schools serving students with the most academic needs for extended periods of time.
2. Re-design the District Awards for Teaching Excellence (DATE) program to require a greater percentage of funds be directed to placing and retaining well-qualified teachers in high need schools.
3. Create monetary and non-monetary incentives for teacher preparation programs to produce the teachers we need the most—secondary mathematics and science teachers.
4. Publish an annual report that documents distribution of teacher quality across the state, within Education Service Centers, and within school districts.
5. Require that all teacher preparation programs provide an adequate amount of quality pre-service training to ensure that beginning teachers have the knowledge and skills to be effective.
6. Fund the Texas Beginning Educator Support System (TXBESS) or other mentoring and induction programs with a proven track record for all beginning teachers in high-need schools.
7. Provide funds to allow beginning teachers to have a reduced course-load so that they may spend time learning from master teachers in their schools.



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Policy Recommendations

(pages 7-8)

8. Implement a statewide working conditions survey that could be used by school and district administrators to identify schools with poor working conditions and to provide assistance to improve the working conditions.
9. Ensure that school and district leadership preparation programs emphasize the importance of shared decision making and appropriate levels of autonomy and accountability.
10. Allocate extra financial support that allows schools to provide students more individual attention through various strategies such as: (a) employing extra classroom personnel so that children do not have to be pulled from regular classes or from electives courses to make acceptable academic progress; (b) creating smaller class sizes or reduced teacher workloads; and, (3) providing more opportunities for teachers and students to interact in small-group settings outside the formal instructional periods.
11. Implement a plan that requires TEA and local districts to create a system that ensures all under-performing schools are staffed by well-qualified teachers, e.g., teacher who have more than two years of teaching experience, who have demonstrated strong content knowledge through exemplary scores on the state certification examinations or GPA from a selective undergraduate institution, and who have demonstrated classroom excellence through classroom observations and increased student achievement.



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