

Supporting College Readiness: Preparing Middle School Students for High School in Texas

Ed Fuller, PhD

with Marilyn Springel, and Greg Fuller

*This study was funded by the Texas Business and Education Coalition.
The views and conclusions expressed by the authors do not necessarily reflect those of TBEC.*

Executive Summary

National and state policies over the last decade have focused on improving high schools. More recently, policymakers have focused on improving high schools to prepare more students for college. Indeed, the Legislature added measures of college readiness to the high school accountability system. While the focus on high schools is understandable, these efforts have largely overlooked the importance of elementary and middle schools in preparing students to be ready for middle school and high school, respectively.

Thus, the primary purpose of this particular paper is to examine the relationship between middle school achievement and high school outcomes. In particular, this study focuses on the relationship between the achievement of 8th grade students in Texas public middle schools and a series of high school outcomes.

Conclusions

This study reaches eight major conclusions:

1) The performance of students in 8th grade is strongly associated with a number of individual outcomes for students in high school. Specifically, students not taking the 8th grade TAKS or not passing the 8th grade TAKS math or reading tests are far *less likely* to:

- Pass the 9th grade TAKS math and reading tests;
- Complete and pass the 9th grade Algebra I course;
- Stay enrolled in the Texas public school system;
- Progress to the 11th grade on-time; and,
- Meet the 11th grade TAKS college-readiness standard.

For example, of the 135,000 students who did not take or did not pass the 8th grade TAKS in 2006, only 101,450 (75%) were still enrolled in a Texas public school in 2009, only 81,330 (60%) were enrolled in the 11th grade, and only 3,100 (2%) met the NCEA math college-readiness standard on TAKS (2300+) in the 11th grade.

2) At the school level, the percentage of incoming 9th grade students that either did not pass or did not take the 8th grade TAKS math test is an extremely strong predictor of a school being labeled low-performing and the percentage of students enrolling in college. In high schools that have an incoming 9th grade cohort of students whose TAKS math scores are .5 standard deviations below average are *seven times more likely* to be low-performing. Schools with incoming students that have TAKS scores greater than .25 standard deviations above average are almost *five times more likely* to be rated recognized or exemplary.

3) The performance of 5th grade students is strongly associated with the performance of 8th grade students. Specifically, students who either do not take the TAKS tests or do not pass the 5th grade TAKS tests are *less likely* to: (1) Pass the 8th grade TAKS tests; (2) Progress to the 8th grade on-time; and (3) Stay enrolled in the Texas public school system.

4) At the school level, the percentage of incoming 6th grade students that either did not pass or did not take the 5th grade TAKS math test is an extremely strong predictor of a school being labeled low-performing and the school having a low percentage of students being high school ready. In middle schools that have an incoming 6th grade cohort of students whose 5th grade TAKS math scores are .5 standard deviations below average are seven times more likely to be low-performing. The results for high schools are quite similar.

5) Very few middle or high schools are successful in taking incoming students who are very low-performing and preparing them for the next level of schooling. Of the 84 schools with at least 30 students who did not pass the 5th grade math TAKS test, only four schools moved at least 20% of the students onto a college-ready trajectory. At the high school level, of the approximately 500 schools with at least 30 students who did not pass the 8th grade math TAKS test, only about 80 schools moved at least 20% to college-ready status in math.

6) Middle schools successful in moving 6th grade students to a high school ready status in 8th grade tend to employ most or all of the following strategies:

- a) Increase learning time through the double-blocking of some or all students and providing tutoring time before or after school, during lunch, or on Saturdays;
- b) Foster teacher collaboration through time to meet and training;
- c) Democratically develop a shared sense of accountability among all staff;
- d) High-quality professional development that is on-going and understood and supported by school and district administration;
- e) Use data to inform—not drive—decision making about curriculum, teaching, and learning;
- f) Dramatically reduce class sizes for struggling students; and,
- g) Use technology and hands-on learning to engage students in learning.

7) Districts with middle schools that help students improve dramatically in math use some common resources and strategies to promote student growth.

- a) Provide the necessary resources for schools to address the specific needs of students;
- b) Provide on-going professional development and support the continual learning of teachers;
- c) Hire the best principal possible and give them the resources, support, and autonomy to lead successfully, then let them perform; and,
- d) Provide timely and useful data and training about understanding and using the data;

8) *Student economic disadvantaged status is the strongest predictor of student outcomes.* Indeed, economically disadvantaged students have less positive outcomes than their more affluent peers, even after controlling for student performance levels and school characteristics. Every research study on student achievement reaches this same conclusion. While school factors are important, student background characteristics are even more important in explaining student outcomes.

Policy Implications

Over the past decade, much of our national and state education policy has focused on building a bigger and stronger set of accountability measures to drive achievement. Much of these efforts were based on the belief that the introduction of the accountability system in Texas was the primary driver of student gains in achievement. Yet, many policymakers forget that Texas has infused a substantial amount of new money into the system in the early 1990s as well as distributed the money more equitably. The accountability system would not have worked without the resources for schools to meet the standards. Texas policymakers, however, have largely abandoned this successful strategy and focused primarily on the policy lever of accountability systems. The results have been less than promising. Indeed, while Texas made some of the largest gains on the National Assessment of Educational Progress (NAEP) in the 1990s, our students have made essentially no gains over the last decade. We argue that the current state policies and funding levels are simply inadequate to move student achievement forward and ensure a greater number and percentage of students are well-prepared for high school and college. We must find a better way.

The results of this study suggest state-, district-, and school-level policies. It is important to remember that many of the school level policies are dependent on district- and state-level policies and behaviors.

State Policy

The state can play a significant role in this area in a number of different ways.

1) *Address the issue of increasing poverty in Texas* by creating a coordinated, multi-agency effort to increase access to affordable and high-quality health care, child care, and early childhood education. The return on investment is monumental when spent in these areas. The earlier the state invests in improving a child's life chances, the less the state will spend on that individual over that person's lifetime and the greater revenues returned to the state from that individual. Moreover, far more emphasis needs to be focused on providing effective social supports for students in poverty.

2) *Create a coordinated and integrated set of policies that address low-performing schools.* These policies include: creating an adequate and equitable school finance system; improving the school accountability system (adding a growth component); closing the loopholes in teacher preparation that allow under-prepared teachers to obtain certification; creating incentives for talented principals and teachers to teach at hard-to-staff schools; and improving the financial accountability system to ensure funds are targeted to those students who need them most.

4) *Fix the school finance system.* At least one-half of the schools interviewed said that budget cuts over the next years would likely force them to eliminate at least one of the major strategies they believed was responsible for the dramatic gains in student achievement.

3) *Shed more light on the inputs into the education system.* Low-performing schools do not get any additional inputs, yet face a far more daunting task than most schools. To be successful, these schools need additional money, better prepared teachers, greater teacher stability, more experienced teachers and administrators, and outstanding principals. Moreover, these schools need to provide a longer school day and summer instruction. These policies require additional money and changes to the school finance system.

5) Thoughtfully review our current strategy of creating more magnet, early college, and charter schools. Many students thrive in such schools, but creating these schools further concentrates poor and low-performing students into neighborhood schools that spiral downward until they are closed.

6) Ensure the new testing system is constructed in a way that lessens the impetus to “teach to the test.” Without a well-designed testing system, the accountability system simply does not work. We should have more open-ended questions on the test and have a set of questions for individual students and another set for schools.

7) Improve teacher preparation. While the new teacher preparation program accountability system may improve the quality of newly prepared teachers, we still have a long way to go in this area. Secondary teachers certified through alternative certification programs are required to have only 12 undergraduate hours in their subject area compared to at least 24 from a traditional undergraduate program.

8) Carefully examine how we prepare and assess elementary and middle school mathematics teachers. Currently, elementary and middle school teachers can be assigned to teach math even if they failed the math section of the generalist test. The state should increase requirements to teach elementary math and review the requirements to be certified as an elementary or middle school teacher on a generalist certificate.

9) Improve principal preparation. Principals are key actors in school improvement, yet the state system for principal preparation is disjointed and out-of-date. The state is currently reviewing this area and needs to be sure to review the latest research and hear the recommendations of top programs.

10) Support smaller class sizes. While smaller class sizes are relatively expensive, they have fairly large effects at the elementary level and have moderate effects at the middle school level. The effects are more pronounced for students struggling in school. In fact, the higher the grade level, the smaller the class sizes need to be for students struggling academically. Schools with few struggling students should increase class sizes for students and use the extra resources to provide individualized instruction for struggling students. Schools with many struggling students should receive financial support to have smaller class sizes as well as intervention specialists.

11) Provide the financial resources for early screenings and evaluations. Many students struggle in school because of undiagnosed issues related to vision, hearing, mental illness, or learning disabilities. All children should be screened for vision and hearing difficulties and students below grade level for two consecutive years should be evaluated for other issues such as dyslexia, ADHD, Asperger’s, and learning disabilities. Any student that fails two consecutive TAKS or other state-mandated tests in the same subject area should be assessed to diagnose the problems underlying poor performance.

District Policies

1) Focus on early interventions that are sustained over time so that students are prepared for the next level of schooling. This is especially important in elementary schools since being below grade level in 5th grade has strong negative effects on the probability of being ready for high school at the end of 8th grade.

2) Provide useful, timely data to schools. Teachers and principals need and want this data to plan collaboratively. Yet, many districts don't have the capacity to provide such data and need support from the state to do so.

3) Ensure struggling schools are provided the necessary resources to achieve the goals set for them. Numerous studies conclude that districts rarely provide the fiscal and human resources necessary for struggling schools to make dramatic improvements. Superintendents and school boards need to implement policies to ensure struggling schools have adequate resources and re-think their current strategies of providing elite schools for the high-performing students while allowing other students to attend under-resourced schools.

4) Hire the best principals and support them. Emerging research is clear—getting great teachers to go to and stay at a school is largely dependent on having a great principal who creates a clear school vision focused on teaching and learning, works democratically with teachers, and supports teacher collaboration. Districts need to pay whatever they have to in order to place and keep great principals at the schools that need them most. Districts also need to provide the principals the necessary resources, support, and autonomy required to be successful.

5) Support Teacher Collaboration. This research and other research have found that the opportunity to collaborate with other teachers during the school day is one of the most important factors in improving achievement (Mertens & Flowers, 2006; Mertens, Flowers, & Mulhall, 1998). The more opportunities teachers have to collaborate, the more training they are provided, and the more support they are provided, the greater the effect of teacher collaboration on student achievement.

6) Provide Social Support for Students. Many students struggling in school do so because of issues outside of the school such as abuse, neglect, malnourishment, or mental illness. Others struggle because of learning difficulties not diagnosed by the school. Schools—with financial support from the state—should assess students for underlying issues that may be causing the learning difficulties.

List of Middle Schools Showing Large Improvements in TAKS Mathematics Scores for Students Enrolled Consecutively from 6th Grade in 2007 to 8th Grade in 2009

District-Wide Improvement		Individual School with High Levels of Improvement			
Coppell ISD	East MS	Lyford ISD	Lyford MS	Anna ISD	Anna MS
Leander ISD	Running Brushy MS	Madisonville ISD	Madisonville JHS	IDEA Academies	IDEA College Prep
McAllen ISD	Cathey MS	Northside ISD	Neff MS	Pflugerville ISD	Park Crest MS
Ysleta ISD	Chacon MS	Austin ISD	Paredes MS	Ingram ISD	Ingram MS
Lewisville ISD	Downing MS				
Socorro ISD	Sanchez MS				