Grades 7–8 Comprehensive Report

Texas GEAR UP State Grant Evaluation

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Table of Contents

Tables

Figures

Acronyms and Abbreviations

AEIS	Academic Excellence Indicator System
ANOVA	Analysis of Variance
AP	Advanced Placement
APR	Annual Performance Report
ASPR	Annual Strategic Planning Report
CTK	Community TechKnowledge
DAP	Distinguished Achievement Program
DGB	Data Governance Board
ELA	English Language Arts
ELL	English Language Learners
EOC	End-of-Course
FY	Fiscal Year
GEAR UP	Gaining Early Awareness and Readiness for Undergraduate Programs
GUIDES	GEAR UP Integrated Data Entry System
HB	House Bill
IRB	Institutional Review Board
MLM	Multilevel Model
NCES	National Center for Education Statistics
NOGA	Notification of Grant Award
PBL	Project-based Learning
PD	Professional Development
PEIMS	Public Education Information Management System
PSAT/NMSQT	Preliminary SAT/National Merit Scholarship Qualifying Test
PSAT-10	Preliminary SAT for Grade 10 students
PSM	Propensity Score Matching
QED	Quasi-Experimental Design
RHSP	Recommended High School Program
SB	Senate Bill
SG	State Grant
STAAR®	State of Texas Assessments of Academic Readiness
STAAR® EOC	State of Texas Assessments of Academic Readiness End-of-Course
STEM	Science, Technology, Engineering, and Mathematics
TAPR	Texas Academic Performance Report
TCPP	Texas College Preparation Program
TEA	Texas Education Agency
TEC	Texas Education Code
TG	Texas Guaranteed Student Loan Corporation
THECB	Texas Higher Education Coordinating Board
T-STEM Centers	Texas Science, Technology, Engineering, and Mathematics Centers
USDE	U.S. Department of Education
UT	The University of Texas
UT-Austin	The University of Texas at Austin
UT-IPSI	The University of Texas at Austin's Institute for Public School Initiatives

Executive Summary

The U.S. Department of Education (ED) awarded the Texas Education Agency (TEA) a $33 million federal Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP) grant in federal fiscal year (FY) 2012. The broad purpose of the federal GEAR UP program is to increase the number of low-income students who are prepared to enter and succeed in postsecondary education through state and local partnership grants. Beginning in 2012–13, the Texas GEAR UP State Grant (SG) follows a cohort of students from Grade 7 through their first year of postsecondary education (the 2018–19 school year).

This report focuses on outcomes in Year 2 of the Texas GEAR UP SG (the 2013–14 school year), the cohort's last year in middle school (Grade 8). There were seven middle schools that were involved in the evaluation of the Texas GEAR UP SG. Participating schools and their districts are listed in Table ES.1; throughout this report, schools are identified by letter (e.g., School A, School B) to protect confidentiality.

Table ES.1. Profile of Texas GEAR UP Schools

District	Middle School (2012–13; 2013–14)
Edgewood Independent School District	Brentwood, Garcia, Wrenn
Somerset Independent School District	Somerset
Lubbock Independent School District	Dunbar
Manor Independent School District	Decker, Manor

To meet the federal purpose of the GEAR UP grant, the Texas GEAR UP SG program includes nine project goals and 27 corresponding objectives, provided in Appendix A.2 of the report. Three objectives are related to advanced coursework, student support services, and summer programs. Other goals are intended to increase data-driven instruction (through teacher professional development [PD]), community collaboration, and access to postsecondary information.

Outcome goals include on-time promotion, improved high school completion at a college-ready level, college attendance, and college retention. In addition to meeting goals at campuses selected to participate in the program, there are objectives to provide statewide information and professional learning for educators to promote college readiness across the state.

Evaluation of Texas GEAR UP State Grant

The evaluation of the program examines implementation and outcomes (including the relationship between the two) and identifies potential best practices over the seven-year grant period. Evaluation objectives include the following:

- Provide ongoing formative evaluation of implementation of Texas GEAR UP SG (facilitators and barriers, promising practices, and recommended corrections);
- Explore implementation status, mix of implementation, and relationships between implementation and student outcomes;
- Determine the impact on parents, school, and community alliances;
- Examine access to and use of statewide resources;
- Examine student outcomes; and,
- Understand cost and sustainability.

The external evaluation is a longitudinal design that spans seven years and follows a cohort model. The primary GEAR UP cohort includes students at seven Texas GEAR UP SG middle schools at which services were provided. The comparison school cohort consists of students attending seven statistically similar schools that did not participate in the Texas GEAR UP SG. Students in the retrospective cohort attended the Texas GEAR UP SG schools in Grade 7 one year prior to the start of the grant. Table ES.2 illustrates the timeline and grade levels associated with the three cohorts.

Table ES.2. Evaluation Timeline: Grade in School by Grant Year by Cohort Group

Cohort Group	Pre-Grant Award 2011–12	Grant Year 1 2012–13	Grant Year 2 2013–14	Grant Year 3 2014–15	Grant Year 4 2015–16	Grant Year 5 2016–17	Grant Year 6 2017–18	Grant Year 7 2018–19
Primary Cohort (Texas GEAR UP SG Schools)	Grade 6	Grade 7	Grade 8	Grade 9	Grade 10	Grade 11	Grade 12	First Year of College
Comparison Schools	Grade 6	Grade 7	Grade 8	Grade 9	Grade 10	Grade 11	Grade 12	First Year of College
Retrospective Cohort (Texas GEAR UP SG Schools pre-award)	Grade 7	Grade 8	Grade 9	Grade 10	Grade 11	Grade 12	First Year of College	--

For this report, each cohort was followed from Grade 7 to Grade 8, with Grade 8 outcomes being the main focus of the report. First, differences between the primary cohort and the other two cohort groups, and the state of Texas when possible, are examined. Second, relationships between participating in the program for various periods of time (i.e., Grade 8, or both Grades 7 and 8) and academic outcomes are examined. Third, the effect of dosage is examined (e.g., Did students who participated in many GEAR UP activities have better outcomes than those who participated in only a few activities?) Fourth, relationships between participating in individual activities (e.g., Algebra I tutoring) and academic outcomes for Texas GEAR UP SG primary cohort students are explored.

While this comprehensive report focuses on outcomes, two annual implementation reports provide detailed information regarding implementation in the first two years of the Texas GEAR UP SG. Annual Implementation Report #1 (O'Donnel et al., 2013) focused on implementation that occurred through March in the 2012–13 school year. Annual Implementation Report #2 (Briggs, et al., 2015) focused on implementation events that occurred from summer 2013 through March of the 2013–14 school year. These annual reports provided a snapshot of how the seven Texas GEAR UP SG participating middle schools (located in four districts), TEA, and TEA's Texas GEAR UP SG collaborators were implementing the program.

Key Findings

Three key outcomes are explored in this report. Findings were considered key if they were aligned to the project goals and objectives set by TEA (see Appendix A). Relevant project goals and objectives emphasized in this report include the following:

- Project Goal 1 is to improve instruction and expand academic opportunities in math and science. Within that goal is Project Objective 1.1, which states that by the end of the project's second year, 30% of cohort students will have completed Algebra I in Grade 8.
- Project Goal 4 is for GEAR UP campuses to provide student services to increase on-time promotion and academic preparation for college. The broader goal of academic preparation for college will be measured more in depth in future reports, but it is measured here by performance on Grade 8 STAAR assessments and on the Algebra I EOC.
- Project Objective 4.3: An objective within project goal 4 is to increase on-time promotion such that by the end of the project's third year, the on-time promotion rate of cohort students will exceed the state average.

Interested readers should view the full report for additional information on all key findings. Select evaluation questions relevant to Year 2 outcomes—addressed in the report—include the following:

- What outcomes are associated with participation in Texas GEAR UP SG?
- How do trends in outcomes at the Texas GEAR UP SG schools differ in comparison to the state average and/or the comparison group schools?
- How do trends in outcomes for the Texas GEAR UP SG primary cohort students differ from the retrospective?[1]
- How do trajectories of outcomes differ based on exposure to implementation? For example, do students who participate in Texas GEAR UP SG activities in all grades (e.g., Grade 7 and Grade 8) differ compared to students who enter Texas GEAR UP SG schools at a later grade level?
- How are implementation and outcomes related to one another? Are certain dosages of implementation associated with more successful outcomes? Are there certain patterns of participation in implementation strategies?

Comparisons between Groups

Differences between students in the Texas GEAR UP SG primary cohort and the comparison schools and retrospective cohorts in the three outcomes of interest are examined.

[1] The retrospective cohort consists of students who attended GEAR UP schools the year prior to implementation. Future reports will include comparisons from follow-on cohorts attending the Texas GEAR UP SG school post the primary cohort.

ALGEBRA I COMPLETION

Key Takeaway:

Students in the Texas GEAR UP SG primary cohort were much more likely than students in the other two cohorts to complete Algebra I. A full 30% of students in the primary cohort completed Algebra I (compared to only 17% of students in the comparison schools cohort and 14% of students in the retrospective cohort), meeting Project Objective 1.1.

The first major objective for Texas GEAR UP SG Grade 8 students (Project Objective 1.1) was for 30% of primary cohort students to complete Algebra I in Grade 8. The schools in the primary cohort were able to meet this target exactly, achieving an Algebra I completion rate of 30%. However, only two of the schools met or exceeded the target, School G (52%) and School F (30%). The other five schools had between 20% (School B) and 27% (School C) of their students complete Algebra I in Grade 8.

All schools in the primary cohort had higher completion rates than their respective comparison schools and the retrospective cohort. Overall, 17% of students in the comparison schools cohort and 14% of students in the retrospective cohort completed Algebra I in Grade 8. That is, students in the Texas GEAR UP SG primary cohort had close to double the rate of Algebra I completion than their peers.

In addition, the Texas GEAR UP SG schools increased enrollment in Algebra I without substantially reducing completion rates. Overall, 92% of primary cohort students who enrolled in Algebra I completed the course. This was comparable to completion within the retrospective cohort (92%) and was only slightly lower than the comparison schools (96%).

PERFORMANCE ON STAAR ASSESSMENTS

Key Takeaway:

Students in the Texas GEAR UP SG primary cohort were less likely to meet the standards for Algebra I EOC and STAAR Grade 8 Mathematics than students in the other cohorts. There were no clear trends in performance on the other three assessments.

STAAR Algebra I EOC and STAAR Grade 8 Mathematics

Students in the Texas GEAR UP SG primary cohort had poorer performance on both the Algebra I EOC and on Grade 8 STAAR Mathematics than students in both the comparison schools cohort and the retrospective cohort. Once prior STAAR Mathematics scores and other student characteristics (e.g., gender, ELL status) were taken into account, students in the primary cohort were less likely to reach both the Level II Phase-in 1 and Level II final standards for Algebra I and STAAR Grade 8 Mathematics in the retrospective cohort, and for STAAR Grade 8 Mathematics in the comparison schools cohort.

This finding may indicate that there is a downside to allocating resources into one area (i.e., getting students to complete Algebra I) – poorer performance on STAAR. It is important to recognize, however, that 92% of students in the primary cohort still reached the Level II Phase-in 1 standard for Algebra I. That is, although approximately twice as many students took Algebra I EOC in the primary cohort as in the other two cohorts, the vast majority were still able to meet the passing standard.

Other STAAR Assessments

On the other three STAAR tests, the pattern of results was not as clear. On STAAR Science, students in the retrospective cohort were significantly more likely to reach the Level II Phase-in 1 standard than students in the primary and comparison schools cohorts. In contrast, students in the primary and comparison schools cohort were more likely to meet the Level II final standard than students in the retrospective cohort. However, once prior achievement and other student characteristics were taken into account, this difference was no longer significant.

Students in the primary cohort were also less likely to reach the Level II Phase-in 1 standard on Social Studies than students in the retrospective cohort. However, they were more likely than students in the comparison schools cohort to meet the Level II Phase-in 1 standard for Social Studies. Finally, students in the primary cohort were slightly more likely to meet the Level II final standard on STAAR Reading than students in the comparison schools cohort, but in the multilevel models the difference was no longer significant.

Overall, of 12 available non-mathematics comparisons (3 assessments x 2 standards x 2 cohort groups), once prior achievement and other student characteristics were taken into account, the primary cohort had significantly better achievement in one area (reaching the Level II Phase-in 1 standard on STAAR Social Studies, vs. the comparison schools cohort) and worse achievement in two areas (reaching the Level II Phase-in 1 standard on STAAR Social Studies and STAAR Science vs. the retrospective cohort). There were no differences in the majority of areas (nine of twelve, or 75%).

ON-TIME PROMOTION

Key Takeaway:

Students in the Texas GEAR UP SG primary cohort were less likely to be promoted than students in the other two cohorts, or compared to the state average. However, the difference was very small: 98% of students in the primary cohort (as compared to 99% for each of the other groups) were promoted to Grade 8 on time.

Project Objective 4.3 is for the on-time promotion rate for GEAR UP students to exceed the state average by Year 3. The state average for Grade 7–8 promotion was 99%. The Texas GEAR UP SG primary cohort achieved a 98.1% promotion rate while the comparison schools and retrospective cohort each achieved a rate of 99%. That is, the promotion rate in the Texas GEAR UP SG primary cohort was about one percentage point lower than, but practically the same as, the statewide rate and rates of both comparison groups.

Analyses within the Primary Cohort

LENGTH OF TIME IN COHORT

Key Takeaway:

Students in the primary cohort who attended a Texas GEAR UP SG school in both Grade 7 and Grade 8 were significantly more likely than those who attended in Grade 8 only to have completed Algebra I.

Our next set of analyses focused on the effect of participation in one year of GEAR UP versus both years on Algebra I completion and STAAR performance. Students who attended in Grade 8 only were compared to those who attended in both Grade 7 and Grade 8.[2]

Within the primary cohort, students who attended a Texas GEAR UP SG school in both Grade 7 and Grade 8 were significantly more likely than those who attended in Grade 8 only to have completed Algebra I. However, length of time in cohort was not a significant predictor for meeting either standard for Algebra I EOC.

On other STAAR assessments, students who attended a Texas GEAR UP SG school in both Grade 7 and Grade 8 were significantly more likely than those who attended in Grade 8 only to reach the Level II Phase-in 1 standard on Grade 8 STAAR Mathematics. In addition, students who attended a Texas GEAR UP SG school in both Grade 7 and Grade 8 were significantly more likely than those who attended in Grade 8 only to reach both standards for STAAR Reading and STAAR Science and the Level II Phase-in 1 standard for Social Studies.

It is important to note when interpreting these results that prior STAAR scores were unavailable for the majority of students who were enrolled in Grade 8 only. Therefore, previous STAAR score could not be included in the covariate model. There is a possibility that students who attended in both years were stronger students than students who attended only one year. Because there was no way to assess prior achievement, these results should be interpreted with caution.

Overall Level of Participation

Key Takeaway:

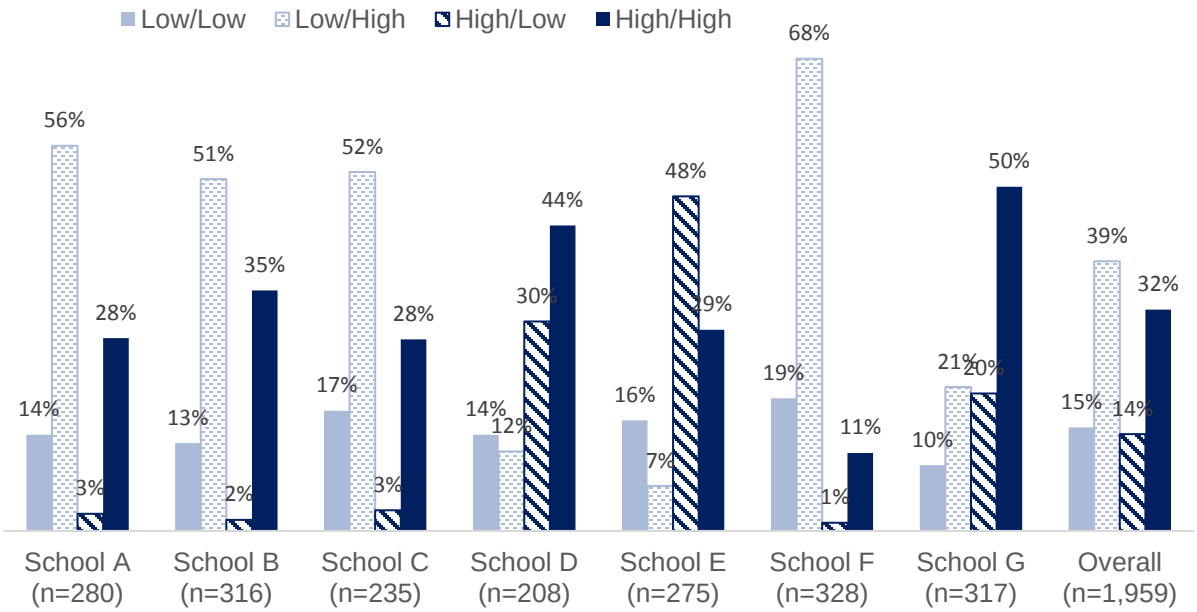
Students in the Texas GEAR UP SG primary cohort who had a high level of participation in Grade 8 were more likely to complete Algebra I and to reach the Level II Phase-in 1 standard on Algebra I EOC.

Students in the Texas GEAR UP SG primary cohort attended schools with a variety of activities and services available through the GEAR UP grant. The next set of analyses examines if students who participated in more activities had better short-term outcomes than those who participated in fewer activities. To measure this, student participation each year was classified as either High or Low.[3] Therefore, students were coded overall as being Low/Low (low participation in both years), Low/High (low participation in Grade 7 and high participation in Grade 8), High/Low (high participation in Grade 7 and low participation in Grade 8) and High/High (high participation in both years).

Overall, 15% of students were in the Low/Low category, 39% of students were in the Low/High category, 14% of students were in the High/Low category and 32% of students were in the High/High category. Participation category varied greatly by campus. For instance, at Schools A, B, C, and F, more than half of students were in the Low/High category. At School G, exactly 50% of students were in the High/High category. At School E, 48% of students were in the High/Low category (See Figure ES.1).

[2] Very few students who attended in Grade 7 only had Grade 8 outcome data available, so they were excluded from the analyses.
[3] In Grade 7, students who participated in 0-2 activities were coded as Low, and 3-8 activities were coded as High. In Grade 8, students who participated in 0-3 activities were coded as Low, and 4-8 were coded as High.

Figure ES.1. Percentage of Students by Overall Level of Participation by Texas GEAR UP SG School



Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014.
Notes. In the category names, the first word (i.e., high or low) is associated with level of participation in Grade 7 while the second word is associated with level of participation in Grade 8.

The strongest finding was that students with a high level of participation in Grade 7 (i.e., students in the High/Low and High/High groups) were more likely than their Low/Low counterparts to complete Algebra I in Grade 8. They were also more likely to reach the Level II Phase-in 1 standard for Algebra I EOC, even when prior achievement and other student characteristics were taken into account. This finding suggests that engaging students at a high level as early as possible was associated with successfully completing Algebra I.

For the other four STAAR assessments, there were only two significant findings (of eight possible) once prior achievement and other student characteristics were taken into account. First, students in the High/Low group were less likely to reach the Level II final standard for STAAR Science. Second, students in the Low/High group were less likely to meet the Level II Phase-in 1 standard in Social Studies.

Activities Associated with Outcomes

Key Takeaway:

Students in the Texas GEAR UP SG primary cohort were much more likely than students in the other two cohorts to complete Algebra I. A full 30% of students in the primary cohort completed Algebra I (compared to only 17% of students in the comparison schools cohort and 14% of students in the retrospective cohort), meeting Project Objective 1.1.

Finally, the degree to which specific activities were associated with Algebra I completion and performance on STAAR assessment was explored. Statistical models examined if there was any impact of participation in a given activity and an outcome, and if there was an impact of the amount of participation in a particular activity (e.g., number of hours of tutoring or number of college visits in Grade 8) on outcome.

There were 12 activities that were positively associated with Algebra I completion. The four activities most strongly associated with Algebra I completion were advanced mathematics course enrollment in Grade 7, high engagement with college visits during summer following Grade 7, and participation by parents in Grade 7 summer workshops. It is important to note that almost all activities classified as student workshops in Grade 7 summer were intended by the schools to improve Algebra I completion. School G was the leader in this area: 42% of students participated in a 20-hour, week-long minicamp focused on Algebra I during the summer between Grade 7 and Grade 8. School G also had the highest Algebra I completion rate by far, with 52% of students completing Algebra I compared to other schools that ranged from 20% to 32%.

There were five activities that were significant positive predictors of reaching the Level II Phase-in 1 standard on STAAR Algebra I EOC. Students who enrolled in an advanced mathematics course in Grade 7, those who attended a family event in Grade 7 or Grade 8, those who attended a student workshop in Grade 7, and those who had a parent attend a workshop in Grade 8 were more likely to reach the standard than students who did not participate in these activities. The only positive predictor of reaching the Level II final standard on STAAR Algebra I EOC was advanced mathematics enrollment in Grade 7. There was one negative predictor of performance on STAAR Algebra I EOC: students who received any counseling in Grade 8 were less likely to meet the Level II Phase-in 1 standard or the Level II final standard on STAAR Algebra I EOC than students who did not receive any counseling.

On STAAR Grade 8 Mathematics, there were also five activities that were positively associated with meeting the Level II Phase-in 1 standard. Students who enrolled in an advanced mathematics course in Grade 7, those who went on a college visit, participated in job shadowing, or went on an educational trip in Grade 8, and students who had a parent who attended a workshop in Grade 7 were all more likely to meet the standard than their peers. The only predictor of meeting the Level II final standard was enrollment in an advanced mathematics course in Grade 7.

Similar to the above, students who were enrolled in an advanced mathematics course in Grade 7 were more likely to meet both standards for STAAR Science. Additionally, students who had a parent who attended a workshop in Grade 8 were more likely to reach the Level II Phase-in 1 standard, and students who went on a college visit in the summer after Grade 7 were more likely to meet the Level II final standard. Finally, students who received science tutoring in Grade 7 were less likely to meet both standards.

Enrollment in an advanced reading course was a significant predictor of meeting both the Level II Phase-in 1 standard and the Level II final standard on STAAR Reading and STAAR Social Studies. Additionally, students who participated in job shadowing in Grade 7 and those who went on educational trips (in Grade 7, the summer between Grade 7 and 8, and in Grade 8) were more likely to meet the Level II Phase-in 1 standard on STAAR Social Studies than their peers.

Overall, enrollment in an advanced math or reading course in Grade 7 was the most consistent positive predictor of outcomes, although there were other areas that correlated in some areas as well. For example, parent participation in a workshop predicted reaching the Level II Phase-in 1 standard on Algebra I EOC, STAAR 8 Mathematics, and STAAR Science. Students who went on a college visit in the summer after Grade 8 were more likely to meet the Level II Phase-in 1 standard on STAAR Mathematics and the Level II final standard on STAAR Science. However, it is possible that students who were more engaged and motivated in school than their peers would participate in a broader variety of GEAR UP activities. Therefore, some of the differences above may be attributable to unmeasurable pre-existing differences between students.

1. Introduction and Overview of Texas GEAR UP

In April 2012, the U.S. Department of Education (USDE) awarded the Texas Education Agency (TEA) a federal Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP) grant. The broad purpose of the federal GEAR UP program is to increase the number of low-income students who are prepared to enter and succeed in postsecondary education. Through the Texas GEAR UP State Grant (SG), participating schools provide services to a primary cohort of students from Grade 7 (2012–13 school year) through their first year of postsecondary education (2018–19).[4] The intent of the Texas GEAR UP SG services is to impact postsecondary attendance by the individual students, as well as to impact parents' ability to support/encourage their child regarding postsecondary attendance. In addition, Texas GEAR UP SG supports teachers through the provision of professional development (PD) and schools/districts through changes in academic rigor, potentially impacting postsecondary education outcomes in cohorts beyond the primary cohort. TEA contracted with ICF to provide an external, third-party evaluation of the Texas GEAR UP SG. This first comprehensive report examines Grade 8 outcomes in the primary cohort of students, including an examination of the relationship between participation and outcomes based on approximately 18 months of program implementation (from November 2012 to March 2014). While making a statewide impact through the widespread provision of coordinated information and resources for students and their parents regarding postsecondary opportunities is also a Texas GEAR UP SG goal, this report will focus only on outcomes associated with the primary cohort.

While this comprehensive report focuses on outcomes, two annual implementation reports provide detailed information regarding implementation in the first two years of the Texas GEAR UP SG. Annual Implementation Report #1 (O'Donnel et al., 2013) focused on implementation that occurred through March in the 2012–13 school year. Annual Implementation Report #2 (Briggs, et al., 2015) focused on implementation events that occurred from summer 2013 through March of the 2013–14 school year. These annual reports provided a snapshot of how the seven Texas GEAR UP SG participating middle schools (located in four districts), TEA, and TEA's Texas GEAR UP SG collaborators were implementing the program. This report provides highlights from those reports but does not replicate them. Readers interested in more fully understanding Texas GEAR UP SG implementation are encouraged to read the two annual implementation reports. Throughout this report, the same letter (Schools A through G) used in the prior reports to identify each school is used in order to maintain confidentiality.

This chapter provides a brief overview of the relevant research literature on student success and college readiness, along with an explanation of these issues in the context of the state of Texas. Descriptions of the GEAR UP program and the Texas GEAR UP SG are also provided. Next, an overview of the key research questions addressed in this report is provided along with an overview of the Texas GEAR UP SG evaluation, as well as limitations associated with the analyses to be presented.

1.1 GEAR UP College Readiness Challenge

1.1.1 The National and Texas College Readiness Challenge

The federal GEAR UP program is focused on supporting college readiness for students who may not otherwise pursue postsecondary educational opportunities. It is estimated that by 2020, more than 55% of Texas jobs will require some type of postsecondary credential (Texas Higher Education Coordinating Board [THECB], 2014). However, college enrollment and completion rates continue to reflect wide gaps based on students' family income. In 2013, the immediate

[4] Additional information about the cohort evaluation design of Texas GEAR UP SG is included in Appendix B.

college enrollment rate of high school completers from high-income families was 80%, compared to 49% of students from low-income families (Kena et al., 2015). Data show that only 9% of youth from the lowest income quartile attain a college degree by age 25, compared with 80% of youth from the highest income quartile (Bailey & Dynarski, 2011). Hispanic youth immediate enrollment in college (60%) was also significantly lower in 2010 than that for either White or African American youth (71% and 66%, respectively).

According to the Pew Hispanic Center (2012), Hispanics represent about one quarter of all public school students nationwide, but make up only 16% of those in higher education. Postsecondary graduation rates also lag for minority students. In 2014, 60% of first-time degree-seeking students who enrolled in Texas public universities in fall 2008 earned a postsecondary degree within six years. In Texas, of the total Hispanic population in 2013, 12.5% have earned a bachelor's degree or higher within six years, compared to the percentages of African American and White populations earning a bachelor's degree or higher: 22.3% and 35.9%, respectively (THECB, 2015). Data on Texas students released in 2015 suggest that postsecondary enrollment growth in the state has slowed, decreasing in fall 2013, and growing only slightly in 2014 (THECB, 2015). In fall 2014, in-state college-going rates of Hispanic students (51.7%) and African American students (48.7%) continued to lag behind White and Asian student enrollment rates (56.1% and 79.4%, respectively).

In 2015, although 52% of Texas students had immediate enrollment in a postsecondary institution following high school graduation, many of these students do not enter postsecondary-ready, decreasing the likelihood that they will earn a credential (THECB, 2015).[5] Although improving enrollment is a critical first step, students must also be prepared at a level that will move them from enrollment to graduation. In spite of improvements in recent years regarding college and career readiness in Texas high schools, a large portion of students continues to rely on developmental education to prepare them for college-level material.[6] In fall 2013, 11% of students who attended a four-year public institution required developmental education (a five percentage point decrease from fall 2010) and 34% of all statewide college students required developmental education (a seven percentage point decrease from fall 2010). Community and technical colleges are particularly likely to encounter students with a need for developmental education courses. Of all public community and technical college students enrolled in fall 2013, 49% required developmental education, a six-percentage point decrease from 2010. The impact on students in terms of time, money, and outcomes is significant when developmental education courses are required. For example, a 2012 report revealed that Texas students who did not require developmental coursework were twice as likely as students who did require such coursework to have graduated with a degree (THECB & TEA, 2012).[7]

The Texas GEAR UP SG, which began in 2012, provides an opportunity to support schools serving high percentages of low-income students in new approaches to college readiness. This

[5] The 56% of Texas students who had immediate enrollment in a postsecondary institution includes enrollment both inside and outside the state of Texas. Conley (2007) defines college readiness as "the level of preparation a student needs in order to enroll and succeed—without remediation—in a credit-bearing general education course at a postsecondary institution that offers a baccalaureate degree or transfer to a baccalaureate program" (p. 5).
[6] Developmental education is remedial classes/interventions that college students need to be eligible for credit-bearing courses.
[7] They were twice as likely to have graduated with a degree from a community college within three years and twice as likely to have graduated from a four-year institution within six years. Data reflect graduation in 2009 for community college and 2010 for graduation from a four-year college.

includes influencing student motivation. Based on findings from the High School Survey of Student Engagement, student engagement and motivational factors play a critical role in determining a student's ability to succeed in college (Yazzie-Mintz, 2010).[8] Nationally, students are motivated by a desire to go to college and get a good job. For example, the 2009 survey asked more than 42,000 high school students across 103 schools in 27 states about their views regarding academic motivation. When asked why they go to school, students' most common responses were "Because I want to get a degree and go to college" (73%) and "Because I want to get a good job" (67%). USDE suggests that GEAR UP programs, including the Texas GEAR UP SG, engage in a range of activities that encourage and build on students' motivations to set postsecondary education as a goal, provide academic and social support to students, educate students about postsecondary enrollment, and prepare them for the financial costs associated with postsecondary attendance.

1.1.2 Algebra I: Grades 8 and 9 Enrollment

One of the key objectives of the Texas GEAR UP SG to be addressed in this report is successful completion of Algebra I in Grade 8 by at least 30% of students (Project Objective 1.1, see Appendix A). In order to better equip students with college-ready skills, educators across the nation have implemented programs designed to increase academic rigor and enhance access to advanced coursework at a younger age. In the area of mathematics, one of the first steps in this pathway to college-readiness has been to encourage enrollment in algebra in Grades 8 and 9. Researchers have found a link between taking algebra in Grade 8 and both completion of more years of advanced mathematics courses and an increased likelihood for completion of higher-level science coursework (Stein, Kauffman, Sherman, & Hillen, 2011). Furthermore, even when controlling for prior achievement, students who take algebra coursework in Grade 8 or Grade 9 experience greater academic gains than those who complete general mathematics classes (Domina, 2014; Gamoran & Hannigan, 2000). Achievement gains were most pronounced when struggling students were provided with additional academic supports (Stein, Kauffman, Sherman, & Hillen, 2011).

Nationally, over time there has been a steady increase in the percentage of students enrolled in algebra courses in Grade 8 (Stein, Kauffman, Sherman, & Hillen, 2011). According to Domina (2014), 40% of students enroll in algebra or a more advanced course in Grade 8 and an additional 38% enroll in pre-algebra. However, access to college-preparatory mathematics has not been equitable. Students enrolled in algebra in Grade 8 are less likely to be male, African American, and Hispanic (Gamoran & Hannigan, 2000). Students excluded from early algebra coursework are also more likely to have parents with lower educational attainment and lower incomes. Students' prior test scores and teachers' recommendations with regard to prior math performance also affect student access to early algebra (Domina, 2014). Where a school is located additionally influences access to algebra in Grade 8, as schools in suburban communities are more likely to offer algebra in Grade 8 than schools in urban or rural communities (Stein, Kauffman, Sherman, & Hillen, 2011).

1.1.3 Texas High School Graduation

Understanding high school graduation in Texas is important because it is a necessary milestone toward college enrollment. At the time of this data analysis, the Texas high school Grade 9 four-year longitudinal graduation rate slightly increased from 88.0% for the Class of 2013 to 88.3% for the Class of 2014 (TEA, 2015). The graduation rates for students in the Class of 2014 identified as being economically disadvantaged (85.2%) did not change from the graduation rates of students in the Class of 2013 identified as being economically disadvantaged (85.2%)

[8] The High School Survey of Student Engagement is a comprehensive survey on student engagement and school climate issues. Please see http://ceep.indiana.edu/about/additional.html for additional information.

and lagged relative to the state overall for the Class of 2014 (88.3%). These trends reinforce the need for Texas GEAR UP SG to support schools with high percentages of students identified as being economically disadvantaged. English Language Learners (ELL), Hispanic, and African American youth are also targeted by the Texas GEAR UP SG. TEA data indicate concerns with the graduation rates for these student populations; rates are improving over time but are still below state averages. In other words, progress for various groups continues to lag amidst overall progress. For example, students identified as ELL at any point between Grades 9 and 12 had a much lower high school graduation rate (71.5%) than the state average (88.3%) for the Class of 2014. Both Hispanic and African American groups continued to lag behind White, non-Hispanic youth in the state as well, with a Class of 2014 graduation rate of 85.5% and 84.2% respectively (compared to 93.0% for White, non-Hispanic).[9]

In addition to high school graduation, one way to prepare students for enrollment in higher education is to offer dual-credit (college and high school) courses and expose students to the rigorous content in advanced placement (AP) classes. Ideally, academic rigor in AP courses exposes students to the typical demands of a college course. Data from the time of the analysis suggest that participation in AP courses is another area where various student groups lag relative to other student groups, although progress has also been made (TEA, 2013a; TEA, 2013b). The number of Texas high school graduates reported to be graduating in the Class of 2014 who took at least one AP exam during high school increased by 3.1 percentage points from the previous school year, with a total of 39.1% of students; this is 3.4 percentage points higher than the national average (35.7%; TEA, 2015b). For low-income students, Texas is the only state in the U.S. that achieved equitable participation in AP exams in 2014, which is defined as the percentage of K–12 students who are identified as eligible for free or reduced-price lunches (51.1%) equaling the percentage of students (51.0%) who take an AP exam (TEA, 2015b). Although participation is equitable, performance for some student groups is low. According to a 2014 College Board data release, the student groups with the lowest mean AP scores in Texas were students who are African American, Other Hispanic, or Mexican American, with the average scores on a five-point scale at 1.95, 2.05, and 2.24, respectively; this is compared to 2.89 for White students and 2.58 overall in Texas (College Board, 2015).[10] Texas GEAR UP SG, which stresses academic rigor and student engagement in AP courses, has the potential to be part of the effort to help reduce achievement gaps between student groups on AP exams.

1.1.4 About the Federal GEAR UP Program

TEA's application for and receipt of a federal GEAR UP SG is in line with the general state focus on promoting college readiness and access discussed in the prior section. The federal GEAR UP program seeks to improve postsecondary enrollment and completion for low-income students. The GEAR UP program addresses the challenges faced by low-income students in attaining postsecondary success in an early and ongoing manner, by providing services, activities, and resources to students from Grade 7 through the first year of college. These goals are presented as a pyramid, with each goal building on previously attained goals (CoBro

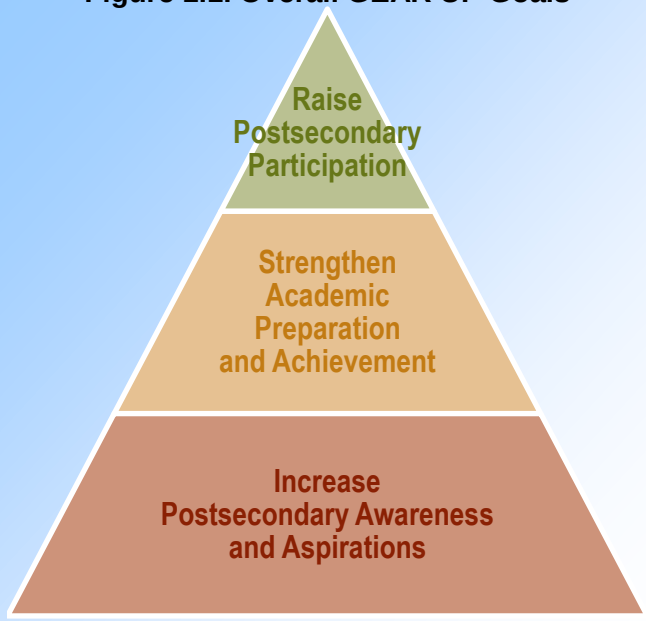
[9] Hispanic (Class of 2013: 85.1%, Class of 2009: 73.5%) and African American (Class of 2013: 84.1%, Class of 2009: 73.8%) youth in the Class of 2013 had improved graduation rates compared to the Class of 2009. Both Hispanic and African American groups continued to lag behind Asian American (Class of 2013: 93.8%, Class of 2009: 89.7%) and White, non-Hispanic youth in the state as well (Class of 2013: 93.0%, Class of 2009: 92.4%). Please see https://tea.texas.gov/acctres/dropcomp_index.html.

[10] Scores reflect the following scale: 5 = extremely well qualified, 4 = well qualified, 3 = qualified, 2 = possibly qualified, and 1 = no recommendation. Each college decides what scores it will accept. Reported means are averages across exams.

Consulting, 2010; see Figure 1.1). Although the goals build on each other, the strategies associated with each goal can occur throughout the implementation of GEAR UP (e.g., implementation activities to increase college awareness and postsecondary aspirations occur across grades). The goals include the following:

1. **Increasing postsecondary awareness and aspirations.** This goal is focused on increasing GEAR UP students' and parents' knowledge of postsecondary educational options, the preparation needed to succeed at the postsecondary level, and parents' financial literacy regarding postsecondary education. Ideally, aspirations and expectations for postsecondary education are aligned and influence decisions (e.g., to complete Algebra I in Grade 9, to apply for postsecondary enrollment in Grade 12). Texas GEAR UP project objectives, such as offering college awareness workshops to all students and parents by the end of the project's first year, support this effort.
2. **Strengthening academic preparation and achievement.** This goal focuses on providing academically rigorous opportunities for students (e.g., achieving college readiness benchmarks on state/national tests, completion of college credit in high school). GEAR UP PD opportunities for teachers are made available to increase academic rigor in the classroom. Grantees monitor, and students may self-monitor, progress on achieving early and intermediate outcomes that indicate postsecondary readiness (e.g., timely progress toward meeting a plan for graduation at the distinguished level of achievement). Texas GEAR UP project objectives, such as 85% of students completing Algebra I by the end of Grade 9 (Project Objective 1.1) and 60% of students completing an AP/pre-AP course by the fifth year (Project Objective 2.2), reflect this overarching goal.
3. **Raising postsecondary participation.** Finally, GEAR UP seeks to improve high school graduation rates and enrollment in postsecondary education. This goal is at the top of the pyramid, in part, because it is the intended long-term outcome. However, activities intended to aid grantees in meeting this goal also occur throughout the life cycle of the grant, including providing student support services such as tutoring and mentoring. The program anticipates that successful grantees will develop systems to identify students for such services early and at an appropriate level. TEA has indicated that participation in summer programs is of particular interest for the Texas GEAR UP SG evaluation.

Figure 1.1. Overall GEAR UP Goals



Source. CoBro Consulting (2010).

1.1.5 Overview of Texas GEAR UP State Grant

TEA was awarded a federal GEAR UP grant in April 2012 with a start date of July 2012. As described in prior implementation reports (Briggs et al., 2015; O'Donnel et al., 2013), the Texas GEAR UP SG serves low-income and historically underserved students through two primary strategies: (1) a district intervention package, which supports the targeted districts' college readiness and success initiatives; and (2) statewide initiatives, which provide guidance, information, and resources related to college access, readiness, and success for all Texas districts and communities. The Texas GEAR UP SG district intervention supports schools in four districts with a high population of low-income youth. In

addition to Texas GEAR UP SG district intervention supports, statewide supports are provided through existing and newly developed TEA college and career information, which provide a rich array of resources and tools for educators, students and their parents to help provide guidance regarding postsecondary education.[11]

The Texas GEAR UP SG set a range of project goals and objectives (Appendix A). Key to this report are Goals 1 and 4. Goal 1 focuses on improved instruction and expanded academic opportunities in mathematics and science with Objective 1.1 setting a goal that by the end of the project's second year (Grade 8), 30% of cohort students would have completed Algebra I. In support of Goal 1, Texas GEAR UP SG Goal 4 focuses on providing a network of strong student support services to promote on-time promotion and academic preparation for college. Specifically, Objective 4.1 sets a goal of at least 75% of the Grade 8 students involved in a comprehensive mentoring, counseling, and/or tutoring program. This report examines the relationship between participating in activities and student outcomes, including the Algebra I course completion outcome. In addition to Algebra I course completion, student outcomes on Grade 8 STAAR and, for those students completing Algebra I, on the STAAR Algebra I EOC are of interest.

TEA Selection of Districts/Schools to Participate

TEA based selection of districts to participate in the Texas GEAR UP SG grant on data from the 2009–10 school year related to poverty levels and the level of risk of students dropping out of school.[12] At that time, all seven Texas GEAR UP SG middle schools in the four selected districts (Edgewood Independent School District [ISD], Lubbock ISD, Manor ISD, and Somerset ISD) had greater percentages of economically disadvantaged students and at-risk students as compared to state averages (i.e., those students identified as being at-risk for dropping out of

[11] This includes the statewide website at http://www.texasgearup.com.
[12] TEA first applied for the GEAR UP grant in July 2011 with plans for implementation to begin in the 2011–12 school year. Funding was awarded based on this application in a deferred award cycle (April 2012).

school based on having one or more of 13 factors).[13] Most of the Texas GEAR UP SG middle schools generally had higher-than-state-average enrollments of Hispanic/Latino students. At the three schools with lower percentages of Hispanic/Latino students, the next largest group of students in the 2009–10 school year was African American. Both Hispanic/Latino and African American students are historically underrepresented in higher education (Editorial Projects in Education, 2013; Pew Hispanic Center, 2012). Table 1.1 provides general key demographics at the seven GEAR UP schools based on the time of selection into the cohort.

Table 1.1. Profile of Texas GEAR UP SG Middle Schools Pre-Award, 2009–10

Texas GEAR UP SG Middle School	Percentage of Economically Disadvantaged Students	Percentage of At-risk Students	Percentage of Hispanic/Latino Students
School A	90%	68%	98%
School B	82%	74%	98%
School C	91%	62%	97%
School D	90%	48%	51%
School E	84%	56%	61%
School F	76%	50%	55%
School G	82%	58%	86%
State average (all Texas schools)	59%	47%	49%

Source. Texas Education Agency, Academic Excellence Indicator System (AEIS), 2009–10.

CHARACTERISTICS OF STUDENTS PARTICIPATING IN TEXAS GEAR UP STATE GRANT, 2013–14

As of March 2014, 1,959 Grade 8 students attended one of the seven participating Texas GEAR UP SG schools. Table 1.2 provides demographic information about the Grade 8 students in the primary cohort. As previously mentioned, schools are identified by a letter in order to mask the school and maintain confidentiality. At six of the seven middle schools, the majority of students were Hispanic/Latino (ranging from 57% to nearly 100%). The percentage of students identified as ELL, which averaged 12% across all schools, varied by campus, with School D and School G having lower percentages of ELL students (2% and 8%, respectively) as compared to other campuses (10% to 23%).

[13] Texas Education Code (TEC) § 29.081 criteria for at-risk status as of 2015 include each student who is under 26 years of age and who (1) was not advanced from one grade level to the next for one or more school years; (2) is in Grades 7, 8, 9, 10, 11, or 12 and did not maintain an average equivalent of 70 on a scale of 100 in two or more subjects in the foundation curriculum during a semester in the preceding or current school year or is not maintaining such an average in two or more subjects in the foundation curriculum in the current semester; (3) did not perform satisfactorily on an assessment instrument administered to the student, and who has not in the previous or current school year subsequently performed on that instrument or another appropriate instrument at a level equal to at least 110% of the level of satisfactory performance on that instrument; (4) is in prekindergarten, kindergarten, or Grades 1, 2, or 3 and did not perform satisfactorily on a readiness test or assessment instrument administered during the current school year; (5) is pregnant or is a parent; (6) has been placed in an alternative education program during the preceding or current school year; (7) has been expelled during the preceding or current school year; (8) is currently on parole, probation, deferred prosecution, or other conditional release; (9) was previously reported through the Public Education Information Management System (PEIMS) to have dropped out of school; (10) is an English language learner; (11) is in the custody or care of the Department of Protective and Regulatory Services or has, during the current school year, been referred to the department by a school official, officer of the juvenile court, or law enforcement official; (12) is homeless; or (13) resided in the preceding school year or resides in the current school year in a residential placement facility in the district, including a detention facility, substance abuse treatment facility, emergency shelter, psychiatric hospital, halfway house, or foster group home (See https://rptsvr1.tea.texas.gov/perfreport/tapr/2015/glossary.pdf; http://www.statutes.legis.state.tx.us/Docs/ED/htm/ED.29.htm#29.081).

Table 1.2. GEAR UP Primary Cohort Student Demographic Characteristics by School, 2013–14 (Grade 8)

Texas GEAR UP SG Middle School	Number of Students	Percentage of Economically Disadvantaged Students	Percentage of Female Students	Percentage of Hispanic/Latino Students	Percentage of English Language Learners
School A	280	96.8%	52.5%	99.6%	10.4%
School B	316	97.4%	49.7%	98.4%	11.1%
School C	235	97.0%	41.7%	98.3%	18.3%
School D	208	88.5%	45.7%	42.3%	1.9%
School E	275	85.8%	46.5%	63.3%	22.5%
School F	328	80.5%	50.3%	57.3%	12.5%
School G	317	80.4%	45.7%	86.4%	8.2%
Total	1959	89.1%	47.7%	78.9%	12.3%

Source. Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 2014.

TEXAS GEAR UP STATE GRANT COLLABORATORS

The Texas GEAR UP SG sought to meet statewide and primary cohort goals in part through collaboration with outside organizations. In Year 1, TEA collaborated with five organizations: Texas GEAR UP SG Support Center (a technical assistance provider, herein referred to as the Support Center); AMS Pictures; Texas Science, Technology, Engineering, and Mathematics (T-STEM) Centers; Texas Guaranteed Student Loan Corporation (TG); and the College Board. In Year 2, TEA retained five of these collaborators, the Support Center, AMS Pictures, TG, T-STEM Centers, and College Board, and added three new collaborators: Abriendo Puertas, Community TechKnowledge (CTK), and GeoFORCE.[14] Beginning in Year 2, the Support Center manages the contracts with all collaborators with the exception of AMS Pictures who report directly to TEA.

For the purposes of this report, additional information on the Support Center is provided, as their role appears to have most closely affected implementation by the Texas GEAR UP SG schools. The University of Texas at Austin's Institute for Public School Initiatives' (UT-IPSI) Office for College Access manages and staffs the Support Center. As TEA program staff describe, technical assistance from the Support Center includes grant training (most of which is required for all districts), grant documentation support, grant management training, and assistance with using grant tools/forms. They provide monthly and quarterly reports to TEA that are formatted similar to the Annual Performance Report (APR) and house the GEAR UP Integrated Data Entry System (GUIDES). These data support TEA in aligning reports to project objectives; providing student- and teacher-level participation data for the evaluation; and serving as formative information for TEA and the districts.[15] One role of the Support Center is ensuring that the school districts comply with grant requirements. This was achieved, in part, through working with the districts on a district Annual Strategic Planning Report (ASPR) on which Support Center staff provide guidance and feedback to the districts on their plans for the upcoming school year. During Year 1 and Year 2, Support Center staff reported visiting each school monthly and engaging in calls/email, as needed. The Support Center is also responsible for the annual statewide GEAR UP conference, including contracting with keynote speakers and reviewing papers.

[14] The College Board no longer had a formalized relationship with the Texas GEAR UP SG during Year 2 or Year 3. However, TEA provided grant funds directly to districts to purchase services directly from the College Board.
[15] See http://www2.ed.gov/programs/gearup/performance.html for additional information on the information required by USDE to be submitted annually by grant award recipients.

In Year 2, there was a large focus by Support Center staff on placing College Preparation Advisors at each participating school prior to the start of the 2013–14 school year. The Support Center was responsible for hiring and supporting/training the College Preparation Advisors provided to each Texas GEAR UP SG school in Year 2. Support Center staff trained College Preparation Advisors in the Texas GEAR UP SG project objectives, school characteristics, student success strategies, and college access and readiness strategies.

1.2 Evaluation of Texas GEAR UP State Grant

The evaluation of the Texas GEAR UP SG program over the seven-year grant period focuses on accomplishing the following objectives:

- Provide ongoing formative evaluation of implementation of Texas GEAR UP SG (facilitators and barriers, promising practices, and recommended corrections).
- Understanding relationships among Texas GEAR UP SG implementation, the timing of implementation, and the implementation dosage on Texas GEAR UP SG outcomes.
- Describing opportunities provided through Texas GEAR UP SG at the statewide level.
- Identifying facilitators and barriers to Texas GEAR UP SG implementation.
- Identifying potential Texas GEAR UP SG promising practices and any possible correction in needed areas of program implementation.
- Evaluating the impact of Texas GEAR UP SG from a cost and sustainability perspective.

This comprehensive report will focus on addressing the following additional evaluation questions:

- What outcomes are associated with participation in Texas GEAR UP SG?
- How do trends in outcomes at the Texas GEAR UP SG schools differ in comparison to the state average and/or the comparison group schools?
- How do trends in outcomes for the Texas GEAR UP SG primary cohort students differ from the retrospective?[16]
- How do trajectories of outcomes differ based on exposure to implementation? For example, do students who participate in Texas GEAR UP SG activities in all grades (e.g., Grade 7 and Grade 8) differ compared to students who enter Texas GEAR UP SG schools at a later grade level?
- How are implementation and outcomes related to one another? Are certain dosages of implementation associated with more successful outcomes? Are there certain patterns of participation in implementation strategies?

1.2.1 Logic Model

The evaluation design was developed based on conceptualizing a logic model for how Texas GEAR UP SG might bring about change in student outcomes (see Figure 1.2). The logic model maps out the inputs, program activities, and intended outcomes of the program.

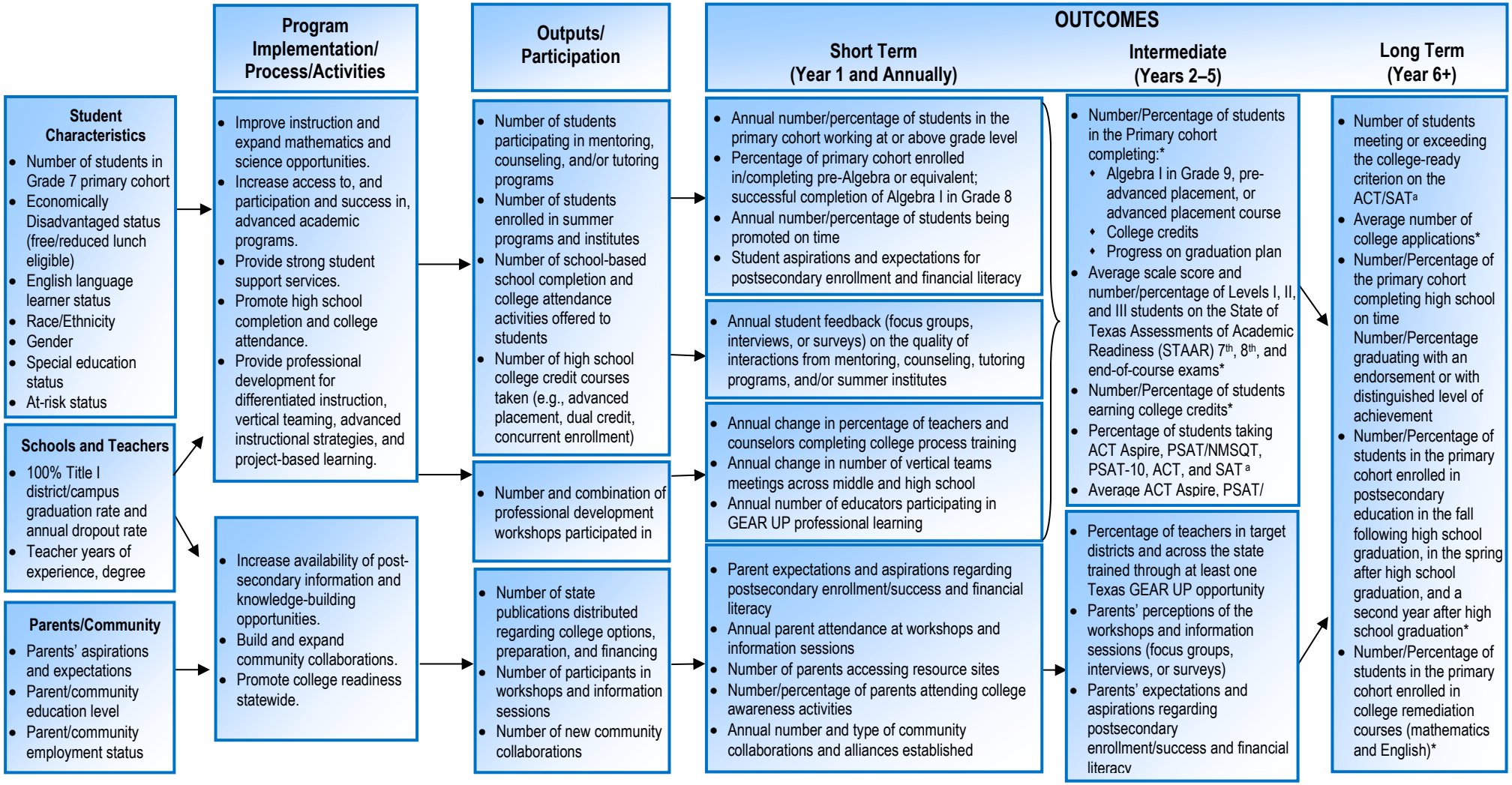
In the logic model, the first column on the left identifies important inputs for the program. These inputs are the existing conditions that the students, parents, and schools brought with them as they began participation in the Texas GEAR UP SG. Many of these inputs are not subject to change by the program (e.g., economic status, education level). Texas GEAR UP SG implements school-based activities with students, teachers, and parents; also included is the development of materials for statewide distribution. Outputs related to levels of participation are

[16] The retrospective cohort consists of students who attended GEAR UP schools the year prior to implementation. Future reports will include comparisons from follow-on cohorts attending the Texas GEAR UP SG school post the primary cohort.

the extent to which individual students, parents, and teachers actually participate in such activities and the patterns of participation. Understanding what activities are implemented and the trends in participation are critical to understanding the potential effect of such participation on outcomes. While visually the model appears to be linear, new activities are anticipated to occur throughout the life of the Texas GEAR UP SG. Similarly, early and intermediate outcomes, such as successful completion of Algebra I in Grade 8, are anticipated to affect eventual long-term outcomes (e.g., enrollment in courses earning college credit during high school).

The goal of this first comprehensive report is to describe short-term outcomes in the Texas GEAR UP SG schools and to identify any potential relationships between implementation and student academic outcomes. The outcomes of specific interest include on-time promotion, Algebra I completion, and Grade 8 performance on STAAR. Non-academic outcomes (e.g., student educational expectations and aspirations) are presented in the annual implementation reports. As data become available, future reports will examine additional outcomes that are further aligned with project goals. See Table A.2, Appendix A for a complete list of Texas GEAR UP SG project goals and objectives).

Figure 1.2. Texas GEAR UP Evaluation Logic Model



Assumptions

Program Implementation/Process/Activities: The evaluation team assumes that processes and activities will change, will be ongoing, and will have varied effects on project outputs and outcomes. As program elements and activities are implemented, evaluators will identify specific expected outputs and short- and long-term outcomes. This process will continue during each stage of the project.

Outputs/Participation: Evaluators will monitor changes in outputs as a result of project processes and activities. We will also assess, to the extent possible, the relationship between changes in outputs and short- and long-term outcomes.

Short-Term and Long-Term Outcomes: Several outcomes will serve as annual measures of program success, including, for example, STAAR results, grade-level performance, and so forth. Items marked with an asterisk (*) will be compared to project goals, historical performance, matched comparison groups from like students and schools, or the state average performance on these measures. Successful attainment of short-term outcomes will also be considered in understanding successful completion of long-term outcomes.

[a] PSAT is the Preliminary SAT. ACT Aspire is the pre-ACT test. SAT and ACT are tests used for college admission.

1.2.2 Evaluation Design: Longitudinal and Quasi-Experimental

The external evaluation is a longitudinal design that spans seven years and follows a cohort model. The primary GEAR UP cohort includes students at the seven Texas GEAR UP SG schools to whom services were provided. The comparison school cohort consists of students attending seven statistically similar schools that did not participate in Texas GEAR UP SG. Students in the retrospective cohort attended the Texas GEAR UP SG schools one year prior to the start of the grant. Table 1.3 illustrates the timeline and grade levels associated with the Texas GEAR UP SG cohort (the primary cohort that the evaluation focuses on) across the grant period compared to the other cohorts of interest.

For this report, each cohort was followed from Grade 7 to Grade 8, with Grade 8 outcomes being the main focus of the report. In addition to comparing differences across cohort groups, outcomes for Texas GEAR UP SG primary cohort were also compared with state averages when possible. Additional details about the evaluation design and methods are provided as analyses are introduced and in Appendix B.

In addition to comparisons of Texas GEAR UP SG primary cohort students' outcomes to other students, relationships between participating in the program for various periods of time (i.e., only in Grade 7, Grade 8, or both Grades 7 and 8) and academic outcomes were also examined. The effect of dosage was also examined (e.g., Did students who participated in many GEAR UP activities have better outcomes than those who participated in only a few activities?) Finally, we examined the relationships between participating in individual activities (e.g., Algebra I tutoring) and academic outcomes for Texas GEAR UP SG primary cohort students.

Table 1.3. Evaluation Timeline: Grade in School by Grant Year by Cohort Group

Cohort Group	Pre-Grant Award 2011–12	Grant Year 1 2012–13	Grant Year 2 2013–14	Grant Year 3 2014–15	Grant Year 4 2015–16	Grant Year 5 2016–17	Grant Year 6 2017–18	Grant Year 7 2018–19
Primary Cohort (Texas GEAR UP SG Schools)	Grade 6	Grade 7	Grade 8	Grade 9	Grade 10	Grade 11	Grade 12	First Year of College
Comparison Schools	Grade 6	Grade 7	Grade 8	Grade 9	Grade 10	Grade 11	Grade 12	First Year of College
Retrospective Cohort (Texas GEAR UP SG Schools pre-award)	Grade 7	Grade 8	Grade 9	Grade 10	Grade 11	Grade 12	First Year of College	--

1.3 Limitations

Several limitations that present challenges to interpreting findings exist. These include the following:

- While the retrospective and comparison school cohorts provide the best possible means of appraisal of the effect of Texas GEAR UP SG, we cannot be certain that participation in Texas GEAR UP SG actually caused the observed differences. Models presented in this report control for factors that are measurable (i.e., collected by schools and reported to TEA) but other factors that are not measurable (e.g., student motivation) may also contribute to change. That is, we can only say that Texas GEAR UP SG implementation was associated (or not) with outcomes, and not that Texas GEAR UP SG implementation caused any outcomes.

- As reported in the annual implementation reports, Year 1 implementation was shortened as the Texas GEAR UP SG schools received a notification of grant award (NOGA) in October 2012, followed by the beginning of implementation in November/December 2012, well after the start of the school year.
- Texas GEAR UP SG implementation data provide a clear count of student participation in number of events and in some cases length of event; thus, analyses within the primary cohort focus on the level of participation of individual students in GEAR UP activities. However, the underlying quality of events is unknown. Therefore, it is possible that attending one high-quality event had an impact that attending five events of relatively lower quality did not.
- Implementation data in Grade 8 are limited to those activities that occurred through March 2014. The STAAR Reading and Mathematics assessments occur at the beginning of April (closely aligning activity and outcome) and STAAR Science and Social Studies in late April. Students take STAAR Algebra I EOC in early May. Course completion occurs in late May or early June.

1.4 Report Overview

In the next chapter, analyses of student Grade 8 outcomes are reported. We first provide descriptive statistics associated with each of the Grade 8 outcomes, in order to provide a foundation for the analyses that follow. Next, findings regarding outcomes in the Texas GEAR UP SG primary cohort are compared to statewide outcomes, comparison school cohort outcomes, and retrospective cohort outcomes. Then, students within the Texas GEAR UP SG primary cohort are categorized regarding the length of time spent in the cohort and their overall level of participation, and outcomes are compared across GEAR UP activity categories. Finally, in order to understand potential best practices, the relationship between participation in specific implementation activities and outcomes within the Texas GEAR UP SG schools is examined. Additional details about the methodology accompany each of the various models in the main text, and Appendix B contains a detailed summary of the analytic methods. A summary of findings is presented in Chapter 3, along with conclusions and recommendations.

2. Grade 8 Student Outcomes

The overall goal of the federal GEAR UP program is improved college readiness and increased postsecondary education enrollment. Texas GEAR UP SG schools work toward achieving this long-term goal by achieving short-term goals along the way. This report focuses on short-term outcomes associated with TEA Texas GEAR UP SG goals/objectives and/or anticipated to be related to one or more long-term goals/objectives (see Table A.2, Appendix A, for a list of all Texas GEAR UP SG project goals and objectives). Two goals are of particular interest in the current report. First, Project Goal 1 is to expand academic opportunities in mathematics and science, with Objective 1.1 setting the specific goal for 30% of Texas GEAR UP SG primary cohort students to complete Algebra I by the end of the project's second year (Grade 8). And, second, Project Goal 4 is to provide student services to promote on-time promotion and academic preparation for college.

2.1 Student Outcomes

To examine progress toward the relevant Texas GEAR UP SG goals and objectives in Grade 8, this chapter's focus is on three primary academic outcomes. They are analyzed in various ways (see Section 2.3). The outcomes of interest are:

- **Promotion**: On-time grade-level promotion from Grade 7 to Grade 8 (based on enrollment in Grade 7 at any point in the prior year [e.g., 2012–13] and enrollment in Grade 8 during the fall of the subsequent year [e.g., 2013–14]). This outcome is related to Project Objective 4.3, which is to have the GEAR UP cohort exceed the state average for promotion in year three. Although it is not a goal for the current year, analyses in this section measure progress toward the goal.
- **Algebra I Completion**: Completion of Algebra I in Grade 8; this outcome is assessed based on students who received credit for the course.[17] This outcome is related to Project Objective 1.1, which states that by the end of the second year of the grant, 30% of cohort students will have completed Algebra I.
- **STAAR Achievement**: Performance on the STAAR assessments for Algebra I EOC and the four Grade 8 STAAR assessments of reading, mathematics, science, and social studies are included in this report.[18] In 2013–14, STAAR outcomes were categorized by two achievement standards: Level II Phase-in 1 standard and Level II at the final standard. Standards for STAAR were designed to be phased in: The Level II Phase-in 1 standard was the state passing standard in 2013–14. Level II at the final standard is a more rigorous standard than the Level II Phase-in 1 standard.[19] For the purpose of this report, achievement at or above the Level II final standard was considered to be in line with student progress towards the broad goals of the Texas GEAR UP SG program.

[17] See TEA's Public Education Information Management System (PEIMS) standards for additional information https://tea.texas.gov/Reports_and_Data/Data_Submission/PEIMS/PEIMS_Data_Standards/PEIMS_Data_Standards/ . It is possible for students to have passed a course but not receive credit, for example due to excessive absences. In order for students to be considered to be Algebra I completers, they must have received credit for the course.
[18] Students completing Algebra I take the STAAR Algebra I EOC. In many cases, these students also took Grade 8 STAAR Mathematics. For the purpose of this report, for those students who completed both the STAAR Algebra I EOC and Grade 8 STAAR Mathematics, only data associated with the STAAR Algebra I EOC were examined. That is, these STAAR Algebra I EOC taking students were excluded from the Grade 8 STAAR Mathematics analyses. Additionally, only first administration STAAR data were included in the analyses presented here.
[19] As Texas has done for the past two testing programs, the passing standards on the STAAR assessments were being phased in at the time of testing. Therefore, each STAAR assessment has a phase-in and final performance standard.

2.2 Comparison Groups

The evaluation report focuses on understanding each of the Grade 8 outcomes in the Texas GEAR UP SG primary cohort (students who were in Grade 7 in the 2012–13 school year at the seven GEAR UP schools) in relation to state averages and two key comparison groups:

- **Comparison Schools Cohort:** The seven comparison schools were selected based on the similarity of students on demographic characteristics and on Grade 7 STAAR Mathematics scores to students in the Texas GEAR UP SG primary cohort (see Appendix B, Section B.2.1 for additional details). Students at the seven comparison schools did not participate in any GEAR UP programming. Given the similarities between the two school groups in Grade 7, any differences in Grade 8 outcomes may be interpreted as being due in part to participating (versus not participating) in the Texas GEAR UP SG. Within each school group category, the seven schools are labeled from School A to School G. Schools with the same letter label are matched to one another (e.g., School A in Texas GEAR UP SG is matched to School A in the comparison schools).
- **Retrospective Cohort**: The retrospective cohort includes students in GEAR UP SG schools one year prior to the school receiving the Texas GEAR UP SG. Specifically, the Texas GEAR UP SG primary cohort group of students participated in Texas GEAR UP SG and were in Grade 8 in 2013–14. The retrospective cohort students attended the same schools as the primary cohort but were in Grade 8 in 2012–13. The retrospective cohort students did not participate in Texas GEAR UP SG. Therefore, differences in outcomes between the two cohorts may again be attributed, at least in part, to participation (versus no participation) in Texas GEAR UP SG.

Students within each school were also grouped on the following student characteristics:[20]

- Gender
- Race/Ethnicity
- Economically Disadvantaged
- ELL[21]

2.3 Analysis Overview

In order to assess the impact of Texas GEAR UP SG on Grade 8 outcomes, a series of analyses were conducted for each of the outcome variables (see Appendix B.6.4). The findings of each model inform one another. Following is a high-level overview of the content of each of the following sections in this chapter. Within each section, we present key evaluation questions and methodology to address the questions.

In order to understand the analyses and findings, Section 2.4, Describing Outcomes, provides descriptive statistics associated with each of the outcomes. This section also includes basic statistical comparisons between comparison cohorts (i.e., comparison schools and retrospective cohorts) as well as differences by student characteristics within each comparison cohort. Appendix B includes detailed information about how students were included in analyses for each of these cohorts. These basic descriptive statistics provide a context for the subsequent analyses.

[20] For additional definition information associated with how Texas schools were required to submit Public Education Information Management System (PEIMS) data for the 2013–14 school year, including the student group indicators here, please see the Description of Data Elements at https://tea.texas.gov/Reports_and_Data/Data_Submission/PEIMS/PEIMS_Data_Standards/PEIMS_Data_Standards_2013-2014/.

[21] Students are identified in TEA PEIMS as Limited English Proficient but are labeled as ELL in this report.

Section 2.5, Student Outcomes in Comparison, provides the key comparison analyses, broadly answering the question of how students attending the Texas GEAR UP SG schools in the primary cohort performed academically compared to state averages and the evaluation's key comparison cohorts (i.e., comparison schools and retrospective cohorts). For each outcome, several statistical models were created to assess differences between the Texas GEAR UP SG primary cohort and the key comparison groups. Generally, the models started with the simple inclusion of the main comparison group variable (e.g., Texas GEAR UP SG primary cohort vs. retrospective cohort). Additional models added student characteristic variables (e.g., gender) and prior year (Grade 7) STAAR performance to determine if differences between groups were explained by taking into account known aspects of the students. Finally, interaction models examined changes in achievement gaps (e.g., a decrease in the gap between performance of students identified as ELL and non-identified students) associated with comparison group.

Sections 2.6 and 2.7 examine the relationship between participation and outcomes more closely within the Texas GEAR UP SG primary cohort in order to identify potential best practices. Additional details about categorizing participation in various ways are provided in these sections. Student participation data for the evaluation were provided by TEA. Each Texas GEAR UP SG school reports their implementation data into the GUIDES. GUIDES data included here were collected from November 2012 through March 2014.[22]

Appendices A and B provide a more detailed and complete overview of the evaluation and the analyses. Appendices C, D, and E provide tables with additional details on the findings reported as referenced throughout the chapter.

2.4 Describing Outcomes

This section of the report describes basic differences among the student cohort groups compared in this report's analyses and provides a general context for the findings presented in subsequent sections.[23,24] For each variable, we present data for the Texas GEAR UP SG primary and retrospective cohorts and for the comparison schools cohort. Percentages reported here provide information about student outcomes of interest to Texas GEAR UP SG evaluation, specifically addressing the following questions:

- At the end of Grade 7, how many students (percentage) were promoted on time to Grade 8?
- How many students (percentage) successfully completed Algebra I in Grade 8?
- How many students (percentage) performed at the Level II Phase-in 1 standard and the Level II final standard on Grade 8 STAAR assessments (i.e., Mathematics, Reading, Science, and Social Studies) and STAAR Algebra I EOC?

[22] For additional information on how GUIDES data were collected, please see the Annual Implementation Reports (O'Donnel et al., 2013; Briggs, et al., 2015). Grade 7 participation data were collected from the start of the project in Grade 7 in November 2012 through the summer following Grade 7. Grade 8 participation data through March 2014 are included here. The decision to use participation data through March 2014 was based on the Grade 8 STAAR assessment administration dates in late April and early May. Therefore, outcomes in these analyses are based on activities that occurred prior to assessment administration.

[23] The descriptive data provided underlies analyses. However, the sample sizes and outcomes for any given analysis presented in the following sections is dependent on the variables in the given model. In explaining any significant findings, revised percentages are reported and tables are provided in Appendix C as noted.

[24] In using the term *significant* to discuss differences in this chapter, $p < .05$ was the minimum cut point for significance testing. This significance level means that, statistically, there is only a 5% chance that the amount of difference occurred due to chance alone.

2.4.1 On-Time Grade-Level Promotion

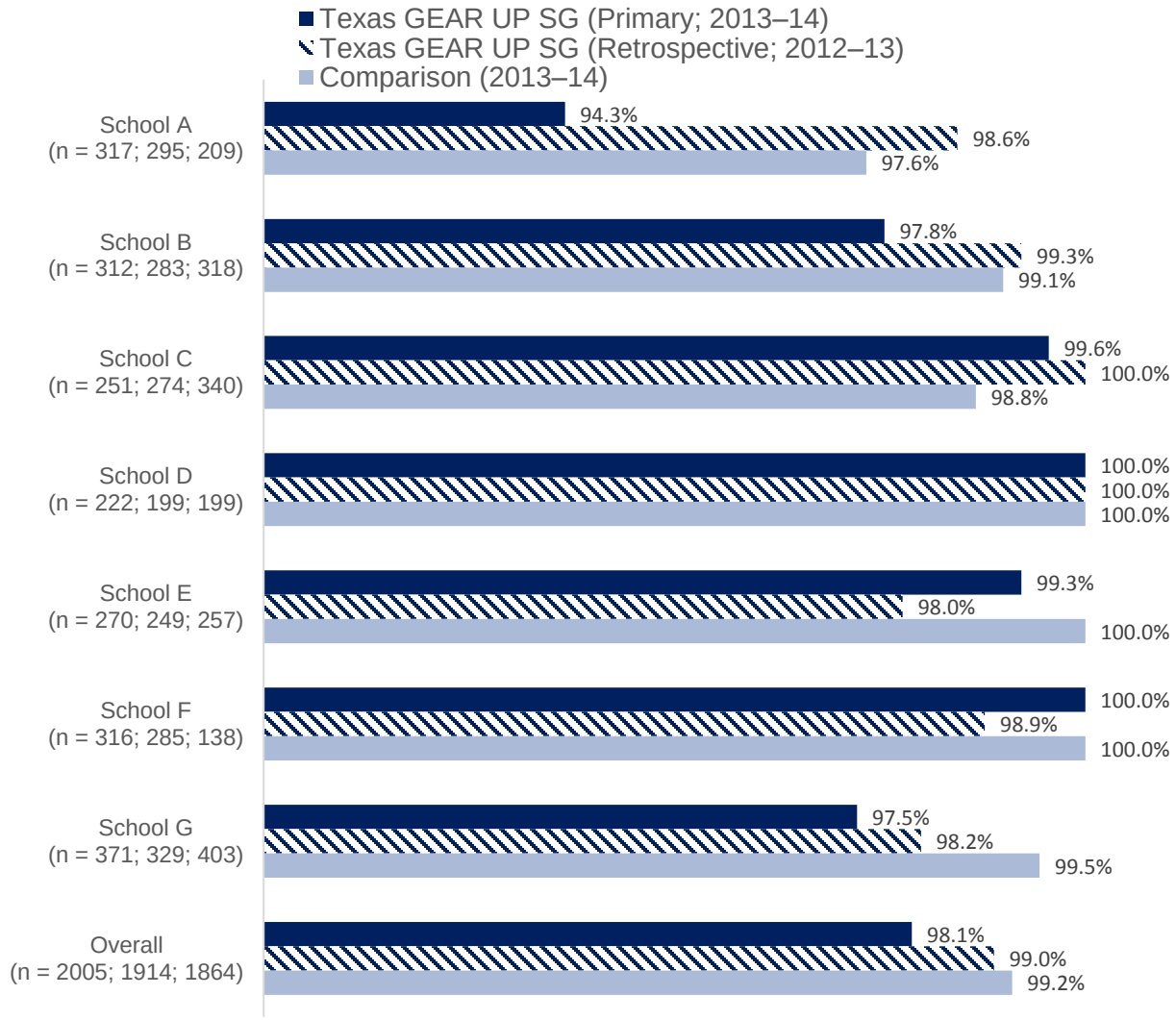
Project Objective 4.3 is to increase promotion for the GEAR UP cohort relative to the state in year three. Progress toward this goal was measured in year two by examining on-time grade-level promotion from Grade 7 to Grade 8.[25] Figure 2.1 provides an overview of promotion by each cohort group (see also Tables C.1 and C.2, Appendix C for more detailed information). Although nearly all students across all groups were promoted on time, significantly fewer students in the Texas GEAR UP SG primary cohort were promoted on time (98%) as compared to students within the comparison schools cohort (99%) and the retrospective cohort (99%).[26, 27] Still, across the three cohort groups there was only a 1.1 percentage point difference in promotion rates. School A in the Texas GEAR UP SG primary cohort promoted the lowest percentage of students on time (94%) while all other promotion rates were over 97%, including two schools with 100% of students promoted. Given the limited variability in on-time promotion, multilevel models were not created for this outcome. Students in the retrospective cohort who were not promoted on time were still in Grade 8 in 2013–14 (and thus received GEAR UP SG services). For all subsequent analyses, these students were considered a part of the primary GEAR UP cohort.

[25] Promotion was assessed by examining if students who were ever enrolled in Grade 7 according to the PEIMS 2012–13 (primary cohort and comparison schools cohort) or 2011–12 (retrospective cohort) enrollment data were in Grade 8 the following school year, according to the PEIMS fall snapshot. Students who were not in the PEIMS database in either Grade 7 or Grade 8 were excluded from the analysis as their grade level in the missing year is unknown. The primary GEAR UP cohort students were in Grade 7 in 2012–13 and in Grade 8 in 2013–14, if promoted on time. The retrospective cohort students were in Grade 7 in 2011–12 and in Grade 8 in 2012–13, if promoted on time.

[26] $\chi^2(1)=10.2$, $p < .01$

[27] $\chi^2(1)=5.57$, $p < .05$

Figure 2.1. Percentage of Students in Grade 7 Promoted to Grade 8 by Texas GEAR UP Primary Cohort, Retrospective Cohort, and Comparison Schools Cohort



Source. Texas Education Agency, Public Education Information Management System (PEIMS) data, 2012, 2013, 2014.

2.4.2 Algebra I Course Completion

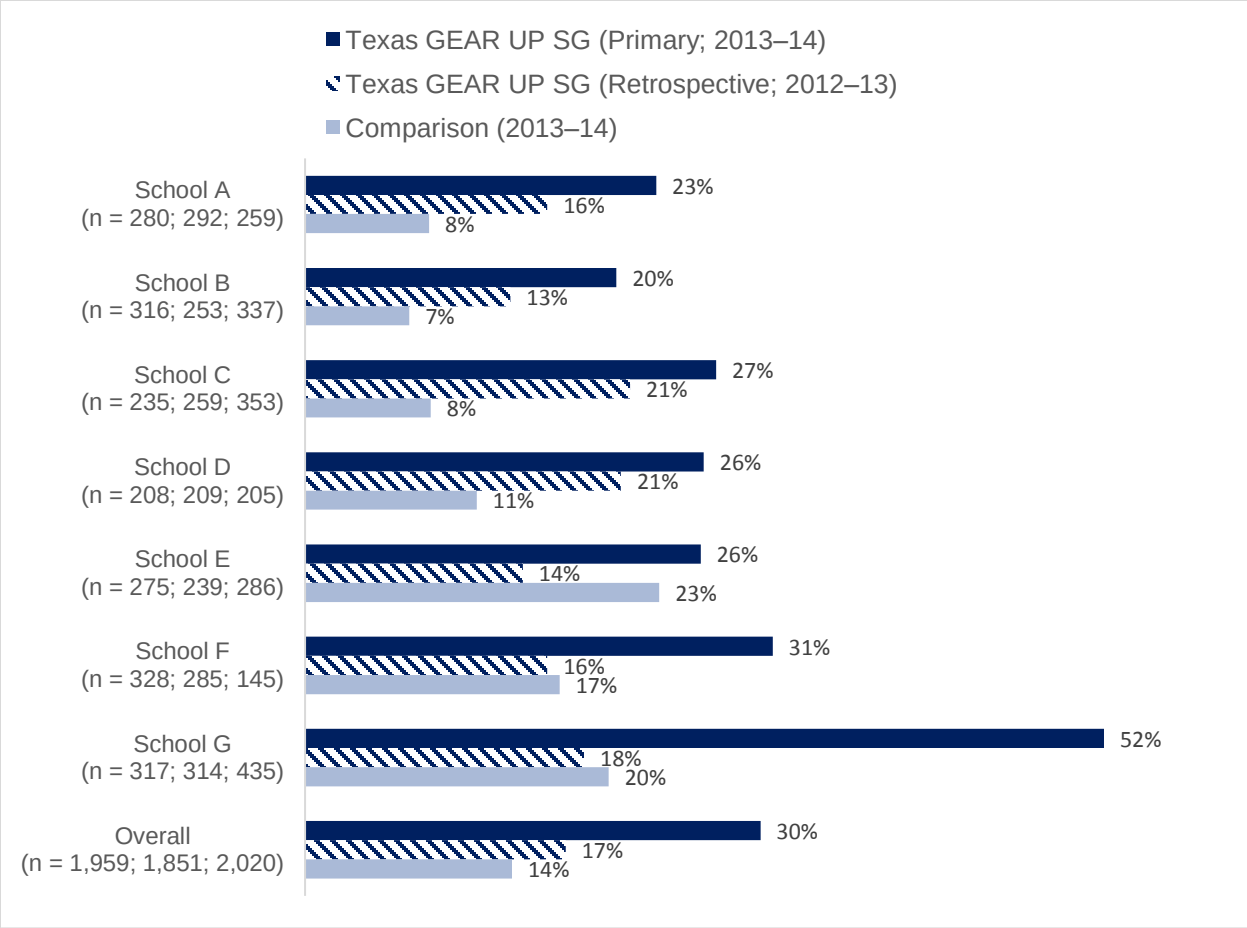
One of the primary goals for Texas GEAR UP SG Grade 8 students (Project Objective 1.1) was for 30% of Texas GEAR UP SG primary cohort students to complete Algebra I in Grade 8. Algebra I completers were defined as students who received credit for Algebra I in Grade 8. The set of non-completers includes both students who did not take Algebra I and those who took Algebra I but did not receive credit. Grade 8 Algebra I completion data are displayed in Figure 2.2, and also in Tables C.3 to C.4, Appendix C.

Across the seven Texas GEAR UP SG schools, 30% of students successfully completed Algebra I, exactly meeting Project Objective 1.1. Grade 8 Algebra I completion averages were significantly lower overall in the comparison school cohort (14%) and for the retrospective cohort (17%).[28] Each school in the Texas GEAR UP SG primary cohort had higher percentages of

[28] $\chi^2(1)=154.8$, $p < .001$; $\chi^2(1)=78.4$, $p < .001$

students complete Algebra I in Grade 8 than at their matched comparison school or in their retrospective cohort (Figure 2.2).

Figure 2.2. Percentage of Students in Grade 8 Completing Algebra I by Texas GEAR UP Primary Cohort, Retrospective Cohort, and Comparison Schools Cohort



Source. Texas Education Agency, Public Education Information Management System (PEIMS) data, 2013, 2014.
Note: This figure represents the percentage of students who received credit for Algebra I in Grade 8. The denominator in the calculation includes all students at each school (not only those who took Algebra I).

Within the Texas GEAR UP SG primary cohort, Schools F and G were the only schools to achieve the 30% Algebra I completion rate goal (31% and 52%, respectively). School G's increase in Grade 8 Algebra I completion from the prior year was particularly large: almost three times as many students in the primary cohort completed Algebra I in Grade 8 compared to the retrospective cohort. As reported in the Annual Implementation Reports (Briggs, et al., 2015; O'Donnel et al., 2013), School G began implementing Texas GEAR UP SG soon after receiving the award and engaged in the broadest range of activities in the first year, with several specifically targeted at increasing enrollment and student success in Algebra I. These efforts appear to have contributed to School G's higher Grade 8 Algebra I completion rates. The high completion rate of School G pulled up the rate for the overall cohort substantially; without School G's numbers, the primary cohort would not have met Project Objective 1.1.

School B had the lowest percentage of students complete Algebra I (20%). None of the comparison schools nor the Texas GEAR UP SG retrospective cohort schools achieved a 30% Grade 8 Algebra I completion rate. At the comparison schools, Algebra I completion rates

ranged from 7% at School B to 23% at School E, and in the retrospective cohort, completion rates ranged from 13% at School B to 21% at Schools C and D.[29]

Another way to consider Algebra I completion is to look at the percentage of students who took the course and received credit. When examined in this way, successful completion of Algebra I was slightly lower at the Texas GEAR UP SG schools (both primary and retrospective cohorts) than at the comparison schools (92%, 92%, and 96% respectively; see Table C.4, Appendix C). It is important to recognize that over 90% of the students enrolled in Algebra I in the Texas GEAR UP SC primary cohort successfully completed the course. Ultimately, approximately double the number of Grade 8 Texas GEAR UP SG primary cohort students attempted and received credit for Algebra I than both the comparison schools and the retrospective cohorts. Five of the seven schools had from 93–100% completion rates, and only one school had a completion rate lower than 75% (School B with 74% completion).

The Texas GEAR UP SG schools were engaged in a range of strategies designed to support this level of Algebra I success, explored in further detail later in the report (see also Briggs, et al., 2015; O'Donnel et al., 2013). Section 2.7 will further explore potential best practices exhibited among the Texas GEAR UP SG schools.

2.4.3 Achievement on Grade 8 Student State Assessments

The next outcome explored was student achievement on state assessments, including STAAR Algebra I EOC and Grade 8 STAAR Mathematics, Grade 8 STAAR Reading, Grade 8 STAAR Science, and Grade 8 STAAR Social Studies. STAAR outcomes are categorized by scores at or above two standards: the Level II Phase-in 1 standard (which counted as passing the test in 2013–14) and Level II at the final standard (considered to be in line with progress toward the goals of Texas GEAR UP SG).[30]

STAAR Algebra I End-of-Course

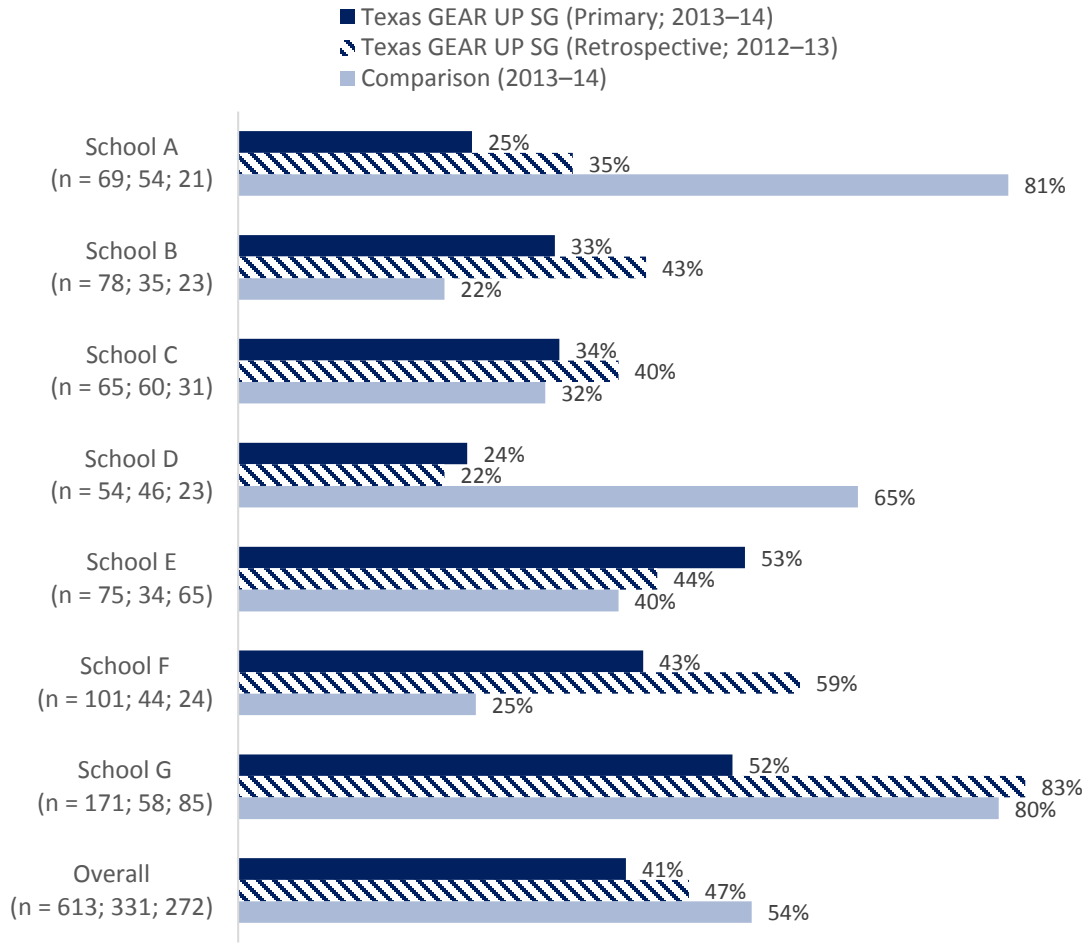
Figure 2.3 summarizes data on STAAR Algebra I EOC (see also Tables C.5 and C.6 in Appendix C). Given that approximately twice as many students in the Texas GEAR UP SG primary cohort completed Algebra I as compared to students in the comparison schools and retrospective cohorts, it is not surprising that a similarly larger number of students took the STAAR Algebra I EOC (n=613, vs. 272 and 331, respectively).

Although the majority of students in all three cohorts met the Level II Phase-in 1 standard on the STAAR Algebra I EOC (See Table C.6, Appendix C), students in the matched comparison schools cohort (96%) and retrospective cohort (96%) were significantly more likely than those in the Texas GEAR UP SG primary cohort (92%) to achieve at or above Level II Phase-in 1.[31] The percentage of students who achieved at or above Level II at the final standard on STAAR Algebra I was also significantly higher for both the comparison schools (54%) and retrospective cohorts (47%) than for the Texas GEAR UP SG primary cohort (41%).[32]

[29] Each comparison school was matched to a specific Texas GEAR UP SG school. The letter references the same letter used to identify Texas GEAR UP SG schools.
[30] For the purposes of this evaluation, specific attention is given to this higher standard since the Texas GEAR UP SG provides services to students to promote post-secondary readiness. Meeting Level II at the final standard on Grade 8 STAAR Reading, Grade 8 STAAR Mathematics, and STAAR Algebra I EOC assessments indicates that a student is on track to reach postsecondary readiness on STAAR Algebra II EOC and English III EOC. This standard is also used to examine Grade 8 STAAR Science and Grade 8 STAAR Social Studies assessment outcomes.
[31] $\chi^2(1)=6.6$, $p < .01$ for comparison schools cohort and $\chi^2(1)=.7.9$, $p <.05$ for retrospective cohort.
[32] $\chi^2(1)=13.8$, $p < .001$ for comparison schools cohort and $\chi^2(1)=4.1$, $p < .05$ for retrospective cohort.

It is important to recognize that, typically, Algebra I is taken in Grade 8 by the students with the strongest mathematical skills (and thus those that are the most likely to meet the standards for STAAR). Texas GEAR UP SG encouraged a broader variety of students to take the course – approximately twice the number in either the comparison schools or retrospective cohorts – and the vast majority of these students were still able to reach the Level II Phase-in 1 standard.

Figure 2.3. Percentage of Students Achieving Level II at the Final Standard on Grade 8 STAAR Algebra I End-of-Course by Texas GEAR UP Primary Cohort, Retrospective Cohort, and Comparison Schools Cohort



Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014. Texas Education Agency, State of Texas Assessments of Academic Readiness end-of-course (STAAR EOC) data, 2013, 2014.
Notes. The cut score for STAAR Algebra I EOC at or above the Level II final standard was 4000.

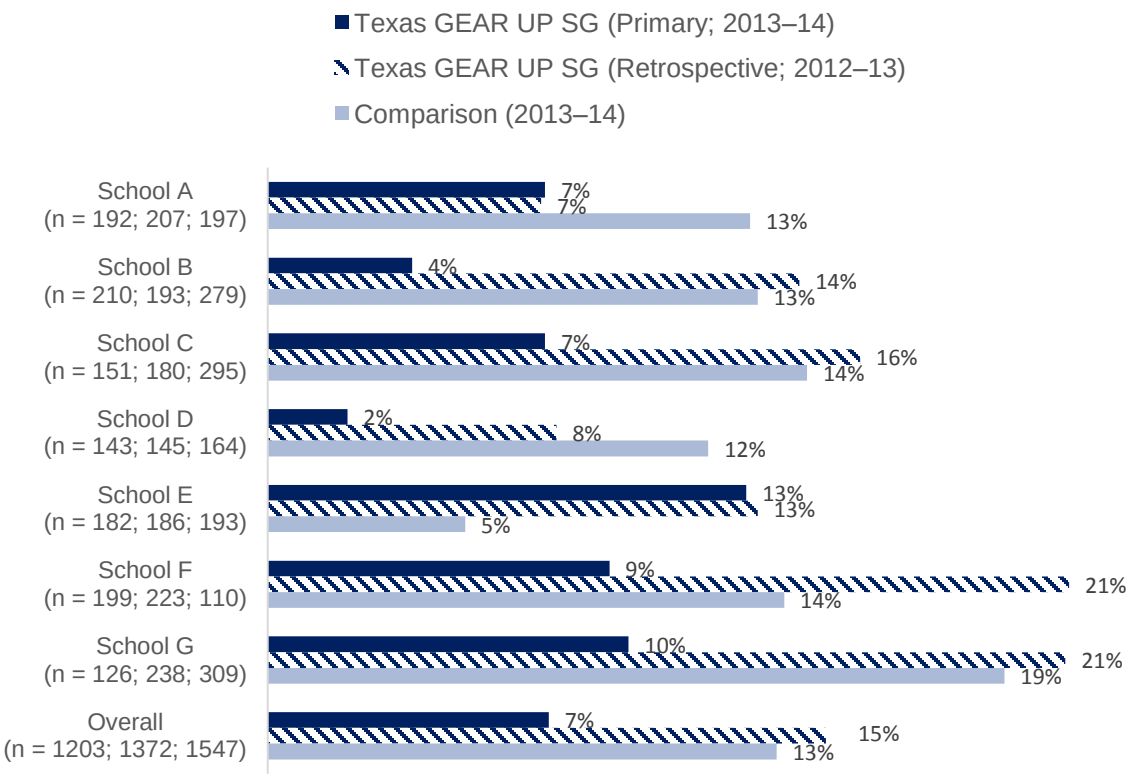
It is worth reiterating that while increasing enrollment in Algebra I may create some challenges with regard to success on STAAR Algebra I EOC, numerically, far more students in the Texas GEAR UP SG primary cohort met both the Level II Phase-in 1 standard and Level II at the final standard than students in the retrospective or comparison schools cohorts. Using School G as the example, the large drop from 83% in the year prior (retrospective cohort) to 52% in the GEAR UP primary cohort scoring at or above Level II at the final standard may seem concerning. However, when examining the raw numbers for School G, 89 students achieved at or above the Level II final standard for Algebra I in 2013–14 (GEAR UP primary cohort; 52% of 171), compared to 48 students in 2012–13 (retrospective cohort; 83% of 58 students). That is,

due to the higher number of students taking the course, almost twice as many students achieved at the Level II final standard in 2013–14 as compared to 2012–13.

STAAR MATHEMATICS

The majority of students in the sample (71% across cohorts) took the Grade 8 STAAR Mathematics assessment (see Tables C.7 to C.8, Appendix C).[33] The Texas GEAR UP SG primary cohort students (51%) were significantly less likely than students in both the comparison schools (60%) and retrospective cohort (59%) to achieve at or above the Level II Phase-in 1 standard (see Table C.8, Appendix C).[34] Figure 2.4 provides an overview of achievement at or above Level II at the final standard on the Grade 8 STAAR Mathematics assessment by each group. Both the comparison schools (13%) and the Texas GEAR UP SG retrospective cohorts (15%) had significantly more students achieve at or above Level II at the final standard than the Texas GEAR UP primary cohort (7%).[35]

Figure 2.4. Percentage of Students Achieving Level II at the Final Standard on Grade 8 STAAR Mathematics by Texas GEAR UP Primary Cohort, Retrospective Cohort, and Comparison Schools Cohort



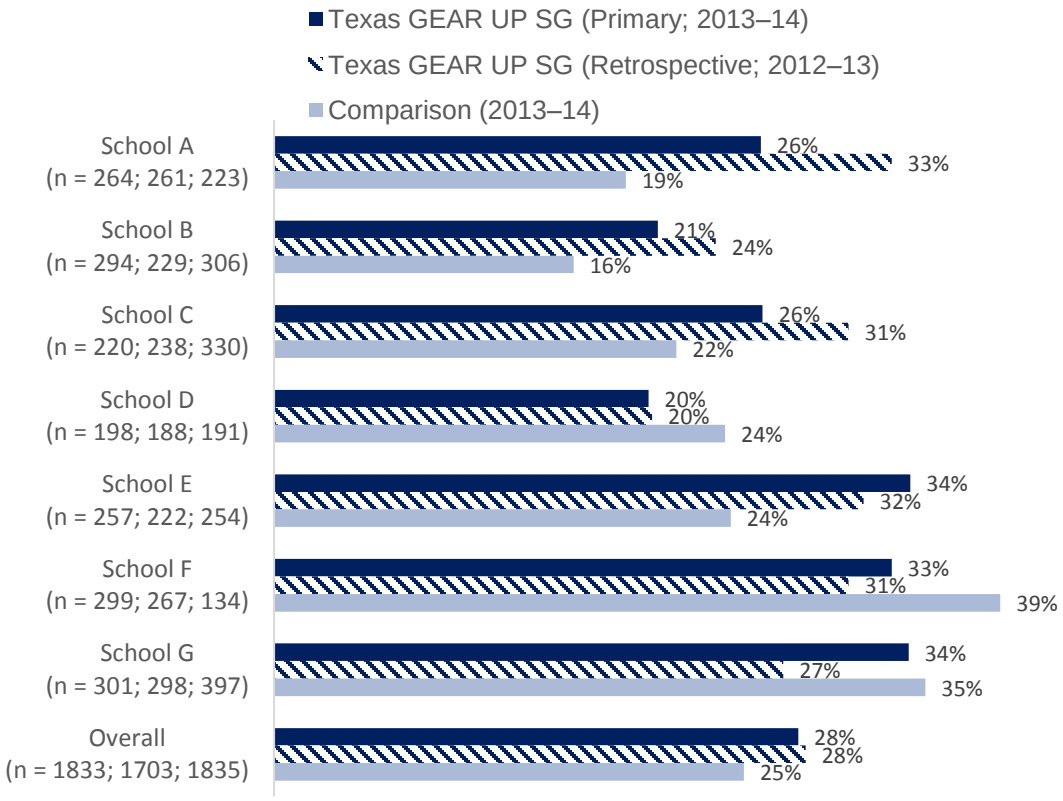
Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014. Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR) data, 2013, 2014.
Notes. The cut score for STAAR Grade 8 Mathematics at or above Level II final standard was 1700.

[33] Some students who took Algebra I EOC also took Grade 8 STAAR Mathematics; our analyses in this report are limited to students who did not also take STAAR Algebra I EOC.
[34] $\chi^2(1)=23.0$, $p < .001$; $\chi^2(1)=16.1$, $p < .001$
[35] $\chi^2(1)=25.2$ $p < .001$; $\chi^2(1)=34.3$, $p < .001$

STAAR READING

For Grade 8 STAAR Reading, the Texas GEAR UP SG primary cohort did not differ significantly from either the comparison schools or the retrospective cohorts in meeting the Level II Phase-in 1 standard (69%, 68% and 71%, respectively; see Table C.9 for counts and scale scores at each achievement level by school, and Table C.10 for percentages by school, Appendix C).[36] Figure 2.5 provides an overview of achievement at or above Level II at the final standard on the Grade 8 STAAR Reading assessment by cohort. Both the Texas GEAR UP SG primary cohort (28%) and retrospective cohort (28%) had significantly higher percentages of students achieving at this level than the comparison schools (25%) cohort. There were no differences in achieving at or above the Level II final standard between the primary and retrospective cohorts.[37]

Figure 2.5. Percentage of Students Achieving Level II at the Final Standard on Grade 8 STAAR Reading by Texas GEAR UP Primary Cohort, Retrospective Cohort, and Comparison Schools Cohort



Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014. Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR) data, 2013, 2014.
Notes. The cut score for STAAR Grade 8 Reading at or above Level II final standard was 1700.

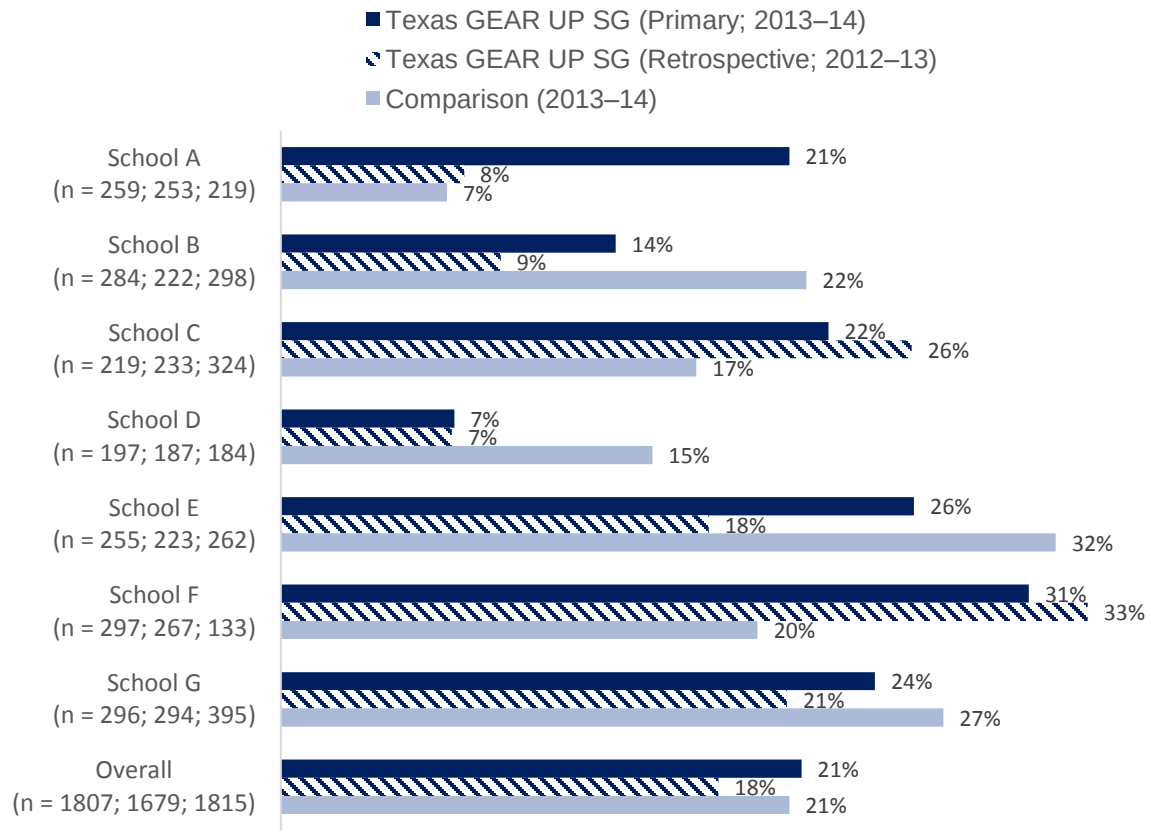
STAAR SCIENCE

For the Grade 8 STAAR Science assessment, there was a significantly higher percentage of students in the Texas GEAR UP SG retrospective cohort compared to the Texas GEAR UP SG

[36] $\chi^2(1)=0.4$, nonsignificant; $\chi^2(1)=0.3$, nonsignificant
[37] $\chi^2(1)=4.7$, $p<.05$, $\chi^2(1)=0.1$, nonsignificant

primary cohort and to the comparison schools cohort that scored at or above the Level II Phase-in 1 standard (59%, 52%, and 53% respectively; see Table C.11 for counts and scale scores at each achievement level by school, and Table C.12 for percentages by school, Appendix C).There were no significant differences in achievement between the primary cohort and the comparison schools cohort.[38] In contrast, a significantly higher proportion of students in the Texas GEAR UP SG primary cohort and the comparison schools cohort (21% for each) achieved at or above Level II at the final standard on STAAR Science compared to the retrospective cohort (18%; see Figure 2.6; Table C.12, Appendix C).[39]

Figure 2.6. Percentage of Students Achieving Level II at the Final Standard on Grade 8 STAAR Science by Texas GEAR UP Primary Cohort, Retrospective Cohort, and Comparison Schools Cohort



Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014. Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR) data, 2013, 2014.
Notes. The cut score for STAAR Grade 8 Science at or above Level II final standard was 4000.

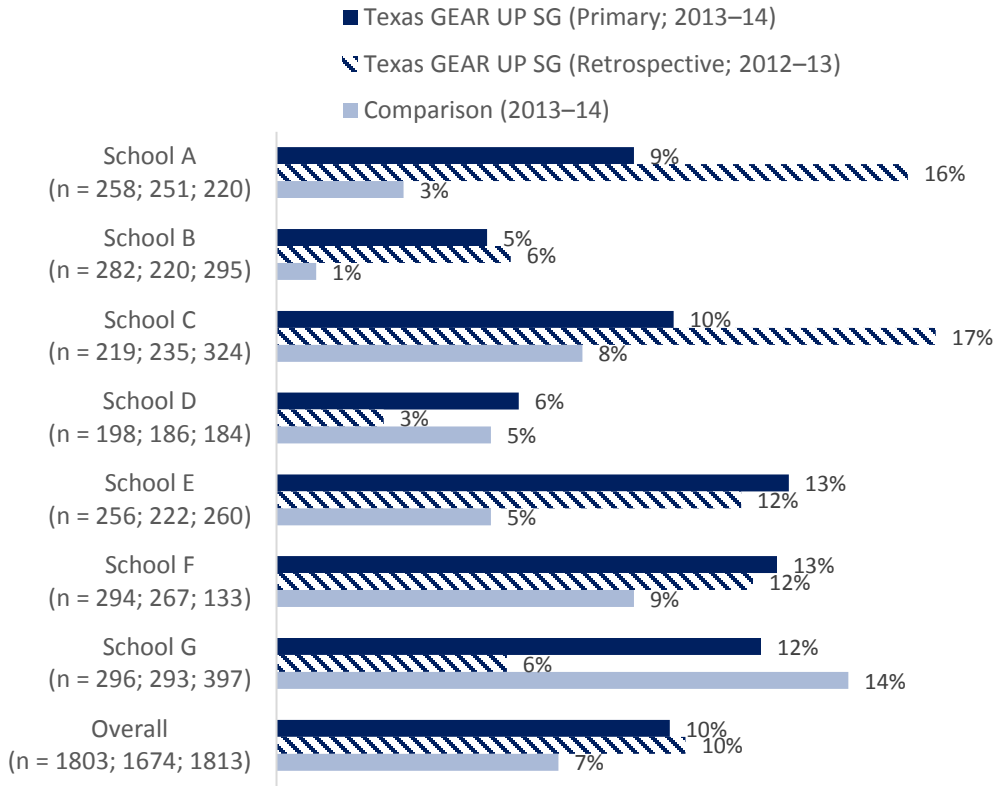
STAAR Social Studies

Tables C.13 and C.14 (Appendix C) provide an overview of student performance on Grade 8 STAAR Social Studies. Students in the Texas GEAR UP SG primary cohort (39%) were significantly more likely than those in the comparison schools (33%) to achieve at or above Level II Phase-In 1 standard. Students in the Texas GEAR UP SG retrospective cohort had

[38] $\chi^2(1)=7.9$, $p < .01$ and $\chi^2(1)=8.2$, $p < .01$; $\chi^2(1)=.001$, nonsignificant
[39] $\chi^2(1)=8.62$, $p < .01$ and $\chi^2(1)=6.7$, $p < .01$; $\chi^2(1)=.13$, nonsignificant

even better performance than the primary cohort, with 44% achieving the Level II Phase-In 1 standard.[40] The Texas GEAR UP SG primary (10%) and retrospective (10%) cohorts were significantly more likely than the comparison schools cohort (7%) to achieve at or above the Level II final standard (see Figure 2.7 and Table C.14, Appendix C), but did not differ from each other.[41]

Figure 2.7. Percentage of Students Achieving Level II at the Final Standard on Grade 8 STAAR Social Studies by Texas GEAR UP Primary Cohort, Retrospective Cohort, and Comparison Schools Cohort



Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014. Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR) data, 2013, 2014.
Notes. The cut score for STAAR Grade 8 Social Studies at or above Level II final standard was 4000.

2.4.4 Differences by Student Characteristics

The next question we examined was, "Do outcomes differ by student characteristic variables (e.g., gender, race/ethnicity, economically disadvantaged status, ELL status) within each key comparison group?" In this section, descriptive outcomes for the Texas GEAR UP SG primary cohort, Texas GEAR UP SG retrospective cohort, and comparison schools cohort by student characteristics are presented. Although detailed results from statistical tests are not presented, all differences described were significant at the $p<.05$ level.

ALGEBRA I COMPLETION

Grade 8 Algebra I completion was identical for female and male students in the Texas GEAR UP SG primary cohort (see Table 2.1 for means). On the other hand, within both the

[40] $\chi^2(1)=13.8$, $p < .001$; $\chi^2(1)=5.5$, $p < .05$
[41] $\chi^2(1)=9.4$ and $\chi^2(1)=10.0$, p's $< .01$; $\chi^2(1)=.02$, nonsignificant

comparison schools and the Texas GEAR UP SG retrospective cohort, female students were significantly more likely than male students (15 vs 12% and 19 vs 15%, respectively) to complete Algebra I. Additionally, in the Texas GEAR UP SG primary cohort and comparison schools cohort (but not in the retrospective cohort), White students were significantly more likely to complete Algebra I than students of other races/ethnicities.[42] Algebra I completion also differed significantly by economically disadvantaged status and ELL status for all three cohorts (see Table 2.1). Students who were identified as economically disadvantaged and ELL were much less likely to have completed Algebra I than their counterparts. For example, in the primary cohort, 32% of students who were not ELL completed Algebra I, compared to only 15% of ELL students – more than twice as many.

Table 2.1. Grade 8 Algebra I Completion by Student Characteristic for Texas GEAR UP SG Primary Cohort, Comparison Schools Cohort, and Retrospective Cohort

Student Characteristic	Texas GEAR UP SG Primary Cohort (2013–14)		Comparison Schools Cohort (2013–14)		Texas GEAR UP SG Retrospective Cohort (2012–13)	
	n	% Algebra I Completers	n	% Algebra I Completers	n	% Algebra I Completers
Gender						
Female	935	29.6%	1029	15.2%	909	19.1%
Male	1024	29.7%	991	11.7%	942	14.9%
Race/Ethnicity						
African American	289	22.8%	449	12.7%	273	17.6%
Hispanic	1545	29.7%	1425	13.1%	1445	16.5%
White	97	45.4%	116	19.8%	107	15.0%
Economically Disadvantaged Status						
Not Economically Disadvantaged	213	46.0%	241	23.7%	139	27.3%
Economically Disadvantaged	1746	27.7%	1779	12.1%	1712	16.1%
English Language Learner (ELL) Status						
Non-ELL	1719	31.8%	1754	15.0%	1606	18.1%
ELL	240	14.6%	266	3.4%	245	9.4%
Overall	**1959**	**29.7%**	**2020**	**13.5%**	**1851**	**17.0%**

Sources. Texas Education Agency, Texas GEAR UP SG GEAR UP Integrated Data Entry System (GUIDES) data Through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2013 and 2014.
Notes. Students who took Algebra I but did not receive credit are included in non-completers. There were a small number of students of other ethnicities in the sample – 28 in the primary cohort, 30 in the comparison schools cohort and 26 in the retrospective cohort. Due to their relatively small number, they were excluded from Race/Ethnicity analyses.

STAAR Algebra I End-of-Course

Table 2.2 provides an overview of STAAR Algebra I EOC performance at each achievement level by student characteristics for the Texas GEAR UP SG primary cohort, the Texas GEAR UP SG retrospective cohort, and the comparison schools cohort.

Level II Phase-in 1. Overall, more than 90% of students achieved at or above the Level II Phase-in 1 standard on STAAR Algebra I EOC. However, students identified as ELL were significantly less likely to achieve the Level II Phase-in 1 standard than students not identified as ELL in the primary and retrospective cohorts. For example, in the primary cohort, 93% of students who were not identified as ELL met the standard, compared to only 78% of students identified as ELL.

[42] Because only a few students identified as "Other", and because this group included students who were of many different racial and ethnic backgrounds, data from this group were not analyzed statistically.

Level II Final. In the Texas GEAR UP SG primary cohort, male students were significantly more likely than female students to reach the Level II final standard on STAAR Algebra I EOC. In the primary and retrospective cohorts, White students were significantly more likely than their counterparts to achieve at this level. For example, in the retrospective cohort, 80% of White students achieved Level II at the final standard, compared to only 40% of African American students and 48% of Hispanic students. Additionally, students who classified as economically disadvantaged were significantly less likely to meet the standard in the primary and retrospective cohorts. For example, in the primary cohort, 56% of students who were not economically disadvantaged reached the Level II final standard, compared to only 38% of their peers. Finally, within the Texas GEAR UP SG primary and retrospective cohorts, a significantly lower percentage of students identified as ELL reached the Level II final standard. For example, in the primary cohort, only 19% of students identified as ELL reached the standard, compared to 42% of non-identified students. There was not a significant difference for ELL status within the comparison schools cohort, but this was likely due to the very low numbers of students identified as ELL at these schools who took the Algebra I EOC (only 10).

Table 2.2. STAAR Algebra I End-of-Course Achievement Level in Grade 8 by Student Characteristic for Texas GEAR UP SG Primary Cohort, Comparison Schools Cohort, and Retrospective Cohort

Student Characteristic	Texas GEAR UP SG Primary Cohort (2013–14)			Comparison Schools Cohort (2013–14)			Texas GEAR UP SG Retrospective Cohort (2012–13)		
	n	% Level II Phase-in 1 and Above	% Level II Final and Above	n	% Level II Phase-in 1 and Above	% Level II Final and Above	n	% Level II Phase-in 1 and Above	% Level II Final and Above
Gender									
Female	291	92.4%	36.4%	156	96.8%	51.3%	175	97.1%	48.0%
Male	322	91.3%	44.7%	116	95.7%	57.8%	156	95.5%	46.8%
Race/Ethnicity									
African American	66	89.4%	34.8%	55	94.5%	61.8%	50	92.0%	40.0%
Hispanic	491	91.6%	39.3%	187	96.3%	52.9%	254	96.9%	47.6%
White	44	100.0%	63.6%	24	100.0%	41.7%	15	100.0%	80.0%
Economically Disadvantaged Status									
Not Economically Disadvantaged	100	95.0%	56.0%	57	96.5%	61.4%	36	100.0%	63.9%
Economically Disadvantaged	513	91.2%	37.8%	215	96.3%	52.1%	295	95.9%	45.4%
English Language Learner (ELL) Status									
Non-ELL	577	92.7%	42.1%	262	96.9%	55.0%	307	96.1%	47.6%
ELL	36	77.8%	19.4%	10	80.0%	30.0%	24	100.0%	45.8%
Overall	**613**	**91.8%**	**40.8%**	**272**	**96.3%**	**54.0%**	**331**	**96.4%**	**47.4%**

Sources. Texas Education Agency, Texas GEAR UP SG GEAR UP Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2013 and 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness end-of-course (STAAR EOC), 2013 and 2014. There were a small number of students of other ethnicities who took the Algebra I EOC. Due to their relatively small number, they were excluded from Race/Ethnicity analyses.

GRADE 8 STAAR MATHEMATICS

Table 2.3 provides an overview of Grade 8 STAAR Mathematics at each achievement level by student characteristics for the Texas GEAR UP SG primary cohort, Texas GEAR UP SG retrospective cohort, and comparison schools cohort.

Level II Phase-in 1. A significantly larger percentage of White students and a smaller percentage of African American students met the Level II Phase-in 1 standard for STAAR 8 Mathematics in the primary and retrospective cohorts. For example, in the primary cohort, 68%

of White students met the standard, compared to only 39% of African American students. Additionally, students who were classified as economically disadvantaged (58%) were less likely to reach the standard in the Texas GEAR UP SG retrospective cohort than their non-economically disadvantaged peers (73%). In the comparison schools cohort, there were two significant differences. First, female students (63%) were more likely than male students (57%) to reach the Level II Phase-in 1 standard. Second, students identified as ELL within the comparison schools cohort (46%) were less likely than students who were not identified as ELL (62%) to meet the Level II Phase-in 1 standard.

***Level II Final*.** As above, a significantly larger percentage of White students and a smaller percentage of African American students met Level II at the final standard within the primary and retrospective cohorts. For example, in the retrospective cohort, 25% of White students and only 8% of African American students met the standard. In the comparison schools cohort, there were no significant race/ethnicity differences, but students attending comparison schools who were identified as ELL (6%) were less likely than non-identified students (15%) to reach the standard.

Table 2.3. Grade 8 STAAR Mathematics Achievement Level by Student Characteristic for Texas GEAR UP SG Primary Cohort, Comparison Schools Cohort, and Retrospective Cohort

Student Characteristic	Texas GEAR UP SG Primary Cohort (2013–14)			Comparison Schools Cohort (2013–14)			Texas GEAR UP SG Retrospective Cohort (2012–13)		
	n	% Level II Phase-in 1 and Above	% Level II Final and Above	n	% Level II Phase-in 1 and Above	% Level II Final and Above	n	% Level II Phase-in 1 and Above	% Level II Final and Above
Gender									
Female	580	51.0%	6.2%	779	63.2%	14.6%	669	57.7%	14.6%
Male	623	50.4%	8.5%	768	56.5%	12.1%	703	59.5%	14.8%
Race/Ethnicity									
African American	202	38.6%	5.0%	352	57.1%	11.6%	199	48.2%	7.5%
Hispanic	943	52.3%	7.5%	1097	60.6%	13.8%	1075	60.0%	15.3%
White	44	68.2%	13.6%	79	65.8%	17.7%	85	67.1%	24.7%
Economically Disadvantaged Status									
Not Economically Disadvantaged	95	51.6%	10.8%	157	66.2%	15.3%	93	74.2%	20.4%
Economically Disadvantaged	1110	50.6%	7.1%	1390	59.1%	13.2%	1279	57.5%	14.3%
English Language Learner (ELL) Status									
Non-ELL	1033	50.1%	7.4%	1339	62.1%	14.5%	1181	59.0%	15.2%
ELL	170	54.1%	7.6%	208	45.7%	6.2%	191	56.0%	12.0%
Overall	**1203**	**50.7%**	**7.4%**	**1547**	**59.9%**	**13.4%**	**1372**	**58.6%**	**14.7%**

Sources. Texas Education Agency, Texas GEAR UP SG GEAR UP Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2013 and 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Note. Students taking STAAR Algebra I end-of-course were excluded. There were a small number of students of other ethnicities who took Grade 8 STAAR Mathematics. Due to their relatively small number, they were excluded from Race/Ethnicity analyses.

GRADE 8 STAAR READING

Table 2.4 provides an overview of Grade 8 STAAR Reading at each achievement level by student characteristics for the Texas GEAR UP SG primary cohort, the Texas GEAR UP SG retrospective cohort, and the comparison schools cohort.

Level II Phase-in 1. Across all three cohorts, students who were identified as ELL and classified as economically disadvantaged were significantly less likely than their counterparts to achieve at or above the Level II Phase-in 1 standard. For example, only 55% of students in the

retrospective cohort who were identified as ELL reached the Level II Phase-in 1 standard, but 73% of students who were not ELL reached the standard. Male students were significantly less likely than female students to reach the Level II Phase-in 1 standard in the Texas GEAR UP SG primary cohort and the comparison schools cohort. For example, 66% of males in the primary cohort met the Level II Phase-in 1 standard, and 72% of female students met the standard. African American students were significantly less likely than students of other races to meet the Level II Phase-in 1 standard in the GEAR UP primary cohort, and White students were more likely to meet the Level II Phase-in 1 standard in the GEAR UP primary cohort and in the comparison schools cohort. For example, in the primary cohort, 82% of White students met the standard, compared to only 60% of African American students.

Level II Final. Similar to the above, across all three cohorts, students who were identified as ELL and classified as economically disadvantaged were significantly less likely than their counterparts to achieve at or above Level II at the final standard. Students identified as ELL, in particular, struggled with the STAAR Reading assessment. For example, although 32% of students in the Texas GEAR UP SG primary cohort who were not identified as ELL reached Level II at the final standard, only 2% of students identified as ELL did so. Male students were significantly less likely than female students to reach Level II at the final standard in the Texas GEAR UP SG retrospective cohort and within the comparison schools cohort. For example, only 25% of male students in the retrospective cohort met the Level II final standard, compared to 32%. Finally, White students were more likely to meet the Level II final standard in the GEAR UP primary and comparison schools cohorts than students of other races. For example, in the primary cohort, 42% of White students met the standard, compared to only 23% of African American and 28% of Hispanic students.

Table 2.4. Grade 8 STAAR Reading Level by Student Characteristic for Texas GEAR UP SG Primary Cohort, Comparison Schools Cohort, and Retrospective Cohort

Student Characteristic	Texas GEAR UP SG Primary Cohort (2013–14)			Comparison Schools Cohort (2013–14)			Texas GEAR UP SG Retrospective Cohort (2012–13)		
	n	% Level II Phase-in 1 and Above	% Level II Final and Above	n	% Level II Phase-in 1 and Above	% Level II Final and Above	n	% Level II Phase-in 1 and Above	% Level II Final and Above
Gender									
Female	885	71.9%	29.6%	945	72.2%	27.6%	849	72.1%	32.0%
Male	948	66.4%	27.0%	890	63.7%	22.4%	854	69.2%	24.8%
Race/Ethnicity									
African American	269	60.2%	23.4%	409	67.7%	21.3%	247	65.6%	26.3%
Hispanic	1450	69.7%	27.9%	1295	67.3%	24.7%	1330	71.2%	28.2%
White	89	82.0%	41.6%	105	79.0%	41.9%	100	75.0%	33.0%
Economically Disadvantaged Status									
Not Economically Disadvantaged	195	79.0%	44.6%	215	76.3%	41.9%	133	81.2%	37.6%
Economically Disadvantaged	1638	67.8%	26.3%	1620	67.0%	22.8%	1570	69.7%	27.6%
English Language Learner (ELL) Status									
Non-ELL	1615	72.8%	31.8%	1604	72.7%	28.4%	1475	73.0%	31.0%
ELL	218	40.8%	2.3%	231	35.9%	1.7%	228	55.3%	11.8%
Overall	**1833**	**69.0%**	**28.3%**	**1835**	**68.1%**	**25.1%**	**1703**	**70.6%**	**28.4%**

Sources. Texas Education Agency, Texas GEAR UP SG GEAR UP Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2013 and 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014. There were a small number of students of other ethnicities who took Grade 8 STAAR Reading. Due to their relatively small number, they were excluded from Race/Ethnicity analyses.

GRADE 8 STAAR SCIENCE

Table 2.5 provides an overview of Grade 8 STAAR Science at each achievement level by student characteristics for the Texas GEAR UP SG primary cohort, the Texas GEAR UP SG retrospective cohort, and the comparison schools cohort.

Level II Phase-in 1. As was the case for achievement on Grade 8 STAAR Reading, students who were non-White, identified as ELL, and classified as economically disadvantaged were less likely than their respective counterparts to have met the Level II Phase-in 1 standard for all cohort groups (i.e., Texas GEAR UP SG primary cohort, comparison schools cohort, and Texas GEAR UP SG retrospective cohort) at both performance levels. For example, only 51% of students classified as economically disadvantaged in the comparison schools cohort met the standard, compared to 68% of their non-economically disadvantaged peers. Additionally, female students were less likely than males to meet the Level II Phase-in 1 standard in the Texas GEAR UP SG primary and retrospective cohorts. In the retrospective cohort, for example, 55% of females and 63% of males met the standard.

Level II Final. Students who were female, non-White, identified as ELL, and classified as economically disadvantaged were less likely than their respective counterparts to have met Level II at the final standard for all cohort groups. For example, in the primary cohort, 31% of students identified as ELL reached the standard compared to 56% of students not identified as ELL.

Table 2.5. Grade 8 STAAR Science Achievement Level by Student Characteristic for Texas GEAR UP SG Primary Cohort, Comparison Schools Cohort, and Retrospective Cohort

Student Characteristic	Texas GEAR UP SG Primary Cohort (2013–14)			Comparison Schools Cohort (2013–14)			Texas GEAR UP SG Retrospective Cohort (2012–13)		
	n	% Level II Phase-in 1 and Above	% Level II Final and Above	n	% Level II Phase-in 1 and Above	% Level II Final and Above	n	% Level II Phase-in 1 and Above	% Level II Final and Above
Gender									
Female	864	49.2%	17.8%	939	51.4%	18.6%	840	55.4%	14.6%
Male	943	56.2%	24.5%	876	54.3%	23.2%	839	62.7%	21.1%
Race/Ethnicity									
African American	271	42.1%	15.9%	410	51.2%	18.0%	248	54.8%	16.1%
Hispanic	1424	53.7%	21.1%	1279	51.8%	19.7%	1306	58.7%	17.2%
White	87	70.1%	35.6%	103	70.9%	43.7%	100	72.0%	25.0%
Economically Disadvantaged Status									
Not Economically Disadvantaged	192	66.7%	35.4%	214	67.8%	35.0%	129	79.8%	31.0%
Economically Disadvantaged	1615	51.2%	19.6%	1601	50.8%	18.9%	1550	57.3%	16.8%
English Language Learner (ELL) Status									
Non-ELL	1610	55.5%	23.5%	1595	56.0%	22.9%	1464	60.9%	19.0%
ELL	197	31.0%	3.6%	220	30.0%	5.9%	215	46.5%	10.2%
Overall	**1807**	**52.9%**	**21.3%**	**1815**	**52.8%**	**20.8%**	**1679**	**59.0%**	**17.9%**

Sources. Texas Education Agency, Texas GEAR UP SG GEAR UP Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2013 and 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014. There were a small number of students of other ethnicities who took Grade 8 STAAR Science. Due to their relatively small number, they were excluded from Race/Ethnicity analyses.

GRADE 8 STAAR SOCIAL STUDIES

Table 2.6 provides an overview of Grade 8 STAAR Social Studies at each achievement level by student characteristics for the Texas GEAR UP SG primary cohort, the Texas GEAR UP SG retrospective cohort, and the comparison schools cohort.

Level II Phase-in 1. Students who were non-White, identified as ELL, and classified as economically disadvantaged were less likely than their respective counterparts to have met the Level II Phase-in 1 standard for all cohort groups (i.e., Texas GEAR UP SG primary cohort, comparison schools cohort, and Texas GEAR UP SG retrospective cohort). For example, in the primary cohort, 53% of White students met the standard, compared to only 23% of African American and 28% of Hispanic students. Additionally, female students were less likely than male students to meet the Level II Phase-in 1 standard in the Texas GEAR UP SG primary cohort and in the comparison schools cohort. For example, in the comparison schools cohort, 35% of males compared to 31% of females met the standard.

Level II Final. Students who were non-White and classified as economically disadvantaged were less likely than their respective counterparts to have met the Level II final standard in the GEAR UP primary cohort and comparison schools cohort. For example, 8% of students classified as economically disadvantaged but 23% of non-classified students met the Level II final standard in the primary cohort. Females and students identified as ELL were less likely to meet the Level II final standard across all three cohorts. For example, 11% of students not identified as ELL met the Level II final standard in the retrospective cohort, compared to 5% of students who were identified as ELL.

Table 2.6. Grade 8 STAAR Social Studies Level by Student Characteristic for Texas GEAR UP SG Primary Cohort, Comparison Schools Cohort, and Retrospective Cohort

Student Characteristic	Texas GEAR UP SG Primary Cohort (2013–14)			Comparison Schools Cohort (2013–14)			Texas GEAR UP SG Retrospective Cohort (2012–13)		
	n	% Level II Phase-in 1 and Above	% Level II Final and Above	n	% Level II Phase-in 1 and Above	% Level II Final and Above	n	% Level II Phase-in 1 and Above	% Level II Final and Above
Gender									
Female	864	33.7%	6.7%	939	30.7%	5.8%	833	42.3%	8.6%
Male	939	43.7%	12.9%	874	35.1%	8.5%	841	45.4%	11.9%
Race/Ethnicity									
African American	270	34.4%	5.2%	411	32.6%	5.1%	246	35.0%	7.7%
Hispanic	1420	38.5%	9.6%	1277	31.1%	6.8%	1305	44.9%	10.1%
White	88	53.4%	23.9%	103	52.4%	16.5%	98	51.0%	16.3%
Economically Disadvantaged Status									
Not Economically Disadvantaged	190	54.7%	22.6%	215	48.4%	16.3%	127	62.2%	14.2%
Economically Disadvantaged	1613	37.0%	8.4%	1598	30.7%	5.8%	1547	42.3%	10.0%
English Language Learner (ELL) Status									
Non-ELL	1605	41.4%	10.8%	1594	35.8%	8.0%	1460	46.1%	11.1%
ELL	198	18.2%	2.5%	219	11.4%	0.0%	214	28.5%	4.7%
Overall	**1803**	**38.9%**	**9.9%**	**1813**	**32.8%**	**7.1%**	**1674**	**43.8%**	**10.3%**

Sources. Texas Education Agency, Texas GEAR UP SG GEAR UP Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2013 and 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014. There were a small number of students of other ethnicities who took Grade 8 STAAR Social Studies. Due to their relatively small number, they were excluded from Race/Ethnicity analyses.

2.5 Student Outcomes in Comparison

This section addresses the following questions using advanced statistical techniques (see Appendix B) where appropriate:

- What is the relationship between participation in the Texas GEAR UP SG primary cohort on student outcomes compared to the state average?

- What is the relationship between participation in the Texas GEAR UP SG primary cohort on each student outcome compared to the comparison schools cohort?
- What is the relationship between participation in the Texas GEAR UP SG primary cohort on each student outcome compared to the retrospective cohort?
- What is the relationship between student characteristics, participation in Texas GEAR UP SG primary cohort, and student outcomes? Were any achievement gaps based on student characteristics reduced or increased by participation in Texas GEAR UP SG?

2.5.1 Comparison to State Average

Project Objective 4.3 states that by the end of the project's third year (Grade 9), the on-time promotion rate of the Texas GEAR UP SG primary cohort students will meet or exceed the state average. Project Goal 5 has several objectives that also make reference to comparisons to state averages (see Table A.2, Appendix A). In this section, any outcome that has an available state average to compare to is included in order to make a descriptive comparison.[43, 44] It is important to note that these comparisons were made to the entire population of students statewide, whose student characteristics differ from the sample studied in this report. For example, the percentage of students classified as economically disadvantaged in our sample was 89%, compared to the state average in 2014–15 of 59%.[45]

ON TIME PROMOTION

In both the 2012–13 and 2013–14 school years, the statewide Grade 7 promotion rate was 99% (only 1% were retained in grade statewide).[46] At 98.1%, the Texas GEAR UP SG primary cohort promoted slightly fewer Grade 7 students into Grade 8, while at 99% the comparison schools and retrospective cohorts matched the state average. Four of the seven Texas GEAR UP Schools (Schools C, D, E, and F) met or exceeded the state average. While the overall Grade 7 to Grade 8 promotion rate at the Texas GEAR UP SG schools was slightly lower than the state average, no additional analyses were run on promotion given the lack of variability across schools (see Tables C.1 and C.2, Appendix C).

STAAR ALGEBRA I EOC

The 2013–14 state average scale score on STAAR Algebra I EOC was 3966 (see Table C.15, Appendix C).[47] The overall average scale score for the Texas GEAR UP SG schools on STAAR Algebra I EOC was 3941, slightly lower than the state average. However, a larger percentage of students met the Level II Phase-in 1 standard in the primary cohort as compared to the state average (92% vs 86%). In fact, every school but School A outperformed the state average (see Table C.6, Appendix C).[48]

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[43] Statewide averages for Algebra I completion are not available. Statewide averages on STAAR end-of-course exams by grade are not available. These comparisons are not statistical. Rather, the sample is described as either being similar to the population (if not identical) or dissimilar to the population.
[44] State averages on STAAR can be found in the STAAR Statewide Summary Reports, 2013–14 at https://tea.texas.gov/staar/rpt/sum/
[45] Status reports for students identified as economically disadvantaged by year may be found here: https://rptsvr1.tea.texas.gov/adhocrpt/adstc.html
[46] https://tea.texas.gov/acctres/retention/years.html. Note that Texas reports on grade level retention, while Project Objective 4.3 focuses on promotion, which is calculated: promotion rate = 1 – retention rate
[47] As noted in the introduction, some students take STAAR exams more than once. For the purposes of this report, only first-time-tested students are included.
[48] Statewide Level II final standard averages were not available for Algebra I EOC.

Although this finding is encouraging, it is important to remember that the state average includes students who took STAAR Algebra I EOC at all grade levels, and our sample includes only students who took Algebra I in Grade 8 (and who perform better, on average, than their 9th grade peers). Therefore, comparisons to Grade 8 Texas GEAR UP SG primary cohort students should be interpreted with caution.

STAAR MATHEMATICS

Although performance by the Texas GEAR UP SG primary cohort exceeded the state average on STAAR Algebra I EOC, the Texas GEAR UP SG primary cohort scored far below the state average on Grade 8 STAAR Mathematics (1597 compared to 1676; see Table C.15). Additionally, only 57% of students in the GEAR UP primary cohort met the Level II Phase-in 1 standard as compared to 83% of students in the state. Finally, a far smaller percentage of students achieved at or above Level II at the final standard on Grade 8 STAAR Mathematics in the state of Texas as compared to the GEAR UP primary cohort (38% state average; 11% Texas GEAR UP SG primary cohort; see Table 2.3).[49]

STAAR READING

Students in the Texas GEAR UP SG primary cohort also achieved at lower levels on Grade 8 STAAR Reading than the state (see Table C.15, Appendix C). Their average scale score was 1628 as compared to the state average of 1684, with no school achieving at or above the state average. Similarly, 69% of students in the GEAR UP primary cohort met the Level II Phase-in 1 standard, compared to 83% statewide. The difference was even larger when examining data on the final standard: statewide, 47% of students achieved at or above Level II at the final standard on Grade 8 STAAR Reading while only 28% of the Texas GEAR UP SG primary cohort students achieved at this level.

STAAR SCIENCE AND STAAR SOCIAL STUDIES

Students in the Texas GEAR UP SG primary cohort also achieved at lower levels than state averages on both Grade 8 STAAR Science and Grade 8 STAAR Social Studies (see Table C.15, Appendix C). For Grade 8 STAAR Science, the statewide average was 3861 while the Texas GEAR UP SG primary cohort average was 3562. For Grade 8 STAAR Social Studies, the statewide average was 3679 and the Texas GEAR UP SG primary cohort average was 3417. Similarly, the percentage of students achieving at or above Level II final standard was much lower for the Texas GEAR UP SG primary cohort (as compared to the statewide average) for both Grade 8 STAAR Science (21% and 40%, respectively) and for Grade 8 STAAR Social Studies (10% and 27%, respectively).

2.5.2 Matched Schools Comparison

The next step in the evaluation was to compare Grade 8 outcomes in the Texas GEAR UP SG primary cohort to outcomes in a group of matched comparison schools not participating in GEAR UP. As described in Appendix B.2.1, each Texas GEAR UP SG school was matched to another school that had similar student characteristics using Propensity Score Matching (PSM). One limitation of PSM is that matching is limited to data that are available for the match, including demographics and state assessment scores. Intangibles such as student motivation or school leadership that may also contribute to differences are not available to include in the matching. However, given that the two school groups appeared to be very similar in Grade 7

[49] State averages on STAAR can be found in the STAAR Statewide Summary Reports, https://tea.texas.gov/staar/rpt/sum/.

(2012–13, the year prior to the Texas GEAR UP program), it is likely that differences in Grade 8 (2013–14) are associated with participation in the Texas GEAR UP SG program.

For each outcome variable, three separate multilevel models (MLM) were created (see also Section 2.3 and Appendix B). Students attending the same school share important characteristics – for example, they have the same principal, share many of the same teachers, and experience a similar school culture. Therefore, two students who attend the same school may have more similar outcomes to one another than two students who attend two different schools. MLMs cluster students within schools, and thus help account for some of this within-group similarity.

For each outcome variable, a main effects MLM was first created to see if there was an overall significant difference on the outcome between the Texas GEAR UP SG primary cohort and the matched comparison schools cohort. In other words, this main effects model examines the relationship between the outcome and Texas GEAR UP SG participation without any other information (variables) in the model.

Next, a covariate MLM including data on student demographics (e.g., gender, race/ethnicity) and prior performance on STAAR was created. Adding these other variables to the model helped to determine if other factors explained any differences in the outcome variable, and whether GEAR UP SG participation remained a significant predictor of the outcomes after accounting for these other factors.

Finally, separate interaction models were run one at a time to examine any potential interaction effects between Texas GEAR UP SG participation (primary cohort versus comparison schools cohort) and student characteristics, specifically looking to see if achievement gaps (e.g., between students identified as ELL and non-identified students) differed by cohort. The six separate interaction models examined the relationship between school group (Texas GEAR UP SG versus matched comparison schools) and each of the following:

- Gender (females versus males)
- Race/ethnicity (White versus all other races)
- Race/ethnicity (African American versus all other races)
- Race/ethnicity (Hispanic versus all other races)
- Economically disadvantaged status (yes/no economically disadvantaged as determined by participation in Free and Reduced Lunch program)
- ELL status (yes/no currently identified as ELL)

COURSE COMPLETION

Grade 8 Algebra I Completion

Based on the main effects model for Grade 8 Algebra I completion, the difference in Algebra I completion rates between the Texas GEAR UP SG primary cohort and the comparison schools cohort was significant (see Table 2.7).

Table 2.7. Grade 8 Algebra I Completion: Texas GEAR UP Primary Cohort versus Matched Comparison Schools Cohort; MLM Main Model 2013–14 (Grade 8)

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio
Intercept	-1.96	0.19	***	NA
Texas GEAR UP Primary Cohort (versus Matched Comparison Schools)	1.04	0.26	***	2.82
Number of students/schools	3,979/14			
School level variance	0.21			

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014.
Notes. The reference categories in the model included comparison school and Algebra I completion. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .48. "NA" indicates "not applicable."

Overall, significantly more students in the Texas GEAR UP SG primary cohort than those in the matched comparison schools cohort successfully completed Algebra I in Grade 8. Each Texas GEAR UP SG school had higher percentages of students complete Algebra I than its matched comparison counterpart.

In the covariate model (see Table 2.8), performance on STAAR Grade 7 Mathematics was a very strong predictor of Algebra I completion; as student scores on STAAR Mathematics in the previous year increased, so did the likelihood of successfully completing Algebra I in Grade 8. The multilevel model showed that even when controlling for previous STAAR Mathematics performance, Texas GEAR UP SG primary cohort students continued to have a higher completion rate than those in the comparison schools cohort. Additionally, students identified as economically disadvantaged were less likely than their counterparts to have completed Algebra I in Grade 8. There were no significant interactions between Texas GEAR UP SG participation and student characteristics.

Table 2.8. Grade 8 Algebra I Completion: Texas GEAR UP SG Primary Cohort versus Matched Comparison Schools Cohort; MLM Covariate Model 2013–14 (Grade 8)

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	-2.60	0.30	***	NA
Texas GEAR UP Primary Cohort (versus Matched Comparison Schools)	1.96	0.31	***	7.11
Grade 7 STAAR Mathematics Scale Score (z-score)	2.00	0.09	***	NA
Female	0.17	0.12	ns	NA
African American (vs. Hispanic)	0.15	0.18	ns	NA
White (vs. Hispanic)	-0.16	0.27	ns	NA
Economically Disadvantaged	-0.66	0.19	***	0.52 (1.94)
ELL	-0.17	0.22	ns	NA
Number of students/schools	3,024/14			
School level variance	0.25			

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model are: comparison, male, Hispanic, not Economically Disadvantaged, non-ELL. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%; ns indicates non-significant finding. The intercept-only model (model without predictors) for this outcome produced school variance of 0.48. "NA" indicates "not applicable" and "ns" indicates "not significant."
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. This reversed odds ratio is presented in parentheses.

ACHIEVEMENT ON STUDENT ASSESSMENTS

STAAR Algebra I End-of-Course

Texas GEAR UP SG students were less likely to meet both of the standards on Algebra 1 End-of-Course (EOC) assessment than students at the comparison schools (see Section 2.4.3). This section examines whether these differences still exist when school- and student-level variables are taken into account.

Level II Phase-in 1 and Above. In the main effects model, students in the Texas GEAR UP SG primary cohort were significantly less likely than students in the comparison schools cohort to reach the Level II Phase-in 1 standard on the STAAR Algebra I EOC assessment (see Table C.16, Appendix C).

However, in the covariate model, the difference between the Texas GEAR UP SG primary cohort and the comparison schools cohort disappeared (see Table C.17, Appendix C). Performance on STAAR 7 Mathematics was a strong predictor of meeting the standard; additionally, students identified as ELL were significantly less likely than students identified as non-ELL to meet the standard. There were no interactions between any of the student characteristic variables and GEAR UP participation.

Level II Final. There was not a significant difference between Texas GEAR UP SG primary cohort and comparison schools cohort students in the main or covariate models for reaching Level II at the final standard on STAAR Algebra I EOC (see Tables C.18 and C.19, Appendix C). This finding indicates that much of the overall difference in reaching the Level II standard can be explained by variation at the school level. Once again, performance on STAAR 7 Mathematics was a strong predictor of meeting the standard. Students who were classified as economically disadvantaged were less likely to reach the standard than non-classified students, even when controlling for prior STAAR score.

However, as shown in Table 2.9, there was one significant interaction between cohort group and gender. Post hoc analyses revealed that when STAAR 7 Mathematics score and other characteristics were taken into account, female students in the comparison schools cohort, but male students in the primary cohort were more likely than their counterparts to reach the Level II final standard.

Table 2.9. Texas GEAR UP SG Primary Cohort versus Matched Comparison Schools Cohort MLM Covariate Interaction Model: STAAR Algebra I EOC Level II Final Achievement, 2013–14 (Grade 8)

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	-3.19	0.57	***	NA
Texas GEAR UP Primary Cohort (versus Matched Comparison Schools)	1.07	0.55	ns	NA
Grade 7 STAAR Mathematics Scale Score (z-score)	2.35	0.18	***	NA
Female	0.95	0.43	*	2.59
African American (vs. Hispanic)	0.49	0.33	ns	NA
White (vs. Hispanic)	-0.03	0.42	ns	NA
Economically Disadvantaged	-0.70	0.30	*	0.50 (2.00)
ELL	0.09	0.46	ns	NA
Interaction: **Gender** x **Cohort**	-1.33	0.49	**	0.26 (3.77)
Number of students/schools	759/14			
School level variance	0.50			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.

Notes. The reference categories in the model are: comparison group, male, Hispanic, not Economically Disadvantaged, non-ELL. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%; ns indicates non-significant finding. NA indicates not applicable. The intercept-only model (model without predictors) for this outcome produced school variance of 0.59.

[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. This reversed odds ratio is presented in parentheses.

STAAR Mathematics

The analyses of Grade 8 STAAR Mathematics include only those students who did not also take STAAR Algebra I EOC. Texas GEAR UP SG students were less likely to meet both of the standards on STAAR 8 Mathematics assessment than students at the comparison schools (see Section 2.4.3). As with Algebra I EOC, the goal of the MLM analyses was to see if these differences persisted when taking school- and student-level characteristics into account.

Level II Phase-in 1. There was not a significant difference in the likelihood of reaching the Level II Phase-in 1 standard between Texas GEAR UP SG primary cohort and students in the comparison schools cohort in the main model (see Table C.20, Appendix C). In the covariate model (Table 2.10), students in the primary cohort were less likely than students in the comparison schools cohort to reach the Level II Phase-in 1 standard, after controlling for STAAR 7 Mathematics performance (a strong predictor of performance). No student demographic characteristics predicted meeting the standard except for GEAR UP participation. There were no significant interactions between participation in GEAR UP and any of the student characteristic variables.

Table 2.10. Grade 8 STAAR Mathematics Level II Phase-in 1 and Above by Texas GEAR UP Primary Cohort versus Matched Comparison Schools: MLM Covariate Model, 2013–14 (Grade 8)

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	1.45	0.24	***	NA
Texas GEAR UP Primary Cohort (versus Matched Comparison Schools)	-0.37	0.18	*	0.69 (1.44)
Grade 7 STAAR Mathematics Scale Score (z-score)	2.25	0.11	***	NA
Female	0.17	0.11	ns	NA
African American (vs. Hispanic)	-0.11	0.15	ns	NA
White (vs. Hispanic)	0.19	0.31	ns	NA
Economically Disadvantaged	-0.27	0.20	ns	NA
ELL	0.06	0.16	ns	NA
Number of students/schools	2,205/14			
School Level Variance	0.07			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: comparison schools, male, Hispanic, not Economically Disadvantaged, non-ELL. ns indicates nonsignificant. NA indicates not applicable. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .17. Only students taking Standard STAAR were included in the model.

Level II Final. The odds of achieving at or above Level II at the final standard on Grade 8 STAAR Mathematics performance was significantly lower for students in the Texas GEAR UP SG primary cohort than for students in the comparison schools cohort in both the main and covariate models (see Tables 2.11 and 2.12). There were no student characteristics that were significant predictors of reaching Level II at the final standard except previous performance on STAAR Mathematics. Finally, there were no significant interactions between GEAR UP participation and student characteristics.

Table 2.11. Grade 8 STAAR Mathematics Level II Final Achievement by Texas GEAR UP Primary Cohort versus Matched Comparison Schools Cohort: Fixed Effects Main Model, 2013–14 (Grade 8)

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	-1.95	0.16	***	NA
Texas GEAR UP Primary Cohort (versus Matched Comparison Schools)	-0.64	0.23	**	0.53 (1.89)
Number of students/schools	2,750/14			
School level variance	0.12			

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model is comparison schools. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. ns indicates nonsignificant. NA indicates not applicable. The intercept-only model (model without predictors) for this outcome produced school variance of .23.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. This reversed odds ratio is presented in parentheses.

Table 2.12. Grade 8 STAAR Mathematics Level II Final Achievement by Texas GEAR UP Primary Cohort versus Matched Comparison Schools Cohort: MLM Covariate Model 2013–14 (Grade 8)

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	-2.30	0.35	***	NA
Texas GEAR UP Primary Cohort (versus Matched Comparison Schools)	-0.60	0.27	*	0.55 (1.83)
Grade 7 STAAR Mathematics Scale Score (z-score)	2.20	0.14	***	NA
Female	0.18	0.16	ns	NA
African American (vs. Hispanic)	-0.06	0.23	ns	NA
White (vs. Hispanic)	0.13	0.39	ns	NA
Economically Disadvantaged	0.02	0.29	ns	NA
ELL	-0.09	0.28	ns	NA
Number of students/schools	2,205/14			
School level variance	0.14			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.

Notes. The reference categories in the model are: comparison group, male, Hispanic, not Economically Disadvantaged, non-ELL. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%; ns indicates non-significant finding. NA indicates not applicable. The intercept-only model (model without predictors) for this outcome produced school variance of 0.23.

[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. This reversed odds ratio is presented in parentheses.

STAAR Reading

There were no differences in meeting the Level II Phase-in 1 for STAAR 8 Reading between students in the Texas GEAR UP SG primary cohort and students in the comparison schools cohort. In contrast, students in the GEAR UP primary cohort were slightly more likely than those in the comparison schools cohort to reach the Level II final standard (see Section 2.4.3). MLMs were created to see if any differences between cohort groups were present when school- and student-level characteristics were taken into account.

Level II Phase-in 1. The main MLM model for Grade 8 STAAR Reading achievement at or above the Level II Phase-in 1 standard showed no significant differences between the Texas GEAR UP SG primary cohort and the comparison schools cohort (see Table C.21, Appendix C). In the covariate model, previous performance on Grade 7 STAAR Reading was a strong predictor of meeting the standard. Additionally, female students were more likely to meet the standard than male students, and students who were African American were less likely to meet the standard than Hispanic students. Finally, students who were identified as ELL were less likely to meet the standard than non-identified students. Participation in Texas GEAR UP SG was not a significant predictor in this model (see Table C.22, Appendix C). There were no significant interactions between participation in GEAR UP and any student characteristics.

Level II Final. There were no significant differences between cohorts for Grade 8 STAAR Reading achievement at or above Level II at the final standard in the main or covariate model (see Table C.23, Appendix C). In the covariate model, previous performance on Grade 7 STAAR Reading was a strong predictor of meeting the standard. Additionally, students who were African American, classified as economically disadvantaged, and identified as ELL were less likely to meet the Level II final standard than their respective counterparts (see Table C.24, Appendix C). There were no interactions between Texas GEAR UP SG participation and student characteristics.

STAAR Science

There were no overall differences in meeting the Level II Phase-in 1 or Level II at the final standard for STAAR Science between students in the Texas GEAR UP SG primary cohort and students in the comparison schools cohort (see Section 2.4.3). MLMs were created to see if any differences between groups emerged when school- and student-level characteristics were taken into account.

Level II Phase-in 1. Texas GEAR UP SG participation was not a significant predictor of achievement at or above the Level II Phase-in 1 standard for Grade 8 STAAR Science in the main model (see Table C.25, Appendix C). In the covariate model, previous performance on STAAR 7 Mathematics was a positive predictor of meeting the Level II at the final standard. Additionally, there were several student characteristics that predicted performance: female students, African American students, and students identified as economically disadvantaged or as ELL were significantly less likely than their respective counterparts to have achieved at or above this level (see Table C.26, Appendix C). None of these student characteristics interacted significantly with Texas GEAR UP SG primary cohort versus comparison school cohort membership.

Level II Final. Findings from the models predicting achievement at or above Level II at the final standard were similar to those for achieving at or above the Level II Phase-in 1 standard for STAAR Science. That is, no difference existed between the Texas GEAR UP SG primary cohort and the comparison schools cohort in the odds of achieving at or above the Level II final standard on STAAR Science in the main (see Table C.27, Appendix C) or covariate (see Table C.28, Appendix C) analyses.

Previous performance on STAAR 7 Mathematics was a strong predictor of meeting the Level II Final standard. Additionally, female students and those identified as economically disadvantaged and/or ELL were significantly less likely to meet this standard than their respective counterparts. As shown in Table 2.13, there was a significant interaction between Texas GEAR UP SG participation and race/ethnicity. Post hoc analyses revealed that once previous STAAR Mathematics score and other student characteristics were taken into account, the gap between White and Hispanic students in reaching the Level II Final standard on Grade 8 STAAR Science was slightly larger for students in the comparison schools than for those in the primary cohort.

Table 2.13. Texas GEAR UP SG Primary Cohort versus Matched Comparison Schools Cohort MLM Covariate Interaction Model: STAAR Science Level II Final Achievement, 2013–14 (Grade 8)

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	-1.21	0.33	***	NA
Texas GEAR UP Primary Cohort (versus Matched Comparison Schools)	-0.11	0.38	ns	NA
Grade 7 STAAR Mathematics Scale Score (z-score)	2.08	0.09	***	NA
Female	-0.60	0.12	***	0.55 (1.82)
African American (vs. Hispanic)	0.18	0.18	ns	NA
White (vs. Hispanic)	1.20	0.37	**	3.33
Economically Disadvantaged	-0.68	0.19	***	0.51 (1.96)
ELL	-1.44	0.28	***	0.24 (4.22)
Interaction: Race (White) x Cohort	-1.56	0.53	**	0.21 (4.78)
Number of students/schools	2960/14			
School level variance	0.45			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.

Notes. The reference categories in the model are: comparison group, male, Hispanic, not Economically Disadvantaged, non-ELL. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%; ns indicates non-significant finding. NA indicates not applicable. The intercept-only model (model without predictors) for this outcome produced school variance of 0.25.

[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. This reversed odds ratio is presented in parentheses.

STAAR Social Studies

Texas GEAR UP SG primary cohort students were more likely to meet the Level II Phase-in 1 standard on the STAAR 8 Social Studies assessment than students in the comparison schools cohort (see Section 2.4.3), but there were no cohort differences in achieving Level II at the final standard. The goal of the MLM analyses was to see if these differences persisted when taking school- and student-level characteristics into account.

Level II Phase-in 1. Although the main model did not show a significant difference in achievement at or above the Level II Phase-in 1 standard for Grade 8 STAAR Social Studies by cohort (see Table C. 29, Appendix C), the covariate model did: students in the Texas GEAR UP SG primary cohort were significantly more likely to reach the Level II Phase-in 1 standard than students in the comparison schools cohort (see Table 2.14) once school- and student-level variables were controlled for. Performance on Grade 7 STAAR Reading was a significant predictor of reaching the standard. Additionally, female students were significantly less likely than male students to reach the standard. No student characteristics interacted significantly with Texas GEAR UP SG primary cohort versus comparison schools cohort membership.

Table 2.14. Grade 8 STAAR Social Studies Level II Phase-in 1 by Texas GEAR UP Primary Cohort versus Matched Comparison Schools Cohort: MLM Covariate Model, 2013–14

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	-0.44	0.19	*	NA
Texas GEAR UP Primary Cohort (versus Matched Comparison Schools)	0.30	0.15	*	1.35
Grade 7 Reading STAAR Scale Score (z-score)	1.79	0.07	***	NA
Female	-0.68	0.10	***	0.51 (1.97)
African American (vs. Hispanic)	0.00	0.13	ns	NA
White (vs. Hispanic)	0.16	0.23	ns	NA
Economically Disadvantaged	-0.29	0.15	ns	NA
ELL	-0.13	0.18	ns	NA
Number of students/schools	3,055/14			
School level variance	0.05			

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: comparison schools, male, Hispanic, not Economically Disadvantaged, non-ELL. "NA" indicates "not applicable" and "ns" indicates "not significant." Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of 0.13.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. This reversed odds ratio is presented in parentheses.

Level II Final. Participation in the Texas GEAR UP SG primary cohort was not a significant predictor of reaching the Grade 8 STAAR Social Studies Level II at the final standard in either the main (see Table C.30, Appendix C) or covariate (see Table C.31, Appendix C) models. That is, no significant difference existed between Texas GEAR UP SG and comparison schools in the odds of achieving at or above this level on Grade 8 STAAR Social Studies. Once again, Grade 7 STAAR Reading performance was a strong predictor of reaching the standard. Additionally, there were several significant effects of student characteristics: students who were female, African American, and classified as economically disadvantaged were significantly less likely to meet Level II at the final standard as compared to their respective counterparts (see Table C.31, Appendix C). There were no interactions between participation in Texas GEAR UP SG and any student characteristics.

2.5.3 GEAR UP SG Primary and Retrospective Cohort Comparison

Section 2.5.2 presented analyses between students in the Texas GEAR UP SG primary cohort and a cohort of students in statistically matched comparison schools. This section presents comparisons within Texas GEAR UP SG schools (i.e., primary versus retrospective cohort). As a reminder, the primary cohort is composed of students who attended schools with the Texas GEAR UP SG program and were in Grade 8 in 2013–14. The retrospective cohort is composed of students who attended the same schools, but were in Grade 8 in 2012–13, one year before the Texas GEAR UP SG program began.

Because students in the GEAR UP primary and retrospective cohorts attended the same schools, and because they had similar characteristics in the year prior to implementation, the primary and retrospective cohort comparisons assume that any change in outcomes within schools is associated with the Texas GEAR UP SG implementation. Of course, in reality, schools may experience teacher and leadership turnover and changes in demographics and other factors from year to year. We assume, in this case, that these changes were small overall, and that students within a school are still comparable from year to year. There were three types

of analyses conducted: main effects models (including only school-level variables), covariate models (including school- and student-level characteristics), and interaction models (searching for differential effects of participation in GEAR UP by student characteristics).

COURSE COMPLETION

Grade 8 Algebra I Completion

The difference in Algebra I completion between Texas GEAR UP SG primary cohort and retrospective cohort was significant in the main model (see Table 2.15). Overall, primary cohort students at Texas GEAR UP SG schools were significantly more likely than students in the retrospective cohort to have successfully completed Algebra I in Grade 8. (Note that this model includes all students in the cohort, not just those students who took Algebra I in Grade 8).

Table 2.15. Grade 8 Algebra I Completion by Texas GEAR UP Primary versus Retrospective Cohort: MLM Main Effects Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio
Intercept	-1.63	0.13	***	NA
Texas GEAR UP Primary Cohort (versus Retrospective Cohort)	0.75	0.08	***	2.12
Number of students/schools	3,810/7			
School level variance	0.08			

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014.

Notes. Retrospective cohort in Grade 8 in 2012–13. Primary cohort in Grade 8 in 2013–14. The reference category in the model is the retrospective cohort. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "NA" indicates "not applicable." The intercept-only model (model without predictors) for this outcome produced school variance of 0.11.

Based on the covariate model (see Table 2.16), the primary cohort remained significantly more likely than the retrospective cohort to have completed Algebra I, even after adjusting for student characteristics. Students who were not identified as economically disadvantaged and those who were not identified as ELL were also significantly more likely to have completed Algebra I in Grade 8 than their respective counterparts. None of the interaction terms were significant. That is, being in the Texas GEAR UP SG primary cohort neither reduced nor increased any achievement gaps on Algebra I completion based on student characteristics.

Table 2.16. Grade 8 Algebra I Completion by Texas GEAR UP Primary versus Retrospective Cohort: MLM Covariate Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	-0.97	0.23	***	NA
Texas GEAR UP Primary Cohort (versus Retrospective Cohort)	0.75	0.09	***	2.12
Grade 7 STAAR Mathematics Scale Score (z-score)	1.20	0.06	***	NA
Female (vs. Male)	0.18	0.09	ns	NA
African American (vs. Hispanic)	0.00	0.16	ns	NA
White (vs. Hispanic)	-0.12	0.23	ns	NA
Economically Disadvantaged	-0.81	0.17	***	0.45 (2.25)
ELL	-0.45	0.17	**	0.64 (1.57)
Number of students/schools	3,012/7			
School level variance	0.15			

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014.
Notes. Retrospective cohort in Grade 8 in 2012–13. Primary cohort in Grade 8 in 2013–14. The reference category in the model is the retrospective cohort. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "NA" indicates "not applicable" and "ns" indicates "not significant." The intercept-only model (model without predictors) for this outcome produced school variance of 0.11.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

ACHIEVEMENT ON STUDENT ASSESSMENTS

STAAR Algebra I End-of-Course

Texas GEAR UP SG students in the primary cohort were less likely to meet both of the standards on the STAAR Algebra I EOC assessment than students in the retrospective cohort (see Section 2.4.3). This section examines whether these differences still exist when school- and student-level variables are taken into account.

Level II Phase-in 1. Based on the main model, students in the Texas GEAR UP SG retrospective cohort were significantly more likely than students in the primary cohort to have achieved at or above the Level II Phase-in 1 standard on STAAR Algebra I EOC (see Table 2.17).

Table 2.17. Grade 8 STAAR Algebra I EOC Achievement at Level II Phase-in 1 and Above by Texas GEAR UP Primary versus Retrospective Cohort: MLM Main Effects Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	3.34	0.33	***	NA
Texas GEAR UP Primary Cohort (versus Retrospective Cohort)	-0.92	0.33	**	0.40 (2.52)
Number of students/schools	944/7			
School level variance	0.14			

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Primary cohort outcome is Grade 8 2013–14; Retrospective cohort outcome is Grade 8 2012–13. The reference category in the model is retrospective cohort. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. ns indicates nonsignificant finding. "NA" indicates "not applicable." The intercept-only model (model without predictors) for this outcome produced school variance of 0.44.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. This reversed odds ratio is presented in parentheses.

In the covariate model, the difference between the GEAR UP primary and retrospective cohorts became a bit more pronounced – that is, after adjusting for Grade 7 STAAR Mathematics performance and other student characteristics, retrospective cohort students were even more likely than primary cohort students to have reached the Level II Phase-in 1 standard (see Table 2.18). Previous performance on STAAR 7 Mathematics was also a significant predictor of achieving at this standard. Finally, students identified as ELL were also less likely than those not identified as ELL to have achieved at or above the Level II Phase-in 1 standard on STAAR Algebra I EOC.

Table 2.18. Grade 8 STAAR Algebra I EOC Achievement at Level II Phase-in 1 and Above by Texas GEAR UP Primary versus Retrospective Cohort: MLM Covariate Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	4.62	0.68	***	NA
Texas GEAR UP Primary Cohort (versus Retrospective Cohort)	-1.72	0.43	***	0.18 (5.58)
Grade 7 STAAR Mathematics Scale Score (z-score)	0.64	0.14	***	NA
Female	0.24	0.28	ns	NA
African American (vs. Hispanic)	-0.88	0.44	*	0.42 (2.40)
White (vs. Hispanic)	NA^	NA^	NA	NA
Economically Disadvantaged	-0.92	0.56	ns	NA
English Language Learner (ELL)	-0.92	0.47	*	0.40 (2.51)
Number of students/schools	888/7			
School level variance	0.20			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: retrospective cohort, male, Hispanic, not Economically Disadvantaged, non-ELL. "NA" indicates "not applicable" and "ns" indicates "not significant." Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of 0.44. Only students taking Standard STAAR were included in the model.
^All White students who took STAAR Algebra I EOC reached Level II Phase-in 1; including this variable in the model created convergence issues and an unacceptably large standard error, so it was removed. The other parameters of the model changed slightly, but their significance did not change. [a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. This reversed odds ratio is presented in parentheses.

As shown in Table 2.19, there was a significant interaction between race/ethnicity and cohort for African American students. Post hoc analyses revealed that, once prior score on STAAR Mathematics and other student characteristics were taken into account, African American students were less likely to reach the Level II Phase-in 1 standard than Hispanic students in both cohorts, but the achievement gap was larger for the retrospective cohort than it was for the primary cohort.

Table 2.19. Texas GEAR UP SG Primary Cohort versus Retrospective Cohort MLM Covariate Interaction Model: STAAR Algebra I End-of-Course Level II Phase-in 1 Achievement, 2013–14 (Grade 8)

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	5.07	0.76	***	NA
Texas GEAR UP Primary Cohort (versus Retrospective Cohort)	-2.38	0.59	***	0.09 (10.84)
Grade 7 STAAR Mathematics Scale Score (z-score)	0.75	0.16	***	NA
Female	0.25	0.29	ns	NA
African American (vs. Hispanic)	-2.44	0.82	**	0.09 (11.44)
White (vs. Hispanic)	NA	NA	NA	NA
Economically Disadvantaged	-0.83	0.56	ns	NA
ELL	-0.89	0.47	ns	NA
Interaction: Race (African American) x Cohort	1.97	0.90	*	7.19
Number of students/schools	888/7			
School level variance	0.19			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model are: comparison group, male, Hispanic, not Economically Disadvantaged, non-ELL. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%; ns indicates non-significant finding. NA indicates not applicable. The intercept-only model (model without predictors) for this outcome produced school variance of 0.11.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. This reversed odds ratio is presented in parentheses.

Level II Final. Similar to reaching the Level II Phase-in 1 standard, students in the Texas GEAR UP SG retrospective cohort were significantly more likely than students in the primary cohort to achieve at or above Level II at the final standard on the STAAR Algebra I EOC (see Table 2.20).

Table 2.20. Grade 8 STAAR Algebra I End-of-Course Achievement at Level II Final: Primary versus Retrospective Cohort MLM Main Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	-0.11	0.23	ns	NA
Texas GEAR UP Primary Cohort (versus Retrospective Cohort)	-0.47	0.15	**	0.63 (1.59)
Number of students/schools	944/7			
School level variance	0.27			

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness end-of-course (STAAR EOC), 2014.
Notes. Retrospective cohort in Grade 8 in 2012–13. Primary cohort in Grade 8 in 2013–14. The reference categories in the model are: retrospective cohort, Level II Final and Above. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "NA" indicates "not applicable" and "ns" indicates "not significant." The intercept-only model (model without predictors) for this outcome produced school variance of 0.23.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

The cohort group differences remained significant in the covariate model (see Table 2.21). Grade 7 STAAR Mathematics score was also a significant predictor of meeting the standard: students with higher prior year STAAR Mathematics scores were more likely to meet the Level II final standard.

Table 2.21. Grade 8 STAAR Algebra I End-of-Course Level II Final: Primary versus Retrospective Cohort MLM Covariate Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	0.27	0.41	***	NA
Texas GEAR UP Primary Cohort (versus Retrospective Cohort)	-1.21	0.18	***	0.30 (3.34)
Grade 7 STAAR Mathematics Scale Score (z-score)	0.68	0.08	***	NA
Female	-0.18	0.15	ns	NA
African American (vs. Hispanic)	0.17	0.28	ns	NA
White (vs. Hispanic)	0.60	0.36	ns	NA
Economically Disadvantaged	-0.42	0.24	ns	NA
English Language Learner (ELL)	-0.57	0.33	ns	NA
Number of students/schools	888/7			
School level variance	0.64			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness end-of-course (STAAR EOC), 2014.
Notes. Retrospective cohort in Grade 8 in 2012–13. Primary cohort in Grade 8 in 2013–14. The reference categories in the model are: retrospective cohort, Level II Final and Above, males, Hispanic, non-Economically Disadvantaged, and non-ELL. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "NA" indicates "not applicable" and "ns" indicates "not significant." The intercept-only model (model without predictors) for this outcome produced school variance of 0.23. [a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

As shown in Table 2.22, there was a significant interaction between race/ethnicity and cohort for White students on STAAR Algebra I EOC achievement at or above Level II final standard. Post hoc analyses revealed that after previous STAAR score and other student characteristics were taken into account, White students in the GEAR UP primary cohort (but not the retrospective cohort) were significantly more likely to reach the Level II final standard than Hispanic students. The gap between White and Hispanic students was smaller for students in the primary cohort than students in the retrospective cohort, though Hispanic students in the retrospective cohort had better performance than their counterparts in the primary cohort.

Table 2.22. Texas GEAR UP SG Primary versus Retrospective Cohort MLM Covariate Interaction Model: STAAR Algebra I End-of-Course Level II Final Achievement, 2013–14 (Grade 8)

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	0.22	0.41	ns	NA
Texas GEAR UP Primary Cohort (versus Retrospective Cohort)	-1.15	0.18	***	0.32 (3.17)
Grade 7 STAAR Mathematics Scale Score (z-score)	0.72	0.08	***	NA
Female	-0.18	0.15	ns	NA
African American (vs. Hispanic)	0.16	0.28	ns	NA
White (vs. Hispanic)	2.10	0.84	*	8.19
Economically Disadvantaged	-0.42	0.24	ns	NA
ELL	-0.57	0.33	ns	NA
Interaction: Race (White) x Cohort	-1.96	0.92	*	0.14 (7.10)
Number of students/schools	888/7			
School level variance	0.64			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model are: comparison group, male, Hispanic, not Economically Disadvantaged, non-ELL. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%; ns indicates non-significant finding. NA indicates not applicable. The intercept-only model (model without predictors) for this outcome produced school variance of 0.23.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. This reversed odds ratio is presented in parentheses.

STAAR Mathematics

Approximately the same percentage of students in the Texas GEAR UP SG primary cohort reached the Level II Phase-in 1 standard for Grade 8 STAAR Mathematics. However, students in the retrospective cohort were more likely to meet the Level II final standard than students in the primary cohort (see Section 2.4.3). This section examines whether these differences still exist when school and student-level variables are taken into account. For the Grade 8 STAAR Mathematics models, only those students who did not also take the STAAR Algebra I EOC were included in the models.

Level II Phase-In 1. Students in the Texas GEAR UP SG primary cohort were significantly less likely to meet the Level II Phase-in 1 standard on Grade 8 STAAR Mathematics that students in the retrospective cohort in the main model (see Table C.32). However, once other covariates were taken into account, there was no longer a significant effect of cohort (see Table C.33, Appendix C). Score on Grade 7 STAAR Mathematics was a significant predictor of reaching the standard. Additionally, students classified as economically disadvantaged were less likely than students not classified as economically disadvantaged to reach the Level II Phase-in 1 standard on Grade 8 STAAR Mathematics.

As shown in Table 2.23, there was a significant interaction between economic disadvantage and cohort. After previous STAAR score and other student characteristics were taken into account, the performance gap between students classified as economically disadvantaged and their peers was greater for the retrospective cohort than the primary cohort.

Table 2.23. Texas GEAR UP SG Primary versus Retrospective Cohort MLM Covariate Interaction Model: STAAR Mathematics Level II Phase-in 1 Achievement, 2013–14 (Grade 8)

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	1.79	0.46	***	NA
Texas GEAR UP Primary Cohort (versus Retrospective Cohort)	-0.89	0.53	ns	NA
Grade 7 STAAR Mathematics Scale Score (z-score)	1.70	0.11	***	NA
Female	-0.03	0.10	ns	NA
African American (vs. Hispanic)	-0.24	0.16	ns	NA
White (vs. Hispanic)	0.19	0.29	ns	NA
Economically Disadvantaged	-1.28	0.45	**	0.28 (3.59)
ELL	0.05	0.14	ns	NA
Interaction: Economically Disadvantaged x **Cohort**	1.14	0.54	*	3.13
Number of students/schools	2058/7			
School level variance	0.08			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model are: comparison group, male, Hispanic, not Economically Disadvantaged, non-ELL. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%; ns indicates non-significant finding. NA indicates not applicable. The intercept-only model (model without predictors) for this outcome produced school variance of 0.17.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. This reversed odds ratio is presented in parentheses.

Level II Final. There was a significant difference between the primary and retrospective cohorts in the main model for Grade 8 STAAR Mathematics at or above the Level II final standard (see Table 2.24). Students in the Texas GEAR UP primary cohort were significantly less likely to meet the Level II Final standard than students in the retrospective cohort. The effect remained significant after adjusting for covariates in the covariate model (see Table 2.25). Grade 7 Mathematics score was once again a significant predictor of reaching the standard. There were no significant interactions between cohort group and any of the student characteristic variables.

Table 2.24. Grade 8 STAAR Mathematics Level II Final: Primary versus Retrospective Cohort MLM Main Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	-1.84	0.16	***	NA
Texas GEAR UP Primary Cohort (versus Retrospective Cohort)	-0.74	0.13	***	0.48 (2.09)
Number of students/schools	2,575/7			
School level variance	0.14			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2014.
Notes. Retrospective cohort in Grade 8 in 2012–13. Primary cohort in Grade 8 in 2013–14. The reference categories in the model are: retrospective cohort, Level II Final and Above. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "NA" indicates "not applicable" and "ns" indicates "not significant." The intercept-only model (model without predictors) for this outcome produced school variance of 0.16.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

Table 2.25. Grade 8 STAAR Mathematics Level II Final: Primary versus Retrospective Cohort MLM Covariate Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	-1.44	0.29	***	NA
Texas GEAR UP Primary Cohort (versus Retrospective Cohort)	-0.74	0.16	***	0.48 (2.10)
Grade 7 STAAR Mathematics Scale Score (z-score)	1.26	0.14	***	NA
Female	-0.03	0.14	ns	NA
African American (vs. Hispanic)	-0.47	0.26	ns	NA
White (vs. Hispanic)	0.43	0.30	ns	NA
Economically Disadvantaged	-0.32	0.28	ns	NA
English Language Learner (ELL)	-0.10	0.22	ns	NA
Number of students/schools	2,058/7			
School level variance	0.02			

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2014.
Notes. Retrospective cohort in Grade 8 in 2012–13. Primary cohort in Grade 8 in 2013–14. The reference categories in the model are: retrospective cohort, males, Hispanic, non-Economically Disadvantaged, and non-ELL. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "NA" indicates "not applicable" and "ns" indicates "not significant." The intercept-only model (model without predictors) for this outcome produced school variance of 0.16.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

STAAR Reading

There were no overall differences in meeting the Level II Phase-in 1 or Level II Final standard for STAAR Reading between students in the Texas GEAR UP SG primary and retrospective cohorts (see Section 2.4.3). MLMs were created to see if any differences between groups emerged when school and student-level characteristics were taken into account.

Level II Phase-in 1. Achievement on Grade 8 STAAR Reading at or above the Level II Phase-in 1 standard did not differ significantly by cohort group in either the main (see Table C.34, Appendix C) or covariate model (see Table C.35, Appendix C). Previous score on Grade 7 STAAR Reading was a significant predictor of meeting the standard. Additionally, students who were African American and those who were identified as ELL were significantly less likely to meet the standard than their respective counterparts. As shown in Table 2.26, there was a significant interaction between cohort group and gender. Post hoc analyses revealed that after prior STAAR scores and other student characteristics were taken into account, there was a performance gap for gender in the primary cohort (where males were less likely to meet the standard than females) but not in the retrospective cohort.

Table 2.26. Texas GEAR UP SG Primary versus Retrospective Cohort MLM Covariate Interaction Model: STAAR Reading Level II Phase-in 1 Achievement, 2013–14 (Grade 8)

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	1.86	0.25	***	NA
Texas GEAR UP Primary Cohort (versus Retrospective Cohort)	-0.39	0.15	**	0.68 (1.48)
Grade 7 Reading STAAR Scale Score (z-score)	2.36	0.10	***	NA
Female	-0.30	0.16	ns	NA
African American (vs. Hispanic)	-0.52	0.15	***	0.60 (1.67)
White (vs. Hispanic)	-0.10	0.30	ns	NA
Economically Disadvantaged	0.08	0.23	ns	NA
ELL	-0.36	0.14	*	0.70 (1.43)
Interaction: Gender x Cohort	0.46	0.22	*	1.59
Number of students/schools	2958/7			
School level variance	0.00			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model are: comparison group, male, Hispanic, not Economically Disadvantaged, non-ELL. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%; ns indicates non-significant finding. NA indicates not applicable. The intercept-only model (model without predictors) for this outcome produced school variance of 0.07.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. This reversed odds ratio is presented in parentheses.

Level II Final. Similar to the above, achievement on Grade 8 STAAR Reading at or above the Level II final standard did not differ significantly by cohort group in either the main (see Table C.36, Appendix C) or covariate (see Table C.37, Appendix C) model. That is, no difference between the Texas GEAR UP SG primary and retrospective cohorts on the percentage of students who achieved at or above Level II at the final standard on STAAR Reading existed. Previous score on Grade 7 STAAR Reading was a significant predictor of meeting the Level II final standard. Finally, as shown in Table 2.27, there was an interaction between cohort and ELL status. Students identified as ELL in both groups were less likely to meet the standard than non-identified students. However, the gap was larger for the primary cohort as compared to the retrospective cohort.

Table 2.27. Texas GEAR UP SG Primary versus Retrospective Cohort MLM Covariate Interaction Model: STAAR Reading Level II Final Achievement, 2013–14 (Grade 8)

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	-1.25	0.21	***	NA
Texas GEAR UP Primary Cohort (versus Retrospective Cohort)	-0.13	0.11	ns	NA
Grade 7 Reading STAAR Scale Score (z-score)	2.40	0.10	***	NA
Female	0.11	0.11	ns	NA
African American (vs. Hispanic)	-0.19	0.16	ns	NA
White (vs. Hispanic)	-0.19	0.25	ns	NA
Economically Disadvantaged	-0.26	0.18	ns	NA
ELL	-0.42	0.28	ns	NA
Interaction: **ELL** x Cohort	-1.34	0.58	*	0.26 (3.83)
Number of students/schools	2958/7			
School level variance	0.00			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model are: comparison group, male, Hispanic, not Economically Disadvantaged, non-ELL. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%; ns indicates non-significant finding. NA indicates not applicable. The intercept-only model (model without predictors) for this outcome produced school variance of 0.05.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. This reversed odds ratio is presented in parentheses.

STAAR Science

Texas GEAR UP SG students in the primary cohort were less likely to meet the Level II Phase-in 1 standard on STAAR Science than students in the retrospective cohort, but they were more likely to meet the Level II final standard (see Section 2.4.3). This section examines whether these differences still exist when school and student-level variables are taken into account.

Level II Phase-in 1. The retrospective cohort was significantly more likely to meet the Grade 8 STAAR Science Level II Phase-in 1 in both the main (see Table 2.28) and covariate models (see Table 2.29). In the covariate model, score on Grade 7 STAAR Mathematics was a significant predictor of reaching the standard. Additionally, female students, students identified as ELL, and students classified as economically disadvantaged were less likely to meet the standard than their respective counterparts. There were no significant interactions between student characteristics and cohort.

Table 2.28. Texas GEAR UP SG Primary versus Retrospective Cohort MLM Main Model: STAAR Science Level II Phase-in 1 Achievement, 2013–14 (Grade 8)

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	0.33	0.19	ns	NA
Texas GEAR UP Primary Cohort (versus Retrospective Cohort)	-0.25	0.07	***	0.78 (1.29)
Number of students/schools	3,486/7			
School level variance	0.24			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Primary cohort outcome is Grade 8 2013–14; retrospective cohort outcome is Grade 8 2012–13. The reference category in the model is retrospective cohort. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "NA" indicates "not applicable." The intercept-only model (model without predictors) for this outcome produced school variance of 0.24.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

Table 2.29. Texas GEAR UP SG Primary versus Retrospective Cohort MLM Covariate Model: STAAR Science Level II Phase-in 1 Achievement, 2013–14 (Grade 8)

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	1.63	0.28	***	NA
Texas GEAR UP Primary Cohort (versus Retrospective Cohort)	-0.45	0.08	***	0.64 (1.56)
Grade 7 STAAR Mathematics Scale Score (z-score)	1.08	0.06	***	NA
Female	-0.38	0.08	***	0.68 (1.47)
African American (vs. Hispanic)	-0.14	0.15	ns	NA
White (vs. Hispanic)	0.27	0.25	ns	NA
Economically Disadvantaged	-0.86	0.19	***	0.42 (2.36)
English Language Learner (ELL)	-0.83	0.13	***	0.44 (2.28)
Number of students/schools	2,987/7			
School level variance	0.23			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: retrospective cohort, male, Hispanic, not economically disadvantaged, non-ELL. "NA" indicates "not applicable" and "ns" indicates "not significant." Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of 0.24.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

Level II Final. Cohort was a significant predictor of achieving the Level II final standard in the main model for Grade 8 STAAR Science (see Table C.38, Appendix C), but after adjusting for student characteristics in the covariate model, the cohort group effect was nonsignificant (see Table C.39, Appendix C). This finding suggests that student characteristics explained more about STAAR Science achievement than did cohort group. Score on Grade 7 STAAR Mathematics was a significant predictor of achieving the Level II final standard. Additionally, female students, students classified as economically disadvantaged, and students identified as ELL were significantly less likely to meet the standard than their counterparts.

As shown in Table 2.30, there was a significant interaction between ELL status and cohort: as with STAAR Reading, the achievement gap in reaching the Level II final standard on STAAR Science was larger for the primary cohort than the retrospective cohort.

Table 2.30. Texas GEAR UP SG Primary versus Retrospective Cohort MLM Covariate Interaction Model: STAAR Science Level II Final Achievement, 2013–14 (Grade 8)

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	-0.98	0.26	***	NA
Texas GEAR UP Primary Cohort (versus Retrospective Cohort)	0.04	0.11	ns	NA
Grade 7 Mathematics STAAR Scale Score (z-score)	1.28	0.07	***	NA
Female	-0.52	0.11	***	0.60 (1.68)
African American (vs. Hispanic)	-0.03	0.18	ns	NA
White (vs. Hispanic)	-0.04	0.24	ns	NA
Economically Disadvantaged	-0.62	0.18	***	0.54 (1.85)
ELL	-0.65	0.25	*	0.52 (1.92)
Interaction: ELL x Cohort	-1.03	0.48	*	0.36 (2.79)
Number of students/schools	2926/7			
School level variance	0.19			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model are: comparison group, male, Hispanic, not Economically Disadvantaged, non-ELL. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%; ns indicates non-significant finding. NA indicates not applicable. The intercept-only model (model without predictors) for this outcome produced school variance of 0.30.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. This reversed odds ratio is presented in parentheses.

STAAR Social Studies

Texas GEAR UP SG students in the primary cohort were less likely to meet the Level II Phase-in 1 standard on STAAR Social Studies than students in the retrospective cohort, but there was no difference in the likelihood of meeting the Level II final standard (see Section 2.4.3). This section examines whether differences between groups emerge when school and student-level variables are taken into account.

Level II Phase-in 1. Cohort was a significant predictor of achieving the Level II Phase-in 1 standard on Grade 8 STAAR Social Studies in both the main (see Table 2.31) and covariate (see Table 2.32) models. Students in the primary cohort were less likely to meet the standard than students in the retrospective cohort. In the covariate model, prior score on Grade 7 STAAR Reading was a significant predictor of meeting the standard. Achievement also differed by gender and economically disadvantaged status (see Table 2.32). Female students and students classified as economically disadvantaged were less likely to meet the standard than their peers. There were no significant interactions between student characteristics and cohort.

Table 2.31. Texas GEAR UP SG Primary versus Retrospective Cohort MLM Main Model: STAAR Social Studies Level II Phase-in 1 Achievement, 2013–14 (Grade 8)

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	-0.29	0.15	ns	NA
Texas GEAR UP Primary Cohort (versus Retrospective Cohort)	-0.20	0.07	**	0.82 (1.22)
Number of students/schools	3,477/7			
School level variance	0.14			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Primary cohort outcome in Grade 8 in 2013–14; retrospective cohort outcome in Grade 8 in 2012–13. The reference category in the model is retrospective cohort. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "NA" indicates "not applicable." The intercept-only model (model without predictors) for this outcome produced school variance of 0.14.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. This reversed odds ratio is presented in parentheses.

Table 2.32. Texas GEAR UP SG Primary versus Retrospective Cohort MLM Covariate Model: STAAR Social Studies Level II Phase-in 1 Achievement, 2013–14 (Grade 8)

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	0.54	0.24	*	NA
Texas GEAR UP Primary Cohort (versus Retrospective Cohort)	-0.53	0.10	***	0.59 (1.69)
Grade 7 STAAR Reading Scale Score (z-score)	1.90	0.08	***	NA
Female	-0.71	0.10	***	0.49 (2.04)
African American (vs. Hispanic)	-0.21	0.16	ns	NA
White (vs. Hispanic)	-0.02	0.24	ns	NA
Economically Disadvantaged	-0.42	0.18	*	0.65 (1.53)
English Language Learner (ELL)	-0.24	0.16	ns	NA
Number of students/schools	2,931/7			
School level variance	0.13			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: retrospective cohort, male, Hispanic, not Economically Disadvantaged, non-ELL. "NA" indicates "not applicable" and "ns" indicates "not significant." Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of 0.14.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. This reversed odds ratio is presented in parentheses.

Level II Final. Cohort was not a significant predictor of reaching the Level II final standard for STAAR Social Studies in either the main (see Table C.40, Appendix C) or covariate (see Table C.41, Appendix C) model. That is, no difference existed between the Texas GEAR UP SG primary and retrospective cohorts on the percentage of students who achieved at or above Level II at the final standard on STAAR Social Studies. However, female students, African American students, and students classified as economically disadvantaged were significantly less likely to meet the standard than their respective counterparts. There were no significant interactions between student characteristics and cohort.

2.6 Texas GEAR UP SG Participation at the Student Level

So far, Texas GEAR UP SG participation has been treated as consistent across all students in the primary cohort. The results of analyses presented in Sections 2.4 and 2.5 assumed that if a student attended a Texas GEAR UP SG school, then they participated in the program. In reality, participation in Texas GEAR UP SG can be differentiated in at least two key ways. First, length of time enrolled at a Texas GEAR UP SG school varied: some students were enrolled in Grade 7 only, some in Grade 8 only, and some in both Grades 7 and 8. Section 2.6.2 presents analyses for student outcomes relative to length of time in the cohort. Second, the amount that individual students participated in Texas GEAR UP SG implementation activities varied. Some students participated in more than the median amount of activities in the Texas GEAR UP SG cohort in both Grade 7 and 8 (i.e., High/High participation), some less than the median in Grade 7 but higher than the median in grade 8 (Low/High participation), and so on. We next analyzed outcome data looking at differences between these four participation-based groups of students (Low/Low, Low/High, High/Low, and High/High). Overall level of participation is further discussed in Section 2.6.3.[50]

Collectively, these analyses address the following Texas GEAR UP SG evaluation questions:

- To what extent were Texas GEAR UP SG Grade 8 student outcomes associated with length of time in Texas GEAR UP SG schools?
- To what extent were Texas GEAR UP SG Grade 8 student outcomes associated with the student's overall level of participation?

2.6.1 Texas GEAR UP State Grant Year 1 and Year 2 Key Participation Findings

Before presenting the findings from the analyses, it is worth summarizing a few of the key findings from the first two Annual Implementation Reports (O'Donnel et al., 2013; Briggs et al., 2015). The national GEAR UP program encourages grantees to engage in a wide range of implementation practices in order to support project objectives. The level and mix of implementation varied across schools in both Year 1 and Year 2 (see Table 2.33 for an overview of Year 1 and Year 2 implementation strategies by school). Overall, implementation was much lower in Year 1 than Year 2, primarily because funding was not received (and thus activities did not begin) until November/December of Year 1. Some schools were able to quickly implement aspects of the program in Year 1, such as student support services, but other aspects were not easily changed at any school. Across all schools, 81% of students participated in some sort of Texas GEAR UP SG implementation activity in Year 1. This number rose to 99% in Year 2, reflecting remarkable progress in the extent to which Texas GEAR UP SG students received any Texas GEAR UP SG services (O'Donnel et al., 2013; Briggs et al., 2015).

Overall, schools made excellent progress in Year 2 by implementing between 58% and 84% of the potential strategies. School A made the most improvement by implementing 11 more strategies in Year 2 than in Year 1. School G implemented the widest range of GEAR UP practices in both years. School D struggled somewhat in Year 1 compared to other schools and continued to face challenges in Year 2 in comparison to other schools (School D implemented the lowest number of activities in Year 2), however, it was on track, along with Schools E, F, and G, to provide support services to at least 75% of students, a Year 2 goal for Grade 8 students. In Year 1 (Grade 7), 39% of students were involved in student support services (i.e., tutoring, counseling, and mentoring), but by Year 2, 78% of Grade 8 students were involved in student support services (Briggs et al., 2015).

[50] See Appendix B, Section B.6.2 for further discussion on how these groups were created.

Table 2.33. Overview of Texas GEAR UP SG Implementation Strategies by School, Year 1 and Year 2

	School A	School B	School C	School D	School E	School F	School G
Implementation Strategies An X in a white cell indicates strategies implemented in both Year 1 and Year 2. An X in a grey-filled cell indicates strategies that schools implemented in Year 2 but not in Year 1.							
Advanced Course Enrollment	X	X	X	X	X	X	X
Algebra I Summer 2013 Support*		X			X	X	X
Student Support Services: Tutoring	X	X	X	X	X	X	X
Student Support Services: Mentoring	X	X	X	X	X	X	X
Student Support Services: Counseling/Advising	X	X	X	X	X	X	X
Student Support Services: Other Activities				X	X	X	
College Visit	X	X	X	X	X	X	X
Job Site Visit/Job Shadowing					X		X
Educational Field Trips*	X	X	X	X	X		
Student Workshops/Events	X	X	X		X	X	X
High School Knowledge Activity*	X		X		X		X
Parent Events	X	X	X	X	X	X	X
Parent Counseling/ Advising*						X	
Parent Event on College Preparation/Financial Aid*	X	X	X			X	X
Parent College Visit*	X	X	X		X	X	X
Parent High School Visit*	X		X				X
Teacher Professional Development[a]	X	X	X	X	X	X	X
Community Alliances	X	X	X	X	X	X	X
Use of Statewide Services	X	X	X	X	X	X	X
Total Number of Strategies Implemented by Year							
Year 1 (out of 12)	4	6	5	5	8	7	11
Year 2 (out of 19) based on total of X's above	15	14	15	11	16	15	16

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; fall 2013 and spring 2014 site visit data.
Note. An "X" indicates that a school reported implementing the strategy, although it does not capture the level of participation (such as the number of students served) for each strategy. An asterisk (*) notes new implementation categories captured in Year 2. Grey-filled cells are strategies that schools implemented in Year 2 but not in Year 1.
[a] School D did not report any vertical teaming or Texas GEAR UP SG-specific teacher professional development (PD). Schools A and C did not report providing any training on project-based learning (PBL) using grant funds. In all other cases, PD provided at the school included advanced instructional strategies, vertical teaming, differentiated instruction, Texas GEAR UP SG-specific training, and PBL.

Several of the implementation activities in Years 1 and 2 were clearly focused on Algebra I completion, a strategy that appears to have resulted in increasing completion of the course based on analyses presented so far. In both years, schools offered supports such as enrichment programs, summer programs, and tutoring services to help students succeed in Algebra I and other advanced courses. Across all schools, 78% of Grade 8 students were involved in student support services in Year 2, in comparison to 39% in Year 1 (Briggs et al., 2015). However, some schools delivered a higher percentage of student support services than other schools. Two schools (School E and School F) offered a mathematics after-school program and all schools that offered summer 2013 programs indicated a focus on mathematics. School G, for example, offered a week-long minicamp focused on Algebra I success. Some of the implementation activities associated, in particular, with Algebra I enrollment and completion, necessarily took place in Year 1. Therefore, students who did not join the primary cohort until

Grade 8 may not have had foundational opportunities in Grade 7 to prepare them for the rigorous coursework of Algebra I.

Another implementation activity focused on college visits. At some schools, college visits were part of an integrated curriculum with students completing assignments in courses aligned with the college visit, identified in Annual Implementation Report #1 as a promising practice. Unfortunately, the implementation data do not provide clear information on the quality of college visits; however, impact from attending these visits is analyzed and discussed later in this chapter.

2.6.2 Length of Time in Cohort

In general, it was anticipated that students who participated in both years of Texas GEAR UP SG would perform better on student outcomes than students who participated in only one year. That is, more exposure to the Texas GEAR UP SG should be associated with better outcomes.

LENGTH OF TIME IN COHORT: DESCRIPTIVES

The majority of students (72%) attended a Texas GEAR UP SG school in both Grade 7 and Grade 8. The remaining students were divided almost evenly between Grade 7 only (16%) and Grade 8 only (13%). There was little difference across schools or student characteristics in length of time in cohort (see Tables D.1 and D.2, Appendix D). School A had the largest percentage of Grade 7 only students (23%) while School F had the fewest (10%). School D had the largest percentage of Grade 8 only Students (19%), while School C had the fewest (8%). School D had the fewest students who attended in both grades (61%), while Schools C, F, and G each had from 76% to 78%.

LENGTH OF TIME IN COHORT: MODELS

Our next set of analyses focused on the effect of participation in one year of GEAR UP versus both years on Algebra I completion and STAAR performance. Data were only available in these areas for 20 of the 361 students who no longer attended a GEAR UP school after Grade 7. Because this number was so small, students who attended GEAR UP in Grade 7 only were excluded from these analyses. Participation in Grade 8 only was compared to participation in both grades. Analyses included running both a main model and a covariate model adjusting for student characteristics.

Grade 7 STAAR scores were not available for most of the students (74%) who were enrolled in Texas GEAR UP SG campuses in Grade 8 only. Therefore, in the covariate model, previous STAAR scores could not be included. This omission requires extra caution when interpreting the results. Students who were in Texas GEAR UP schools in Grade 8 only may have been different from students who attended in both grades. In Section 2.5, previous score on Grade 7 STAAR was a predictor of performance on Grade 8 STAAR for every analysis. There were several cases where participation in the Texas GEAR UP SG primary cohort was significant in the main model, but *not* in the covariate model, once Grade 7 STAAR and other variables were included. Therefore, with the omission of this key variable, it may appear that there was an effect of GEAR UP participation when in reality this difference could be explained by pre-existing differences in prior performance between the students.

Other student characteristics were included in the covariate model. However, as the effects of these student characteristics have been explored in depth in earlier sections of this report, we do not discuss significant student characteristic effects for models unless length of time in cohort also significantly predicted performance. Additional detail about the models is provided in Appendix B. As a reminder, differences were examined only within the Texas GEAR UP SG schools.

COURSE COMPLETION

Grade 8 Algebra I Completion

Length of time in cohort was a significant predictor of Algebra I completion in both the main (see Table 2.34; see also Table D.3, Appendix D) and covariate (see Table 2.35) models. Three times as many students who attended a Texas GEAR UP school in both Grades 7 and 8 (33%) completed Algebra I, compared to only 10% who attended in Grade 8 only. Additionally, in the covariate model, students who were African American, classified as economically disadvantaged, and identified as ELL were less likely than their counterparts to complete Algebra I in Grade 8 (see Table 2.35).

Table 2.34. Algebra I Completion: Length of Time in Texas GEAR UP SG Cohort MLM Main Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	-2.20	0.25	***	NA
Grade 7 & 8 (vs. Grade 8 only)	1.46	0.20	***	4.32
Number of students/schools	1,940/7			
School level variance	0.18			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014.
Notes. The reference category in the model is in primary cohort in Grade 8 only. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "NA" indicates "not applicable" and "ns" indicates "not significant." The intercept-only model (model without predictors) for this outcome produced school variance of 0.18. Only students taking Standard STAAR were included.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

Table 2.35. Grade 8 Algebra I Completion: Length of Time in Cohort MLM Covariate Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	-1.53	0.29	***	NA
Grade 7 & 8 (vs Grade 8 only)	1.46	0.20	***	4.32
Female (vs. Male)	0.05	0.05	ns	NA
African American (vs. Hispanic)	-0.56	0.18	**	0.57 (1.76)
White (vs. Hispanic)	0.13	0.24	ns	NA
Economically Disadvantaged	-0.58	0.17	***	0.56 (1.79)
ELL	-0.98	0.20	***	0.37 (2.67)
Number of students/schools	**1,939/7**			
School Level Variance	**0.14**			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014.
Notes. The reference categories in the model included: in primary cohort in Grade 8 only, male, Hispanic, not Economically Disadvantaged, non-ELL. "NA" indicates "not applicable" and "ns" indicates "not significant." Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1. The intercept-only model (model without predictors) for this outcome produced school variance of 0.18. %. Only students taking Standard STAAR were included in the model.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

ACHIEVEMENT ON STUDENT ASSESSMENTS

Next, we examined the effect of length of time in the GEAR UP SG primary cohort on achievement on STAAR. For each test, we created three MLM models for achievement at or above the Level II Phase-in 1 standard and again for achievement at or above Level II at the final standard.

STAAR Algebra I EOC

Attending a Texas GEAR UP SG campus for one or both years was not a significant predictor of reaching the Level II Phase-in 1 standard on Algebra I EOC in either the main (see Table D.5, Appendix D) or covariate (see Table D.6, Appendix D) models, or Level II at the final standard in either the main (see Table D.7, Appendix D) or covariate (see Table D.8, Appendix D) models.

STAAR Mathematics

Level II Phase-in 1. For STAAR Mathematics, the likelihood of students achieving at or above the Level II Phase-in 1 standard was not significantly higher among students who attended in both Grade 7 and Grade 8 as compared to those who attended in Grade 8 in the main model (see Tables D.9 and D.10, Appendix D). However, length of time in cohort was a significant predictor in the covariate model (see Table 2.36). Students who participated for both years were more likely to reach the standard than those that participated in Grade 8 only. Additionally, students who were African American were less likely than their counterparts to reach Level II Phase-in 1 in the covariate model.

Table 2.36. Grade 8 STAAR Mathematics Level II Phase-in 1 Within Texas GEAR UP SG Schools: Length of Time in Cohort Covariate MLM 2013–14 (Grade 8)

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	-0.23	0.33	ns	NA
Grade 7 & 8 (vs Grade 8 only)	0.32	0.16	*	1.37
Female (vs. male)	0.06	0.12	ns	NA
African American (vs. Hispanic)	-0.63	0.19	**	0.53 (1.88)
White (vs. Hispanic)	0.39	0.35	ns	NA
Economically Disadvantaged	0.09	0.23	ns	NA
ELL	-0.11	0.18	ns	NA
Number of students/schools	1,195/7			
School Level Variance	0.23			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: in primary cohort in Grade 8 only, male, Hispanic, not Economically Disadvantaged, non-ELL. "NA" indicates "not applicable" and "ns" indicates "not significant." Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of 0.26. Only students taking Standard STAAR were included.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

Level II Final. Length of time in the Texas GEAR UP SG cohort was not a significant predictor of Grade 8 STAAR Mathematics achievement at or above Level II at the final standard in either the main (see Table D.11, Appendix D) or covariate (see Table D.12, Appendix D) models.

STAAR Reading

Level II Phase-in 1. For Grade 8 STAAR Reading, students who attended Texas GEAR UP SG in both Grade 7 and Grade 8 were more likely than those who attended in Grade 8 only to achieve at or above the Level II Phase-in 1 standard based on both the main (see Table 2.37) and covariate (Table 2.38) models. Although 71% of students attending in both grades achieved

at or above this level, 60% of students attending in Grade 8 only did so (see Table D.13, Appendix D). Additionally, two student characteristics were significant predictors of reaching the standard: students identified as African American, and students identified as ELL were less likely to reach the standard than their respective counterparts.

Table 2.37. Grade 8 STAAR Reading Level II Phase-in 1 Within Texas GEAR UP SG Schools: Length of Time in Cohort Main MLM 2013–14 (Grade 8)

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio
Intercept	0.42	0.16	**	NA
Grade 7 & 8 (vs Grade 8 only)	0.45	0.14	**	1.57
Number of students/schools	1,823/7			
School Level Variance	0.06			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference category in the model is in primary cohort in Grade 8 only. "NA" indicates "not applicable" and "ns" indicates "not significant." Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of 0.07. Only students taking Standard STAAR were included.

Table 2.38. Grade 8 STAAR Reading Level II Phase-in 1 Within Texas GEAR UP SG Schools: Length of Time in Cohort Covariate MLM 2013–14 (Grade 8)

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	0.94	0.26	***	NA
Grade 7 & 8 (vs Grade 8 only)	0.44	0.15	**	1.55
Female (vs. Male)	0.28	0.11	**	1.32
African American (vs. Hispanic)	-0.68	0.17	***	0.50 (1.98)
White (vs. Hispanic)	0.22	0.30	ns	NA
Economically Disadvantaged	-0.36	0.20	ns	NA
ELL	-1.54	0.16	***	0.21 (4.69)
Number of students/schools	1,822/7			
School Level Variance	0.08			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014.
Notes. The reference categories in the model included: in primary cohort in Grade 8 only, male, Hispanic, not Economically Disadvantaged, non-ELL. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "NA" indicates "not applicable" and "ns" indicates "not significant." The intercept-only model (model without predictors) for this outcome produced school variance of 0.07. Only students taking Standard STAAR were included.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

Level II Final. Students who attended in both Grade 7 and Grade 8 were significantly more likely than students who attended in Grade 8 only to have achieved at or above Level II at the final standard on Grade 8 STAAR Reading in both the main (see Table 2.39) and covariate (see Table 2.40) models. Thirty percent of students who attended Texas GEAR UP SG in both grades, achieved at or above Level II at the final standard as compared to 20% of students who attended in Grade 8 only (see Table D.13, Appendix D). Additionally, students who were identified as African American, economically disadvantaged, and ELL were less likely than their peers to reach the Level II final standard.

Table 2.39. Grade 8 STAAR Reading Level II Final Within Texas GEAR UP SG Schools: Length of Time in Cohort MLM Main Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	-1.44	0.18	***	NA
Grade 7 & 8 (vs Grade 8 only)	0.55	0.17	**	1.73
Number of students/schools	1,823/7			
School level variance	0.06			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: in in primary cohort in Grade 8 only, Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "NA" indicates "not applicable". The intercept-only model (model without predictors) for this outcome produced school variance of 0.07. Only students taking Standard STAAR were included.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

Table 2.40. STAAR Reading Level II Final Within Texas GEAR UP SG Schools: Length of Time in Cohort MLM Covariate Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	-0.65	0.26	*	NA
Grade 7 & 8 (vs Grade 8 only)	0.52	0.17	**	1.67
Female (vs. male)	0.14	0.11	ns	NA
African American (vs. Hispanic)	-0.72	0.18	***	0.48 (2.06)
White (vs. Hispanic)	-0.02	0.24	ns	NA
Economically Disadvantaged	-0.61	0.17	***	0.54 (1.84)
ELL	-3.16	0.46	***	0.04 (23.59)
Number of students/schools	1,822/7			
School Level Variance	0.10			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: in primary cohort in Grade 8 only, male, Hispanic, not Economically Disadvantaged, non-ELL. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "NA" indicates "not applicable" and "ns" indicates "not significant." The intercept-only model (model without predictors) for this outcome produced school variance of 0.07. Only students taking Standard STAAR were included in the model.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

STAAR Science

Level II Phase-in 1. Students attending Texas GEAR UP SG schools in both years were more likely to achieve at or above the Level II Phase-in 1 standard on Grade 8 STAAR Science than students only attending in Grade 8 based on both the main and covariate models (see Tables 2.41 and 2.42). Slightly over half of students attending in both years (55%) achieved at this level as compared to 40% of students attending in Grade 8 only (Table D.14, Appendix D). Additionally, in the covariate model, gender, race/ethnicity, economic status, and ELL status were all associated with Grade 8 STAAR Science achievement at or above the Level II Phase-in 1 standard. Students who were female, African American, classified as economically disadvantaged, and identified as ELL were less likely to meet the standard than their respective counterparts.

Table 2.41. Grade 8 STAAR Science Level II Phase-in 1 Within Texas GEAR UP SG Schools: Length of Time in Cohort Main MLM 2013–14 (Grade 8)

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio
Intercept	-0.37	0.23	ns	NA
Grade 7 & 8 (vs Grade 8 only)	0.52	0.15	***	1.67
Number of students/schools	1,800/7			
School Level Variance	0.24			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference category in the model is in primary cohort in Grade 8 only. "NA" indicates "not applicable" and "ns" indicates "not significant." Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of 0.27. Only students taking Standard STAAR were included in the model.

Table 2.42. Grade 8 STAAR Science Level II Phase-in 1 Within Texas GEAR UP SG Schools: Length of Time in Cohort Covariate MLM 2013–14 (Grade 8)

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	0.42	0.29	ns	NA
Grade 7 & 8 (vs Grade 8 only)	0.51	0.15	***	1.67
Female (vs. male)	-0.33	0.10	***	0.72 (1.40)
African American (vs. Hispanic)	-0.61	0.17	***	0.54 (1.84)
White (vs. Hispanic)	0.14	0.26	ns	NA
Economically Disadvantaged	-0.45	0.18	*	0.64 (1.57)
ELL	-1.29	0.17	***	0.28 (3.62)
Number of students/schools	1,799/7			
School Level Variance	0.24			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014.
Notes. The reference categories in the model included: in primary cohort in Grade 8 only, male, Hispanic, not Economically Disadvantaged, non-ELL. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "NA" indicates "not applicable" and "ns" indicates "not significant." The intercept-only model (model without predictors) for this outcome produced school variance of 0.27. Only students taking Standard STAAR were included in the model.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

Level II Final. Similar to meeting the Level II Phase-in 1 standard, students who attended in both Grade 7 and 8 were significantly more likely than students who attended in only Grade 8 to have achieved at or above Level II at the final standard on Grade 8 STAAR Science in both the main (see Table 2.43) and covariate (see Table 2.44) models. Twenty-three percent (23%) of students attending in both years reached the standard, compared to 13% for those attending in Grade 8 only (see Table D.14, Appendix D). Additionally, as with reaching the Level II Phase-in 1 standard, students who were female, African American, classified as economically disadvantaged, and identified as ELL were less likely to meet the Level II final standard than their respective counterparts.

Table 2.43. STAAR Science Level II Final Within Texas GEAR UP SG Schools: Length of Time in Cohort MLM Main Model 2013–14

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	-1.92	0.26	***	NA
Grade 7 & 8 (vs Grade 8 only)	0.59	0.20	**	1.81
Number of students/schools	1,800/7			
School level variance	0.21			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference category in the model is in primary cohort in Grade 8 only. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "NA" indicates "not applicable" and "ns" indicates "not significant." The intercept-only model (model without predictors) for this outcome produced school variance of 0.23. Only students taking Standard STAAR were included.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

Table 2.44. Grade 8 STAAR Science Level II Final Within Texas GEAR UP SG Schools: Length of Time in Cohort MLM Covariate Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	-0.92	0.32	**	NA
Grade 7 & 8 (vs Grade 8 only)	0.58	0.21	**	1.78
Female (vs. male)	-0.46	0.12	***	0.63 (1.59)
African American (vs. Hispanic)	-0.69	0.20	***	0.50 (2.00)
White (vs. Hispanic)	0.10	0.26	ns	NA
Economically Disadvantaged	-0.62	0.18	***	0.54 (1.86)
ELL	-2.38	0.40	***	0.09 (10.82)
Number of students/schools	1799/7			
School Level Variance	0.24			

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: in primary cohort in Grade 8 only, male, Hispanic, not Economically Disadvantaged, non-ELL. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "NA" indicates "not applicable" and "ns" indicates "not significant." The intercept-only model (model without predictors) for this outcome produced school variance of 0.24. Only students taking Standard STAAR were included in the model.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

STAAR Social Studies

Level II Phase-in 1. Students attending Texas GEAR UP SG schools both years were more likely to achieve at or above the Level II Phase-in 1 standard on Grade 8 STAAR Social Studies than students attending only in Grade 8 based on the main (Table 2.45) and covariate model (Table 2.46). A greater percentage of students attending in both years achieved at this level as compared to students attending in Grade 8 only (40% and 31% respectively, Table D.15, Appendix D). In the covariate model, gender, race/ethnicity, economic status, and ELL status were all associated with Grade 8 STAAR Social Studies achievement at or above the Level II Phase-in 1 standard. Students identified as female, African American, economically disadvantaged, and ELL were less likely to achieve at this level than their respective counterparts.

Table 2.45. Grade 8 STAAR Social Studies Achievement at Level II Phase-in 1 and Above Within Texas GEAR UP SG Schools: Length of Time in Cohort Main MLM 2013–14 (Grade 8)

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio
Intercept	-0.81	0.18	***	NA
Grade 7 & 8 (vs Grade 8 only)	0.38	0.15	*	1.45
Number of students/schools	1,795/7			
School Level Variance	0.08			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference category in the model is in primary cohort in Grade 8 only. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "NA" indicates "not applicable". The intercept-only model (model without predictors) for this outcome produced school variance of 0.09. Only students taking Standard STAAR were included in the model.

Table 2.46. Grade 8 STAAR Social Studies Achievement at Level II Phase-in 1 and Above Within Texas GEAR UP SG Schools: Length of Time in Cohort Covariate MLM 2013–14 (Grade 8)

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	0.14	0.25	ns	NA
Grade 7 & 8 (vs Grade 8 only)	0.35	0.15	*	1.42
Female (vs. Male)	-0.48	0.10	***	0.62 (1.61)
African American (vs. Hispanic)	-0.45	0.17	**	0.64 (1.56)
White (vs. Hispanic)	0.08	0.24	ns	NA
Economically Disadvantaged	-0.57	0.17	***	0.56 (1.77)
ELL	-1.35	0.20	***	0.26 (3.84)
Number of students/schools	1,794/7			
School Level Variance	0.10			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014.
Notes. The reference categories in the model included: in primary cohort in Grade 8 only, male, Hispanic, not Economically Disadvantaged, non-ELL. "NA" indicates "not applicable" and "ns" indicates "not significant." Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of 0.09. Only students taking Standard STAAR were included in the model.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

Level II Final. Length of time in the Texas GEAR UP SG cohort was not a significant predictor of achieving at the Level II final standard for Grade 8 STAAR Social Studies in either the main (see Table D.16, Appendix D) or covariate (see Table D.17, Appendix D) models.

2.6.3 Overall Level of Participation

As noted in the introduction to this section, a second strategy for understanding Texas GEAR UP SG implementation and its association with student outcomes was to create a new variable, overall level of participation using data supplied by the schools with respect to student participation in implementation activities.[51] At each grade level, participation in the following GEAR UP activities was considered:

[51] In Grade 7, these data were collected using Excel spreadsheets completed by each school. Beginning in Grade 8, Texas GEAR UP SG schools used GUIDES to submit their data.

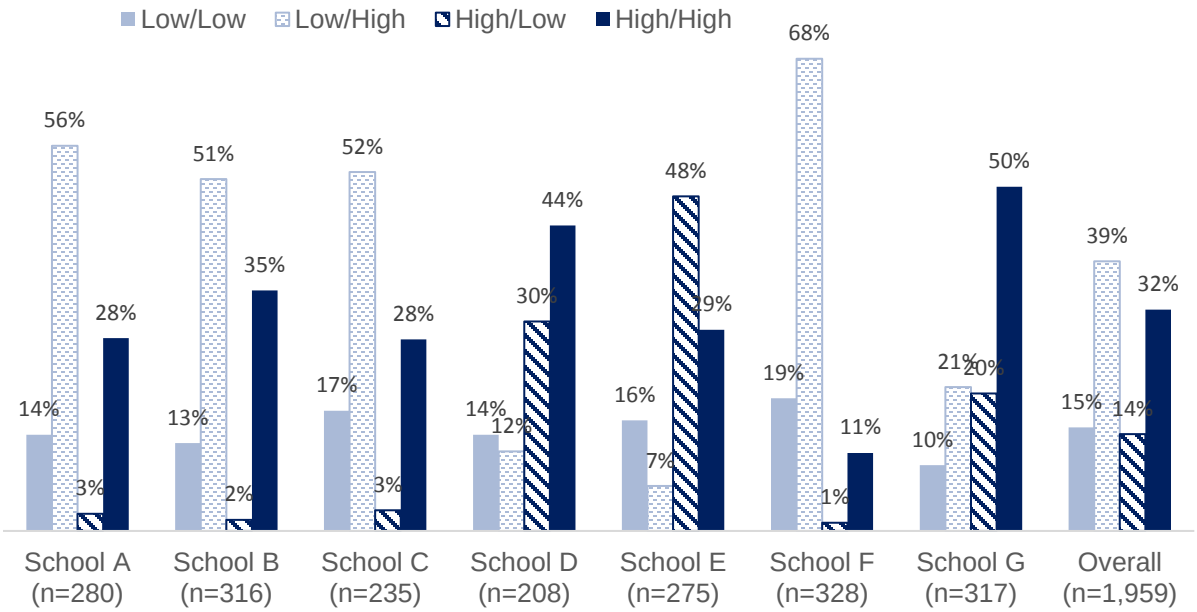
- Enrollment in at least one advanced course
- Tutoring in any subject for any length of time
- Mentoring for any length of time
- Counseling for any length of time
- Student participating in at least one family workshop
- Student participation in at least one college visit
- Student participation in at least one student workshop
- Student participation in any job site visit/job shadowing activity
- Student participation in at least one field trip related to STEM
- Student participation in at least one field trip other than STEM
- Parent of student participated in at least one parent workshop/family event
- Student participation in any Texas GEAR UP SG event coded as "Other"

Next, the total number of activities each student participated in was calculated within each year, to get at level of participation by grade (see Table D.18, Appendix D).[52] For Grade 7, the range of overall participation was 0–7 implementation activity types. For Grade 8, the range was slightly broader (0–8). In Grade 7, students who participated in 0–2 activities were coded as having a Low level of participation, while students who participated in 3–7 activities were coded as having a High level of participation. In Grade 8, Low was 0-3 and High was 4–8 activities. In Grade 7, 8% of students participated in zero activities while in Grade 8 this dropped to less than 1% (see Table D.18, Appendix D). As noted, these students with no participation were included in the Low participation group for their grade.

Finally, the categories were grouped into four new categories to indicate level of participation across the two years (Figure 2.8; see Table D.19, Appendix D). Because the variable depends on having participation codes for each year, only students enrolled in a Texas GEAR UP SG school in both Grade 7 and Grade 8 were included in these analyses. This means that all students in the sample included in these analyses had opportunities to participate in Texas GEAR UP SG each year, again making them more comparable.

[52] Student participation is dependent on having the option to participate because it is an offered activity.

Figure 2.8. Percentage of Students by Overall Level of Participation by Texas GEAR UP SG School



Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014.
Notes. In the category names, the first word (i.e., high or low) is associated with level of participation in Grade 7 while the second word is associated with level of participation in Grade 8.

As can be seen in Figure 2.8, across all campuses the two largest groups of students on overall level of participation fell into the Low/High and High/High groups (39% and 32%, respectively). The Annual Implementation Report #2 (e.g., Briggs et al., 2015) suggested that overall implementation of GEAR UP programming improved in Grade 8. Clearly, these results indicate that students at most of the GEAR UP campus took advantage of the increased offerings, and the majority of students (71%) had high levels of participation in at least one year.

The pattern of participation varied across the Texas GEAR UP SG schools. School G, which implemented a broad range of activities in both years, had the fewest students in the Low/Low (10%) group and the most in the High/High (50%) category.

School F had the highest percentage of students in the Low/Low group (19%) and the smallest percentage of students in the High/High group (11%). However, it also had the most improvement from the first to second year in terms of participation; 68% of its students were in the Low/High group, the highest of any school. Schools A, B, and C followed a similar pattern of improvement over time, with the majority of their students being categorized as Low/High or High/High. Combining the percentages in the Low/High and High/High groups makes it clear that overall participation was high in Grade 8 for the majority of students in Schools A, B, C, and G (84%, 86%, 80%, and 71%). This finding suggests that these schools struggled somewhat to engage students in Grade 7 but were more on track in Grade 8.

School D had the second highest percentage of students categorized in the High/High group (44%) but also had a very large proportion of students categorized as High/Low (30%). Overall, only 56% of students at School D had High participation in Grade 8. School E had the lowest level of participation in Grade 8 – although 29% of students at this campus were in the High/High category, only 36% overall had high participation in Grade 8.

An examination of overall level of participation by student characteristics suggests that the patterns were similar across all student subgroups (see Table D.20, Appendix D).

Next, results from MLM analyses are presented examining the association between student outcomes and overall level of participation. Students in the Low/Low group were the reference group for the analyses. In addition to the main MLM model, a covariate model examined the association between student outcomes and a range of variables including overall level of participation, Grade 7 STAAR Mathematics, and student characteristics.

COURSE COMPLETION

Grade 8 Algebra I Completion

Based on the main model, the odds of a student completing Algebra I in Grade 8 were higher for students in all groups in comparison to the Low/Low group (see Table 2.47). That is, students who were highly engaged in Texas GEAR UP SG in at least one of the two years were more likely to complete Algebra I than those with low participation in both years. Students in the sample from Texas GEAR UP SG school who were in the High/High group (46%), the High/Low group (29%) and the Low/High Group (23%) were significantly more likely than those in the Low/Low group (13%) to have completed Algebra I (see Table D.21, Appendix D).

Table 2.47. Grade 8 Algebra I Completion: Overall Level of Participation MLM Main Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio
Intercept	-1.98	0.24	***	NA
Participation High/High (vs. Low/Low)	1.77	0.20	***	5.80
Participation High/Low (vs. Low/Low)	1.05	0.23	***	2.96
Participation Low/High (vs. Low/Low)	0.70	0.20	***	2.01
Number of students/schools	1,959/7			
School level variance	0.18			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014.
Notes. The reference category in the model is Low/Low participation. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "NA" indicates "not applicable". The intercept-only model (model without predictors) for this outcome produced school variance of 0.18. Only students taking Standard STAAR and in a Texas GEAR UP SG school in both Grade 7 and Grade 8 were included in the model.

In the covariate model, the odds of completing Algebra I in Grade 8 were still higher for students in the High/Low group and the High/High group. However, students in the Low-High group – those who did not participate much in Grade 7 but had high participation in Grade 8 – were not significantly different from the Low-Low group in terms of Algebra I completion (see Table 2.48). Enrollment in Algebra I typically takes place at the end of Grade 7 – so it makes sense that participation in Texas GEAR UP SG must be high in that grade level in order to affect taking Algebra I. Previous score on Grade 7 STAAR Mathematics was also a significant predictor of Algebra I completion – unsurprisingly, students with higher scores on Grade 7 STAAR Mathematics were much more likely to complete Algebra I than students with lower scores. Additionally, students who were classified as economically disadvantaged were significantly less likely to complete Algebra I than students who were not classified as economically disadvantaged.

Table 2.48. Grade 8 Algebra I Completion: Level of Participation MLM Covariate Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio
Intercept	-1.45	0.43	***	NA
Participation High/High (vs. Low/Low)	1.37	0.32	***	3.70
Participation High/Low (vs. Low/Low)	0.76	0.36	*	2.14
Participation Low/High (vs. Low/Low)	0.59	0.32	ns	NA
Grade 7 STAAR Mathematics Scale Score	1.99	0.11	***	NA
Female (vs. Male)	0.02	0.14	ns	NA
African American (vs. Hispanic)	0.11	0.24	ns	NA
White (vs. Hispanic)	-0.14	0.36	ns	NA
Economically Disadvantaged	-0.68	0.24	**	0.51 (1.97)
ELL	-0.30	0.26	ns	NA
Number of students/schools	1,573/7			
School Level Variance	0.17			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014.
Notes. The reference categories in the model included: Low/Low Overall Level of Participation, male, Hispanic, not Economically Disadvantaged, non-ELL. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "NA" indicates "not applicable" and "ns" indicates "not significant." The intercept-only model (model without predictors) for this outcome produced school variance of 0.18. Only students taking Standard STAAR and in a Texas GEAR UP SG school in both Grade 7 and Grade 8 were included in the model.

ACHIEVEMENT ON STUDENT ASSESSMENTS

STAAR Algebra I End-of-Course

Level II Phase-in 1. In the main model students whose participation was at the High/Low level were more likely than those with Low/Low participation to have achieved at the Level II Phase-in 1 standard on STAAR Algebra I EOC (Table 2.49). This significant finding remained in the covariate model (see Table 2.50). In addition, in the covariate model students whose participation was at the High/High level were more likely than those with Low/Low participation to have met at or above this standard. In the covariate model, Grade 7 STAAR Mathematics was a significant predictor of reaching the Level II Phase-in 1 standard. Overall, 93% of students in the High/High group and 98% of students in the High/Low group, as compared to 87% of students in the Low/Low group achieved at or above the Level II Phase-in 1 standard on Algebra I EOC (see Table D.22, Appendix D).

Table 2.49. Grade 8 STAAR Algebra I End-of-Course Level II Phase-in 1 and Above by Level of Participation Group MLM Main Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio
Intercept	1.89	0.56	**	NA
Participation High/High (vs. Low/Low)	0.70	0.54	ns	NA
Participation High/Low (vs. Low/Low)	1.81	0.87	*	6.33
Participation Low/High (vs. Low/Low)	0.15	0.54	ns	NA
Number of students/schools	613/7			
School Level Variance	0.04			

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: Low/Low Overall Level of Participation, male, Hispanic, not Economically Disadvantaged, non-ELL. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "NA" indicates "not applicable" and "ns" indicates "not significant." The intercept-only model (model without predictors) for this outcome produced school variance of 0.07. Only students taking Standard STAAR and in a Texas GEAR UP SG school in both Grade 7 and Grade 8 were included in the model.

Table 2.50. Grade 8 STAAR Algebra I End-of-Course Level II Phase-in 1 by Level of Participation Group MLM Covariate Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio
Intercept	1.43	0.83	ns	NA
Participation High/High (vs. Low/Low)	1.39	0.67	*	4.03
Participation High/Low (vs. Low/Low)	2.98	1.20	*	19.59
Participation Low/High (vs. Low/Low)	0.25	0.66	ns	NA
Grade 7 STAAR Mathematics Scale Score (z-score)	1.52	0.27	***	NA
Female	0.18	0.34	ns	NA
African American (vs. Hispanic)	-0.69	0.51	ns	NA
White (vs. Hispanic)	NA^	NA^	NA	NA
Economically Disadvantaged	-0.76	0.62	ns	NA
ELL	-0.73	0.54	**	0.48 (2.08)
Number of students/schools	581/7			
School Level Variance	0.06			

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: in Low/Low Overall Level of Participation, STAAR Level II Phase-in 1 and Below, male, Hispanic, not Economically Disadvantaged, non-ELL. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "NA" indicates "not applicable" and "ns" indicates "not significant." The intercept-only model (model without predictors) for this outcome produced school variance of 0.07. Only students taking Standard STAAR and in a Texas GEAR UP SG school in both Grade 7 and Grade 8 were included in the model.

Post-hoc analyses revealed that almost all (89%) of the 84 students in the High/Low group were from two schools: School E and School G, which had the best performance on STAAR Mathematics in the sample (see Table C.5, Appendix C). Only 39 of the 581 students in the sample (5%) who took STAAR Algebra I EOC were in the Low/Low participation group (see Table D.22, Appendix D).

Level II Final. Participation level was not a significant predictor of reaching the Level II final standard on STAAR Algebra I EOC in either the main or covariate models.

STAAR Mathematics

Level II Phase-in 1. In the main model, students whose participation level was High/High, High/Low, and Low/High were more likely than students who were in the Low/Low group to achieve at the Level II Phase-in 1 standard on Grade 8 STAAR Mathematics (see Table D.26, Appendix D). However, this difference was nonsignificant within the covariate model (see Table D.27, Appendix D). In the covariate model, only Grade 7 STAAR Mathematics was associated with having performed at the Level II Phase-in 1 standard.

Level II Final. Participation level was not a significant predictor of reaching the Level II final standard on STAAR Mathematics in either the main (see Table D.28, Appendix D) or covariate model.

STAAR Reading

Level II Phase-in 1. Students whose participation level was High/High, High/Low and Low/High were more likely than students who were in the Low/Low group to achieve at the Level II Phase-in 1 standard on Grade 8 STAAR Reading in the main model (see Table D.30, Appendix D) but not the covariate model (see Table D.31, Appendix D). In the covariate model, Grade 7 STAAR Reading, race/ethnicity, and ELL status were all significantly associated with achieving at the Level II Phase-in 1 standard. African American students and students identified as ELL were less likely to achieve at this level than their respective counterparts (see Table D.29, Appendix D).

Level II Final. As with reaching the Level II Phase-in 1 standard, participation level was a significant predictor in the main model (see Table D.35, Appendix D) for reaching the Level II final standard on STAAR Reading – students whose participation was High/High were more likely to reach the standard than students whose participation was Low/Low. However, participation was not a significant predictor in the covariate model (see Table D.37, Appendix D), indicating that previous performance on Grade 7 STAAR Reading and other student characteristics were better predictors of reaching the standard than participation in GEAR UP programming (see Table D.36, Appendix D). In the covariate model, students classified as ELL were less likely to meet the Level II final standard than non-classified students.

STAAR Science

Level II Phase-in 1. Students whose participation level was High/High and students whose participation was low in Grade 7 but high in Grade 8 (Low/High) were more likely than students who were in the Low/Low group to achieve at the Level II Phase-in 1 standard on Grade 8 STAAR Science in the main model (see Table D.38, Appendix D) but not the covariate model (see Table D.39, Appendix D). In the covariate model, Grade 7 STAAR Mathematics, gender, and ELL status were all significantly associated with achieving at the Level II Phase-in 1 standard. Students identified as male and students not identified as ELL were more likely to achieve at this level than their respective counterparts.

Level II Final. In the main model, students whose participation was High/High was positively associated with STAAR Science achievement at or above Level II at the final standard (see Table 2.51). In the covariate model, High/High participation was no longer significant, but High/Low participation was significantly negatively associated with achieving the Level II final standard (Table 2.52). That is, after controlling for prior achievement and other characteristics, students whose participation dropped off in Grade 8 as compared to Grade 7 were much less likely to meet the Level II standard than those in the Low/Low category.

Table 2.51. Grade 8 STAAR Science Level II Final by Overall Level of Participation: MLM Main Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio
Intercept	-1.64	0.27	***	NA
Participation High/High (vs. Low/Low)	0.53	0.20	**	1.70
Participation High/Low (vs. Low/Low)	-0.02	0.26	ns	NA
Participation Low/High (vs. Low/Low)	0.11	0.20	ns	NA
Number of students/schools	1,807/7			
School Level Variance	0.28			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference category in the model included: Low/Low Overall Level of Participation. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "NA" indicates "not applicable" and "ns" indicates "not significant." The intercept-only model (model without predictors) for this outcome produced school variance of 0.24. Only students taking Standard STAAR and in Texas GEAR UP SG school in both Grade 7 and Grade 8 were included in the model.

Table 2.52. Grade 8 STAAR Science Level II Final by Overall Level of Participation: MLM Covariate Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	-1.08	0.46	*	NA
Participation High/High (vs. Low/Low)	-0.21	0.34	ns	NA
Participation High/Low (vs. Low/Low)	-0.82	0.41	*	0.44 (2.27)
Participation Low/High (vs. Low/Low)	-0.14	0.33	ns	NA
Grade 7 STAAR Mathematics Scale Score	2.12	0.12	***	NA
Female	-0.69	0.17	***	0.50 (1.99)
African American (vs. Hispanic)	0.32	0.28	ns	NA
White (vs. Hispanic)	-0.33	0.40	ns	NA
Economically Disadvantaged Status	-0.65	0.27	*	0.52 (1.92)
English Language Learner(ELL) Status	-1.61	0.43	***	0.20 (5.03)
Number of students/schools	1,543/7			
School Level Variance	0.33			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: Low/Low Overall Level of Participation, male, Hispanic, not Economically Disadvantaged, non-ELL. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "NA" indicates "not applicable" and "ns" indicates "not significant." The intercept-only model (model without predictors) for this outcome produced school variance of 0.24. Only students taking Standard STAAR and in a Texas GEAR UP SG school in both Grade 7 and Grade 8 were included in the model.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

STAAR Social Studies

Level II Phase-in 1. The main model for STAAR Social Studies revealed that students in the High/High group were more likely to reach the Level II Phase-in 1 standard than students in the Low/Low group (Table 2.53). In the covariate model, this association was no longer significant, but students in the Low/High group were significantly less likely to meet the standard (Table 2.54). Gender was also significantly associated with achieving at the Level II Phase-in 1 standard on Grade 8 STAAR Social Studies—male students were more likely to meet the standard than female students.

Table 2.53. Grade 8 STAAR Social Studies Level II Phase-in 1 and Above by Level of Participation Group MLM Main Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio
Intercept	-0.57	0.20	**	NA
Participation High/High (vs. Low/Low)	0.37	0.17	*	1.44
Participation High/Low (vs. Low/Low)	0.09	0.20	ns	NA
Participation Low/High (vs. Low/Low)	-0.14	0.16	ns	NA
Number of students/schools	1,803/7			
School Level Variance	0.13			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference category in the model included: Low/Low Overall Level of Participation. "NA" indicates "not applicable" and "ns" indicates "not significant." Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of 0.10. Only students taking Standard STAAR and in a Texas GEAR UP SG school in both Grade 7 and Grade 8 were included in the model.

Table 2.54. Grade 8 STAAR Social Studies Achievement at Level II Phase-in 1 and Above by Level of Participation Group MLM Covariate Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	0.23	0.36	ns	NA
Participation High/High (vs. Low/Low)	-0.26	0.28	ns	NA
Participation High/Low (vs. Low/Low)	-0.41	0.32	ns	NA
Participation Low/High (vs. Low/Low)	-0.67	0.28	*	0.51 (1.95)
Grade 7 STAAR Mathematics Scale Score (z-score)	1.91	0.11	***	NA
Female	-0.81	0.14	***	0.45 (2.24)
African American (vs. Hispanic)	-0.15	0.22	ns	NA
White (vs. Hispanic)	-0.06	0.34	ns	NA
Economically Disadvantaged	-0.16	0.23	ns	NA
ELL	-0.16	0.25	ns	NA
Number of students/schools	1,544/7			
School Level Variance	0.09			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: Low/Low Overall Level of Participation, male, Hispanic, not Economically Disadvantaged, non-ELL. "NA" indicates "not applicable" and "ns" indicates "not significant." Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of 0.10. Only students taking Standard STAAR and in a Texas GEAR UP SG school in both Grade 7 and Grade 8 were included in the model.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

Level II Final. Participation level was not a significant predictor of reaching the Level II final standard on STAAR Social Studies in either the main (see Table D.42, Appendix D) or covariate (see Table D.43, Appendix D) model. Female students, African American students, and students classified as economically disadvantaged were less likely to meet the Level II final standard than their counterparts.

2.7 Seeking Best Practices

In this section, the following question is addressed:

- What practices implemented by the grantee might be identified as potential best practices based on short-term outcomes?

To address this question, statistical models were created to predict the impact of participation in individual GEAR UP activities (e.g., college visit, mathematics tutoring) on academic outcomes (e.g., reaching the Level II Phase-in 1 standard on Grade 8 STAAR performance; see Appendix B for additional detail). For most implementation activities, two analyses were conducted. The first assessed if there was an association between *any* participation in the given activity and the outcome, while the second examined the association between the *amount* of participation (dosage) and the outcome. Dosage was the actual number of either hours (e.g., hours participating in tutoring) or number of activities (e.g., number of college visits) in which the student participated.

Models were created for each activity type and include participation effects for all available Grade 7 and Grade 8 time periods. For example, the models on any tutoring included both any tutoring in Grade 7 and any tutoring in Grade 8. Significant associations in the "any participation" category with an odds ratio of greater than 2.0, and in the "dosage" category with an effect size greater than 0.25 were considered meaningful and as identifying a potential best

practice for the given outcome. Findings that were both significant and meaningful are discussed.

As was the case with overall level of participation, examination of individual activity participation was not based on the quality of the activity or level of student engagement with the activity (as the latter two are not known). Still, examining the relationship between each activity and the outcomes of interest may suggest possible areas of focus within implementing a program similar to Texas GEAR UP SG. Tables E.1 through E.10 in Appendix E provide descriptive information regarding participation at each of the Texas GEAR UP SG schools.

One challenge in identifying potential best practices was that some activities were engaged in only rarely. These activities may have promise, but there was not sufficient data to make a significant association between participation and outcomes. Job site visits/shadowing is one example of an activity that occurred only rarely (only in Grade 8), and mostly within a single school. In addition, it was difficult to separate the association between activities and school in some cases. As will be described, School G which had the highest rate of success with Algebra I completion also engaged in the broadest range of activities and was often the school with the highest level of participation in a given activity.

2.7.1 Course Completion

ALGEBRA I

Table 2.55 provides an overview of all activities that were associated with Grade 8 Algebra I completion (see Tables E.11 to E.23, Appendix E). In all, 11 activity types were meaningfully positively associated with this outcome (that is, students who participated in these activities were more likely to complete Algebra I than their peers). The three activities with the highest odds ratios (higher odds ratios are associated with more impact) were going on a college visit in the summer of Grade 7, enrolling in an advanced mathematics course in Grade 7, and having a parent attend a summer workshop in Grade 7. It is unclear from the data if the summer workshops offered were related to Algebra I completion.

Relative to dosage of activity/event, four of the variables were both significant and meaningful. These included family events in Grade 8, student workshops Grade 8, educational trips in Grade 8, and parent workshops in Grade 8. Each of these was positively associated suggesting that students who participated more in these activities were more likely to have completed Algebra I in Grade 8.

Table 2.55. Activities Associated with Grade 8 Algebra I Completion

Activity	Any Activity/ Event Coefficient	Odds Ratio[a]	Dosage of Activity/ Event Coefficient	Effect Size
Advanced Mathematics Enrollment in Grade 7	1.65***	5.2	--	NA
Counseling Grade 7	0.69*	2.0	0.27*	0.14
Family Event Grade 8	0.37**	1.5	0.51***	0.30
College Visit Grade 7 Summer	1.70***	5.3	1.66***	0.14
Student Workshop Grade 7 School Year	1.02**	2.8	NA	NA
Student Workshop Grade 7 Summer	0.75***	2.1	0.65**	0.16
Student Workshop Grade 8 School Year	-0.40	NA	0.28***	0.52
Educational Trip (STEM) Grade 8 School Year	0.93***	2.6	0.94***	0.14
Educational Trip (Other) Grade 8 School Year	0.97***	2.7	0.83***	0.25
Parent Workshop Grade 7 School Year	0.76***	2.1	0.18	NA
Parent Workshop Grade 7 Summer	1.54**	4.7	1.53**	0.11
Parent Workshop Grade 8 School Year	0.34	NA	0.29***	0.35

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014.

Notes. Separate multilevel models were run for each activity type and for any participation (yes/no) versus dosage of participation (hours or number of events). Only activities that were significantly associated with the outcome are presented. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "--" indicates this is not a variable. "NA" indicates "not applicable." [a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

Counseling was meaningfully associated with Algebra I completion in Grade 7, but not Grade 8. However, inspection of the data (see Table E.3, Appendix E) indicated that only two schools had any counseling activities in Grade 7 – School D and School G. School G had a very high rate of Algebra I completion, which may have driven this association (rather than the other way around). Almost all students in School D (98%) attended counseling in Grade 7, and only 49% of students in School G attended counseling, yet it had a higher Algebra I completion rate.

Parent engagement was associated positively with Algebra I completion. Specifically, having a parent who participated in any parent workshop during the Grade 7 school year or having a parent participate in a workshop during the summer of Grade 7 was significantly associated with Algebra I completion. In addition, higher levels of parent participation in parent workshops in both the summer of Grade 7 and during the school year in Grade 8 were positively associated with Algebra I completion. As reported in the Annual Implementation Reports (O'Donnel et al., 2013; Briggs et al., 2015), schools generally struggled to engage parents in activities in part because relatively few activities were offered to parents (see Tables E.7 and E.10, Appendix E). Of course, it is possible that more highly engaged parents have students who are more engaged and motivated in school than their peers, and so the difference in Algebra I completion may be attributable to unmeasurable pre-existing differences between students. Still, programs such as Texas GEAR UP SG may help give schools an incentive to continue to find ways to further engage parents or to engage new parents with their student's education and course taking.

College visits in the summer after Grade 7 were also significantly associated with Algebra I completion. However, similar to counseling, only two schools offered summer college visits (School E and School F), and only a very small number of students participated (see Table E.4, Appendix E). College visits were more widespread during the school year, but such visits were not associated with Algebra I completion. Data regarding college visit quality were not available; however, anecdotally, the content of college visits varied by school. For example, as noted in Annual Implementation Report #1 (O'Donnel, et al., 2013), School G engaged in what were considered "enhanced" college visits, intended to help connect the visit to what the students were doing in their courses.

Participating in any student workshops during the Grade 7 school year or summer and participating in higher numbers of student workshops in Grade 8 were each significantly positively associated with Algebra I completion. In addition, educational trips in Grade 8 (both STEM and other trips) were also significantly positively associated with Algebra I completion (both for any participation and higher amounts). However, only some schools offered these activities (see Tables E.7 to E.9, Appendix E). For example, the only school to offer an "other" educational trip in Grade 8 was School G, which had a much higher Algebra I completion rate than the other schools. This variability in offerings makes it challenging to determine if the trips truly increased the likelihood of students completing Algebra I, or if they were artifacts of student engagement.

It is important to note that almost all activities coded as student workshops in Grade 7 summer were intended by the schools to improve Algebra I completion. Once again, School G was the leader in this area, and had more than 91% of students participate in an average of 4.6 workshops during the school year and 42% of students participated in a 20-hour, week long minicamp focused on Algebra I during the summer between Grades 7 and Grade 8 (see Table E.6, Appendix E).

2.7.2 Achievement on Student Assessments

While a broad range of activities were significantly positively associated with Algebra I completion, there were fewer significant associations with performance on STAAR. As in earlier sections, STAAR achievement was assessed at both the Level II Phase-in 1 standard and above and at Level II final and above. While findings associating activity participation with STAAR achievement are presented here, readers should interpret these with caution. STAAR achievement may generally be more difficult to influence within a short time frame at least by a program where STAAR was considered to be only indirectly related as a project outcome. Only significant findings, controlling for students' prior STAAR performance, are presented below (see Tables E.24 to E.98, Appendix E).

STAAR Algebra I EOC

Level II Phase-in 1. Six activities/events were significantly associated with achieving at or above the Level II Phase-in 1 standard on STAAR Algebra I EOC in Grade 8, with all significant findings at a meaningful level based on odds ratios greater than 2.0 (see Table 2.56; see Tables E.24 to E.30, Appendix E). Family event participation in Grade 7 was significant at both levels (i.e., any participation and dosage; see Table 2.56). Participation in at least one family event in Grade 8 and in at least one student workshop in Grade 7 were also positively associated with reaching the Level II Phase-in 1 standard. Increased parent participation in Grade 8 workshops was also significantly positively associated with STAAR Algebra I EOC performance at or above the Level II Phase-in 1 standard. Not surprisingly, students who were enrolled in an advanced mathematics course in Grade 7 were more likely to meet the Level II Phase-in 1 standard on the STAAR Algebra I EOC. On the other hand, participation in counseling in Grade 8 was negatively associated – students who received counseling at least once in Grade 8 were less likely to meet the Level II Phase-in 1 standard.

Table 2.56. Activities Associated with Algebra I EOC Achievement at Level II Phase-in 1 and Above (Grade 8)

Activity	Any Activity/Event Coefficient	Odds Ratio[a]	Dosage of Activity/Event Coefficient	Effect Size
Advanced Mathematics Enrollment in Grade 7	0.81*	2.2	-	NA
Counseling Grade 8	-1.15*	0.3 (3.1)	0.01	NA
Family Event Grade 7	1.65*	5.2	1.46*	0.47
Family Event Grade 8	1.07**	2.9	0.42	NA
Student Workshop Grade 7 School Year	1.06**	2.9	0.38	NA
Parent Workshop Grade 8 School Year	0.58	NA	0.21*	0.26

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014.

Notes. Separate multilevel models were run for each activity and for any participation (yes/no) versus dosage of participation (hours or number of events). Only activities that were significantly associated with the outcome are presented. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "--" indicates this is not a variable. "NA" indicates "not applicable."

[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

Level II Final. STAAR Algebra I EOC achievement at or above Level II at the final standard was significantly associated with only two activities (see Table 2.57; see Tables E.31 to E.37, Appendix E). Students enrolled in an advanced mathematics course in Grade 7 were more likely to reach this standard. As with reaching the Level II Phase-in 1 standard, receiving counseling in Grade 8 was significantly negatively associated with achieving at the Level II Final standard on STAAR Algebra I EOC.

Table 2.57. Activities Associated with STAAR Algebra I EOC Achieving at Level II Final (Grade 8)

Activity	Any Activity/Event	Odds Ratio[a]	Dosage of Activity/Event	Effect Size
Advanced Mathematics Enrollment in GRADE 7	0.73	2.1	NA	NA
Counseling Grade 8	-0.88*	0.4 (2.4)	-0.11	NA

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness end-of-course (STAAR EOC), 2014.

Notes. Separate multilevel models were run for each activity and for any participation (yes/no) versus dosage of participation (hours or number of events). Only activities that were significantly and meaningfully associated with the outcome are presented. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "--" indicates this is not a variable. "NA" indicates "not applicable."

[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

STAAR MATHEMATICS

Level II Phase-in 1. Achieving at or above the Level II Phase-in 1 standard on STAAR Mathematics was meaningfully associated with five activities/events (see Table 2.58; see Tables E.38 to E.53, Appendix E). Job shadowing in Grade 8, parent workshops in Grade 7, and advanced mathematics enrollment were the three activities most highly associated with meeting the standard. For dosage, only one of the relationships between participation and performance at or above this standard was both significant and meaningful. Attending more college visits in Grade 8 predicted greater success in achieving the Level II Phase-in 1 standard in mathematics.

Table 2.58. Activities Associated with STAAR Mathematics Achievement at Level II Phase-in 1 and Above (Grade 8)

Activity	Any Activity/Event Coefficient	Odds Ratio[a]	Dosage of Activity/Event Coefficient	Effect Size
Advanced Mathematics Enrollment in Grade 7	0.81**	2.3	-	-
College Visit Grade 8 School Year	0.87***	2.4	0.59***	0.56
Job Shadowing/Job Site Visit Grade 8 School Year	1.12*	3.1	0.89*	0.15
Educational Trip (STEM) Grade 8 School Year	0.78*	2.2	0.78*	0.10
Parent Workshop Grade 7 School Year	0.96**	2.6	0.47**	0.16

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness end-of-course (STAAR EOC), 2014.

Notes. Separate multilevel models were run for each activity and for any participation (yes/no) versus dosage of participation (hours or number of events). Only activities that were significantly and meaningfully associated with the outcome are presented. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "--" indicates this is not a variable. "NA" indicates "not applicable."

Level II Final. Grade 8 STAAR Mathematics achievement at the Level II Final standard was meaningfully associated with only one activity (Table 2.59; see Tables E.54 to E.57, Appendix E). Students enrolled in an advanced mathematics course in Grade 7 were more likely to achieve at or above Level II at the final standard.

Table 2.59. Activities Associated with STAAR Mathematics Achievement at Level II Final (Grade 8)

Activity	Any Activity/Event	Odds Ratio	Dosage of Activity/Event	Effect Size
Advanced Mathematics Enrollment in Grade 7	1.03**	2.9	NA	NA

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2014.

Notes. Separate multilevel models were run for each activity and for any participation (yes/no) versus dosage of participation (hours or number of events). Only activities that were significantly and meaningfully associated with the outcome are presented. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "--" indicates this is not a variable. "NA" indicates "not applicable."

STAAR READING

Level II Phase-in 1. Students enrolled in an advanced reading course in Grade 7 were more likely to achieve at or above the Level II Phase-in 1 standard on STAAR Reading than their peers (see Table 2.60; see Tables E.58 and E.59, Appendix E). No other activities/events were significantly associated with this outcome.

Table 2.60. Activities Associated with STAAR Reading Achievement at Level II Phase-in 1 (Grade 8)

Activity	Any Activity/Event	Odds Ratio	Dosage of Activity/Event	Effect Size
Advanced Reading Enrollment in Grade 7	1.16***	3.2	NA	NA

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2014.

Notes. Separate multilevel models were run for each activity and for any participation (yes/no) versus dosage of participation (hours or number of events). Only activities that were significantly and meaningfully associated with the outcome are presented. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "--" indicates this is not a variable. "NA" indicates "not applicable."

Level II Final. As with the Level II Phase-in 1 standard, meeting the Level II final standard on STAAR Reading was only meaningfully associated with enrollment in an advanced reading course in Grade 7 (Table 2.61; see Tables E.60 to E.62, Appendix E).

Table 2.61. Activities Associated with STAAR Reading Achievement at Level II Final (Grade 8)

Activity	Any Activity/Event	Odds Ratio	Dosage of Activity/Event	Effect Size
Advanced Reading Enrollment in Grade 7	0.68***	2.0	NA	NA

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2014.
Notes. Separate multilevel models were run for each activity and for any participation (yes/no) versus dosage of participation (hours or number of events). Only activities that were significantly and meaningfully associated with the outcome are presented. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "--" indicates this is not a variable. "NA" indicates "not applicable."

STAAR SCIENCE

Level II Phase-In 1. Three activity participation variables were significantly and meaningfully associated with performance at or above the Level II Phase-in 1 standard on STAAR Science (see Table 2.62; see Tables E.63 to E.80, Appendix E). Of these, the strongest relationship was with enrollment in an advanced mathematics course in Grade 7. Additionally, the number of parent workshops attended was positively associated with achieving at or above the Level II Phase-in 1 standard. Receiving any tutoring in Grade 7 in science was negatively associated with student achievement at this level.

Table 2.62. Activities Associated with STAAR Science Achievement at Level II Phase-in 1 and Above (Grade 8)

	Any Activity/ Event	Odds Ratio[a]	Dosage of Activity/Event	Effect Size
Advanced Mathematics Enrollment in Grade 7	1.12**	3.1	NA	NA
Science Tutoring in Grade 7	-0.67*	0.5 (2.0)	-0.10*	-0.24
Parent Workshop Grade 8 School Year	0.47**	1.6	0.23***	0.27

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2014.
Notes. Separate multilevel models were run for each activity and for any participation (yes/no) versus dosage of participation (hours or number of events). Only activities that were significantly and meaningfully associated with the outcome are presented. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "--" indicates this is not a variable. "NA" indicates "not applicable."
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

Level II Final. Grade 8 STAAR Science achievement at the Level II final standard was meaningfully associated with three activities (Table 2.63; see Tables E.81 to E.88, Appendix E). As above, enrolling in an advanced mathematics class in Grade 7 was positively associated and science tutoring in Grade 7 was negatively associated with meeting the standard. Additionally, attending a college visit in the summer between Grades 7 and 8 was positively associated with meeting the Level II final standard.

Table 2.63. Activities Associated with STAAR Science Achievement at Level II Final (Grade 8)

Activity	Any Activity/Event	Odds Ratio[a]	Dosage of Activity/Event	Effect Size
Advanced Mathematics Enrollment in Grade 7	0.68***	2.0	NA	NA
Science Tutoring in Grade 7	-1.62**	0.2 (5.0)	-0.09	NA
College Visit Grade 7 Summer	1.06*	2.9	1.05*	0.09

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2014.
Notes. Separate multilevel models were run for each activity and for any participation (yes/no) versus dosage of participation (hours or number of events). Only activities that were significantly and meaningfully associated with the outcome are presented. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "--" indicates this is not a variable. "NA" indicates "not applicable."
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

STAAR Social Studies

Level II Phase-in 1. Six activities/events were significantly and meaningfully associated with achieving at or above the Level II Phase-in 1 standard on Grade 8 STAAR Social Studies (see Table 2.64; see Tables E. 89 to E.98, Appendix E). Students participating in education trips in the summer and school year of Grade 7 and 8 were more likely to achieve at the Level II Phase-in 1 standard.[53] Additionally, students who attended a college visit in the summer of Grade 7, participated in a job shadowing site visit in Grade 7 or were enrolled in an advanced reading course in Grade 7 were more likely to have achieved at this level than their peers.

Table 2.64. Activities Associated with STAAR Social Studies Achievement at Level II Phase-in 1 and Above (Grade 8)

Activity	Any Activity/Event	Odds Ratio[a]	Dosage of Activity/Event	Effect Size
Advanced Reading Enrollment in Grade 7	0.91***	2.5	NA	NA
College Visit Grade 7 Summer	1.15*	3.2	1.14*	0.10
Job Shadowing/Job Site Visit Grade 7 School Year	0.92*	2.5	1.0**	0.13
Educational Trip (Other) Grade 7 School Year	1.64**	5.2	1.59*	0.16
Educational Trip (Other) Grade 7 Summer	3.08**	21.8	3.08**	0.23
Educational Trip (Other) Grade 8 School Year	0.45*	1.6	0.44**	0.13

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2014.
Notes. Separate multilevel models were run for each activity and for any participation (yes/no) versus dosage of participation (hours or number of events). Only activities that were significantly and meaningfully associated with the outcome are presented. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "--" indicates this is not a variable. "NA" indicates "not applicable." Other indicates the field trip focused on a subject other than STEM.

Level II Final. The only activity significantly associated with STAAR Social Studies achievement at the Level II final standard was enrollment in an advanced reading course in Grade 7 (see Tables 2.65 and 2.66). Students who were enrolled in an advanced reading course in Grade 7 were more likely to achieve at or above Level II at the final standard on Grade 8 STAAR Social Studies than students who weren't enrolled in an advanced reading course.

[53] Other indicates the field trip focused on a subject other than STEM.

Table 2.65. Activities Associated with STAAR Social Studies Level II Final and Above, 2013–14 (Grade 8)

Activity	Any Activity/Event	Odds Ratio	Effect Size	Dosage of Activity/Event	Effect Size
Advanced Reading Enrollment in Grade 7	0.88***	2.39	0.48	-	NA

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2014.
Notes. Separate multilevel models were run for each activity and for any participation (yes/no) versus dosage of participation (hours or number of events). Only activities that were significantly and meaningfully associated with the outcome are presented. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "--" indicates this is not a variable. "NA" indicates "not applicable."

3. Summary and Conclusion

This chapter provides a summary of findings presented in Chapter 2 organized by student outcomes. Where possible, the following key evaluation research questions were addressed for each of the outcomes:

- Descriptively, how did the Texas GEAR UP SG students do with regard to key Grade 8 outcomes: Algebra I, college readiness on Grade 8 STAAR and STAAR Algebra I EOC, and on-time promotion to Grade 8?
- How did student outcomes within the Texas GEAR UP SG primary cohort compare to state averages? To student outcomes at matched comparison schools? To student outcomes in the retrospective cohort?
- What was the relationship between student characteristics, participation in the Texas GEAR UP SG primary cohort, and student outcomes? Were any achievement gaps associated with student characteristics reduced or increased by participation in Texas GEAR UP SG?
- Within Texas GEAR UP SG schools, to what extent were Grade 8 student outcomes associated with length of time in the primary cohort? Associated with the student's overall level of participation?
- Within Texas GEAR UP SG schools, to what extent were Grade 8 student outcomes associated with participation in specific types of GEAR UP SG activities? What activities, if any, were identified as potential best practices based on short-term outcomes?

Key variables used in the outcomes analyses are described here to facilitate understanding of the findings (see also Appendix B). Included in the descriptions are key challenges or limitations associated with the variables.

- **Texas GEAR UP SG Primary Cohort versus Matched Comparison Schools:** The comparison schools were identified as matches to the Texas GEAR UP SG schools by examining data on key demographics and on student performance on state assessments prior to the start of the grant. These schools were similar based on available data but may have differed from Texas GEAR UP SG schools in other ways, such as leadership and student engagement. Additionally, although the comparison schools did not participate in the Texas GEAR UP SG or in any federal GEAR UP program, it is not known if these schools had initiated similar programs using alternative resources.
- **Texas GEAR UP SG Primary versus Retrospective Cohort:** The primary cohort includes students who were in Grade 7 in 2012–13, the year the Texas GEAR UP SG program was initiated. Students in the retrospective cohort attended the same schools, but one year prior to the primary cohort (Grade 7 in 2011–12). Schools were anticipated to feature minimal changes year-to-year other than those brought about by participation in the Texas GEAR UP SG. That is, at least some leadership and teachers were expected to stay consistent from year to year and the community context was expected to change minimally, if at all.
- **Student Characteristic Groups:** Models included four key student characteristic groups in order to assess how the program was supporting, or not, the broad range of students attending the school. These included gender, race/ethnicity, economically disadvantaged status, and ELL status.
- **Length of Time in Cohort:** Within the Texas GEAR UP SG schools, there were students who were in the Texas GEAR UP SG primary cohort in Grade 7 only, Grade 8 only, and in both years. Students who attended a Texas GEAR UP school during an entire school year (regardless of participation in activities) or who attended part of the year and had a record of participation in at least one GEAR UP activity, were considered part of that year's cohort. The impact of this definition on outcomes was anticipated to be conservative. That is, outcomes associated with students who did not attend the school for the entire year and therefore did not have access to all of the activities implemented by the school were still

included as part of the cohort's sample, potentially reducing the strength of the outcome. Grade 8 outcome data were not widely available for students who participated in Grade 7 only, therefore, analyses only examined differences between students who attended in Grade 8 or in both years. Additionally, prior year STAAR scores were not available for most of the students who had attended in Grade 8 only, so MLM analyses did not include this variable in the models. This limits the ability to say that differences between the groups' outcomes were not due to pre-existing differences.

- **Overall Level of Participation:** Within the Texas GEAR UP SG schools, each student was coded at each grade level as having participated in activities to a relatively low versus high extent. Students were grouped into one of four overall level of participation categories based on participation across Grades 7–8:
  - Low/Low: Low in both Grade 7 and Grade 8
  - High/Low: High in Grade 7, Low in Grade 8
  - Low/High: Low in Grade 7, High in Grade 8
  - High/High: High in both Grade 7 and Grade 8

  The determination of level of participation within a school year was based on adding the number of *types* of activities engaged in by the student. For example, a student who was tutored for 10 hours, participated in two student workshops, and went on one college visit would be counted as having participated in three activities. A second student who was tutored for 30 hours, participated in ten student workshops, and went on two college visits would also be counted as participating in three activities. Since each of the students were coded as three, they would both fall into the same group even though there was some difference between the two. In addition, participation in activities could not be differentiated based on quality of implementation or student engagement with the activity. Level of participation within a given year did not differentiate between students who had no participation and those with low participation, nor did it differentiate within the high group those who were very high from those just above the median dividing the two groups.
- **Promotion:** TEA does not specifically have a promotion/retention indicator in PEIMS. Students were considered to have been promoted on time from Grade 7 to 8 if they were ever in Grade 7 in PEIMS for one year and then in Grade 8 in the PEIMS fall snapshot the following year.
- **Achievement on STAAR Assessments:** Two levels of achievement on Grade 8 STAAR and STAAR Algebra I EOC scores were of interest. The first and slightly lower level of achievement was at or above the Level II Phase-in 1 standard, which served as the passing standard. The second and higher standard was achievement at or above the Level II final standard. Achievement at or above the Level II final standard was considered to be a better indicator that students were on track with the goals of the Texas GEAR UP SG.
- **Algebra I Completion:** Student completion of Algebra I was based on data provided by TEA from PEIMS. In order to be counted as completed, students needed to have passed the course and received credit for it. In analyses, students taking the course who did not pass were grouped with students who did not take the course (Algebra I non-completers).

3.1 Limitations

In addition to some of the limitations already noted, readers are cautioned that findings with regard to student outcomes were considered to be associated with Texas GEAR UP SG, rather than caused by Texas GEAR UP SG. The retrospective cohort and matched comparison schools provided the best possible comparison groups given the context of the design of the Texas GEAR UP SG program. Models presented in this report control for factors that are measurable (i.e., collected by schools and reported to TEA) but other factors that are not

measurable (e.g., student motivation) may also contribute to change. This is true whether findings were significant or not significant.

Detailed information about GEAR UP SG implementation in Grade 7 and Grade 8 can be found in the Annual Implementation reports (O'Donnel, et al., 2013; Briggs, et al., 2015). Grade 7 implementation was limited to a briefer timeframe as the Texas GEAR UP SG schools received a notification of grant award (NOGA) in October 2012, followed by the beginning of implementation in November/December 2012, well after the start of the Grade 7 school year.

Had NOGA occurred prior to the start of the school year, some Texas GEAR UP SG schools may have made different decisions regarding, for example, student placement in advanced courses. Since enrollment in Grade 7 occurred prior to award, participation in Texas GEAR UP SG activities cannot be associated with Grade 7 course choices. Participation data in Grade 8 for this report were limited to activities that occurred through March 2014. It was not possible from the data to establish which activities in Grade 8 occurred prior to certain outcomes. Conversely, it is likely that some additional GEAR UP SG activities occurred prior to outcomes but were not included in the analyses. In general, this again leads to a conservative estimate of the relationship between participation in GEAR UP SG and outcomes.

A final limitation to the findings reported here is associated with teacher professional development (PD). Texas GEAR UP SG schools are expected to provide teacher PD that will support teachers in improving academic rigor. While data regarding teacher PD were available, specific teachers who participated were not identified. Even if it were clear exactly which teachers were participating in which PD opportunities, connecting student outcomes to specific teachers was not possible. In general, Texas GEAR UP SG is considered a schoolwide approach with the goal of positive outcomes across the entire primary cohort.

In the next section, key findings associated with each student outcome are presented. Readers are encouraged to keep the preceding limitations and challenges in mind in forming their own interpretations of the results. One additional caution is that a large number of statistical models were run for each of the outcomes. Consistent findings across the various models were of greater interest than inconsistent findings and are emphasized in the summary presented in this chapter.

Finally, this report focuses on short-term outcomes that are very specific and measurable. Some of the GEAR UP SG activities that occurred in Grade 7 and Grade 8 may not be associated with outcomes to date but may eventually be associated with the longer-term goals of the program including enrolling in and attending a postsecondary educational institution.

3.2 Key Findings

3.2.1 Course Completion: Algebra I

Readers of Chapter 2 have likely already determined that Algebra I was the clear success story with regard to Texas GEAR UP SG Grade 7–8 outcomes. That is, participation in the Texas GEAR UP SG program was associated with improved rates of Algebra I completion. The Texas GEAR UP SG schools were encouraged to achieve a 30% Algebra I completion rate in Grade 8 (Project Objective 1.1) and in general the Texas GEAR UP SG schools focused on achieving this goal. In part, it can be argued that of the outcomes of interest to this report, the one over which the Texas GEAR UP SG schools had the most control was enrolling students in Algebra I in Grade 8, then working to help those students to successfully complete the course. Results suggest this was what occurred.

DESCRIPTIVES

TEA established Project Objective 1.1 that the Texas GEAR UP SG schools would have at least 30% of the primary cohort students complete Algebra I in Grade 8. In the retrospective cohort at the Texas GEAR UP SG schools, only 14% of students completed Algebra I in Grade 8. In setting the goal at 30%, TEA raised the bar significantly for these schools – they needed to slightly more than double the rate of Algebra I completion from the prior year. To do so, they had a limited time frame to implement activities – the second half of the Grade 7 school year and the summer following Grade 7 and within Grade 8. Despite this limitation, the schools overall met the target exactly, achieving an Algebra I completion rate of 30%. However, only two of the schools met or exceeded the target, School G (52%) and School F (31%). The other five schools had between 20% (School B) and 27% (School C) completion rates. All schools had higher completion rates than their respective comparison schools and the retrospective cohort.

In addition, the Texas GEAR UP SG schools increased enrollment in Algebra I without substantially reducing completion rates. Overall, 92% of primary cohort students enrolled in Algebra I completed the course. This was comparable to completion within the retrospective cohort (92%) and was only slightly lower than the comparison schools (96%). School B struggled the most to have enrolled students complete Algebra I with only 74% of students at this school completing the course. School A also struggled somewhat, with 81% of students who enrolled successfully completing the course. Success rates at the remaining Texas GEAR UP SG schools were much higher, ranging from 93-100%.

STATISTICAL COMPARISONS

State averages were not available for Grade 8 Algebra I completion at the time of analysis so it was not possible to make that comparison. However, relative to both the comparison schools and the retrospective cohorts, Grade 8 students in the Texas GEAR UP SG primary cohort were significantly more likely to complete Algebra I. In fact, they were nearly three times more likely than students at the comparison schools and twice as likely as students in the retrospective cohort to have completed Algebra I. These significant differences remained even after adjusting for math achievement in Grade 7 (STAAR Mathematics) and for student characteristics.

ACHIEVEMENT GAPS

Across Texas GEAR UP SG primary cohort, matched comparison schools, and the retrospective cohort, students identified as economically disadvantaged and those identified as ELL were significantly less likely than their respective counterparts to have completed Algebra I. Texas GEAR UP SG participation neither increased nor decreased this achievement gap significantly. That is, although Algebra I completion increased at the Texas GEAR UP SG schools, students who were economically disadvantaged and those who were ELL continued to lag behind their peers. The overall effect was that it was beneficial to all students to have attended a Texas GEAR UP SG school regarding Algebra I completion, thought it does not appear to have narrowed any gaps associated with student characteristics.

ASSOCIATIONS WITH PARTICIPATION

Students in the primary cohort who attended a Texas GEAR UP SG school in both Grade 7 and Grade 8 were significantly more likely than those who attended in Grade 8 only to have completed Algebra I. Additionally, students with a high level of participation in Grade 7 (i.e., students in the High/Low and High/High groups) were more likely than their Low/Low counterparts to complete Algebra I in Grade 8. This finding suggests that engaging students at a high level as early as possible was associated with successfully completing Algebra I.

The Texas GEAR UP SG schools generally focused on the Algebra I goal beginning in Grade 7, as described in Annual Implementation Report #1 (O'Donnel et al., 2013) and continued this in

Year 2 (Briggs, et al., 2015). Much of the student support services including tutoring, mentoring and counseling were focused on helping students succeed in Algebra I. Several schools offered mathematics enrichment programs to Grade 7 students and four of the schools (Schools B, E, F, and G) implemented Algebra I support programs over the summer prior to Grade 8. Findings examining the relationship between specific activities and Algebra I completion identified 12 activities that were significantly and meaningfully associated with completion (see Table 2.35, Chapter 2). In Grade 7, being enrolled in an advanced mathematics course, participation in any counseling, participation in student workshops (in the summer and school year), and participation by parents in workshops (in the summer and school year) were all significantly positively associated with Algebra I completion. College visits in the summer following Grade 7 were also significantly positively associated with Algebra I completion. In Grade 8, engagement with family events, educational trips (STEM and Other), and parent workshops were significantly positively associated with Algebra I completion.

The four activities most strongly associated with Algebra I completion were advanced mathematics course enrollment in Grade 7, high engagement with college visits during summer following Grade 7, and participation by parents in Grade 7 summer workshops. Given the finding regarding overall level of participation and the broad range of activities associated with Algebra I completion, a plausible conclusion is that the Texas GEAR UP SG program as a whole contributed to the success in Algebra I completion.

3.2.2 Achievement on Student Assessments (STAAR, STAAR EOC)

For STAAR, outcomes were examined for each of five assessments at both achievement at or above the Level II Phase-in 1 standard and achievement at or above Level II at the final standard.

STAAR Algebra I EOC and Grade 8 STAAR Mathematics

The findings regarding STAAR Algebra I EOC and Grade 8 STAAR Mathematics must be understood in the context of the Texas GEAR UP SG schools significantly increasing Algebra I completion. For the evaluation, students who took STAAR Algebra I EOC were excluded from Grade 8 STAAR Mathematics results. That is, the sample of students for the STAAR Mathematics outcomes excluded all students who took STAAR Algebra I EOC. An examination of Grade 7 STAAR achievement provided some evidence that students enrolled in Algebra I in Grade 8 had exhibited relatively higher mathematics achievement in Grade 7, based on Grade 7 STAAR Mathematics performance. While lower in the Texas GEAR UP SG primary cohort than in comparison groups (matched comparison schools and retrospective cohort), performance on Grade 7 STAAR Mathematics was still higher on average for Algebra I completers than Algebra I non-completers within the Texas GEAR UP SG schools. In this context, the students who took Grade 8 STAAR Mathematics may have been challenged by mathematics content more than their peers who completed Algebra I may have been, and this may be reflected in their achievement on the assessment.

STAAR Comparisons

In comparing performance on Grade 8 STAAR and STAAR EOC to state averages, the Texas GEAR UP SG students generally achieved at a far lower level than the state average, both on average scale scores and the percentage of students achieving at or above Level II at the final standard. This was the case for Grade 8 STAAR Mathematics, Grade 8 STAAR Reading, Grade 8 STAAR Science, and Grade 8 STAAR Social Studies. On STAAR Algebra I EOC, the Texas GEAR UP primary cohort had slightly lower average scale scores than the state average scale but had a higher percentage of students achieving at or above the Level II Phase-in 1 standard. However, the state average is based on all students who ever take STAAR Algebra I EOC, not only those students who completed Algebra I in Grade 8. It is likely that the smaller sample of

students who completed Algebra I and took STAAR Algebra I EOC in Grade 8 were less diverse including on prior mathematic achievement than the far larger percentages of students who complete Algebra I while in Grade 9 (or later).

STAAR Algebra I EOC

Students in the Texas GEAR UP SG cohort were significantly less likely than students in the comparison schools and the retrospective cohort to have achieved at or above the Level II Phase-in 1 and Level II final standards on STAAR Algebra I EOC. When prior performance on STAAR 7 mathematics and student characteristics were taken into account, there were no differences between achievement of the students in the primary cohort and the comparison schools. However, students in the primary cohort still lagged behind students in the retrospective cohort. This finding needs to be understood in the context of greater numbers of students in the Texas GEAR UP SG primary cohort attempting the STAAR Algebra I EOC. Despite having a larger number of students take STAAR Algebra I EOC than the other two cohorts, the majority of students in the primary cohort who took STAAR Algebra I EOC were able to at least achieve at or above the Level II Phase-in 1 standard (92%).

STAAR Mathematics

Students in the primary cohort were less likely to meet both standards for Grade 8 STAAR Mathematics than their peers in both comparison cohorts. This finding was still significant when controlling for Grade 7 STAAR Mathematics score and other student characteristics for achievement at both levels in analyses with the comparison schools, and in reaching the Level II final standard for the analyses with the retrospective cohort. It is possible that the shift in encouraging students to enroll in Algebra I left schools with fewer resources for assisting students in Grade 8 STAAR Mathematics. It is also possible that the higher achieving students in the primary cohort who typically would take Grade 8 Mathematics enrolled in Algebra I instead.

STAAR Reading

No significant differences on reaching the Level II Phase-in 1 standard on Grade 8 STAAR Reading were found either between the Texas GEAR UP SG primary cohort and the comparison schools or between the Texas GEAR UP SG primary and retrospective cohorts. Students in the primary cohort were more likely to meet the Level II final standard than students in the comparison cohort; however, this finding was not significant once prior achievement and other student characteristics were taken into account.

STAAR Science

Achievement at or above the Level II Phase-in 1 standard and Level II at the final standard on Grade 8 STAAR Science was similar for the primary cohort and comparison schools. Students in the primary cohort were less likely to meet the Level II Phase-in 1 standard, but more likely to meet the Level II final standard than students in the retrospective cohort. Once Grade 7 STAAR Mathematics score and student characteristics were controlled for, students in the primary cohort were still less likely to meet the Level II Phase-in 1 standard than students in the retrospective cohort, but the finding for achievement at the Level II final standard disappeared. This suggests that prior achievement and student characteristics explained more about Grade 8 STAAR Science achievement than did Texas GEAR UP SG participation.

STAAR Social Studies

For Grade 8 STAAR Social Studies achievement at or above the Level II Phase-in 1 standard, students in the primary cohort were more likely to meet the standard than students in the comparison schools and were less likely to meet the standard than students in the retrospective cohort. These findings held true even when controlling for Grade 7 STAAR Mathematics score

and other student characteristics. No significant differences on Grade 8 STAAR Social Studies achievement at or above Level II at the final standard were found for either comparison.

Student Characteristics and Achievement Gaps

Achievement gap analyses required running six models for each STAAR outcome, one for each student characteristic comparison separately. This means that 60 analyses were run to assess achievement gap reduction; the models were each run once for comparison between the Texas GEAR UP SG primary cohort and the comparison schools and once for comparison between the Texas GEAR UP SG primary and retrospective cohorts, increasing the number of models to 120. Across all of these, a very small number of interactions were statistically significant. Overall, there was no consistent pattern in enlargement or reduction of achievement gaps: in some cases, they were larger for the primary cohort, and in others, they were larger for the other cohorts (i.e., comparison schools cohort, retrospective cohort). Because of the lack of a consistent pattern, and the large number of analyses run, these results should be interpreted with caution.

STAAR Algebra I EOC

When examining differences between students in the Texas GEAR UP SG primary cohort and comparison schools, students identified as ELL were less likely than non-identified students to have achieved at or above the Level II Phase-in 1 standard, and students classified as economically disadvantaged were less likely to have met the Level II final standard on STAAR Algebra I EOC across all three cohorts. When an interaction term was added to the model, female students were less likely to meet the Level II final standard than males in the primary cohort but more likely to meet the standard in the comparison schools cohort.

In the primary and retrospective cohort models, a significant interaction between race/ethnicity was found. African American students were less likely to meet the Level II Phase-in 1 standard than Hispanic students in the primary and retrospective cohorts, but the gap was much larger for the retrospective cohort than the primary cohort. Similarly, there was an ethnicity achievement gap for the Level II Final standard model: in the both the primary and retrospective cohorts, White students were more likely to meet the standard than Hispanic students, but the gap was larger for the retrospective cohort than the primary cohort.

STAAR Mathematics

Students identified as economically disadvantaged were less likely to reach the Level II Phase-in 1 standard in the primary and retrospective cohorts. This achievement gap was smaller for students in the primary cohort than the retrospective cohort, but both groups of students in the primary cohort were predicted to be less likely to meet the standard than students in the retrospective cohort.

STAAR Reading

For Grade 8 STAAR Reading, the most consistent finding across models and comparison groups was that students not identified as ELL were more likely than students identified as ELL to have achieved at or above the Level II Phase-in 1 standard and to achieve at or above the Level II final standard. Additionally, the gap between reaching the Level II Final standard was larger for students identified as ELL in the primary cohort than in the retrospective cohort.

Males were less likely to meet the Level II Phase-in 1 standard in the primary and comparison schools model. There was no gender difference initially in the primary and retrospective cohort Level II Phase-in 1 model; however, when an interaction term was added, females were less likely than males to reach the standard in the primary cohort but not the retrospective cohort.

African American students were less likely than their counterparts to achieve at or above the Level II Phase-in 1 standard in all three cohorts. Additionally, in the primary and comparison schools cohort, African American students were also less likely to meet Level II at the final standard.

STAAR Science

Participating in Texas GEAR UP SG was not generally associated with Grade 8 STAAR Science outcomes, as already noted. Across all groups (i.e., Texas GEAR UP SG primary and retrospective cohorts; comparison schools), students identified as male, as not economically disadvantaged, and as not ELL were more likely than their respective counterparts to achieve at or above both the Level II Phase-in 1 standard and Level II at the final standard on STAAR Science.

When adding an interaction term to the model, Hispanic students were less likely to meet the Level II Phase-in 1 standard than White students in the primary cohort and the comparison schools cohort, and this achievement gap was larger for the comparison schools cohort than the primary cohort. Similarly, the achievement gap between students who were classified as economically disadvantaged in meeting the Level II Phase-in 1 standard was higher in the retrospective cohort than the primary cohort. Similar to the results for STAAR reading, cohort interacted with ELL status for achievement at or above Level II at the final standard. Within the Texas GEAR UP SG primary cohort, achievement gaps were larger than those seen in the retrospective cohort.

STAAR Social Studies

Similar to the STAAR Science outcomes, students identified as male and as not economically disadvantaged were more likely to achieve at or above the Level II Phase-in 1 standard and at or above Level II at the final standard across Texas GEAR UP SG primary and retrospective cohorts and the comparison schools cohort. Additionally, students who were African American were less likely to meet the Level II final standard in all three cohorts.

Associations with Participation

Length of Time in Cohort

Attending a Texas GEAR UP SG school in both Grade 7 and Grade 8 as compared to Grade 8 only was associated with greater likelihood of achieving at or above the Level II Phase-in 1 standard on Grade 8 STAAR Mathematics, Grade 8 STAAR Reading, Grade 8 STAAR Science, and Grade 8 STAAR Social Studies, and the Level II final standard for Grade 8 STAAR Reading and Science. There were no differences in achievement for STAAR Algebra I EOC related to the length of time spent in the primary cohort. Prior STAAR achievement was not controlled for in these models, however, so it is possible that underlying differences between students who attended GEAR UP schools in both Grade 7 and Grade 8 vs those who attended in Grade 8 only are responsible for the differences.

Overall Level of Participation

The participation of each student within the Texas GEAR UP SG cohort in activities and events was summarized at each grade level as being either Low or High. Students were then grouped as having low participation levels in both years (Low/Low), high participation in both years (High/High), or mixed levels of participation (Low/High and High/Low). Once prior STAAR score and other student characteristics were added to the models, there was no association between level of participation and reaching the standard for the majority (70%) of areas assessed.

There were three exceptions: first, for STAAR Algebra I EOC, students whose participation was categorized as High/High or High/Low were significantly more likely to achieve at or above the

Level II Phase-in 1 standard than those whose participation was Low/Low. Level of participation was also related to meeting the Level II Phase-in 1 standard on STAAR Social Studies: students in the Low/High group (i.e., low participation in Grade 7, high participation in Grade 8) were less likely to meet the standard than students in the Low/Low group once prior performance on STAAR Reading and other student characteristics were controlled for. Overall level of participation was also associated with achievement at or above the Level II final standard in STAAR Science: after controlling for prior STAAR Mathematics score and other student characteristics, students in the High/Low group (i.e., high participation in Grade 7, low participation in Grade 8) were less likely to meet the standard than students in the Low/Low group.

3.2.3 Promotion: Grade 7 to Grade 8

Project Objective 4.3 is for the on-time promotion rate for GEAR UP students to exceed the state average by Year 3. The state average for Grade 7–8 promotion was 99%. The Texas GEAR UP SG primary cohort achieved a 98.1% promotion rate while the comparison schools and retrospective cohort each achieved at 99%. That is, the promotion rate in the Texas GEAR UP SG primary cohort was about one percentage point lower than the statewide rate and rates of both comparison groups. Although this difference was statistically significant, there was not a meaningful difference between promotion rates for the Texas GEAR UP SG students and the state average, between Texas GEAR UP SG primary cohort and the comparison schools, or between the Texas GEAR UP SG primary and retrospective cohorts.

3.3 Recommendations

Collectively the findings suggest several possible recommendations both as next steps going forward and for other schools initiating GEAR UP programs (or programs with goals similar to GEAR UP). Given the strength of the Algebra I completion findings, most of these recommendations are associated with that goal.

3.3.1 Best Practices

The findings regarding Algebra I completion suggest that it is possible to substantially increase the percentage of students who successfully complete the course in Grade 8. The analyses on overall level of participation and length of time in the cohort associated with Algebra I completion collectively suggest that encouraging participation at a high level and early (Grade 7) may be key to achieving this goal. It can be argued that the broad number of activities associated with Algebra I completion that were implemented by GEAR UP SG schools further support this suggestion that it is not one single activity that will lead to a similar result.

In line with this are the results on Algebra I at School G, which had the highest rate of Grade 8 Algebra I completion. In Annual Implementation Report #2 (Briggs, et al., 2015), it was recommended that School G may be a potential model of successfully implementing a GEAR UP program. Several of the activities specifically associated with Algebra I completion were ones that School G was implementing to a greater extent than other schools.

3.3.2 Encouraging Borderline Students to Take Rigorous Courses

Another recommendation associated with continued success in increasing Algebra I enrollment is to encourage schools to examine their use of prior mathematics achievement as a guideline for course enrolment. It is unclear if schools use Grade 7 STAAR Mathematics as one indicator of potential success in Grade 8 Algebra I, but if they do, the average scale scores for the Texas GEAR UP SG cohort suggest that schools could set a lower Grade 7 scale score as the cutoff to identify students who may be successful. The Texas GEAR UP SG primary cohort students had scale scores that were approximately 30 points lower than the comparison school and retrospective cohorts, yet the vast majority of these students were successful in the course and

on STAAR Algebra I EOC. These results show that schools can challenge students to take the more rigorous Algebra I course, and many of them will be successful. However, Texas GEAR UP SG schools did provide significant amounts of supports and implementation activities to support student success in Algebra I so these may need to be in place in order to achieve similar outcomes.

This is not to suggest that academic rigor in the course be reduced. As reported in the Annual Implementation Reports, during site visits staff at some sites expressed concern that students were being put into Algebra I who were not prepared to succeed. While there were slightly lower rates of successful completion of the course and reaching the Level II Phase-in 1 standard and Level II at the final standard on Algebra I EOC than other cohorts, the majority of students (over 90%) who enrolled in Algebra I being able to successfully complete the course. Going forward, the Texas GEAR UP SG schools may need to continue to provide these supports, and to address perceptions by school staff that students will not be able to achieve if academic rigor is increased.

At the same time, there is some concern that the Texas GEAR UP SG schools may have needed to focus additional efforts on students not enrolled in Algebra I and/or across other content areas. In particular, outcomes on STAAR suggest the Texas GEAR UP SG students performed less well than other groups on Grade 8 STAAR Mathematics. It is possible that the resources allotted to having students complete Algebra I placed a strain on resources for students not enrolled in the course. Of course, it is also possible that the students who would have been the highest achieving in Grade 8 Mathematics were moved to Algebra I, and that was responsible for the lower percentages of students meeting the standard. Although students taking courses other than Algebra I may have started out with relatively lower mathematical skills, with additional supports perhaps more students required to take STAAR Mathematics would have achieved at the postsecondary education-ready level.

3.4 Next Steps for the Evaluation

The evaluation team has continued to collect data on the outcomes of the Texas GEAR UP SG primary cohort as they have transitioned into high school starting in the 2014–15 school year, and will continue through the 2017–18 school year. The final comprehensive evaluation report will be published by August 31, 2019 (reporting on outcomes through the 2017–18 school year).

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Appendix A: Evaluation Questions and Project Goals

A.1 Evaluation Questions

Table A.1 provides an overview of the evaluation questions. Some questions are addressed in the Annual Implementation Reports. Other evaluation questions will be addressed in future reports. Throughout this comprehensive report, the specific evaluation questions being addressed were identified. The list of evaluation questions will be expanded as appropriate to each report. In addition, several of the research questions described below focus on understanding when and how implementation changes. For this report, the focus is on first period of implementation only.

Table A.1. Texas GEAR UP SG Evaluation Questions

Evaluation Questions
1. Implementation of Texas Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP) State Grant (SG) Strategies and Identification of Potential Best Practices
1.1 To evaluate implementation of Texas GEAR UP SG strategies intended for teacher professional development (PD) to improve academic rigor and data-driven instruction
1.1.1 What types of PD implementation strategies were identified by grantees in their action plans?
1.1.2 Each year, when and to what extent did grantees implement PD strategies?
1.1.3 What percentage of core content teachers had the opportunity to participate in PD training regarding each of the following: differentiated instruction, advanced instructional strategies, project-based learning (PBL), other? What percentage of core content teachers actually participated in each PD opportunity? To what extent, if any, did teachers other than core content teachers have an opportunity to participate and actually participate in PD?
1.1.4 When and how did grantees provide PD regarding vertical team preparation and implementation to Middle School and High School teachers? Were appropriate teachers from all schools on the vertical team able to attend the PD?
1.1.5 What are perceptions of teachers who attend given PD regarding: training itself, impact on teacher practice, and impact on vertical alignment, as appropriate to training?
1.1.6 What facilitators and barriers can be identified to implementing PD opportunities? If barriers to implementing were identified, to what extend were grantees able to overcome such barriers and how? Do grantees anticipate and are they able to overcome barriers in following years?
1.1.7 In what ways are trained teachers implementing data driven strategies? Differentiated instruction? PBL?
1.2 To evaluate implementation of student support services Texas GEAR UP SG strategies
1.2.1 What types of student support services implementation strategies were identified by grantees in their action plans?
1.2.2 What types of information were utilized to identify students for participation in student support services implementation activities?

Evaluation Questions
1.2.3 When and to what extent did grantees implement student support services strategies with students?
1.2.4 What are student, parent, and staff perceptions of student support services implementation strategies?
1.2.5 What facilitators and barriers can be identified regarding implementing student support services strategies? If barriers to implementing were identified, to what extent were grantees able to overcome such barriers and how? Do grantees anticipate and are they able to overcome barriers in following years?
1.2.6 During each year of the grant, what types of information are grantees making available to students? How do grantees inform students about opportunities to learn about college attendance and career success? How many activities are held for students to attend? How and to what extent do grantees provide information to students regarding information that is available through the state office?
1.2.7 By the end of the year, how many students (%) participate in each type of college readiness activity conducted by grantees? How many activities does each student attend?
1.2.8 What are students' levels of understanding regarding readiness (e.g., college aspirations/ expectations, college options, being postsecondary education ready at each grade level, financing college)?
1.3 To identify potential best practices
1.3.1 What practices implemented by the grantee might be identified as potential best practices based on data?
1.3.2 What practices implemented by grantees are perceived by grantees (students, parents, staff) to be effective, and therefore a potential best practice?
1.3.3 What individual strategies and/or mix of strategies were provided in each year?
2. Family, School and Community Impact
2.1 To evaluate the impact of GEAR UP on families (parents)
2.1.1 Each year of the grant, what types of information are grantees making available to students' families? How do grantees inform families about opportunities to learn about college attendance and career success? How many activities are held for parents to attend? How and to what extent do grantees provide information to parents regarding what is available through the state office?
2.1.2 By the end of each year, how many parents (%) attend each type of activity conducted by the grantees? How many activities does each parent attend?
2.1.3 Each year it is measured, what are parents' levels of understanding regarding a range of topics linked to understanding college and career readiness (e.g., college expectations and aspirations, college options, being postsecondary education ready at each grade level, financing college)? Do parents report having gained knowledge over the year based on information and activities provided by the grantee?
2.1.4 What information or opportunities do parents perceive to have been most relevant in informing them regarding college and career readiness?
2.1.5 What facilitators and barriers do schools and parents report regarding participation in college readiness activities? If barriers were identified, to what extent were grantees able to

Evaluation Questions
overcome such barriers and how? Do grantees anticipate and are they able to overcome barriers in following years?
2.2 To evaluate the impact of GEAR UP on community alliances
2.2.1 At the end of each grant year, how many collaborations have schools formed with business alliances? In what ways and how often have business collaborators offered opportunities for career exploration to students?
2.2.2 At the end of each grant year, how many collaborations have schools formed with government entities? Community groups? In what ways and how often have collaborators offered opportunities for career exploration to students? Opportunities to provide information regarding scholarships, financial aid, and college awareness and readiness?
2.2.3 What are the perceptions of the school and of the community collaborators regarding the collaboration as it relates to meeting GEAR UP goals? What facilitators and barriers to collaboration are reported? If barriers were identified, to what extent were grantees able to overcome such barriers and how? Do grantees anticipate and are they able to overcome barriers in following years?
3. Statewide Impact
3.1 To evaluate the impact of GEAR UP on statewide availability of information and professional learning opportunities
3.1.1 What types of information regarding college readiness have been made available through the state? Are there any topics relevant to college readiness not yet available?
3.1.2 What steps if any has the state office taken to communicate to schools and families about information available?
3.1.3 Each year, how many GEAR UP professional learning opportunities are made available to educators (e.g., Project Share, face-to-face)? How many educators, including those not at current GEAR UP campuses, are participating in such opportunities?
4. Cost and Sustainability Outcomes
4.1 To evaluate use of GEAR UP funding
4.1.1 For what services and activities do grantees use grant funds each year and over the entire time period of the grant?
4.1.2 To what extent were grantees able to secure matching funds?
4.1.3 For what services and activities do grantees use matching funds each year and over the entire time period of the grant?
4.2 To evaluate sustainability of GEAR UP implementation
4.2.1 To what extent are grantees able to sustain activities initiated with the Texas GEAR UP SG cohort with following cohorts of students?

A.2 Texas GEAR UP State Grant Project Goals and Objectives

Project objectives that were addressed in even a preliminary manner were presented within the report. The following is a list of all project objectives outlined by Texas Education Agency (TEA) in the federal grant proposal.

Project Goal 1 - Improve instruction and expand academic opportunities in mathematics and science.

- Project Objective 1.1: By the end of the project's second year, 30% of cohort students will have completed Algebra I in the Grade 8. By the end of the project's third year, 85% of students will have completed Algebra I.
- Project Objective 1.2: By the end of the project's sixth year, the percentage of cohort students graduating on the Foundation High School Program with an endorsement or at the distinguished level of achievement, including four years of credits in each core subject, will meet or exceed the state average.

Project Goal 2 - Increase access to and success in quality advanced academic programs.

- Project Objective 2.1: By the end of the project's fourth year, all participating high schools will make opportunities available for each student to complete 18 hours of college credit [through Advanced Placement (AP), dual credit, or concurrent enrollment] by the time he or she graduates from high school.
- Project Objective 2.2: By the end of the project's fifth year, 60% of the cohort, including English Language Learner (ELL) students, will complete a pre-AP or AP course.
- Project Objective 2.3: By the end of the project's sixth year, at least 50% of cohort students will graduate with college credit earned by AP exam or through dual credit.

Project Goal 3 - Provide PD for strong data-driven instruction.

- Project Objective 3.1: In each grant year, all core content teachers will have the opportunity to participate in training regarding differentiated instruction, advanced instructional strategies, and project-based learning.
- Project Objective 3.2: In each grant year, teams of teachers at the middle and high school will complete at least five days of vertical teams preparation and implementation each year.

Project Goal 4 – Provide a network of strong student support services to promote on-time promotion and academic preparation for college.

- Project Objective 4.1: By the end of the second year, at least 75% of the Grade 8 students will be involved in a comprehensive mentoring, counseling, and/or tutoring program based on results of teacher/counselor input and diagnostic data.
- Project Objective 4.2: Beginning in the second year, at least 30% of the students will be involved in summer programs and institutes designed to help them work at or above grade level, ease transitions, and increase college awareness.
- Project Objective 4.3: By the end of the project's third year, the on-time promotion rate of cohort students will exceed the state average.
- Project Objective 4.4: By the end of the project's fifth year, 70% of GEAR UP students will have knowledge of, and demonstrate, necessary academic preparation for college.

Project Goal 5 - Promote high school completion and college attendance.

- Project Objective 5.1: By the end of the project's fourth year, all cohort students will complete the ACT Aspire or the Preliminary SAT/National Merit Scholarship Qualifying Test

(PSAT/NMSQT) or PSAT-10.[54] By the end of the project's fifth year, all cohort students will complete the SAT or ACT.
- Project Objective 5.2: By the end of the project's sixth year, the percentage of students meeting criterion on the ACT/SAT will meet or exceed the state average.
- Project Objective 5.3: At the end of the project's sixth year, the number of students who graduate postsecondary education ready in mathematics and English will meet or exceed the state average.
- Project Objective 5.4: At the end of the project's sixth year, the cohort completion rate will meet or exceed the state average.
- Project Objective 5.5: At the beginning of the seventh year, more than 50% of cohort of students will enroll in postsecondary education in the fall after high school graduation.

Project Goal 6 - Meet or exceed state average for first-year college retention.
- Project Objective 6.1: The student retention rate for the second semester and the second year of college will meet or exceed the state average.
- Project Objective 6.2: At the end of the project's seventh year, the number of students on track to complete college will exceed the average postsecondary completion rate.

Project Goal 7 - Increase the availability of postsecondary information and knowledge-building opportunities.
- Project Objective 7.1: By the end of the first year, the state office will make information regarding college options, preparation, and financing will be made available to students, parents, and educators throughout the state.
- Project Objective 7.2: By the end of the first year, information and workshops aimed at linking college attendance to career success will be available to 100% of cohort students and their parents.
- Project Objective 7.3: Each year, at least 50% of cohort parents, including parents of current and former ELL students, will attend at least three college awareness activities.
- Project Objective 7.4: By the end of the project's fifth year, teachers and counselors will complete training in the college admissions and financial aid process.

Project Goal 8 - Build and expand community alliances.
- Project Objective 8.1: All participating districts will form business alliances that support higher student achievement and offer opportunities for career exploration.
- Project Objective 8.2: Participating campuses will form alliances with governmental entities and community groups to enhance the information available to students regarding scholarships, financial aid, and college awareness.

Project Goal 9 - Promote college readiness statewide.
- Project Objective 9.1: Each year, the project will increase the number of educators participating in GEAR UP professional learning, including through Project Share and face-to-face trainings.
- Project Objective 9.2: By the end of the project's sixth year, at least 40% of Texas school districts will have utilized at least one Texas GEAR UP statewide resource, including materials and PD.

[54] Texas GEAR UP SG initially indicated a goal aligned with students taking ACT PLAN by the end of project's fourth year. However, ACT has replaced PLAN with ACT Aspire. Similarly, the PSAT has been replaced by the PSAT/NMSQT and PSAT-10.

Appendix B: Evaluation Design, Methods, and Analytics

This appendix provides a more detailed description of the Texas Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP) State Grant (SG) evaluation design, as well as specific on methods and analyses used in this report.

B.1 Longitudinal Design

One important aspect of the evaluation design is to study Texas GEAR UP SG longitudinally. The Texas GEAR UP SG evaluation is based on a cohort model design. Texas GEAR UP SG services were first provided to Grade 7 students in participating districts during the 2012–13 school year and will continue through the first year of enrollment at a postsecondary institution (the 2018–19 school year). There are two additional cohort groups of interest for the purposes of the evaluation that will be included in comprehensive reports. First, one of the comparison groups will be a retrospective comparison group of the students who are one-grade level ahead of the Texas GEAR UP SG cohort—the students at the Texas GEAR UP SG schools who were in Grade 8 in the 2012–13 school year. Examining trends in outcomes in this cohort as compared to the targeted cohort will allow the Texas Education Agency (TEA) to better understand how the program has potentially created change at the school level. Similarly, it is hoped that future cohorts of students will also benefit through sustained implementation of the program with new Grade 7 students. Therefore, the evaluation team will compare available outcome data from follow-on cohorts as well. For example, by the third annual implementation report, it will have examined trends in successful completion of Algebra I in Grade 8 for three cohorts of students (i.e., Grade 8 in the 2012–13 school year [retrospective cohort], Grade 8 in the 2013–14 school year [target cohort], and Grade 8 in the 2014–15 school year [follow-on cohort]). The potential cohorts of interest are presented in Table B.1.[55]

Table B.1. Texas GEAR UP SG Cohorts of Data Collected During the Seven-Year Grant

Cohort	Grade 7	Grade 8	Grade 9	Grade 10	Grade 11	Grade 12	First Year of College
Retrospective Cohort	Baseline: Prior to GEAR UP	Grant Year 1	Grant Year 2	Grant Year 3	Grant Year 4	Grant Year 5	Grant Year 6
Cohort 1	Baseline: Grant Year 1	Grant Year 2	Grant Year 3	Grant Year 4	Grant Year 5	Grant Year 6	Grant Year 7
Cohort 2	Baseline: Grant Year 2	Grant Year 3	Grant Year 4	Grant Year 5	Grant Year 6	Grant Year 7	
Cohort 3	Baseline: Grant Year 3	Grant Year 4	Grant Year 5	Grant Year 6	Grant Year 7		
Cohort 4	Baseline: Grant Year 4	Grant Year 5	Grant Year 6	Grant Year 7			
Cohort 5	Baseline: Grant Year 5	Grant Year 6	Grant Year 7				
Cohort 6	Baseline: Grant Year 6	Grant Year 7					
Total number of cohorts for data in each grade	7	7	6	5	4	3	2

[55] Outcome data often lag in availability relative to implementation data. For example, course completion data for any given school year are not available until October of the following year, at the earliest. In order for appropriate time to run analyses, outcome data will typically occur approximately six months post receipt at the earliest.

B.2 Quasi-Experimental Design

In addition to comparisons that will be made based on longitudinal aspects of the design, the ICF team will utilize a quasi-experimental design (QED). The Texas GEAR UP SG schools were not selected randomly to participate, ruling out a true experimental design. Still, it is important to understand outcomes within the Texas GEAR UP SG schools in comparison to outcomes elsewhere. Specifically, outcomes at the Texas GEAR UP SG schools will be compared to: a) statewide averages (where possible); and b) outcomes in comparison schools selected based on propensity-score matching (PSM) to be as similar as possible to Texas GEAR UP SG participating schools. A school-level PSM was conducted in order to best argue the comparability of students at the Texas GEAR UP SG schools to comparison schools.

B.2.1 Propensity Score Matching

PSM is the optimal method for establishing an equivalent comparison group in non-experimental studies. PSM refers to a class of covariate methods for constructing comparison groups based on pairing study subjects, in this case schools, based on what is known about those subjects. Propensity scores represent the estimated probability that a program participant is assigned to an intervention based on observable variables. By using PSM to identify a very close non-Texas GEAR UP SG match (or multiple matches) for each Texas GEAR UP SG school, it will be possible to estimate the value-added effect of the Texas GEAR UP program. That is, if two schools are found to be similar on a range of characteristics, but students at only one school receive the GEAR UP "treatment," then any potential differences in outcomes may be attributable to GEAR UP participation.

The PSM was conducted as a school-level matching using Academic Excellence Indicator System (AEIS) and Common Core Data: GEAR UP schools were each matched to one comparison school using the nearest-neighbor method.[56] Given that Texas GEAR UP SG is a school-wide approach, it was determined that the school level match was the most appropriate approach and a student-level match was not necessary. ICF conducted the school-level matching based on the variables in Table B.2. Student demographics were expressed as school-specific percentages per various student subgroups defined by race and ethnicity, economically disadvantaged, students' educational status (e.g., ELL, Special education, retention). School characteristics included in the model were student-teacher ratio, dropout rate, and attendance rate. School-average TAKS pretest scores were particularly important predictors as baseline equivalence based on them were critical for the success of the quasi-experimental study design.

The matching variables were generated as the averages across the three years prior to when Texas GEAR UP SG was first implemented (2010–2012) for all schools in the state of Texas. In some cases, only one to two years of data were available.

[56] The nearest-neighbor method selects the *n* comparison units whose propensity scores are closets to the treated unit.

Table B.2. School Level Matching Variables

School-Level Matching Variable	Data Resource	2010	2011	2012
Campus Type*	AEIS			x
Grade Span*	AEIS			x
Campus urban-centric locale*	Common Core Data			x
Final Accountability Rating**	AEIS		x	
All Students Count	AEIS	x	x	x
Student: Grade 6 %	AEIS	x	x	x
Student: Grade 7 %	AEIS	x	x	x
Student: Grade 8 %	AEIS	x	x	x
Student: Female %	AEIS	x	x	x
Student: African American %	AEIS	x	x	x
Student: Hispanic %	AEIS	x	x	x
Student: White %	AEIS	x	x	x
Student: Native American %	AEIS	x	x	x
Student: Asian/Pacific Islander %	AEIS	x	x	x
Student: Economically Disadvantaged %	AEIS	x	x	x
Student: ELL %	AEIS	x	x	x
Student: Mobility %	AEIS	x	x	x
Student: Bilingual/ESL %	AEIS	x	x	x
Student: Gifted & Talented %	AEIS	x	x	x
Student: At Risk %	AEIS	x	x	x
Student: Special Education %	AEIS	x	x	x
Retention: Regular Ed Grade 6 %**	AEIS		x	x
Retention: Regular Ed Grade 7 %	AEIS		x	x
Retention: Regular Ed Grade 8 %	AEIS		x	x
Staff: Teacher Student Ratio	AEIS	x	x	x
Annual Dropout for Grades 7–8: All Students Rate	AEIS	x	x	n/a
Attendance: All Students Rate	AEIS	x	x	n/a
TAKS -% Met Standard: Grades 6–8, Summed All Students Mathematics Rate	AEIS	x	x	n/a
TAKS - % Met Standard: Grades 6–8, Summed All Students Reading/ELA Rate	AEIS	x	x	n/a
TAKS -% Commended Performance Test: Grades 6–8, Summed All Students Mathematics Rate	AEIS	x	x	n/a
TAKS – % Commended Performance Test: Grades 6–8, Summed All Students Reading/ELA Rate	AEIS	x	x	n/a

Source. Texas Education Agency, Academic Excellence Indicator System (AEIS), 2010, 2011, 2012; Common Core Data.

*Exact matching was used for these variables. Campus urban-centric locale was grouped into four categories for the exact match. Final accountability ratings were not assigned in 2011–12 school year. Because these variables are categorical, the most recent collection will be used for matching rather than the average over prior years as was the case for non-categorical data.

**Retention data are delayed by one year, so only two years of data were used. The x for retention is when the data are available but the data actually reflect prior school year retention (so retained in 2010 or 2011).

The Propensity Score Matching (PSM) Model

The PSM model is based on the logistic regression model where the outcome is the membership of the schools (GEAR UP schools vs. non-GEAR UP schools) and predictors are a set of covariates that describe the schools and help explain the difference between GEAR UP schools and non-GEAR UP schools. The following equation expresses the basic logistic regression modeling framework:

$$Log(p_k/1-p_k) = \beta_{00} + \beta_{10} * predictor_k + ...$$

where

- Postscript k stands for school
- P is a probability that a school k is a GEAR UP school (as opposed to a non-GEAR UP school)
- β's are parameters to be estimated,
- *"…"* indicates that the model will include multiple predictors and corresponding parameters

Based on derived coefficients (βs) and the values of predictors, the logistic regression model produces a statistic called predicted probability or propensity score. The propensity score is a balancing score, meaning that it balances all pretreatment group differences in observed covariates. For each GEAR UP school, comparison school with the closest propensity score was chosen. As a result, a GEAR UP school and the matched comparison school were similar in observed characteristics that are important in predicting the outcome distinction between treatment and non-treatment GEAR UP. In deriving propensity score, the logistic regression algorithm took into account the relative weight of predictors in their covariate correlation with the outcome.

Decisions regarding three aspects of the PSM are described here: a. the ratio of intervention to control cases; b. the algorithm used for matching; c. the distance metric on which the matching is based.

School level matching

a. **Ratio**. A fixed 1-to-4 ratio was used; the main rationale for this choice is to create a large enough pool of potential controls for the second stage.[57]
b. **Algorithm**. Nearest neighbor is one of the most straightforward and fast algorithms for finding comparable groups. Exact **matching** was required only for a limited subset of variables, particularly, school's grade span.
c. **Distance metric.** The propensity score is an extremely useful metric distance that summarizes many covariates in a single measure. The propensity score is based on a logistic regression of an indicator of group membership on all the covariates for which balance is desired. For this school level regression being in the Texas GEAR UP SG group is a relatively rare occurrence (i.e., only seven cases [schools]). Alternative distance metrics were also examined in making final decisions: Mahalanobis distance; robust Mahalanobis distance; weighted Mahalanobis distance where the weights are determined to maximize balance (Diamond and Sekhon, 2013). All the alternatives and the final decisions were made based on the covariate balance they achieve.

[57] There is no one-size-fits-all rule regarding how much larger than the intervention the pool of controls should be to be able to obtain a good matched sample. It depends on how far apart the two samples are to start with. How much variability there is in the control pool compared to the intervention sample also plays a role. However, as a rough indication, Rubin (1973) showed through simulations that a control pool 2 to 4 times the size of the intervention sample was adequate for quite a few situations.

Comparison of treatment and comparison group means on each of the school-level matching variables are displayed in Table B.3. According to What Works Clearinghouse standards, the most important predictors that need to achieve baseline equivalence are pretest averages of the two groups. Results suggest that the PSM model successfully matched the groups by keeping the TAKS pretest differences to a minimum.

Table B.3. Comparison of Means for Each Covariate Before and After Matching for the Texas GEAR UP SG and Matched Comparison Schools

	Before Matching			After Matching		
	Mean GEAR UP	Mean Comparison	std diff*	Mean GEAR UP	Mean Comparison	std diff*
Propensity (logit)	-1.31	-751.06	63.48	-1.31	-2.34	0.09
Rural	0.43	0.53	-19.82	0.43	0.43	0.00
All Student Count	651.86	555.21	35.61	651.86	627.17	9.10
Grade 6 %	29.66	23.06	46.81	29.66	28.74	6.58
Grade 7 %	35.33	33.57	20.99	35.33	35.77	-5.33
Grade 8 %	35.01	33.25	20.94	35.01	35.49	-5.74
African American %	15.21	15.01	1.04	15.21	21.58	-33.45
Hispanic %	77.93	43.08	137.79	77.93	71.75	24.43
White %	5.79	38.54	-150.09	5.79	5.81	-0.09
American Indian %	0.20	0.50	-55.35	0.20	0.19	0.80
Asian %	0.45	1.86	-52.50	0.45	0.19	9.59
Economically Disadvantaged %	86.65	62.67	153.08	86.65	88.59	-12.37
ELL %	13.22	8.37	51.98	13.22	16.36	-33.62
At-risk %	58.44	44.21	126.59	58.44	60.35	-16.95
Mobility %	21.83	16.73	96.99	21.83	20.80	19.58
Special Education %	12.07	11.00	30.84	12.07	11.41	19.09
Teacher-Student Ratio	14.62	13.28	58.82	14.62	14.43	8.12
Grade 6 Retention Rate	1.25	0.83	31.43	1.25	0.86	29.60
Grade 7 Retention Rate	1.39	1.20	11.46	1.39	1.11	16.79
Grade 8 Retention Rate	1.17	1.51	-20.23	1.17	1.04	8.10
Dropout Rate	0.24	0.18	19.65	0.24	0.24	-2.44
Attendance Rate	94.55	95.58	-84.19	94.55	94.79	-19.76
TAKS Math - Met Standard	67.57	79.57	-178.74	67.57	67.93	-5.32
TAKS Reading - Met Standard	78.07	86.99	-167.56	78.07	77.43	12.08
TAKS Math - Commended	9.64	18.30	-144.85	9.64	10.21	-9.56
TAKS Reading - Commended	19.64	30.18	-137.53	19.64	19.43	2.80
Missing Grade 6 Retention Rate	0.14	0.28	-32.44	0.14	0.14	0.00
Final Accountability Rating: Academically Acceptable	0.43	0.13	66.53	0.43	0.43	0.00

Sources: Texas Education Agency, Academic Excellence Indicator System (AEIS), 2013.

B.3 Methodology

The Texas GEAR UP SG evaluation is utilizing a mixed-methods approach in order to best address the evaluation questions with the data available at a given point in time during the evaluation; a mix of quantitative and qualitative methods is being used to best address the range of evaluation questions. The use of multiple methods to collect, analyze, and synthesize information related to Texas GEAR UP SG allows for checks and balances across methods. Multiple methods allow for the triangulation of results, producing an in-depth assessment of Texas GEAR UP SG's effectiveness and providing greater confidence in evaluation findings.

Much of the data that were collected, as described in the data sources section that follows, are quantitative in nature. Evaluators collected additional qualitative data through open-ended survey items and site visit interviews and focus groups, allowing the story of Texas GEAR UP SG implementation and impact at each school/district to be told. Findings based on data collected through the range of perspectives are compared against one another throughout reporting of findings.

B.4 Data Sources and Data Collection

Evaluators used several data sources for this report, including GEAR UP Integrated Data Entry System (GUIDES) data,[58] extant data provided by TEA, student and parent survey data, and site visit data. The following sections provide an overview of each data source, including process of collecting data that were included in this report.

B.4.1 Annual Performance Reporting Data

During the 2012–13 school year, the ICF team worked with TEA to develop an appropriate tool for collecting GUIDES data. This strategy was a one-time solution for collecting GUIDES data. Beginning in 2013–14, TEA's collaborator for technical assistance, The University of Texas at Austin's Institute for Public School Initiatives (UT-IPSI), contracted with a provider of a system to collect Texas GEAR UP SG GUIDES data. The general strategy was similar to that used in Year 1 and Year 2, but grantees were eventually able to enter GUIDES data in an ongoing manner; 2014–15 APR reporting was similar. In Year 3, TEA added an additional organization, Community TechKnowledge (CTK), to support data collection using GEAR UP Integrated Data Entry System (GUIDES), a customized tool for collecting Texas GEAR UP SG data.

In order to broadly understand what is collected for the APR, we have retained the Year 1 description here. GUIDES data collection is aligned with requirements for the U.S. Department of Education APR, submitted by TEA each year in April. Districts are asked to report on implementation and participation at the student level in Texas GEAR UP SG activities from the time of the prior APR through the end of March of the current implementation year. For example, districts indicated student enrollment in advanced courses; student participation in tutoring, mentoring, and counseling; and student participation in any Texas GEAR UP SG events held at the campus. Districts also indicated if the student's parent(s)/guardian(s) participated in any events targeted for parents. Districts provided a description of each Texas GEAR UP SG student and parent event held at their school. In addition, districts provided information on teacher participation in professional development (PD) opportunities related to the Texas GEAR UP SG and on community alliances formed to date. Appendix C has a description of all GUIDES data that Texas GEAR UP SG grantees were requested to submit for the APR.

B.4.2 Extant Data

Extant data refers to data that TEA already collects. TEA provides these data to the evaluation team as appropriate. The following extant data were used in writing this report:

- **TEA's Texas GEAR UP SG Grant Application and District Applications.** TEA provided its application to the federal government, district applications provided by each Texas GEAR UP SG school, and all in-place TEA agreements. These documents were reviewed in order to better understand the Texas GEAR UP SG grant in general and for specific information regarding

[58] GUIDES is used to collect a range of student level data. This data is also used to meet USDOE reporting requirements for the Texas GEAR UP SG.

planned implementation priorities. This review occurred prior to survey and site visit protocol development in order to inform the process.

- **Action Plans.** Each Texas GEAR UP SG school provides updated action plans annually. These updated plans clarified, eliminated, and added planned implementation strategies. In this report, these action plans were used to provide general insights regarding connections between what grantees planned and what was implemented. Each action plan is coded for specific implementation strategies and a comparison of planned versus actual implementation analyses is conducted.
- **Public Education Information Management System (PEIMS).** PEIMS contains student-level information collected by TEA on public education. It provides data on student demographics, attendance, high school course completion and high school completion, school personnel, and district organizational information. PEIMS variables of interest include gender, race/ethnicity, Economically Disadvantaged, and ELL status.
- **Texas Academic Performance Report (TAPR).** TAPR is an updated version of TEA's AEIS. TAPR contains campus-level performance information about every public school and district in Texas. TAPR also provides extensive profile information about staff, finances, and programs. The evaluation also includes AEIS data from the 2009–10 school year, as data from this year informed the selection of schools for participation in Texas GEAR UP SG.
- **State of Texas Assessments of Academic Readiness (STAAR) and STAAR End-of-Course (EOC)**. STAAR contains data on Grade 8 assessments, which include STAAR Mathematics, STAAR Reading, STAAR Science, and STAAR Social Studies. Each of the five courses with an associated STAAR EOC will also be requested from TEA. Both scale scores and level of achievement from STAAR will be requested.

B.4.3 Student and Parent Surveys

The U.S. Department of Education requires that GEAR UP grantees survey students and parents at least every two years, with an additional requirement that programs survey at least 80% of their students and at least 50% of their parents at these intervals. The USDE has identified items that must be included on the surveys (i.e., five items each on the student and parent survey). From this basic foundation, GEAR UP programs are free to add additional questions. Items were selected for inclusion in the Texas GEAR UP SG surveys from surveys developed by members of the ICF evaluation team with prior experience evaluating GEAR UP programs and based on sample surveys (i.e., CoBro Consulting, 2010). Content areas on the survey were finalized with TEA and included information regarding such items as: a) student/parent satisfaction with the program and program activities; b) student/parent questions on educational expectations and aspirations; and (c) student and parent knowledge regarding postsecondary education, including financial knowledge. Surveys undergo several layers of review and required approval by both ICF's Institutional Review Board (IRB) and TEA's Data Governance Board (DGB).[59] Both student and parent surveys were available online as well as in paper format. Schools collected the data independently following instructions provided by the evaluation team as required by IRB.[60] Students and parents could choose to take the survey in either English or in Spanish. Survey data was collected anonymously. Additional information about the parent and student surveys as well as findings from completed surveys can be found in the Annual Implementation Reports.

[59] IRB approval was received to use passive consent from parents for student participation in the surveys. Parents were notified that the survey was planned and asked to inform the school if they did not want their child to participate. Students also provided their own assent for participation in the surveys.

[60] The surveys took about 20 to 30 minutes for students to complete. Ideally, student surveys would take no more than 15 to 20 minutes. If appropriate, future survey versions will be shortened.

B.4.4 Telephone Interview with Texas Education Agency and Collaborators

To best understand the role of various collaborators and progress at the state level, the ICF team developed interview protocols and conducted interviews with the interim Texas GEAR UP SG state director at TEA and with appropriate personnel from each of the four statewide TEA collaborators late in spring 2014 (see Appendix D for interview protocols). The interview with the interim TEA Texas GEAR UP SG director provided information regarding the process of managing the Texas GEAR UP SG grants to districts, and coordinating with the state technical assistance office to ensure that grant activities are implemented and meeting suggested targets. In addition, questions were asked regarding any changes in the project objectives for the Texas GEAR UP SG, the level of school buy-in from districts, frequency of contact with districts and schools, the status of TEA's work with collaborators and statewide initiatives, and factors that have facilitated or hindered GEAR UP implementation this past year.

Representatives from each of the statewide Texas GEAR UP SG collaborators participated in telephone interviews with the evaluation team. All collaborators had a single interview with one staff member. During the interviews, collaborators were asked to describe their organizations as well as their organizations' roles in the Texas GEAR UP SG. They were also asked about their relationship with TEA, with the individual Texas GEAR UP SG schools, and with other TEA collaborators. Collaborators also provided information regarding progress on implementation of activities, planned future activities, and barriers and facilitators of implementation.

B.4.5 School Site Visits

Site visits are an important feature of the Texas GEAR UP SG evaluation. To ensure that relevant and useful information was gathered on these site visits, protocols specific to multiple types of stakeholders were developed. Seven protocols were developed to gather data from stakeholders. These protocols were for Texas GEAR UP SG school coordinator interviews, Texas GEAR UP SG College Preparation Advisor interviews, school administrator interviews, teacher focus groups, student focus groups, parent focus groups, and community stakeholder interviews/focus groups. The content of the protocols was aligned to Texas GEAR UP SG project objectives, relative to implementation in Year 2. Generally, the protocols explored knowledge and understanding of the Texas GEAR UP SG, participation in and perceptions of implementation activities, barriers and facilitators to participation in Texas GEAR UP SG implementation activities, perceptions of stakeholders regarding promising practices, and awareness of issues related to postsecondary education. Focus groups were structured to provide ample time for participants to express their views about the program and specific activities within it. The student focus group protocol was designed using classroom discussion strategies (e.g., brainstorming) to encourage participation by all students.

SITE VISITS

Site visits were completed at each of the seven Texas GEAR UP SG schools in fall 2013 and spring 2014. The evaluation team made copies of interview and focus group protocols available to schools (see Appendix C) prior to participating in the visit. Telephone calls and emails were used to communicate with each site regarding the visit and to develop a site visit schedule. Schedules varied by school based on the availability of participants, but all schools were asked to schedule time for separate interviews with the GEAR UP coordinator, College Preparation Advisor, and administrator at the school, as well as focus groups with students, parents, and teachers. Sites had the option to schedule a community stakeholder focus group if appropriate. During the communication about the site visits, it was clarified that the intent of the visit was not to evaluate teachers or staff but to gather information on Texas GEAR UP SG implementation, emerging promising practices, and strategies that could enhance program effectiveness. The team customized materials for specific sites based on information gained in the APR on activities and events for students, parents, and teachers.

A few of the general highlights regarding these visits are provided here. The Appendix E case studies provide more details. Each site visit varied somewhat in order to be appropriate to the individual school.

- **School Staff Interviews.** The ICF team designed interview protocols for principals, assistant principals, school-site Texas GEAR UP SG College Preparation Advisors, and Texas GEAR UP SG Coordinators. In most cases, interviews were conducted on a one-to-one basis. At each school, an interview was requested with both an administrator (i.e., principal, assistant principal) as well as school-site GEAR UP SG staff. Overall, ICF conducted interviews with 19 school administrators.
- **Teacher Focus Groups.** ICF conducted teacher focus groups at all of the middle schools in the Texas GEAR UP SG. Due to classroom coverage issues, the size and duration of focus groups varied widely. The typical teacher focus group had three teachers and lasted approximately 30 minutes. Many schools scheduled teachers for focus groups during their planning periods or open times so they did not have to find substitutes for teachers to attend. Teachers participated in interviews rather than focus groups if they were unavailable at the same time as other teachers. Teachers were asked about knowledge of Texas GEAR UP SG, perceptions of the program at their school, and current and planned Texas GEAR UP SG-sponsored PD and workshops. Many of the questions focused on activities regarding Texas GEAR UP SG Project Objective 1.1 related to Algebra I completion. For those teachers with day-to-day involvement with the program, ICF inquired about specific activities and their perceived effectiveness along with perceptions of program buy-in among teachers, parents, and students. Overall, for fall 2013 and spring 2014, ICF conducted 36 teacher focus groups with 106 participants.
- **Student Focus Groups.** Focus groups with students were held at each school to examine student knowledge of the program and of higher education, their participation in program activities, and their perceptions of GEAR UP's effectiveness. Student focus groups averaged eight to 10 participants. Overall, 118 students participated in focus groups.
- **Parent Focus Groups.** ICF conducted focus groups with parents at all sites. The purpose of these focus groups was to examine parent knowledge of the program and of higher education, their participation in program activities, and their perceptions of effectiveness. The evaluation team provided Spanish-speaking personnel at six sites where the school requested such support. At four sites, Spanish-speaking parents attended and ICF conducted two focus groups at these sites, one in English and one in Spanish. Overall, 70 parents participated in focus groups, including 22 who attended Spanish-language sessions. The typical parent focus group averaged three participants.
- **Community Stakeholder Interview/Focus Groups.** In setting up the site visits, all sites were asked about current relationships with community stakeholders on the Texas GEAR UP SG; time was allotted in the schedule to interview community stakeholders if available. However, no site was able to schedule such a focus group.

B.5 Data Security and Cleaning

The ICF team received all data provided by TEA via a secure, password protected environment. Survey data was collected by schools and then shipped to ICF. ICF provided boxes and shipping labels to schools to facilitate this process. Students and parents were asked not to write their names on the surveys in order to maintain anonymity. Separate envelopes or boxes were used to collect consent/assent forms. Once received by ICF all electronic data were stored on a protected server accessible only to team members who have signed TEA's access to confidential data form. Paper surveys were numbered and scanned in order to create an electronic copy. The paper copies were then stored in a locked file cabinet

Upon receipt of the GUIDES data in April 2013, ICF reviewed the data and asked TEA to follow up with schools for clarification regarding some responses. The survey data was examined for missing values, outliers, and response patterns. Once all cleaning steps were completed, a final clean data set was prepared for use in analyses.

B.6 Data Analytics

The goal of the first comprehensive report was to describe outcomes in the Texas GEAR UP SG schools and to identify any potential relationships between implementation and outcomes and to address progress toward specific Project Goals. Analyses compared how students at Texas GEAR UP SG schools performed relative to students in the selected comparison schools (see PSM) to students in the retrospective cohort (within Texas GEAR UP SG schools), and where appropriate to statewide averages on the academic outcomes described in the next section.

B.6.1 Outcomes Used in the Analyses

- Advanced course completion, specifically Grade 8 Algebra I completion (Project Objective 1.1)
- Grade 8 STAAR performance (categorical [Level]) (NOTE: Given delayed implementation in Grade 7 particularly prior to STAAR, the decision was made to not include Grade 7 STAAR as an outcome variable.)
- On-time grade-level promotion rate from Grade 7 to Grade 8 (based on enrollment in Grade 7 in prior year (2012–13) followed by enrollment in Grade 8 (2013–14) (Project Objective 4.3, which is an end of Year 3 goal)

The Texas GEAR UP SG primary cohort and Comparison student cohort consists of students who were in Grade 7 in Year 1 (2012–13) and data were potentially available for the following three years: prior-to-the intervention year (2011–12), Year 1 (2012–13), and/or Year 2 (2013–14). Additional students entered the primary cohort in Grade 8, while some Grade 7 students were no longer in the primary cohort past Grade 7. The retrospective cohort students were in Grade 7 in 2011–12. For this first comprehensive report, no analyses related to the follow-on cohorts was provided.

B.6.2 Implementation Level with Texas GEAR UP SG cohort

The following how implementation was operationalized in two ways.

Length in Cohort: Each year (in the two years the grant had been implemented and the evaluation underway), the evaluation team and TEA made decisions about whether a student would/would not be included in the Texas GEAR UP SG primary and comparison school cohort. In general, these decisions were based on time in grade and participation in activity. Students are therefore coded as Grade 7 participants only, Grade 8 participants only, or both Grade 7 & 8 participants. Students who attended a school for only a brief period of time and did not participating in any Texas GEAR UP SG activities were generally not part of the cohort.

The length of time in cohort variable does not differentiate between students enrolled for the entire year and students enrolled for only part of a given year. A student who was enrolled the entire school year was coded the same as a student who arrived in January of the school year and never left.

It is important to note that, while we were able to obtain student outcome data for students who remained in Texas public schools, even if they left a Texas GEAR UP campus, some students who stopped attending a Texas GEAR UP SG school (e.g., those who no longer attended a Texas public school) did not have available student outcome data. These students were excluded in all of the analyses.

Participation in Individual Activities: In order to understand the relationship between implementation and outcomes, descriptive analyses were first conducted to examine students' participation in Texas GEAR UP SG activities in each of the two years. First, activities were coded categorically as yes/no participation (e.g., Did parents participate in at least one activity?

Did the student have a tutor?). In most cases, the variable was also included in models as continuous (dosage). For example, college visits were coded as Yes/No participated in a college visit during the Grade 7 school year, Grade 7 summer, or Grade 8 school year. In addition, the number of college visits during each of the time frames was also included. The following table highlights the implementation activities of interest to the analyses.

Table B.4. Implementation Variables

	Implementation Activity	Participation Values (calculated for each year)
Student Support Services	Tutoring	Yes/No for participation by subject (ELA, Math, Science, Social Studies) as available. Hours of tutoring by subject (continuous)
	Mentoring	Yes/No for participation Hours of mentoring
	Counseling	Yes/No for participation Number of counseling hours
	College visit	Yes/No for participation Number of visits
	Job site visit/shadowing	Yes/No for participation Number of visits/shadowing events
	Summer program (pre Grade 8)	Yes/No participated in Grade 7 Summer program Number of programs
	Student workshops/events	Yes/No any event Number of events (continuous)
	Parent events	Yes/No did student's parent participate in at least one event Number of events student's parent participated in
	Family event	Yes/No did student participate in at least one family event Number of family events student participated in
Length in Cohort (Grades in GEAR UP or comparison school)		Grade 7 only, Grade 8 only or Both Grade 7 and Grade 8
Number of Subjects in Advanced/AP Course		Grade 7 advanced in Math, Science or ELA (0-3) Grade 8 advanced in Math, Science, ELA or Social Studies (0-4) Code as Yes/No any advanced course Code as Yes/No other than math advanced course (for Algebra I as outcome) Advanced is based on school definition; calculate overall and for AP specific (no classes identified as AP in Grade 7 or Grade 8)

Overall Level of Implementation. Within each year, the number of activities participated in was summed across the cohort. An approximately median split was calculated in order to determine High versus Low level of participation within the year relative to other students in the cohort. This was used to calculate a categorical student-level variable across the two years (overall level of implementation) as follows:

- Low/Low: No participation to low participation in both years
- High/High: High participation in both years
- Low/High: Low in Grade 7 and High in Grade 8
- High/Low: High in Grade 7 and Low in Grade 8

Given the low rates of students who did not participate in any activity, these students were included in the low participation group. That is, the variable did not distinguish between no participation and low participation as both were included in the same category.[61] This decision occurred in part because Texas GEAR UP SG was considered a whole school approach. Students who did not directly participate in implementation activities were considered to be aware of the activities and may have been exposed to the program through informal interactions with peers, teachers, and Texas GEAR UP SG staff. In addition, there were not sufficient numbers of students who participated in no activities. Only 8% of students who attended for a sufficient period of time in Grade 7 did not participate in any Texas GEAR UP SG implementation activities and this dropped to less than 1% in Grade 8 (see Table D.29, Appendix D). Given this, creating a separate no implementation group among students who attended Texas GEAR UP SG for a sufficient period of time would have excluded students from the analyses unnecessarily.

One key challenge with regard to implementation variables is that the evaluation team had no way to assess the quality of any given activity or to assess student engagement with any given activity. TEA collected GUIDES data that coded for participation but not for quality or engagement. For example, two students who each attended one workshop were coded as participating in student workshops. However, the two workshops may have differed significantly in quality and one student may have been highly engaged, asking questions and following up on workshop activities, while another student may have attended with little engagement or follow up.

In addition, for overall level of implementation, the evaluation team did not differentiate between students who participated in multiple activities within an implementation category (e.g., student workshops, college visits) and those who participated in only one. That is, overall level of implementation primarily measures *breadth* of participation rather than *depth* of participation. The overall category was associated with participation in a broad range of implementation activities rather than with extensive participation in a single type of activity. In section 2.4, level of participation with specific activities is further explored.

Readers should consider these challenges in interpreting these results. For example, outcomes associated with low implementation may be due in part to students with no implementation. It is the perspective of the evaluation team that in order to better understand the relationship between implementation and outcomes, the benefits of grouping students within Texas GEAR UP SG as further described here outweighed the concerns.

The standardized effect sizes allow us to compare evaluation results across different outcomes and even across different studies. This is a standard practice for interval scale outcomes and it represents the program impact in terms of standard deviation of outcome variables. If, for example, the standardized effect size was .25, it means that the average outcome score differences between the treatment and control/comparison subjects was .25 SD. For the What Works Clearinghouse (WWC), effect sizes of 0.25 standard deviations or larger are considered substantively important. For binary value outcome analysis (e.g., passing Algebra I course), WWC uses the COX index algorithm to convert results into standardized effect sizes. The calculation is based on the probability of the occurrence of an event in each of the two groups (treatment vs. control/comparison). According to WWC standards handbook, the algorithm is:

[61] No participation in implementation at the Texas GEAR UP SG primary cohort was included in the sample only if the student remained in the school long enough to be considered a member of the cohort. Students who attended one of the Texas GEAR UP SG schools for a short period of time but who did not participate in any implementation activities were excluded from the sample of Texas GEAR UP SG students.

$$g = \frac{\left[\ln\left(\frac{Pi}{1-Pi}\right) - \ln\left(\frac{Pc}{1-Pc}\right)\right]}{1.65}$$

Where Pi stands for the probability of an event occurrence in the treatment group and Pc standards for the probability of an event occurrence in the control/comparison group.

B.6.3 Evaluation questions and Associated Analyses

Table B.5 summarizes the proposed student impact questions to be examined in the report. Implementation variables were described in the prior section. Additional variables used in these analyses include:

- **School Group**: Texas GEAR UP SG schools versus matched comparison schools
- **Cohort Group**: primary cohort versus retrospective cohort
- **Student Characteristics**: race/ethnicity, economically disadvantaged, ELL status, gender

For analyzing student academic outcomes, the analysis team relied on the multilevel modeling (MLM) framework that adjusts for the correlated error structure inherent in education data. As detailed later, the MLM model is suitable for data where students are nested within schools and thus observations do not meet the independent assumption. For questions comparing to state or national averages, descriptive statistics are used. The next section describes how the MLM modeling framework accommodates the proposed analytical approaches: the main impact analysis, the statistical interaction analysis, and the implementation as predictor analysis.

Table B.5. GEAR UP Evaluation Questions and Analytic Approach

Originally Proposed Evaluation Questions for Short-term Outcomes	Modeling and Analysis Approach	Variables
2.1.1 How many students (%) successfully complete Algebra I, in Grade 8?	Descriptive statistics (%) by school group, cohort group, and student group	Algebra I Completion (COURSE_RESULT) in Grade 8 for GEAR UP, comparison and retrospective completed equals pass (variable coded as pass/fail/incomplete)
2.1.2 How are students at GEAR UP campuses performing on STAAR and STAAR EOC exams (scale scores)?	Descriptive statistics (mean, SD) by school group, cohort group and student group (scale scores to be presented in Appendix only) (Mathematics and Algebra I EOC broken out separately)	Reading scale scores (Grades 7 & 8) Mathematics scale scores (Grades 7 & 8) Algebra I EOC scale scores (Grades 7 & 8) Writing scale scores (Grade 7 only) Science scale scores (Grade 8 only) Social Studies scale scores (Grade 8 only)
How many students (%) are performing at the college readiness level (Level II final phase in) on STAAR and STAAR EOC? (NOTE: Will describe % at Level I vs. Level II Phase-in 1 vs. Level II Final and Above	Descriptive statistics (%) by school group, cohort group, and student group (Mathematics and Algebra I EOC will be broken out)	Level on Reading (Grades 7 & 8) Level on Mathematics (Grades 7 & 8) Level on Algebra I EOC (Grades 7 & 8) Level on Writing (Grade 7 only) Level on Science (Grade 8 only) Level on Social Studies (Grade 8 Only)

Originally Proposed Evaluation Questions for Short-term Outcomes	Modeling and Analysis Approach	Variables
2.1.3 At the end of each grantee year, how many students (%) have been promoted on time to the next grade level? (NOTE: Grade 7 to Grade 8 only)	Descriptive statistics (%) by school group, cohort group and student group	On-time grade promotion from Year 1 to Year 2 (Grade 7 to Grade 8) NOTE: Defined as in one grade level in PEIMS in one year and in the next grade in fall of following year; for example in Grade 7 in PEIMS 2012–13 and in Grade 8 PEIMS fall snapshot 2013–14.
2.1.9 Where appropriate, what is the relationship between participation in a GEAR UP campus on each student outcome as compared to: a) state averages; and	Descriptive (NOTE: State average is population statistic so either is or is not different from that)	State averages used for comparison: Grade 7 to Grade 8 promotion (from AR report); STAAR (from TAPR); and NOTE: Per TEA, there is not a state average for Grade 8 Algebra I completion.
2.1.9 b) student outcomes in comparison schools?	main impact MLM analysis school group	all outcomes (Algebra I completion and Grade 8 STAAR performance) covariates in model (see description in statistical methods section)
2.1.9 c) retrospective cohort comparison	Covariate regression analysis/logistic regression analyses of cohort group differences (Note. Seven is too few schools to perform an MLM.) cohort group, within Texas GEAR UP SG only	all outcomes (Algebra I completion and Grade 8 STAAR performance) Covariates and Interactions included in model (see description in paper)
2.1.8 Where appropriate, what is the relationship between student characteristics (e.g., English language learner [ELL] status, socioeconomic status, ethnicity/race) and participation in GEAR UP program on student outcomes? That is, how does the effect of the intervention program vary by student characteristics?	statistical interaction MLM model school group by student demographic group	add student group in to main impact MLM model: race/ethnicity, Economically Disadvantaged, ELL status gender
2.1.10 What is the relationship between implementation (e.g., level of implementation and/or specific implementation strategies) and student outcomes (e.g., achievement [Algebra I, AP taking, STAAR], promotion rates, course completion rates? Outcomes in Future Reports: ACT/SAT, degrees awarded)?	Overall Implementation as Predictor Analysis. MLM within GEAR UP only; by school group if possible; and by student groups	all outcomes (Algebra I completion and Grade 8 STAAR performance) school group or Level of implementation included in the MLM analyses (model run twice)

Originally Proposed Evaluation Questions for Short-term Outcomes	Modeling and Analysis Approach	Variables
Additional courses if appropriate, AP course taking more generally		cohort group (also run with retrospective vs. level of implementation)
1.3.1 What practices implemented by the grantee might be identified as potential best practices based on short-term outcomes?	individual activity implementation as predictor analysis: MLM within GEAR UP only	All Outcomes (Algebra I completion and Grade 8 STAAR performance) Multiple runs of the MLM model: once for each activity categorically
SPOTLIGHT 1) transition of the cohort between Grades 8 and 9 and specific GEAR UP strategies and efforts employed during this time period to assist students that transition which additionally facilitates progress toward ultimate goals of the Texas GEAR UP program. Beginning with the transition from Grade 8 to Grade 9, what type(s) of summer transition and/or institutes did grantees conduct? What percentages of students participated in summer programs? To what extent do students who participated in summer programs have outcomes that differ from students who do not participate in programs? What facilitators and barriers can be identified to implementing summer programs? If barriers to implementing were identified, to what extent were grantees able to overcome such barriers and how? Do grantees anticipate and are they able to over barriers in following years?	descriptive	Fall 2014 survey and site visit data; summer 2015 GUIDES data on attendance at summer transition camps ("fish" camps)

B.6.4 Analytic Models

All of the outcomes described in Section 2.1 are categorical rather than continuous. This means that rather than examining mean group differences based on average scores, the analyses will assess the ability to predict the category outcome (e.g., Met Standard on STAAR). For each outcome a series of models were run, with school group and cohort group as the primary comparison variables of interest.

- **Chi-square Analyses**: First, basic analysis (chi-square) examined descriptive differences in outcomes by student characteristic variables. These student characteristic analyses were run twice, once with the school group sample (i.e., all students in the Texas GEAR UP SG primary cohort and all students in the comparison schools) and once with the cohort group sample (i.e., students in the Texas GEAR UP SG primary and retrospective cohorts). These analyses assessed whether each outcome was associated with each of the student characteristic variables (e.g., gender). These analyses examined if the distribution in the outcome is similar across all categories of the given student characteristic variable.

- **Main Impact Model:** The main impact model examined differences in outcomes associated with the school level grouping variables (i.e., school group, cohort group). This model examined the relationship between the given grouping variable and each outcome. When the grouping variable was significant, the ability to predict the given outcome was increased based on knowing the level of the grouping variable. The main impact model determined if the association between grouping and outcome occurred after accounting for any differences in outcomes occurring across schools.
- **Covariate Model:** The covariate model retained the grouping variable and included additional variables that might also predict the outcomes in order to determine if the grouping variable was associated with the outcome after accounting for other potential contributors associated to the outcome. Additional variables included Grade 7 STAAR Mathematics as a marker for prior achievement given that students who are relatively more/less successful in one year may also be successful at that same level in future years. In addition, this model included the four student characteristic variables. Each of the variables in the model might be associated (significantly) with the outcomes. If the grouping variable was significant, then again knowing group membership added to the ability to predict the outcome after accounting for any ability to predict from the other variables in the model.
- **Statistical Interaction Model:** Finally, we conducted models examining statistical interactions between student characteristic variables and the school level grouping variables.[62] These models examined if any difference associated with school level grouping variables was consistent across the levels of a given student characteristic variable. For example, was being in Texas GEAR UP SG associated with an outcome in the same way for both girls and boys. Significant interactions suggest that the association was not the same.

The primary analytical model used was multilevel modeling (MLM). More specifically, because all outcomes were binary (categorical), we use a type of MLM called multilevel logistic regression model. The regular statistical approaches (e.g., ANCOVA) rely on the independence assumption, which was clearly violated in our data where student outcomes are clustered/correlated within schools. The classical statistical tests most likely underestimate the amount of imprecision in the data and leads to overly optimistic and misleading statistical test results. By explicitly incorporating the imprecision of between-school variance into the estimation process, the MLM adjusts for the clustering problem and derives more realistic estimates of standard errors, providing conservative statistical test results.

As summarized in Table B.5, the MLM examined a) the main impact of GEAR UP intervention on student outcomes, b) statistical interaction between the intervention effect and student subgroup characteristics, and c) the relation between student outcome, the dosage level and type of student-level GEAR UP activity implementation. To elaborate how these analytical questions are examined with data, the next sections provide additional detailed specifications of the MLMs.

THE MAIN IMPACT MLM ANALYSIS

Evaluation questions: 2.1.9 (b)

The following MLM equations summarize the Main Impact MLM analysis and address evaluation question 2.1.9(b) which asks whether participation in a school with Texas GEAR UP SG results in different outcomes than participation at similar comparison schools. As mentioned, outcome variables were binary (e.g., yes/no completed Algebra I), so the following examines the probability that students achieve a higher level in outcome variables than a lower level.

[62] As noted in Appendix B, the primary forms of analyses are Multilevel Modeling (MLM) and logistic regression.

Table B.6. The Main Impact MLM Equations for Binary Outcomes

For binary outcomes:

$$Level\ 1: \mathrm{Log}\left(\frac{P}{1-P}\right) = \beta_{0j} + \beta_{1j} * BaselineAchievement_{ij} + \cdots$$
$$Level\ 2: \beta_{0j} = \gamma_{00} + \gamma_{01} * Treatment_j + u_{0j}$$
$$Level\ 2: \beta_{1j} = \gamma_{10}$$

- P stands for the probability that a student successfully completes a course.
- postscripts *i* and *j* index, respectively, student and school
- β's and γ's are parameters to be estimated
- *BaselineAchievement* is a Grade 7 STAAR test score
- *Treatment* is a binary indicator (1 if GEAR UP school, else 0)

"…" indicates that the model will include multiple predictors and corresponding parameters

u's are school-specific residuals (estimated as random effects) and they are independently and identically distributed with a mean of 0.

Being a logistic regression model, the model uses a logistic function suitable for analyzing the binary outcome. The outcome examined was the probability of students, for example, of successfully completing an Algebra I course (represented as P in the model). The model explicitly drives school differences as level-2 intercepts or random effects (expressed as β_{0j} in the equation) and uses the level-2 intervention variable to analyze the outcome variation between Texas GEAR UP SG and comparison schools. Because the model includes both level-1 and level-2 covariates, the impact coefficient (γ_{01}) will measure the net magnitude of the Texas GEAR UP SG program effectiveness on student outcome and helps evaluate the hypothesis that GEAR UP school students performed better than comparison schools on outcomes. Analyses were conducted for Grade 8 outcomes with Grade 7 STAAR as a pretest covariate as appropriate.[63] STAAR scores from prior-to-the intervention year will be used as a pretest covariate, so the impact coefficient will capture one year or two years of student academic growth, respectively, for Grade 7 and Grade 8 analysis.

STAAR student achievement is the most complicated outcome as it multiple levels of interest (evaluation question 2.1.2, Level I, Level II Phase-In Standard (Below Final Recommended and Level II Final Recommended and Above). Level II Final Recommended and Above is considered by TEA to be postsecondary education ready. To improve the ease of interpretation, the levels were dichotomized as not met standard (Level I) vs. met standard (Level II at Phase-In Standard and above) and not postsecondary education ready (at or below Level II Phase-In Standard) vs. postsecondary education ready (Level II Final Recommended and above). The comparisons are essentially comparing STAAR pass/fail status and then separately comparing postsecondary college readiness. This assumes appropriate variance in level to allow for the comparisons.

As mentioned, some student-level grouping variables were entered into the model, so their correlation on the outcome variables will be adjusted. To assess the program impact, a binary variable "Treatment" in the equation represents "school group" which differentiates seven Texas GEAR UP SG schools (Treatment=1) and seven non-GEAR UP schools (Treatment=0). The same set of covariates was used for all models discussed later:

[63] Prior year STAAR was used as a covariate.

- Gender
- Race and Ethnicity (White, African American, Hispanic)
- Economically Disadvantaged
- ELL
- Prior year scale score on state assessment (STAAR) was included as a pretest covariate. For mathematics and science outcomes, STAAR 7 Mathematics was the covariate. For reading and social studies outcomes, STAAR 7 Reading was the covariate. STAAR Scale Scores were first transformed into z-scores before being used in the model.

LENGTH IN TIME IN COHORT ANALYSIS

Our analysis sample included three groups of GEAR UP students who varied by the length of school enrollment. The following summarizes how students varied in terms of enrollment in GEAR UP schools. This additional analysis examines whether Group T3 has a better outcome average than T1 and T2 as their exposure to the intervention is more consistent and longer than other groups.

- T1: Texas GEAR UP SG school students who were in the schools only in Year 1 (Grade 7)
- T2: Texas GEAR UP SG school students who were in the schools only in Year 2 (Grade 8)
- T3: Texas GEAR UP SG school students who were in the schools in Year 1 and Year 2 (Grades 7 and 8)

To estimate the group differences of outcomes, the model will include a dummy variable representing Group T1 and T2 (coded as 1 if a student belongs to the group; else 0). The following modification will be made to the level 1 and 2 part of the equations proposed earlier. The omission of T3 is intentional because, when mutually exclusive categories enter the model in this way, one category has to be excluded and its estimate will be reflected in value of the intercept (γ_{00}).

Level 1: $\log(p/(1-p)) = \beta_{0j} + \beta_{1j} * \Pr etest_{ij} + \beta_{2j} * T1 + \beta_{3j} * T2 + \ldots$

Level 2: $\beta_{0j} = \gamma_{00} + u_{0j}$

STATISTICAL INTERACTION MLM MODEL:

Evaluation question: 2.1.8

To address evaluation questions 2.1.8, the MLM model included the statistical interaction between the treatment variable (school group) and student's characteristics (student group). This assessed the degree to which the program impact depended on student characteristics (e.g., ELL, Gender). In the MLM equation, this was represented as a complex model called "cross-level statistical interaction model." A student characteristic (e.g., ELL) is a level-1 variable and the treatment indicator is a level-2 variable and thus the statistical interaction takes place between the two levels.

Level 1: $Log(p/(1-p)) = \beta_{0j} + \beta_{1j} * \Pr etest_{ij} + \beta_{2j} * ELL_{ij} \ldots$

Level 2: $\beta_{0j} = \gamma_{00} + \gamma_{01} * Treatment + u_{0j}$

Level 2: $\beta_{1j} = \gamma_{10}$

Level 2: $\beta_{2j} = \gamma_{20} + \gamma_{21} * Treatment$

To make this model representation more intuitive, the level 2 equations should be inserted into the level 1 equation. As shown by the following equation (simplified to include the relevant terms with adjusted postscripts), the model reduces to the regular statistical interaction model. It estimates γ_3 which represents the degree to which the effect of the intervention (γ_1) depends on a value of another variable (ELL).

$$Log(p/(1-p)) = \gamma_0 + \gamma_1 * Treatment + \gamma_2 * ELL_{ij}. + \gamma_3 * Treatment * ELL + ...$$

To implement this model, the analysis team will create the statistical interaction variable by multiplying the value of the intervention variable (coded as school group or as level of intervention) and the value of the subgroup characteristic variables (coded 0 or 1; e.g., 1 if ELL student, else 0). A statistically significant interaction variable will support the possibility that the program's effectiveness depends on students' subgroup characteristics.

INDIVIDUAL ACTIVITY IMPLEMENTATION AS PREDICTOR ANALYSIS:

Evaluation question: 1.3.1

To help identify best practices, analyses were conducted to estimate the impact of individual activity participation. For this analysis, participating in implemented activities was the key. While school was not in the model directly, the extent to which schools have implemented activities was related to level of implementation. As discussed in an earlier section, the level of implementation in Grade 7 and Grade 8 was measured by individual activity participation (e.g., student support service, such as tutoring, mentoring, college, and work site visits). To examine how program participation was associated with outcomes, we have two approaches to using the activity participation information. The first was to use the count data (e.g., frequency of student's tutor service use) as predictors. Because we have data from Grade 7 and 8, we will be using the sum of the counts across grade levels (Year 1 and Year 2) for each of the service activities. The other was to create categorical variables of the activity data indicating yes/no participated in the given activity. Based on the GUIDES information, students were classified either as "participated in the activity" or "did not participate" in the two program years. This coding scheme creates four student groups (e.g., No/No: Did not participate in the activity in either Grade 7 or Grade 8; Yes/Yes: Participated in the activity in both grades, etc.).

The analysis sample included only GEAR UP students because only GEAR UP school students provided data on their program participation. As shown in the equation below, the count data entered the level-1 part of the equation and the effect β_{2j} was estimated.

Level 1: $Log(p/(1-p)) = \beta_{0j} + \beta_{1j} * \mathrm{Pr}etest_{ij} + \beta_{2j} * COUNT_{ij}. + ...$

Level 2: $\beta_{0j} = \gamma_{00} + u_{0j}$

To estimate the categorical group outcome differences, the model included a series of dummy variables representing the groups (coded as 1 if a student belongs to the group; else 0). The following modification were made to the level 1 and level 2 part of the equation presented earlier. As mentioned, NN, YY, NY, and YN stand for, respectively No/No (Did not participate in the activity in either Grade 7 or Grade 8), Yes/Yes, No/Yes, and Yes/No. The omission of group NN is intentional because, when mutually exclusive categories enter the model in this way, one category has to be excluded and its estimate will be captured as the intercept value (γ_{00}).

Level 1: $Log(p/(1-p)) = \beta_{0j} + \beta_{1j} * \Pr etest_{ij} + +\beta_{2j} * YY_{ij} + \beta_{3j} * NY_{ij} + \beta_{4j} * YN_{ij} + ...$

Level 2: $\beta_{0j} = \gamma_{00} + u_{0j}$

To help define best practices, we compared the practices whose association with the outcome was statistically significant at 0.05 (p-value, two-tail test). As mentioned, the practice variable was coded either as count or categorical variables and both results are considered for selecting best practices. We will use odds ratio for each practice to compare and interpret the magnitude of program impact. As this is an exploratory analysis, the exact thresholds for classify odds ratio sizes into "small," "medium," or "large" will not be set.

OVERALL IMPLEMENTATION AS PREDICTOR ANALYSIS:

Evaluation questions: 2.1.10

This section addresses the impact of overall implementation on student outcomes. As noted earlier, student participation data was provided from GUIDES (e.g., student support services, such as tutoring, mentoring, college, and work site visits). Based on the individual activity items, we derived overall summary variables classifying students into four groups: a) Low/Low: Non-participation to low participation in both years), b) High/High: High participation in both years), c) High/Low, and d) Low/High. As only Texas GEAR UP SG schools implemented the program, the analysis sample included only Texas GEAR UP SG students and compare then by group defined by program participation pattern.

To estimate the group differences, the model included a series of dummy variables representing the groups (coded as 1 if a student belongs to the group; else 0). The following modification were made to the level 1 and level2 part of the equation presented earlier. As mentioned, LL, HH, LH, and HL stand for, respectively Low/Low (low overall participation in both years), High/ High, Low/ High, and High/ Low. The LL group will be treated as the omitted category (reference group) and its adjusted outcome will be captured by the intercept term (γ_{00}). Other groups' coefficients represent the size of deviation from the LL group's estimate.

$$Level\ 1: \mathrm{Log}\left(\frac{P}{1-P}\right) = \beta_{0j} + \beta_{1j} * Pretest_{ij} + \beta_{2j} * HH_{ij} + \beta_{3j} * LH_{ij} + \beta_{4j} * HL_{ij} + \cdots$$
$$Level\ 2: \beta_{0j} = \gamma_{00} + u_{0j}$$

RETROSPECTIVE COHORT COMPARISON

Evaluation questions: 2.1.9(c)

To understand how the academic performance of the Texas GEAR-UP SG schools differed from prior to post implementing they program, we compared the student outcome differences of the Texas GEAR UP SG primary cohort and the retrospective cohort. As Table B.7 shows, the retrospective cohort of students was in Grade 7 in the pre-intervention year (2011–12) and became Grade 8 students in Year 1 (2012–13). Being the cohort one year prior to the primary cohort, these students, though enrolled in the same schools, did not receive the intervention. In contrast, the primary cohort of students consisted of Grade 7 students in 2012–13 and became Grade 8 students in 2013–14. The point of comparison was between the retrospective Grade 8 cohort from the Year 1 and the primary cohort Grade 8 from Year 2.

Table B.7. Retrospective and Primary Cohorts

	2011–12 (Pre-intervention year)	2012–13 (Year 1)	2013–14 (Year 2)
Primary cohort		Grade 7	Grade 8
Retrospective cohort	Grade 7	Grade 8	

The analytical approach was similar to the comparison group analyses. A main impact analyses was followed by Multiple Logistic Regression Analysis. To allow the cohort group comparison of educational outcomes, the analysis data was prepared such that the data from the primary cohort and retrospective cohort were placed vertically on top of one another. For simple demonstration, Table B.8 shows a hypothetical sample of eight students from two schools. In this example, each school has two primary cohort students and two retrospective cohort students. The outcome columns show hypothetical values for student outcome (binary; the same outcome variables discussed in other analyses, e.g., Algebra course completion). Gender is one example of a student characteristic predictor. The real analysis sample included more rows, representing students from seven schools and two cohorts, and columns representing a full set of outcomes and predictors.

Table B.8. Data Structure for the Retrospective and Primary Cohort Comparison

Student ID	School Name	Cohort	Outcome (Binary 0 versus 1)	Gender
1	A	Primary	0	Male
2	A	Primary	1	Female
3	A	Retrospective	1	Male
4	A	Retrospective	0	Female
5	B	Primary	1	Male
6	B	Primary	1	Female
7	B	Retrospective	0	Male
8	B	Retrospective	0	Female

Because the analysis focused on seven Texas GEAR UP SG (treatment) schools and the number of level-2 units is too small for MLM analysis, the analytical approach was a multiple logistic regression model. The primary goal of this model was to estimate the cohort difference in outcomes, while controlling for multiple variables as covariates. If the Texas GEAR UP SG intervention was successful, the program impact is reflected in the size of parameter β_1, as it captures the average performance difference of primary cohort students and retrospective cohort students. School differences were adjusted for by a series of dummy variables representing each of seven schools, though for simplicity only one school was shown below.

$$Log(P/(1-P)) = \beta_0 + \beta_1 * \mathrm{Pr}imaryCohort_i + \beta_1 * School\_A_j + \beta_3 * Male_i + \ldots$$

where

- Postscripts *i* and *j* index, respectively, student and school.
- P stands for the probability that a student achieves a successful outcome.
- *PrimaryCohort* is a binary indicator of primary cohort membership (1 if primary, 0 if retrospective).

- *School_A is an example of a school membership variable (1 if school A, 0 if other schools)*
- *"…"* indicates that the model will include multiple predictors and corresponding parameters.
- β's are parameters to be estimated.

Another important question was how the program impact varies by student subgroups, such as gender, race, ELL, special education, and economically disadvantaged status. Using gender as an example, the following equation shows how the model tested the interaction effect between the cohort membership variable and gender variable. If the interaction term parameter (β_4) is statistically significant, it indicates that the program impact depended on students' subgroup characteristic.

$$\log(p/(1-p)) = \beta_0 + \beta_1 * \mathrm{Pr}imaryCohort_i + \beta_1 * School\_A_j + \beta_3 * Male_i + \beta_4 * \mathrm{Pr}imaryCohort * Male_i + \ldots$$

The interaction effects was tested for gender, race and ethnicity, economically disadvantaged status, and ELL status. Running each interaction effect model separately per subgroup runs the risk of multiple comparison and optimistic statistical test results.

B.7 References

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Appendix C: Outcomes Analyses Additional Tables

Appendix C provides additional details associated with the Student Outcomes analyses findings reported in Chapter 2.

C.1 Student Outcomes Descriptives

Table C.1. Percentage of Students in Grade 7 Promoted to Grade 8 by Texas GEAR UP Primary Cohort, Retrospective Cohort, and Comparison Schools Cohort

School Group	Primary Cohort (2013–14)		Retrospective Cohort (2012–13)	
	n	% Promoted to Grade 8	n	% Promoted to Grade 8
Texas GEAR UP SG				
School A	317	94.3%	295	98.6%
School B	312	97.8%	283	99.3%
School C	251	99.6%	274	100.0%
School D	222	100.0%	199	100.0%
School E	270	99.3%	249	98.0%
School F	316	100.0%	285	98.9%
School G	317	97.5%	329	98.2%
Overall	**2005**	**98.1%**	**1914**	**99.0%**
Comparison Schools				
Comparison A	209	97.6%	Not Applicable	
Comparison B	318	99.1%		
Comparison C	340	98.8%		
Comparison D	199	100.0%		
Comparison E	257	100.0%		
Comparison F	138	100.0%		
Comparison G	403	99.5%		
Overall	**1864**	**99.2%**		

Source. Texas Education Agency, Public Education Information Management System (PEIMS) data, 2012, 2013, 2014.
Notes. Promotion defined as increasing one grade level in PEIMS between school years; for example, in Grade 7 in PEIMS anytime during 2012–13 and in Grade 8 PEIMS fall snapshot 2013–14.

Table C.2. Percentage of Students Promoted to Grade 8 by Student Characteristic and Texas GEAR UP Primary Cohort versus Matched Comparison Schools Cohort, 2013–14

Student Characteristic	Texas GEAR UP SG		Comparison Schools	
	n	% Promoted to Grade 8	n	% Promoted to Grade 8
Gender				
Female	930	98.9%	940	99.3%
Male	1068	97.9%	924	99.2%
Race/Ethnicity				
African American	291	100.0%	424	99.5%
Hispanic	1572	98.2%	1322	99.2%
White	105	96.2%	94	98.9%
Economically Disadvantaged Status				
Not Economically Disadvantaged	189	98.9%	193	99.5%
Economically Disadvantaged	1797	98.3%	1671	99.2%
English Language Learner (ELL) Status				
Non-ELL	1729	98.4%	1591	99.2%
ELL	266	98.5%	273	99.3%
Overall	**1995**	**98.4%**	**1864**	**99.2%**

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014.
Notes. Similar data for the retrospective cohort were not available. A small number students were missing information on gender and classification as economically disadvantaged. Several students were also of other races/ethnicities than in the table above. Thus, numbers in each section may not add up to the total number of students.

Table C.3. Percentages of Grade 8 Students Taking Algebra I by Texas GEAR UP Primary Cohort versus Matched Comparison Schools (2013–14) and by School Group (2012–13 and 2013–14)

School Group	n	% Did Not Take Algebra I	% Took Algebra I
Texas GEAR UP SG (Primary Cohort: 2013–14)			
School A	280	71.8%	28.2%
School B	316	72.8%	27.2%
School C	235	72.3%	27.7%
School D	208	74.0%	26.0%
School E	275	72.4%	27.6%
School F	328	69.2%	30.8%
School G	317	45.7%	54.3%
Overall	**1,959**	**67.7%**	**32.3%**
Comparison Schools (2013–14)			
Comparison A	259	91.9%	8.1%
Comparison B	337	92.9%	7.1%
Comparison C	353	91.2%	8.8%
Comparison D	205	88.8%	11.2%
Comparison E	286	76.2%	23.8%
Comparison F	145	83.4%	16.6%
Comparison G	435	78.6%	21.4%
Overall	**2,020**	**85.9%**	**14.1%**
Texas GEAR UP SG School (Retrospective Cohort: 2012–13)			
School A	292	81.5%	18.5%
School B	253	84.6%	15.4%
School C	259	76.4%	23.5%
School D	209	78.5%	21.5%
School E	239	85.4%	14.6%
School F	285	83.9%	16.1%
School G	314	80.9%	19.1%
Overall	**1,851**	**81.6%**	**18.4%**

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS) 2013 and 2014.

Table C.4. Within Grade 8 Algebra I Takers, Percentages of Students Receiving Credit for the Course by Texas GEAR UP Primary Cohort and Matched Comparison Schools (2013–14) and Texas GEAR UP SG Retrospective Cohort (2012–13 and 2013–14)

School Group	n	% of Algebra I Takers Who Received Credit
Texas GEAR UP SG (Primary Cohort: 2013–14)		
School A	280	81.0%
School B	316	74.4%
School C	235	96.9%
School D	208	100.0%
School E	275	93.4%
School F	328	99.0%
School G	317	95.9%
Overall	**1,959**	**91.8%**
Comparison Schools (2013–14)		
Comparison A	259	100.0%
Comparison B	337	95.8%
Comparison C	353	93.5%
Comparison D	205	100.0%
Comparison E	286	97.1%
Comparison F	145	100.0%
Comparison G	435	92.5%
Overall	**2,020**	**95.8%**
Texas GEAR UP SG School (Retrospective Cohort: 2012–13)		
School A	292	85.2%
School B	253	87.2%
School C	259	90.2%
School D	209	95.6%
School E	239	97.1%
School F	285	97.8%
School G	314	95.0%
Overall	**1,851**	**92.4%**

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS) 2013 and 2014.
Notes. Students who enrolled in the course and received credit for it are considered Algebra I completers.

Table C.5. Grade 8 STAAR Algebra I End-of-Course Average Scale Score by Level of Achievement and Texas GEAR UP Primary Cohort versus Matched Comparison Schools (2013–14) and Texas GEAR UP SG Retrospective Cohort (2012–13 and 2013–14)

	Primary Cohort (2013–14)								Retrospective Cohort (2012–13)							
	Level I		Level II Phase-in 1		Level II Final and Above		Overall		Level I		Level II Phase-in 1		Level II Final and Above		Overall	
School Group	n	Mean Scale Score	n	Mean Scale Score	n	Mean Scale Score	n	Mean Scale Score	n	Mean Scale Score	n	Mean Scale Score	n	Mean Scale Score	n	Mean Scale Score
Texas GEAR UP SG																
School A	11	3349.5	41	3752.5	17	4160.6	69	3788.8	1	3462.0	34	3784.3	19	4208.9	54	3927.7
School B	8	3404.0	44	3798.1	26	4135.4	78	3870.1	3	3278.0	17	3782.5	15	4264.9	35	3946.0
School C	4	3275.5	39	3760.4	22	4230.6	65	3889.7	1	3340.0	35	3766.6	24	4304.3	60	3974.6
School D	7	3368.6	34	3714.2	13	4212.2	54	3789.3	5	3396.0	31	3731.0	10	4188.9	46	3794.1
School E	3	3429.0	32	3796.2	40	4338.0	75	4070.5	1	3296.0	18	3714.8	15	4235.5	34	3932.2
School F	6	3326.0	52	3765.3	43	4367.5	101	3995.6	0	n/a	18	3723.6	26	4194.7	44	4001.9
School G	11	3371.9	71	3738.9	89	4311.6	171	4013.4	1	3423.0	9	3875.4	48	4371.5	58	4278.2
Overall	**50**	**3361.8**	**313**	**3759.2**	**250**	**4284.6**	**613**	**3941.1**	**12**	**3361.2**	**162**	**3760.7**	**157**	**4277.4**	**331**	**3991.3**
Comparison Schools																
Comparison A	0	n/a	4	3873.5	17	4147.6	21	4095.4	Not Applicable							
Comparison B	2	3415.0	16	3772.8	5	4032.4	23	3798.1								
Comparison C	3	3373.7	18	3801.9	10	4258.5	31	3907.8								
Comparison D	0	n/a	8	3819.9	15	4141.2	23	4029.4								
Comparison E	4	3362.8	35	3801.6	26	4250.3	65	3954.1								
Comparison F	1	3334.0	17	3756.2	6	4167.7	24	3841.5								
Comparison G	0	n/a	17	3811.4	68	4452.8	85	4324.5								
Overall	**10**	**3373.6**	**115**	**3796.1**	**147**	**4310.7**	**272**	**4058.7**								

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness end-of-course (STAAR EOC), 2013 and 2014.

Table C.6. Grade 8 STAAR Algebra I End-of-Course Percentage of Students by Level of Achievement for Texas GEAR UP SG Primary Cohort and Comparison Schools (2013–14) and Texas GEAR UP SG Retrospective Cohort (2012–13)

School Group	Primary Cohort (2013–14)			Retrospective Cohort (2012–13)		
	n	% Level II Phase-in 1	% Level II Final and Above	n	% Level II Phase-in 1	% Level II Final and Above
Texas GEAR UP SG						
School A	69	84.1%	24.6%	54	98.1%	35.2%
School B	78	89.7%	33.3%	35	91.4%	42.9%
School C	65	93.8%	33.8%	60	98.3%	40.0%
School D	54	87.0%	24.1%	46	89.1%	21.7%
School E	75	96.0%	53.3%	34	97.1%	44.1%
School F	101	94.1%	42.6%	44	100.0%	59.1%
School G	171	93.6%	52.0%	58	98.3%	82.8%
Overall	**613**	**91.8%**	**40.8%**	**331**	**96.4%**	**47.4%**
Comparison Schools						
Comparison A	21	100.0%	81.0%	Not Applicable		
Comparison B	23	91.3%	21.7%			
Comparison C	31	90.3%	32.3%			
Comparison D	23	100.0%	65.2%			
Comparison E	65	93.8%	40.0%			
Comparison F	24	95.8%	25.0%			
Comparison G	85	100.0%	80.0%			
Overall	**272**	**96.3%**	**54.0%**			

Source. Texas Education Agency, Texas GEAR UP SG GEAR UP Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness end-of-course (STAAR EOC), 2013 and 2014.

Table C.7. Average Grade 8 STAAR Mathematics Scale Score by Level of Achievement for Texas GEAR UP SG Primary Cohort and Comparison Schools (2013–14) and Texas GEAR UP SG Retrospective Cohort (2012–13)

	Primary Cohort (2013–14)								Retrospective Cohort (2012–13)							
	Level I		Level II Phase-in 1		Level II Final and Above		Overall		Level I		Level II Phase-in 1		Level II Final and Above		Overall	
School Group	n	Mean Scale Score	n	Mean Scale Score	n	Mean Scale Score	n	Mean Scale Score	n	Mean Scale Score	n	Mean Scale Score	n	Mean Scale Score	n	Mean Scale Score
Texas GEAR UP SG																
School A	113	1514.5	65	1623.0	14	1752.5	192	1568.5	96	1530.3	96	1628.7	15	1724.8	207	1590.0
School B	116	1518.4	86	1626.2	8	1740.4	210	1571.0	92	1509.2	74	1630.7	27	1745.9	193	1588.9
School C	69	1511.6	71	1630.9	11	1751.8	151	1585.2	76	1515.2	76	1631.6	28	1745.7	180	1600.2
School D	102	1505.2	38	1620.7	3	1714.7	143	1540.3	82	1527.0	52	1619.8	11	1739.5	145	1576.4
School E	69	1520.9	90	1633.3	23	1779.7	182	1609.2	67	1525.4	95	1630.1	24	1739.0	186	1606.4
School F	86	1508.7	95	1628.4	18	1759.0	199	1588.5	83	1538.3	93	1632.8	47	1747.6	223	1621.8
School G	38	1534.9	76	1626.0	12	1745.4	126	1609.9	72	1533.9	116	1625.9	50	1762.1	238	1626.7
Overall	**593**	**1514.1**	**521**	**1627.6**	**89**	**1757.4**	**1203**	**1581.5**	**568**	**1525.4**	**602**	**1628.9**	**202**	**1747.5**	**1372**	**1603.5**
Comparison Schools																
Comparison A	83	1518.9	89	1632.0	25	1745.5	197	1598.8	Not Applicable							
Comparison B	128	1521.6	115	1625.7	36	1770.4	279	1596.6								
Comparison C	113	1520.7	140	1626.9	42	1756.8	295	1604.7								
Comparison D	67	1521.4	78	1635.3	19	1754.6	164	1602.6								
Comparison E	93	1527.6	90	1626.8	10	1753.4	193	1585.5								
Comparison F	46	1525.3	49	1623.5	15	1745.7	110	1599.1								
Comparison G	91	1514.4	158	1632.2	60	1747.5	309	1619.9								
Overall	**621**	**1521.2**	**719**	**1629.2**	**207**	**1753.9**	**1547**	**1602.5**								

Source. Texas Education Agency, Texas GEAR UP SG GEAR UP Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Note. Only students who did not take Algebra I EOC are included.

Table C.8. Percentage of Students by Grade 8 STAAR Mathematics Level of Achievement for Texas GEAR UP SG Primary Cohort and Comparison Schools (2013–14) and Texas GEAR UP SG Retrospective Cohort (2012–13)

School Group	Primary Cohort (2013–14)			Retrospective Cohort (2012–13)		
	n	Level II Phase-in 1	% Level II Final and Above	n	% Level II Phase-in 1	% Level II Final and Above
Texas GEAR UP SG						
School A	192	41.1%	7.3%	207	53.6%	7.2%
School B	210	44.8%	3.8%	193	52.3%	14.0%
School C	151	54.3%	7.3%	180	57.8%	15.6%
School D	143	28.7%	2.1%	145	43.4%	7.6%
School E	182	62.1%	12.6%	186	64.0%	12.9%
School F	199	56.8%	9.0%	223	62.8%	21.1%
School G	126	69.8%	9.5%	238	69.7%	21.0%
Overall	**1203**	**50.7%**	**7.4%**	**1372**	**58.6%**	**14.7%**
Comparison Schools						
Comparison A	197	57.9%	12.7%	Not Applicable		
Comparison B	279	54.1%	12.9%			
Comparison C	295	61.7%	14.2%			
Comparison D	164	59.1%	11.6%			
Comparison E	193	51.8%	5.2%			
Comparison F	110	58.2%	13.6%			
Comparison G	309	70.6%	19.4%			
Overall	**1547**	**59.9%**	**13.4%**			

Source. Texas Education Agency, Texas GEAR UP SG GEAR UP Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.

Table C.9. Average Grade 8 STAAR Reading Scale Score for Texas GEAR UP SG Primary Cohort and Comparison Schools (2013–14) and Texas GEAR UP SG Retrospective Cohort (2012–13)

	Primary Cohort (2013–14)								Retrospective Cohort (2012–13)							
	Level I		Level II Phase-in 1		Level II Final and Above		Overall		Level I		Level II Phase-in 1		Level II Final and Above		Overall	
School Group	n	Mean Scale Score	n	Mean Scale Score	n	Mean Scale Score	n	Mean Scale Score	n	Mean Scale Score	n	Mean Scale Score	n	Mean Scale Score	n	Mean Scale Score
Texas GEAR UP SG																
School A	85	1506.7	110	1632.7	69	1757.6	264	1624.8	71	1496.4	104	1630.1	86	1759.3	261	1636.3
School B	106	1501.5	127	1627.3	61	1753.0	294	1608.0	71	1489.3	104	1623.2	54	1771.7	229	1616.7
School C	59	1510.8	103	1631.1	58	1768.9	220	1635.2	62	1494.7	103	1627.8	73	1769.1	238	1636.5
School D	88	1505.6	71	1624.2	39	1740.3	198	1594.4	85	1515.0	65	1621.9	38	1759.5	188	1601.4
School E	72	1503.7	96	1628.0	89	1765.5	257	1640.8	64	1511.2	88	1627.9	70	1771.8	222	1639.6
School F	90	1502.0	109	1629.6	100	1760.7	299	1635.1	61	1501.6	124	1631.7	82	1766.1	267	1643.2
School G	68	1507.3	131	1634.0	102	1766.4	301	1650.2	86	1500.8	131	1622.9	81	1764.0	298	1626.0
Overall	**568**	**1504.9**	**747**	**1629.9**	**518**	**1760.7**	**1833**	**1628.2**	**500**	**1501.6**	**719**	**1626.7**	**484**	**1765.9**	**1703**	**1629.5**
Comparison Schools																
Comparison A	76	1497.6	105	1622.1	42	1747.3	223	1603.2	Not Applicable							
Comparison B	129	1503.2	128	1622.8	49	1745.6	306	1592.0								
Comparison C	124	1493.0	135	1623.5	71	1748.0	330	1601.3								
Comparison D	72	1511.4	73	1620.5	46	1760.4	191	1613.1								
Comparison E	72	1505.1	120	1628.7	62	1756.2	254	1624.8								
Comparison F	25	1523.4	57	1628.1	52	1755.3	134	1657.9								
Comparison G	88	1509.0	171	1622.3	138	1751.0	397	1641.9								
Overall	**586**	**1503.3**	**789**	**1623.8**	**460**	**1751.7**	**1835**	**1617.4**								

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.

Table C.10. Percentage of Students by Grade 8 STAAR Reading Level of Achievement for Texas GEAR UP SG Primary Cohort and Comparison Schools (2013–14) and Texas GEAR UP SG Retrospective Cohort (2012–13)

School Group	Primary Cohort (2013–14)			Retrospective Cohort (2012–13)		
	n	% Level II Phase-in 1	% Level II Final and Above	n	% Level II Phase-in 1	% Level II Final and Above
Texas GEAR UP SG						
School A	264	67.8%	26.1%	261	72.8%	33.0%
School B	294	63.9%	20.7%	229	69.0%	23.6%
School C	220	73.2%	26.4%	238	73.9%	30.7%
School D	198	55.6%	19.7%	188	54.8%	20.2%
School E	257	72.0%	34.6%	222	71.2%	31.5%
School F	299	69.9%	33.4%	267	77.2%	30.7%
School G	301	77.4%	33.9%	298	71.1%	27.2%
Overall	**1833**	**69.0%**	**28.3%**	**1703**	**70.6%**	**28.4%**
Comparison Schools						
Comparison A	223	65.9%	18.8%	Not Applicable		
Comparison B	306	57.8%	16.0%			
Comparison C	330	62.4%	21.5%			
Comparison D	191	62.3%	24.1%			
Comparison E	254	71.7%	24.4%			
Comparison F	134	81.3%	38.8%			
Comparison G	397	77.8%	34.8%			
Overall	**1835**	**68.1%**	**25.1%**			

Source. Texas Education Agency, Texas GEAR UP SG GEAR UP Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.

Table C.11. Average Grade 8 STAAR Science Scale Score for Texas GEAR UP SG Primary Cohort and Comparison Schools (2013–14) and Texas GEAR UP SG Retrospective Cohort (2012–13)

	Primary Cohort (2013–14)								Retrospective Cohort (2012–13)							
	Level I		Level II Phase-in 1		Level II Final and Above		Overall		Level I		Level II Phase-in 1		Level II Final and Above		Overall	
School Group	n	Mean Scale Score	n	Mean Scale Score	n	Mean Scale Score	n	Mean Scale Score	n	Mean Scale Score	n	Mean Scale Score	n	Mean Scale Score	n	Mean Scale Score
Texas GEAR UP SG																
School A	114	3057.5	91	3717.7	54	4309.9	259	3550.6	131	3196.0	103	3687.0	19	4107.0	253	3464.3
School B	170	3059.4	75	3725.1	39	4227.0	284	3395.5	114	3184.1	88	3693.7	20	4236.2	222	3480.9
School C	103	3138.8	67	3696.5	49	4297.7	219	3568.7	84	3214.8	89	3725.1	60	4304.6	233	3690.3
School D	145	3042.1	38	3687.9	14	4162.4	197	3246.3	113	3163.3	61	3694.2	13	4232.4	187	3410.8
School E	107	3154.0	82	3778.6	66	4363.1	255	3667.8	88	3215.1	96	3705.2	39	4203.8	223	3599.0
School F	111	3183.8	95	3741.4	91	4347.7	297	3718.8	54	3245.7	125	3730.8	88	4278.1	267	3813.1
School G	102	3207.8	122	3722.8	72	4312.1	296	3688.7	104	3251.2	129	3708.1	61	4248.1	294	3658.5
Overall	**852**	**3111.7**	**570**	**3728.0**	**385**	**4313.0**	**1807**	**3562.0**	**688**	**3205.6**	**692**	**3707.8**	**300**	**4252.0**	**1679**	**3599.3**
Comparison Schools																
Comparison A	153	3119.8	51	3698.9	15	4119.5	219	3323.2	Not Applicable							
Comparison B	135	3103.7	99	3693.8	64	4257.1	298	3547.5								
Comparison C	155	3105.0	114	3707.3	55	4284.0	324	3517.1								
Comparison D	114	3092.8	42	3687.5	28	4333.6	184	3417.4								
Comparison E	97	3109.7	82	3725.4	83	4341.1	262	3692.5								
Comparison F	67	3147.0	40	3734.0	26	4287.6	133	3546.5								
Comparison G	135	3197.3	153	3726.4	107	4366.5	395	3718.9								
Overall	**856**	**3124.2**	**581**	**3712.2**	**378**	**4312.7**	**1815**	**3560.0**								

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.

Table C.12. Percentage of Students by Grade 8 STAAR Science Level of Achievement for Texas GEAR UP SG Primary Cohort and Comparison Schools (2013–14) and Texas GEAR UP SG Retrospective Cohort (2012–13)

School Group	Primary Cohort (2013–14)			Retrospective Cohort (2012–13)		
	n	% Level II Phase-in 1	% Level II Final and Above	n	% Level II Phase-in 1	% Level II Final and Above
Texas GEAR UP SG						
School A	259	56.0%	20.8%	253	48.2%	7.5%
School B	284	40.1%	13.7%	222	48.6%	9.0%
School C	219	53.0%	22.4%	233	63.9%	25.8%
School D	197	26.4%	7.1%	187	39.6%	7.0%
School E	255	58.0%	25.6%	223	60.5%	17.5%
School F	297	62.6%	30.6%	267	79.8%	33.0%
School G	296	65.5%	24.3%	294	64.6%	20.7%
Overall	**1807**	**52.9%**	**21.3%**	**1679**	**59.0%**	**17.9%**
Comparison Schools						
Comparison A	219	30.1%	6.8%	Not Applicable		
Comparison B	298	54.7%	21.5%			
Comparison C	324	52.2%	17.0%			
Comparison D	184	38.0%	15.2%			
Comparison E	262	63.0%	31.7%			
Comparison F	133	49.6%	19.5%			
Comparison G	395	65.8%	27.1%			
Overall	**1815**	**52.8%**	**20.8%**			

Source. Texas Education Agency, Texas GEAR UP SG GEAR UP Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.

Table C.13. Average Grade 8 STAAR Social Studies Scale Score for Texas GEAR UP SG Primary Cohort and Comparison Schools (2013–14) and Texas GEAR UP SG Retrospective Cohort (2012–13)

	Primary Cohort (2013–14)								Retrospective Cohort (2012–13)							
	Level I		Level II Phase-in 1		Level II Final and Above		Overall		Level I		Level II Phase-in 1		Level II Final and Above		Overall	
School Group	n	Mean Scale Score	n	Mean Scale Score	n	Mean Scale Score	n	Mean Scale Score	n	Mean Scale Score	n	Mean Scale Score	n	Mean Scale Score	n	Mean Scale Score
Texas GEAR UP SG																
School A	16	3168.0	74	3684.5	24	4201.6	258	3412.3	112	3176.6	99	3706.1	40	4193.4	251	3547.5
School B	197	3117.5	70	3683.9	15	4150.1	282	3313.0	148	3179.8	59	3682.6	13	4137.7	220	3371.3
School C	135	3172.2	62	3669.9	22	4126.3	219	3409.0	106	3202.5	90	3689.4	39	4297.0	235	3570.6
School D	151	3143.1	36	3696.1	12	4153.4	198	3304.8	142	3129.7	39	3649.5	5	4289.8	186	3269.9
School E	140	3148.9	83	3727.8	33	4168.1	256	3468.0	116	3162.9	80	3689.8	26	4258.2	222	3481.0
School F	154	3181.6	103	3701.4	37	4264.5	294	3500.0	131	3235.7	104	3726.0	32	4179.0	267	3539.7
School G	166	3186.2	94	3703.7	36	4236.2	296	3478.2	185	3187.0	91	3691.9	17	4293.2	293	3408.0
Overall	**1102**	**3158.3**	**522**	**3697.2**	**179**	**4198.6**	**1803**	**3417.6**	**940**	**3181.5**	**562**	**3696.1**	**172**	**4232.5**	**1674**	**3462.3**
Comparison Schools																
Comparison A	172	3147.5	41	3673.7	7	4105.1	220	3276.1	Not Applicable							
Comparison B	227	3130.7	65	3666.1	3	4157.3	295	3259.1								
Comparison C	201	3170.6	98	3667.0	25	4178.4	324	3398.5								
Comparison D	136	3156.7	38	3678.6	10	4173.1	184	3319.7								
Comparison E	174	3145.1	72	3666.0	14	4225.0	260	3347.5								
Comparison F	78	3144.8	43	3679.9	12	4201.8	133	3413.2								
Comparison G	230	3161.7	110	3696.8	57	4192.4	397	3458.0								
Overall	**1218**	**3151.4**	**467**	**3676.5**	**128**	**4187.0**	**1813**	**3359.7**								

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.

Table C.14. Percentage of Students by Grade 8 STAAR Social Studies Level of Achievement for Texas GEAR UP SG Primary Cohort and Comparison Schools (2013–14) and Texas GEAR UP SG Retrospective Cohort (2012–13)

School Group	Primary Cohort (2013–14)			Retrospective Cohort (2012–13)		
	n	% Level II Phase-in 1	% Level II Final and Above	n	% Level II Phase-in 1	% Level II Final and Above
Texas GEAR UP SG						
School A	258	38.0%	9.3%	251	55.4%	15.9%
School B	282	30.1%	5.3%	220	32.7%	5.9%
School C	219	38.4%	10.0%	235	54.9%	16.6%
School D	198	24.2%	6.1%	186	23.7%	2.7%
School E	259	45.3%	12.9%	222	47.7%	11.7%
School F	294	47.6%	12.6%	267	50.9%	12.0%
School G	296	43.9%	12.2%	293	36.9%	5.8%
Overall	**1803**	**38.9%**	**9.9%**	**1674**	**43.8%**	**10.3%**
Comparison Schools						
Comparison A	220	21.8%	3.2%	Not Applicable		
Comparison B	295	23.1%	1.0%			
Comparison C	324	38.0%	7.7%			
Comparison D	184	26.1%	5.4%			
Comparison E	260	33.1%	5.4%			
Comparison F	133	41.4%	9.0%			
Comparison G	397	42.1%	14.4%			
Overall	**1813**	**32.8%**	**7.1%**			

Source. Texas Education Agency, Texas GEAR UP SG GEAR UP Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.

C.2 Comparison to State Averages on STAAR Assessments

Table C.15. Average Scale Score on STAAR by Subject and by Texas GEAR UP Primary Cohort School, Compared to State Average, 2013–14

School Group	n	Mean STAAR Algebra I EOC	n	Mean Grade 8 STAAR Mathematics	n	Mean Grade 8 STAAR Reading	n	Mean Grade 8 STAAR Science	n	Mean Grade 8 STAAR Social Studies
State Average (April 2014)										
		3966		1676		1684		3861		3679
Texas GEAR UP SG (Primary Cohort)										
School A	69	3789	261	1597	264	1625	259	3551	258	3412
School B	78	3870	287	1598	294	1608	284	3396	282	3313
School C	65	3890	216	1620	220	1635	219	3569	219	3409
School D	54	3789	143	1540	198	1594	197	3246	198	3305
School E	75	4071	182	1609	257	1641	255	3668	256	3468
School F	101	3996	200	1590	299	1635	297	3719	294	3500
School G	171	4013	127	1610	301	1650	296	3689	296	3478
Overall	**613**	**3941**	**1416**	**1597**	**1833**	**1628**	**1807**	**3562**	**1803**	**3417**

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013–14; Texas Education Agency, STAAR Statewide Summary Reports 2013–14 http://tea.texas.gov/Student_Testing_and_Accountability/Testing/State_of_Texas_Assessments_of_Academic_Readiness_(STAAR)/STAAR_Statewide_Summary_Reports_2013-2014/.

Note. Given these students went on to complete Algebra I, these schools may have been using an alternative assessment with high performing students.

C.3 Texas GEAR UP Primary Cohort versus Matched Comparison Schools MLM: Texas GEAR UP SG versus Comparison Schools

C.3.1 STAAR Algebra I EOC

Table C.16. Grade 8 STAAR Algebra I EOC Level II Phase-in 1 and Above by Texas GEAR UP Primary Cohort versus Matched Comparison Schools: MLM Main Model, 2013–14 (Grade 8)

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	3.29	0.36	***	NA
Texas GEAR UP Primary Cohort (versus Matched Comparison Schools)	-0.87	0.41	*	0.42 (2.38)
Number of students/schools	885/14			
School level variance	0.12			

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model are: Comparison. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. ns indicates nonsignificant finding. NA indicates not applicable. The intercept-only model (model without predictors) for this outcome produced school variance of 0.25.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. This reversed odds ratio is presented in parentheses.

Table C.17. Grade 8 STAAR Algebra I EOC Level II Phase-in 1 and Above by Texas GEAR UP Primary Cohort versus Matched Comparison Schools: MLM Covariate Model, 2013–14 (Grade 8)

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	3.81	0.76	***	NA
Texas GEAR UP Primary Cohort (versus Matched Comparison Schools)	-1.03	0.59	ns	NA
Grade 7 STAAR Mathematics Scale Score (z-score)	0.96	0.18	***	NA
Female	0.28	0.31	ns	NA
African American (vs. Hispanic)	-0.63	0.47	ns	NA
White (vs. Hispanic)^	NA^	NA^	NA^	NA^
Economically Disadvantaged	-0.95	0.59	ns	NA
ELL	-1.19	0.45	**	0.30 (3.28)
Number of students/schools	759/14			
School Level Variance	0.10			

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: comparison schools, male, Hispanic, not Economically Disadvantaged, non-ELL. ns indicates nonsignificant. NA indicates not applicable. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. Only students taking Standard STAAR were included in the model. The intercept-only model (model without predictors) for this outcome produced school variance of 0.25. ^All White students who took STAAR Algebra I EOC reached Level II Phase-in 1; including them in the model created convergence issues, so they were removed. The other parameters of the model changed slightly, but their significance did not change.

Table C.18. Grade 8 STAAR Algebra I EOC Level II Final by Texas GEAR UP Primary Cohort versus Matched Comparison Schools: MLM Main Model, 2013–14 (Grade 8)

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio
Intercept	0.00	0.31	ns	NA
Texas GEAR UP Primary Cohort (versus Matched Comparison Schools)	-0.52	0.42	ns	NA
Number of students/schools	885/14			
School Level Variance	0.51			

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model are: Comparison. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. ns indicates nonsignificant finding. The intercept-only model (model without predictors) for this outcome produced school variance of .59. Only students taking Standard STAAR were included in the model.

Table C.19. Grade 8 STAAR Algebra I EOC Level II Final by Texas GEAR UP Primary Cohort versus Matched Comparison Schools: MLM Covariate Model, 2013–14 (Grade 8)

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	-2.62	0.53	***	NA
Texas GEAR UP Primary Cohort (versus Matched Comparison Schools)	0.36	0.49	ns	NA
Grade 7 STAAR Mathematics Scale Score (z-score)	2.30	0.18	***	NA
Female	-0.08	0.20	ns	NA
African American (vs. Hispanic)	0.61	0.32	ns	NA
White (vs. Hispanic)	0.01	0.42	ns	NA
Economically Disadvantaged	-0.66	0.30	*	0.52 (1.93)
ELL	-0.00	0.46	ns	NA
Number of students/schools	759/14			
School Level Variance	0.52			

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: comparison schools, male, Hispanic, not Economically Disadvantaged, non-ELL. ns indicates nonsignificant. NA indicates not applicable. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .59. Only students taking Standard STAAR were included in the model.

C.3.2 STAAR Mathematics

Table C.20. Grade 8 STAAR Mathematics Achievement at Level II Phase-in 1 and Above by Texas GEAR UP Primary Cohort versus Matched Comparison Schools: Main Effects MLM, 2013–14 (Grade 8)

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio
Intercept	0.38	0.15	*	NA
Texas GEAR UP Primary Cohort (versus Matched Comparison Schools)	-0.34	0.22	ns	NA
Number of students/schools	2,750/14			
School level variance	0.14			

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model are: Comparison. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. ns indicates nonsignificant finding. NA indicates not applicable. The intercept-only model (model without predictors) for this outcome produced school variance of 0.17.

C.3.3 STAAR Reading

Table C.21. Grade 8 STAAR Reading Level II Phase-in 1 Standard by Texas GEAR UP Primary Cohort versus Matched Comparison Schools: MLM Main Model, 2013–14 (Grade 8)

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	0.79	0.13	***	NA
Texas GEAR UP Primary Cohort (versus Matched Comparison Schools)	0.01	0.18	ns	NA
Number of students/schools	3,668/14			
School Level Variance	0.10			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model are: Comparison. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. ns indicates nonsignificant finding. NA indicates not applicable. The intercept-only model (model without predictors) for this outcome produced school variance of 0.11.

Table C.22. Grade 8 STAAR Reading Level II Phase-in 1 Standard by Texas GEAR UP Primary Cohort versus Matched Comparison Schools: MLM Covariate Model, 2013–14 (Grade 8)

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	1.47	0.21	***	NA
Texas GEAR UP Primary Cohort (versus Matched Comparison Schools)	0.03	0.10	ns	NA
Grade 7 Reading STAAR Scale Score (z-score)	2.25	0.09	***	NA
Female	0.21	0.10	*	1.23
African American (vs. Hispanic)	-0.31	0.14	*	0.74 (1.36)
White (vs. Hispanic)	-0.15	0.31	ns	NA
Economically Disadvantaged	-0.06	0.20	ns	NA
ELL	-0.44	0.15	**	0.64 (1.56)
Number of students/schools	3,078/14			
School Level Variance	0			

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: comparison schools, male, Hispanic, not Economically Disadvantaged, non-ELL. ns indicates nonsignificant. NA indicates not applicable. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .71. Only students taking Standard STAAR were included in the model. The intercept-only model (model without predictors) for this outcome produced school variance of 0.11

Table C.23. Grade 8 STAAR Reading Level II Final by Texas GEAR UP Primary Cohort versus Matched Comparison Schools: MLM Main Model, 2013–14 (Grade 8)

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio
Intercept	-1.11	0.13	***	NA
Texas GEAR UP Primary Cohort (versus Matched Comparison Schools)	0.15	0.19	ns	NA
Number of students/schools	3,668/14			
School Level Variance	0.10			

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference category in the model is comparison schools. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. ns indicates nonsignificant. NA indicates not applicable. The intercept-only model (model without predictors) for this outcome produced school variance of 0.12. Only students taking Standard STAAR were included in the model.

Table C.24. Grade 8 STAAR Reading Level II Final by Texas GEAR UP Primary Cohort versus Matched Comparison Schools: MLM Covariate Model, 2013–14 (Grade 8)

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	-1.39	0.20	***	NA
Texas GEAR UP Primary Cohort (versus Matched Comparison Schools)	0.16	0.13	ns	NA
Grade 7 Reading Scale Score (z-score)	2.46	0.10	***	NA
Female	0.08	0.11	ns	NA
African American (vs. Hispanic)	-0.45	0.15	**	0.64 (1.56)
White (vs. Hispanic)	-0.22	0.25	ns	NA
Economically Disadvantaged	-0.42	0.17	*	0.66 (1.52)
ELL	-1.72	0.39	***	0.18 (5.58)
Number of students/schools	3,078/14			
School Level Variance	0.01			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: comparison schools, male, Hispanic, not Economically Disadvantaged, non-ELL. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .12. Only students taking Standard STAAR were included in the model. "NA" indicates "not applicable" and "ns" indicates "not significant."
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

C.3.4 STAAR Science

Table C.25. Grade 8 STAAR Science Level II Phase-in 1 by Texas GEAR UP Primary Cohort versus Matched Comparison Schools: MLM Main Model, 2013–14

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	0.02	0.19	ns	NA
Texas GEAR UP Primary Cohort (versus Matched Comparison Schools)	0.04	0.28	ns	NA
Number of students/schools	3,622/14			
School Level Variance	0.25			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model are: Comparison. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of 0.25. "NA" indicates "not applicable" and "ns" indicates "not significant."

Table C.26. Grade 8 STAAR Science Level II Phase-in 1 by Texas GEAR UP Primary Cohort versus Matched Comparison Schools: MLM Covariate Model, 2013–14

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	1.08	0.33	**	NA
Texas GEAR UP Primary Cohort (versus Matched Comparison Schools)	-0.17	0.40	ns	NA
Grade 7 STAAR Mathematics Scale Score (z-score)	2.11	0.09	***	NA
Female	-0.39	0.10	***	0.68 (1.48)
African American (vs. Hispanic)	0.04	0.14	ns	NA
White (vs. Hispanic)	0.40	0.26	ns	NA
Economically Disadvantaged	-0.52	0.17	**	0.59 (1.69)
ELL	-1.03	0.16	***	0.36 (2.80)
Number of students/schools	2,960/14			
School Level Variance	0.51			

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: comparison schools, male, Hispanic, not Economically Disadvantaged, non-ELL. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .71. Only students taking Standard STAAR were included in the model. The intercept-only model (model without predictors) for this outcome produced school variance of 0.25. "NA" indicates "not applicable" and "ns" indicates "not significant."
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

Table C.27. Grade 8 STAAR Science Level II Final by Texas GEAR UP Primary Cohort versus Matched Comparison Schools: MLM Main Model, 2013–14

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio
Intercept	-1.46	0.20	***	NA
Texas GEAR UP Primary Cohort (versus Matched Comparison Schools)	0.06	0.28	ns	NA
Number of students/schools	3,622/14			
School Level Variance	0.24			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: comparison schools. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "NA" indicates "not applicable" and "ns" indicates "not significant." The intercept-only model (model without predictors) for this outcome produced school variance of 0.25. Only students taking Standard STAAR were included in the model.

Table C.28. Grade 8 STAAR Science Level II Final by Texas GEAR UP Primary Cohort versus Matched Comparison Schools: MLM Covariate Model, 2013–14

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	-1.18	0.32	***	NA
Texas GEAR UP Primary Cohort (versus Matched Comparison Schools)	-0.21	0.37	ns	NA
Grade 7 STAAR Mathematics Scale Score (z-score)	2.07	0.09	***	NA
Female	-0.60	0.12	***	0.55 (1.82)
African American (vs. Hispanic)	0.18	0.17	ns	NA
White (vs. Hispanic)	0.45	0.27	ns	NA
Economically Disadvantaged	-0.63	0.18	***	0.53 (1.88)
ELL	-1.44	0.28	***	0.24 (4.20)
Number of students/schools	2,960/14			
School Level Variance	0.42			

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: comparison, male, Hispanic, not Economically Disadvantaged, non-ELL. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "NA" indicates "not applicable" and "ns" indicates "not significant." The intercept-only model (model without predictors) for this outcome produced school variance of 0.25. Only students taking Standard STAAR were included in the model.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

C.3.5 STAAR Social Studies

Table C.29. Grade 8 STAAR Social Studies Level II Phase-in 1 by Texas GEAR UP Primary Cohort versus Matched Comparison Schools: MLM Main Model, 2013–14

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio
Intercept	-0.77	0.14	***	NA
Texas GEAR UP Primary Cohort (versus Matched Comparison Schools)	0.28	0.19	ns	NA
Number of students/schools	3,616/14			
School Level Variance	0.11			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model are: comparison schools. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "NA" indicates "not applicable" and "ns" indicates "not significant." The intercept-only model (model without predictors) for this outcome produced school variance of 0.13.

Table C.30. Grade 8 STAAR Social Studies Level II Final by Texas GEAR UP Primary Cohort versus Matched Comparison Schools: MLM Main Model, 2013–14

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio
Intercept	-2.80	0.22	***	NA
Texas GEAR UP Primary Cohort (versus Matched Comparison Schools)	0.53	0.30	ns	NA
Number of students/schools	3,616/14			
School Level Variance	0.25			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: comparison schools. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "NA" indicates "not applicable" and "ns" indicates "not significant." The intercept-only model (model without predictors) for this outcome produced school variance of 0.32. Only students taking Standard STAAR were included in the model.

Table C.31. Grade 8 STAAR Social Studies Level II Final by Texas GEAR UP Primary Cohort versus Matched Comparison Schools: MLM Covariate Model, 2013–14

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	-2.57	0.29	***	NA
Texas GEAR UP Primary Cohort (versus Matched Comparison Schools)	0.48	0.27	ns	NA
Grade 7 Reading Scale Score (z-score)	1.82	0.11	***	NA
Female	-0.99	0.16	***	0.37 (2.69)
African American (vs. Hispanic)	-0.94	0.25	***	0.39 (2.56)
White (vs. Hispanic)	0.06	0.28	ns	NA
Economically Disadvantaged	-0.76	0.20	***	0.47 (2.15)
ELL	-0.58	0.48	ns	NA
Number of students/schools	3,055/14			
School Level Variance	0.15			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: comparison schools, male, Hispanic, not Economically Disadvantaged, non-ELL. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1. "NA" indicates "not applicable" and "ns" indicates "not significant." The intercept-only model (model without predictors) for this outcome produced school variance of 0.32. Only students taking Standard STAAR were included in the model.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

C.4 Cohort Group MLM: Texas GEAR UP SG Primary Cohort versus Retrospective Cohort

C.4.1 STAAR Mathematics

Table C.32. Grade 8 STAAR Mathematics at Level II Phase-in 1 and Above by Cohort Group: MLM Main Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	0.32	0.16	ns	NA
Primary Cohort (vs. Retrospective Cohort)	-0.28	0.08	***	0.76 (1.32)
Number of students/schools	2,575/7			
School level variance	0.17			

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Primary cohort outcome is Grade 8 2013–14; retrospective cohort outcome is Grade 8 2012–13. The reference category in the model is retrospective cohort. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "NA" indicates "not applicable." The intercept-only model (model without predictors) for this outcome produced school variance of 0.17.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. This reversed odds ratio is presented in parentheses.

Table C.33. Grade 8 STAAR Mathematics at Level II Phase-in 1 and Above by Cohort Group: MLM Covariate Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	1.09	0.27	***	NA
Primary Cohort (vs. Retrospective Cohort)	0.20	0.11	ns	NA
Grade 7 STAAR Mathematics Scale Score	1.71	0.11	***	NA
Female	-0.04	0.10	ns	NA
African American (vs. Hispanic)	-0.24	0.16	ns	NA
White (vs. Hispanic)	0.21	0.29	ns	NA
Economically Disadvantaged	-0.56	0.24	*	0.57 (1.75)
English Language Learner (ELL)	0.04	0.15	ns	NA
Number of students/schools	2,058/7			
School level variance	0.08			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: retrospective cohort, male, Hispanic, not Economically Disadvantaged, non-ELL. "NA" indicates "not applicable" and "ns" indicates "not significant." Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of 0.17.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. This reversed odds ratio is presented in parentheses.

C.4.2 STAAR Reading

Table C.34. Grade 8 STAAR Reading Achievement at Level II Phase-in 1 and Above by Cohort: MLM Main Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio
Intercept	0.86	0.11	***	NA
Primary Cohort (vs. Retrospective Cohort)	-0.07	0.07	ns	NA
Number of students/schools	3,536/7			
School level variance	0.07			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Primary cohort outcome is Grade 8 2013–14; retrospective cohort outcome is Grade 8 2012–13. The reference category in the model is retrospective cohort. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "NA" indicates "not applicable" and "ns" indicates "not significant." The intercept-only model (model without predictors) for this outcome produced school variance of 0.07.

Table C.35. Grade 8 STAAR Reading Achievement at Level II Phase-in 1 and Above by Cohort: MLM Covariate Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	1.76	0.24	***	NA
Primary Cohort (vs. Retrospective Cohort)	-0.17	0.11	ns	NA
Grade 7 STAAR Reading Scale Score (z-score)	2.35	0.10	***	NA
Female	-0.06	0.11	ns	NA
African American (vs. Hispanic)	-0.52	0.15	***	0.60 (1.67)
White (vs. Hispanic)	-0.12	0.30	ns	NA
Economically Disadvantaged	0.06	0.23	ns	NA
English Language Learner (ELL)	-0.37	0.14	*	0.69 (1.44)
Number of students/schools	2,958/7			
School level variance	0.00			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: retrospective cohort, male, Hispanic, not Economically Disadvantaged, non-ELL. "NA" indicates "not applicable" and "ns" indicates "not significant." Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .71. Only students taking Standard STAAR were included in the model.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

Table C.36. Grade 8 STAAR Reading Achievement at Level II Final: Cohort Group MLM Main Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio
Intercept	-0.95	0.10	***	NA
Primary Cohort (vs. Retrospective Cohort)	<0.01	0.08	ns	NA
Number of students/schools	3,536/7			
School level variance	0.05			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: retrospective cohort, STAAR Level II Phase-in 1 and Below. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. Only students taking Standard STAAR were included in the model. "ns" indicates "not significant." The intercept-only model (model without predictors) for this outcome produced school variance of 0.05.

Table C.37. Grade 8 STAAR Reading Achievement at Level II Final: Cohort Group MLM Covariate Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	-1.22	0.20	***	NA
Primary Cohort (vs. Retrospective Cohort)	-0.19	0.11	ns	NA
Grade 7 STAR Reading Scale Score	2.40	0.10	***	NA
Female (vs. male)	0.12	0.11	ns	NA
African American (vs. Hispanic)	-0.19	0.16	ns	NA
White (vs. Hispanic)	-0.19	0.25	ns	NA
Economically Disadvantaged Status	-0.26	0.18	ns	NA
English Language Learner Status	-0.83	0.24	***	0.43 (2.30)
Number of students/schools	2,958/7			
School level variance	<0.01			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: retrospective cohort, male, Hispanic, not Economically Disadvantaged, non-ELL. "NA" indicates "not applicable" and "ns" indicates "not significant." Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. Only students taking Standard STAAR were included in the model.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

C.4.3 STAAR Science

Table C.38. Grade 8 STAAR Science Achievement at Level II Final: Cohort MLM Main Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio
Intercept	-1.66	0.22	***	NA
Primary Cohort (vs. Retrospective Cohort)	0.24	0.09	**	1.26
Number of students/schools	3,486/7			
School level variance	0.31			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: retrospective cohort. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. Only students taking Standard STAAR were included in the model. The intercept-only model (model without predictors) for this outcome produced school variance of 0.31. "NA" indicates "not applicable."

Table C.39. Grade 8 STAAR Science Achievement at Level II Final: Cohort MLM Covariate Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	-0.95	0.26	***	NA
Primary Cohort (vs. Retrospective Cohort)	-0.02	0.11	ns	NA
Grade 7 STAAR Mathematics Scale Score	1.29	0.07	***	NA
Female (vs. Male)	-0.52	0.11	***	0.60 (1.68)
African American (vs. Hispanic)	-0.02	0.18	ns	NA
White (vs. Hispanic)	0.04	0.24	ns	NA
Economically Disadvantaged	-0.62	0.18	***	0.53 (1.86)
ELL	-1.02	0.21	***	0.36 (2.76)
Number of students/schools	2,926/7			
School level variance	0.19			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: retrospective cohort, male, Hispanic, not Economically Disadvantaged, non-ELL. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. Only students taking Standard STAAR were included in the model. The intercept-only model (model without predictors) for this outcome produced school variance of 0.31.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

C.4.4 STAAR Social Studies

Table C.40. Grade 8 STAAR Social Studies Achievement at Level II Final: Cohort Group MLM Main Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio
Intercept	-2.24	0.17	***	NA
Primary Cohort (vs. Retrospective Cohort)	0.02	0.11	ns	NA
Number of students/schools	3,477/7			
School level variance	0.15			

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: retrospective cohort. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. Only students taking Standard STAAR were included in the model. “ns” indicates “not significant.” The intercept-only model (model without predictors) for this outcome produced school variance of 0.16.

Table C.41. Grade 8 STAAR Social Studies Achievement at Level II Final: Cohort Group MLM Covariate Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	-2.18	0.29	***	NA
Primary Cohort (vs. Retrospective Cohort)	-0.21	0.14	ns	NA
Grade 7 STAAR Reading Scale Score	1.80	0.10	***	NA
Female (vs. male)	-0.95	0.15	***	0.39 (2.59)
African American (vs. Hispanic)	-0.52	0.26	*	0.59 (1.69)
White (vs. Hispanic)	0.48	0.29	ns	NA
Economically Disadvantaged	-0.52	0.22	*	0.60 (1.68)
ELL	-0.03	0.31	ns	NA
Number of students/schools	2,931/7			
School level variance	0.12			

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: retrospective cohort, male, Hispanic, not Economically Disadvantaged, non-ELL. "NA" indicates "not applicable" and "ns" indicates "not significant." Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. Only students taking Standard STAAR were included in the model. The intercept-only model (model without predictors) for this outcome produced school variance of 0.16.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

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Appendix D: Outcomes Analyses within Texas GEAR UP SG by Participation Variables

D.1 Student Descriptives by Length of Time in Cohort

Table D.1. Length of Time in Texas GEAR UP SG Cohort by School, 2013–14

School Group	n	Grade 7 Only	Grade 8 Only	Both Grade 7 and Grade 8
School A	360	22.5%	11.4%	66.1%
School B	368	15.5%	14.4%	70.1%
School C	277	15.2%	7.9%	76.9%
School D	250	20.0%	19.2%	60.8%
School E	322	15.2%	14.0%	70.8%
School F	362	10.2%	11.9%	77.9%
School G	362	12.4%	11.3%	76.2%
Overall	**2301**	**15.7%**	**12.7%**	**71.6%**

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.

Table D.2. Length of Time in Cohort by Student Characteristics, 2012–13 and 2013–14

School Group	Grade 8 Only n	Grade 8 Only %	Both Grade 7 and Grade 8 n	Both Grade 7 and Grade 8 %
Gender				
Male	145	47.2%	879	53.4%
Female	162	52.8%	768	46.6%
Race/Ethnicity				
African American	47	16.0%	236	14.3%
Hispanic	227	73.9%	1314	79.8%
White	20	6.5%	76	4.6%
Economically Disadvantaged Status				
Not Economically Disadvantaged	33	10.7%	179	10.9%
Economically Disadvantaged	274	89.3%	1468	89.1%
English Language Learner (ELL) Status				
Non-ELL	264	86.0%	1451	88.1%
ELL	43	14.0%	196	11.9%
Overall	**307**	**100.0%**	**1647**	**100.0%**

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2013 and 2014. Several students were also of other races/ethnicities than in the table above. Thus, numbers in each section may not add up to the total number of students.

D.2 Student Outcomes by Length of Time in Cohort

D.2.1 Algebra I Completion

Table D.3. Percentage of Students by Grade 8 Algebra I Completion Status by Length of Time in Cohort, 2012–13 and 2013–14

Length of Time in Cohort	Algebra I Non-Completers		Algebra I Completers	
	n	%	n	%
Grade 8 only	275	89.6%	33	10.4%
Both Grade 7 and Grade 8	1098	66.7%	549	33.3%
Total	**1373**	**70.1%**	**582**	**29.9%**

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2013 and 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.

D.2.2 STAAR Algebra I End-of-Course

Table D.4. Percentage of Students by STAAR Algebra I End-of-Course Level by Length of Time in Cohort, 2013–14

Implementation Year	n	Level II Phase-in 1 and Above %	Level II Final and Above %
In Grade 8 only	32	90.6%	34.4%
Both Grade 7 and Grade 8	580	91.9%	41.0%
Total	612	91.8%	40.6%

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.

Table D.5. Grade 8 STAAR Algebra I End-of-Course Level II Phase-in 1 Standard and Above Within Texas GEAR UP SG Schools: Length of Time in Cohort MLM Main Model 2013–14 (Grade 8)

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio
Intercept	2.29	0.62	***	NA
In Grades 7 & 8 (vs Grade 8 only)	0.14	0.63	ns	NA
Number of students/schools	612/7			
School Level Variance	0.07			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: in Primary cohort in Grade 8 only, male, Hispanic, not Economically Disadvantaged, non-ELL. “NA” indicates “not applicable” and “ns” indicates “not significant.” Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of 0.07.

Table D.6. Grade 8 STAAR Algebra I End-of-Course Level II Phase-in 1 and Above Within Texas GEAR UP SG Schools: Length of Time in Cohort MLM Covariate Model 2013–14 (Grade 8)

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	2.78	0.80	***	NA
In Grades 7 & 8 (vs Grade 8 only)	0.19	0.63	ns	NA
Female (vs. male)	0.21	0.30	ns	NA
African American (vs. Hispanic)	-0.60	0.47	ns	NA
White (vs. Hispanic)	NA^	NA^	NA	NA
Economically Disadvantaged	-0.49	0.51	ns	NA
ELL	-1.41	0.46	**	0.24 (4.11)
Number of students/schools	611/7			
School Level Variance	0.09			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: in Primary cohort in Grade 8 only, male, Hispanic, not Economically Disadvantaged, non-ELL. "NA" indicates "not applicable" and "ns" indicates "not significant." Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of 0.07. [a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

Table D.7. Grade 8 STAAR Algebra I End-of-Course Level II Final Within Texas GEAR UP SG Schools: Length of Time in Cohort MLM Main Model 2013–14 (Grade 8)

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio
Intercept	-0.72	0.41	ns	NA
In Grades 7 & 8 (vs Grade 8 only)	0.23	0.39	ns	NA
Number of students/schools	612/7			
School Level Variance	0.17			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: in Primary cohort in Grade 8 only. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** <0.1%. "NA" indicates "not applicable" and "ns" indicates "not significant." The intercept-only model (model without predictors) for this outcome produced school variance of 0.18. Only students taking Standard STAAR were included in the model.

Table D.8. STAAR Algebra I End-of-Course Level II Final Within Texas GEAR UP SG Schools: Length of Time in Cohort MLM Covariate Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	-0.10	0.49	ns	NA
In Grades 7 & 8 (vs Grade 8 only)	0.25	0.40	ns	NA
Female (vs. male)	-0.33	0.17	ns	NA
African American (vs. Hispanic)	-0.32	0.31	ns	NA
White (vs. Hispanic)	0.59	0.35	ns	NA
Economically Disadvantaged	-0.48	0.25	ns	NA
ELL	-1.06	0.44	*	0.35 (2.90)
Number of students/schools	611/7			
School Level Variance	0.12			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: in Primary cohort in Grade 8 only, male, Hispanic, not Economically Disadvantaged, non-ELL. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "NA" indicates "not applicable" and "ns" indicates "not significant." The intercept-only model (model without predictors) for this outcome produced school variance of 0.18. Only students taking Standard STAAR were included in the model.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

D.2.3 STAAR Mathematics

Table D.9. Percentage of Students by STAAR Mathematics Achievement Level by Length of Time in Cohort 2013–14 (Grade 8)

Implementation year	n	Level II Phase-in 1 %	Level II Final and Above %
In Grade 8 only	215	44.7%	9.8%
Both Grade 7 and Grade 8	980	52.2%	6.9%
Total	1195	50.8%	7.4%

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.

Table D.10. Grade 8 STAAR Mathematics Level II Phase-in 1 Within Texas GEAR UP SG Schools: Length of Time in Cohort MLM Main Model 2013–14 (Grade 8)

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio
Intercept	-0.20	0.24	ns	NA
In Grades 7 & 8 (vs Grade 8 only)	0.30	0.16	ns	NA
Number of students/schools	1,195/7			
School Level Variance	0.25			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: in Primary cohort in Grade 8 only, male, Hispanic, not Economically Disadvantaged, non-ELL. "NA" indicates "not applicable" and "ns" indicates "not significant." Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, ***< 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of 0.26.

Table D.11. Grade 8 STAAR Mathematics Level II Final Within Texas GEAR UP SG Schools: Length of Time in Cohort MLM 2013–14 (Grade 8)

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio
Intercept	-2.28	0.28	***	NA
In Grades 7 & 8 only (vs Grade 8 only)	0.40	0.26	ns	NA
Number of students/schools	1,195/7			
School Level Variance	0.16			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: in primary cohort in Grade 8 only. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "ns" indicates "not significant." The intercept-only model (model without predictors) for this outcome produced school variance of 0.17. Only students taking Standard STAAR were included in the model. No student taking STAAR Mathematics and not taking Algebra I EOC attended in Grade 7 only.

Table D.12. STAAR Mathematics Level II Final Within Texas GEAR UP SG Schools: Length of Time in Cohort MLM Covariate Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio
Intercept	-1.74	0.46	***	NA
In Grades 7 & 8 only (vs Grade 8 only)	0.38	0.27	ns	NA
Female (vs. Male)	-0.37	0.23	ns	NA
African American (vs. Hispanic)	-0.64	0.38	ns	NA
White (vs. Hispanic)	0.31	0.49	ns	NA
Economically Disadvantaged	-0.31	0.37	ns	NA
ELL	-0.22	0.33	ns	NA
Number of students/schools	1,195/7			
School Level Variance	0.18			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: in Primary cohort in Grade 8 only, male, Hispanic, not Economically Disadvantaged, non-ELL. "NA" indicates "not applicable" and "ns" indicates "not significant." Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of 0.17. Only students taking Standard STAAR were included in the model.

D.2.4 STAAR Reading

Table D.13. Percentage of Students by STAAR Reading Achievement Level by Length of Time in Cohort 2013–14 (Grade 8)

Implementation Year	n	Level II Phase-in 1 and Above %	Level II Final and Above %
In Grade 8 only	257	59.5%	19.5%
Both Grade 7 and Grade 8	1566	70.7%	29.8%
Total	1823	69.1%	28.2%

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.

D.2.5 STAAR Science

Table D.14. Percentage of Students by STAAR Science Achievement Level by Length of Time in Cohort 2013–14 (Grade 8)

Implementation Year	n	Level II Phase-in 1 %	Level II Final and Above %
In Grade 8 only	243	40.3%	13.2%
Both Grade 7 and Grade 8	1557	55.0%	22.7%
Total	1800	53.0%	21.3%

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.

D.2.6 STAAR Social Studies

Table D.15. Percentage of Students by STAAR Social Studies Achievement Level by Length of Time in Cohort 2013–14 (Grade 8)

Implementation Year	n	Level II Phase-in 1 %	Level II Final and Above %
In Grade 8 only	243	30.9%	7.0%
Both Grade 7 and Grade 8	1552	40.3%	10.4%
Total	1795	39.0%	9.9%

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.

Table D.16. Grade 8 STAAR Social Studies Achievement at Level II Final Within Texas GEAR UP SG Schools: Length of Time in Cohort MLM Main Model 2013–14 (Grade 8)

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio
Intercept	-2.60	0.27	***	NA
In Grades 7 & 8 only (vs Grade 8 only)	0.42	0.27	ns	NA
Number of students/schools	1,795/7			
School Level Variance	0.06			

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: in primary cohort in Grade 8 only. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "NA" indicates "not applicable" and "ns" indicates "not significant." The intercept-only model (model without predictors) for this outcome produced school variance of 0.07. Only students taking Standard STAAR were included in the model.

Table D.17. Grade 8 STAAR Social Studies Achievement at Level II Final Within Texas GEAR UP SG Schools: Length of Time in Cohort MLM Covariate Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	-1.17	0.34	***	NA
In Grades 7 & 8 only (vs Grade 8 only)	0.37	0.27	ns	NA
Female (vs. male)	-0.78	0.17	***	0.46 (2.18)
African American (vs. Hispanic)	-1.05	0.31	***	0.35 (2.86)
White (vs. Hispanic)	0.44	0.30	ns	NA
Economically Disadvantaged	-1.02	0.22	***	.36 (2.79)
ELL	-1.65	0.47	***	0.19 (5.19)
Number of students/schools	1,794/7			
School Level Variance	0.06			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: in primary cohort Grade 8 only, male, Hispanic, not Economically Disadvantaged, non-ELL. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "NA" indicates "not applicable" and "ns" indicates "not significant." The intercept-only model (model without predictors) for this outcome produced school variance of 0.07. Only students taking Standard STAAR were included in the model.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

D.3 Overall Level of Participation

D.3.1 Descriptives

Table D.18. Percentage of Students by Amount of Participation in GEAR UP activities by Grade Level within Texas GEAR UP SG Schools

Amount of Participation	n	Percentage of Students	Level of Participation Category
Grade 7 (2012–13) Number of Implementation Activities			
0	165	8.2%	Low
1	309	15.4%	Low
2	610	30.3%	Low
3	542	27.0%	High
4-5	363	18.1%	High
6-7	21	1.0%	High
Grade 8 (2013–14) Number of Implementation Activities			
0	10	0.5%	Low
1-2	298	15.3%	Low
3	578	29.7%	Low
4	552	28.3%	High
5-6	459	23.6%	High
7-8	52	2.7%	High

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014.

Table D.19. Percentage of Students at Each Overall Level of Participation by Texas GEAR UP SG School

School	n	Low/Low	Low/High	High/Low	High/High
School A	280	13.9%	55.7%	2.5%	27.9%
School B	316	12.7%	50.9%	1.6%	34.8%
School C	235	17.4%	51.9%	3.0%	27.7%
School D	208	13.9%	11.5%	30.3%	44.2%
School E	275	16.0%	6.5%	48.4%	29.1%
School F	328	19.2%	68.3%	1.2%	11.3%
School G	317	9.5%	20.8%	19.9%	49.8%
Overall	**1,959**	**14.6%**	**39.4%**	**14.4%**	**31.6%**

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014.
Note. Only students enrolled in Texas GEAR UP SG schools in both Grade 7 and Grade 8 included.

Table D.20. Percentage of Students by Level of Participation and Student Characteristic

School Group	n	Low/Low	Low/High	High/Low	High/High
Gender					
Female	935	13.9%	40.2%	11.4%	34.4%
Male	1024	15.2%	38.6%	17.1%	29.1%
Race/Ethnicity					
African American	289	12.5%	29.4%	23.5%	34.6%
Hispanic	1545	14.6%	41.6%	12.5%	31.4%
White	97	20.6%	35.1%	15.5%	28.9%
Economically Disadvantaged Status					
Not Economically Disadvantaged	213	16.9%	30.5%	15.5%	37.1%
Economically Disadvantaged	1746	8.1%	38.6%	16.5%	36.9%
English Language Learner (ELL) Status					
Non-ELL	1719	14.6%	38.7%	14.4%	32.3%
ELL	240	14.6%	43.8%	14.6%	27.1%
Overall	**1959**	**14.6%**	**39.4%**	**14.4%**	**31.6%**

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014.
Several students were also of other races/ethnicities than in the table above. Thus, numbers in each section may not add up to the total number of students.

D.3.2 Algebra I Completion

Table D.21. Percentage of Students Completing Algebra I in Grade 8 by Overall Level of Participation

	Low/Low		Low/High		High/Low		High/High	
School	n	% Complete Algebra I	n	% Complete Algebra I	n	% Complete Algebra I	n	% Complete Algebra I
School A	39	7.7%	156	23.1%	7	14.3%	78	30.8%
School B	40	2.5%	161	16.1%	5	0.0%	110	33.6%
School C	41	17.1%	122	14.8%	7	57.1%	65	52.3%
School D	29	6.9%	24	29.2%	63	7.9%	92	43.5%
School E	44	11.4%	18	0.0%	133	29.3%	80	33.8%
School F	63	19.0%	224	29.5%	4	0.0%	37	59.5%
School G	30	23.3%	66	37.9%	63	52.4%	158	63.3%
Overall	**286**	**12.9%**	**771**	**23.1%**	**282**	**29.1%**	**620**	**45.8%**

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014.

D.3.3 STAAR Algebra I End-of-Course

Table D.22. Percentage of Students at Grade 8 STAAR Algebra I End-of-Course Level II Phase-in 1 by School by Level of Participation

School	Low/Low		Low/High		High/Low		High/High	
	N	% STAAR Level II Phase-in 1 and Above	n	% STAAR Level II Phase-in 1 and Above	n	% STAAR Level II Phase-in 1 and Above	N	% STAAR Level II Phase-in 1 and Above
School A	3	66.7%	39	84.6%	0	-	27	85.2%
School B	2	50.0%	34	85.3%	0	-	42	95.2%
School C	7	>99.0%	20	85.0%	4	>99.0%	34	97.1%
School D	2	50.0%	7	85.7%	5	80.0%	40	90.0%
School E	6	83.3%	0	-	40	97.5%	29	96.6%
School F	11	>99.0%	68	91.2%	0	-	22	>99.0%
School G	8	87.5%	24	95.8%	35	>99.0%	104	91.4%
Overall	39	87.2%	192	88.9%	84	97.6%	298	93.0%

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.

Table D.23. Grade 8 STAAR Algebra I End-of-Course Level II Final by Level of Participation Group MLM Main Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio
Intercept	-0.07	0.36	ns	NA
Participation High/High (vs. Low/Low)	-0.53	0.35	ns	NA
Participation High/Low (vs. Low/Low)	-0.05	0.41	ns	NA
Participation Low/High (vs. Low/Low)	-0.51	0.36	ns	NA
Number of students/schools	613/7			
School Level Variance	0.13			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: in Low/Low Overall Level of Participation, male, Hispanic, not Economically Disadvantaged, non-ELL. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. “ns” indicates “not significant.” The intercept-only model (model without predictors) for this outcome produced school variance of 0.18. Only students taking Standard STAAR and in a Texas GEAR UP SG school in both Grade 7 and Grade 8 were included in the model.

Table D.24. Grade 8 STAAR Algebra I End-of-Course Level II Final by Level of Participation Group MLM Covariate Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	-2.00	0.67	**	NA
Participation High/High (vs. Low/Low)	-0.56	0.52	ns	NA
Participation High/Low (vs. Low/Low)	0.26	0.60	ns	NA
Participation Low/High (vs. Low/Low)	-0.40	0.54	ns	NA
Grade 7 STAAR Mathematics Scale Score	2.66	0.23	***	NA
Female	-0.37	0.24	ns	NA
African American (vs. Hispanic)	0.56	0.45	ns	NA
White (vs. Hispanic)	0.22	0.54	ns	NA
Economically Disadvantaged	-0.81	0.36	*	0.43 (2.32)
ELL	0.27	0.54	ns	NA
Number of students/schools	581/7			
School Level Variance	0.42			

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: in Low/Low Overall Level of Participation, male, Hispanic, not Economically Disadvantaged, non-ELL. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "NA" indicates "not applicable" and "ns" indicates "not significant." The intercept-only model (model without predictors) for this outcome produced school variance of 0.18. Only students taking Standard STAAR and in Texas GEAR UP SG school in both Grade 7 and Grade 8 were included in the model.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

Table D.25. Percentage of Students on STAAR Algebra I EOC Level II Final by Overall Level of Participation and School

School	Low/Low		Low/High		High/Low		High/High	
	n	% STAAR Level II Final and Above	n	% STAAR Level II Final and Above	n	% STAAR Level II Final and Above	n	% STAAR Level II Final and Above
School A	3	0.0%	39	25.6%	0	NA	27	25.9%
School B	2	50.0%	34	35.3%	0	NA	42	31.0%
School C	7	28.6%	20	30.0%	4	0.0%	34	41.2%
School D	2	0.0%	7	42.9%	5	40.0%	40	20.0%
School E	6	50.0%	0	NA	40	57.5%	29	48.3%
School F	11	81.8%	68	38.2%	0	NA	22	36.4%
School G	8	62.5%	24	54.2%	35	60.0%	104	48.1%

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.

D.3.4 STAAR Mathematics

Table D.26. Grade 8 STAAR Mathematics Level II Phase-in 1 and Above by Level of Participation Group MLM Main Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	-0.46	0.25	ns	NA
Participation High/High (vs. Low/Low)	0.91	0.19	***	2.49
Participation High/Low (vs. Low/Low)	0.46	0.23	*	1.59
Participation Low/High (vs. Low/Low)	0.45	0.18	*	1.57
Number of students/schools	1,203/7			
School Level Variance	0.28			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: in Low/Low Overall Level of Participation, male, Hispanic, not Economically Disadvantaged, non-ELL. "NA" indicates "not applicable" and "ns" indicates "not significant." Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. Only students taking Standard STAAR and in a Texas GEAR UP SG school in both Grade 7 and Grade 8 were included in the model. The intercept-only model (model without predictors) for this outcome produced school variance of 0.26. The intercept-only model (model without predictors) for this outcome produced school variance of 0.35.

Table D.27. Grade 8 STAAR Mathematics Level II Phase-in 1 by Level of Participation Group MLM Covariate Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio
Intercept	0.82	0.46	ns	NA
Participation High/High (vs. Low/Low)	0.59	0.33	ns	NA
Participation High/Low (vs. Low/Low)	0.20	0.37	ns	NA
Participation Low/High (vs. Low/Low)	0.05	0.31	ns	NA
Grade 7 STAAR Mathematics Scale Score (z-score)	2.44	0.17	***	NA
Female	0.02	0.16	ns	NA
African American (vs. Hispanic)	-0.02	0.25	ns	NA
White (vs. Hispanic)	0.66	0.56	ns	NA
Economically Disadvantaged	-0.16	0.35	ns	NA
ELL	0.32	0.25	ns	NA
Number of students/schools	963/7			
School Level Variance	0.10			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: in Low/Low Overall Level of Participation, male, Hispanic, not Economically Disadvantaged, non-ELL. "NA" indicates "not applicable" and "ns" indicates "not significant." Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. Only students taking Standard STAAR and in a Texas GEAR UP SG school in both Grade 7 and Grade 8 were included in the model. The intercept-only model (model without predictors) for this outcome produced school variance of 0.26.

Table D.28. Percentages of Students at Grade 8 STAAR Mathematics Level II Phase-in 1 and Above by School by Level of Participation

School	Low/Low		Low/High		High/Low		High/High	
	N	% STAAR Level II Phase-in 1	n	% STAAR Level II Phase-in 1	n	% STAAR Level II Phase-in 1	n	% STAAR Level II Phase-in 1
School A	28	25.0%	108	39.8%	5	40.0%	51	52.9%
School B	24	25.0%	115	43.5%	4	25.0%	67	55.2%
School C	29	37.9%	90	51.1%	3	100.0%	29	75.9%
School D	26	23.1%	15	33.3%	52	26.9%	50	32.0%
School E	33	48.5%	16	62.5%	82	63.4%	51	68.6%
School F	43	53.5%	139	56.8%	3	0.0%	14	78.6%
School G	16	62.5%	37	73.0%	23	65.2%	50	72.0%

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.

Table D.29. Grade 8 STAAR Mathematics Level II Final by Overall Level of Participation Group MLM Main Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio
Intercept	-2.61	0.32	***	NA
Participation High/High (vs. Low/Low)	0.13	0.34	ns	NA
Participation High/Low (vs. Low/Low)	<0.01	0.40	ns	NA
Participation Low/High (vs. Low/Low)	-0.07	0.33	ns	NA
Number of students/schools	1,203/7			
School Level Variance	0.17			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: in Low/Low Overall Level of Participation. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. “NA” indicates “not applicable” and “ns” indicates “not significant.” The intercept-only model (model without predictors) for this outcome produced school variance of 0.17. Only students taking Standard STAAR and in Texas GEAR UP SG school in both Grade 7 and Grade 8 were included in the model.

Table D.30. Grade 8 STAAR Mathematics Level II Final by Level of Participation Group MLM Covariate Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio
Intercept	-3.22	0.81	***	NA
Participation High/High (vs. Low/Low)	0.58	0.59	ns	NA
Participation High/Low (vs. Low/Low)	0.68	0.66	ns	NA
Participation Low/High (vs. Low/Low)	0.11	0.59	ns	NA
Grade 7 STAAR Mathematics Scale Score	2.25	0.25	***	NA
Female	0.00	0.29	ns	NA
African American (vs. Hispanic)	0.21	0.48	ns	NA
White (vs. Hispanic)	1.09	0.64	ns	NA
Economically Disadvantaged	-0.10	0.53	ns	NA
ELL	0.05	0.43	ns	NA
Number of students/schools	963/7			
School Level Variance	0.35			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: in Low/Low Overall Level of Participation, male, Hispanic, not Economically Disadvantaged, non-ELL. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "NA" indicates "not applicable" and "ns" indicates "not significant." The intercept-only model (model without predictors) for this outcome produced school variance of 0.17. Only students taking Standard STAAR and in Texas GEAR UP SG school in both Grade 7 and Grade 8 were included in the model.

Table D.31. Percentage of Students on STAAR Mathematics at Level II Final by Overall Level of Implementation

	Low/Low		Low/High		High/Low		High/High	
School	N	% STAAR Level II Final and Above	n	% STAAR Level II Final and Above	n	% STAAR Level II Final and Above	n	% STAAR Level II Final and Above
School A	28	7.1%	108	6.5%	5	0.0%	51	9.8%
School B	24	4.2%	115	3.5%	4	25.0%	67	3.0%
School C	29	10.3%	90	2.2%	3	0.0%	29	20.7%
School D	26	3.8%	15	0.0%	52	1.9%	50	2.0%
School E	33	9.1%	16	18.8%	82	12.2%	51	13.7%
School F	43	11.6%	139	7.9%	3	0.0%	14	14.3%
School G	16	0.0%	37	21.6%	23	8.7%	50	4.0%

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.

D.3.5 STAAR Reading

Table D.32. Grade 8 STAAR Reading Level II Phase-in 1 and Above by Level of Participation Group MLM Main Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio
Intercept	0.38	0.17	*	NA
Participation High/High (vs. Low/Low)	0.64	0.17	***	1.89
Participation High/Low (vs. Low/Low)	0.48	0.20	*	1.62
Participation Low/High (vs. Low/Low)	0.36	0.16	*	1.44
Number of students/schools	1,833/7			
School Level Variance	0.08			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: in Low/Low Overall Level of Participation, male, Hispanic, not Economically Disadvantaged, non-ELL. "NA" indicates "not applicable" and "ns" indicates "not significant." Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. Only students taking Standard STAAR and in a Texas GEAR UP SG school in both Grade 7 and Grade 8 were included in the model. The intercept-only model (model without predictors) for this outcome produced school variance of 0.07.

Table D.33. Grade 8 STAAR Reading Level II Phase-in 1 and Above by Level of Participation Group MLM Covariate Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	1.66	0.41	***	NA
Participation High/High (vs. Low/Low)	-0.41	0.31	ns	NA
Participation High/Low (vs. Low/Low)	-0.23	0.34	ns	NA
Participation Low/High (vs. Low/Low)	-0.30	0.31	ns	NA
Grade 7 STAAR Reading Scale Score (z-score)	2.43	0.13	***	NA
Female	0.18	0.15	ns	NA
African American (vs. Hispanic)	-0.46	0.21	*	0.62 (1.59)
White (vs. Hispanic)	0.17	0.47	ns	NA
Economically Disadvantaged	0.24	0.30	ns	NA
ELL	-0.52	0.21	*	0.60 (1.68)
Number of students/schools	1,557/7			
School Level Variance	0.00			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: in Low/Low Overall Level of Participation, male, Hispanic, not Economically Disadvantaged, non-ELL. "NA" indicates "not applicable" and "ns" indicates "not significant." Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. Only students taking Standard STAAR and in a Texas GEAR UP SG school in both Grade 7 and Grade 8 were included in the model. The intercept-only model (model without predictors) for this outcome produced school variance of 0.07. [a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

Table D.34. Percentages of Students at Grade 8 STAAR Reading Level II Phase-in 1 and Above by School by Level of Participation

School	Low/Low		Low/High		High/Low		High/High	
	N	% STAAR Level II Phase-in 1 and Above	n	% STAAR Level II Phase-in 1 and Above	n	% STAAR Level II Phase-in 1 and Above	n	% STAAR Level II Phase-in 1 and Above
School A	32	56.2%	148	68.2%	6	66.7%	78	71.8%
School B	26	50.0%	154	66.2%	5	20.0%	109	66.1%
School C	36	69.4%	113	68.1%	7	85.7%	64	82.8%
School D	27	40.7%	23	52.2%	58	53.4%	90	62.2%
School E	39	51.3%	18	55.6%	120	75.8%	80	80.0%
School F	52	69.2%	209	68.4%	3	0.0%	35	85.7%
School G	24	75.0%	65	81.5%	58	81.0%	154	74.7%

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.

Table D.35. Grade 8 STAAR Reading Level II Final by Overall Level of Participation Group MLM Main Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio
Intercept	-1.17	0.19	***	NA
Participation High/High (vs. Low/Low)	0.52	0.18	**	1.68
Participation High/Low (vs. Low/Low)	0.12	0.22	ns	NA
Participation Low/High (vs. Low/Low)	0.00	0.18	ns	NA
Number of students/schools	1,833/7			
School Level Variance	0.08			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: in Low/Low Overall Level of Participation, STAAR Level II Phase-in 1 and Below. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "NA" indicates "not applicable" and "ns" indicates "not significant." The intercept-only model (model without predictors) for this outcome produced school variance of 0.07. Only students taking Standard STAAR and in Texas GEAR UP SG school in both Grade 7 and Grade 8 were included in the model.

Table D.36. Percentage of Students on STAAR Reading Level II Final by Overall Level of Participation and Texas GEAR UP SG School

School	Low/Low		Low/High		High/Low		High/High	
	n	% STAAR Level II Final and Above	n	% STAAR Level II Final and Above	n	% STAAR Level II Final and Above	n	% STAAR Level II Final and Above
School A	32	21.9%	148	24.3%	6	16.7%	78	32.1%
School B	26	11.5%	154	20.1%	5	0.0%	109	24.8%
School C	36	19.4%	113	23.9%	7	42.9%	64	32.8%
School D	27	11.1%	23	17.4%	58	10.3%	90	28.9%
School E	39	23.1%	18	22.2%	120	35.0%	80	42.5%
School F	52	46.2%	209	26.3%	3	0.0%	35	60.0%
School G	24	25.0%	65	35.4%	58	32.8%	154	35.1%

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.

Table D.37. Grade 8 STAAR Reading Level II Final by Overall Level of Participation Group MLM Covariate Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	-1.20	0.38	**	NA
Participation High/High (vs. Low/Low)	-0.14	0.32	ns	NA
Participation High/Low (vs. Low/Low)	-0.30	0.35	ns	NA
Participation Low/High (vs. Low/Low)	-0.33	0.31	ns	NA
Grade 7 Reading Scale Score	2.54	0.14	***	NA
Female	0.14	0.15	ns	NA
African American (vs. Hispanic)	-0.25	0.26	ns	NA
White (vs. Hispanic)	-0.41	0.37	ns	NA
Economically Disadvantaged	-0.28	0.25	ns	NA
ELL	-1.75	0.53	***	0.17 (5.76)
Number of students/schools	1,557/7			
School Level Variance	<0.01			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: in Low/Low Overall Level of Participation, male, Hispanic, not Economically Disadvantaged, non-ELL. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "NA" indicates "not applicable" and "ns" indicates "not significant." The intercept-only model (model without predictors) for this outcome produced school variance of 0.07. Only students taking Standard STAAR and in Texas GEAR UP SG school in both Grade 7 and Grade 8 were included in the model.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

D.3.6 STAAR Science

Table D.38. Grade 8 STAAR Science Level II Phase-in 1 and Above by Level of Participation Group MLM Main Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio
Intercept	-0.42	0.25	ns	NA
Participation High/High (vs. Low/Low)	0.88	0.17	***	2.41
Participation High/Low (vs. Low/Low)	0.39	0.20	ns	NA
Participation Low/High (vs. Low/Low)	0.33	0.16	*	1.39
Number of students/schools	1,807/7			
School Level Variance	0.32			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: in Low/Low Overall Level of Participation, male, Hispanic, not Economically Disadvantaged, non-ELL. "NA" indicates "not applicable" and "ns" indicates "not significant." Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. Only students taking Standard STAAR and in a Texas GEAR UP SG school in both Grade 7 and Grade 8 were included in the model. The intercept-only model (model without predictors) for this outcome produced school variance of 0.27.

Table D.39. Grade 8 STAAR Science Level II Phase-in 1 and Above by Level of Participation Group MLM Covariate Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	0.52	0.47	ns	NA
Participation High/High (vs. Low/Low)	0.55	0.31	ns	NA
Participation High/Low (vs. Low/Low)	0.17	0.36	ns	NA
Participation Low/High (vs. Low/Low)	0.10	0.30	ns	NA
Grade 7 STAAR Mathematics Scale Score (z-score)	2.32	0.13	***	NA
Female	-0.52	0.14	***	0.60 (1.67)
African American (vs. Hispanic)	0.24	0.24	ns	NA
White (vs. Hispanic)	0.09	0.40	ns	NA
Economically Disadvantaged	-0.34	0.26	ns	NA
ELL	-1.11	0.23	***	0.33 (3.05)
Number of students/schools	1,543/7			
School Level Variance	0.57			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: in Low/Low Overall Level of Participation, male, Hispanic, not Economically Disadvantaged, non-ELL. "NA" indicates "not applicable" and "ns" indicates "not significant." Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. Only students taking Standard STAAR and in a Texas GEAR UP SG school in both Grade 7 and Grade 8 were included in the model. The intercept-only model (model without predictors) for this outcome produced school variance of 0.27. [a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

Table D.40. Percentages of Students at Grade 8 STAAR Science Level II Phase-in 1 by School by Level of Participation

	Low/Low		Low/High		High/Low		High/High	
School	n	% STAAR Level II Phase-in 1 and Above	n	% STAAR Level II Phase-in 1 and Above	n	% STAAR Level II Phase-in 1 and Above	n	% STAAR Level II Phase-in 1 and Above
School A	27	33.3%	149	53.7%	6	33.3%	77	70.1%
School B	25	16.0%	145	36.6%	5	0.0%	109	52.3%
School C	36	47.2%	113	44.2%	7	57.1%	63	71.4%
School D	27	22.2%	23	39.1%	56	10.7%	91	34.1%
School E	36	50.0%	16	50.0%	123	59.3%	80	61.3%
School F	50	56.0%	208	61.1%	3	0.0%	36	86.1%
School G	24	54.2%	62	64.5%	58	74.1%	152	64.5%

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.

Table D.41. Percentage of Students on STAAR Science Level II Final by Overall Level of Participation and Texas GEAR UP SG School

School	Low/Low		Low/High		High/Low		High/High	
	n	% STAAR Level II Final and Above	n	% STAAR Level II Final and Above	n	% STAAR Level II Final and Above	n	% STAAR Level II Final and Above
School A	27	11.1%	149	24.2%	6	16.7%	77	18.2%
School B	25	4.0%	145	10.3%	5	0.0%	109	21.1%
School C	36	22.2%	113	13.3%	7	28.6%	63	38.1%
School D	27	0.0%	23	8.7%	56	1.8%	91	12.1%
School E	36	22.2%	16	12.5%	123	24.4%	80	32.5%
School F	50	38.0%	208	26.4%	3	0.0%	36	47.2%
School G	24	12.5%	62	37.1%	58	19.0%	152	23.0%

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.

D.3.7 STAAR Social Studies

Table D.42. Percentages of Students at Grade 8 STAAR Social Studies Level II Phase-in 1 and Above by School by Level of Participation

School	Low/Low		Low/High		High/Low		High/High	
	n	% STAAR Level II Phase-in 1 and Above	n	% STAAR Level II Phase-in 1 and Above	n	% STAAR Level II Phase-in 1 and Above	n	% STAAR Level II Phase-in 1 and Above
School A	27	22.2%	148	35.8%	6	16.7%	77	49.4%
School B	25	12.0%	143	28.0%	5	20.0%	109	37.6%
School C	36	41.7%	113	27.4%	7	57.1%	63	54.0%
School D	27	22.2%	23	21.7%	57	14.0%	91	31.9%
School E	37	37.8%	16	37.5%	123	45.5%	80	50.0%
School F	47	57.4%	208	43.3%	3	0.0%	36	63.9%
School G	24	54.2%	62	41.9%	57	50.9%	153	40.5%

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.

Table D.43. Grade 8 STAAR Social Studies Level II Final by Overall Level of Participation: MLM Main Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio
Intercept	-2.29	0.25	***	NA
Participation High/High (vs. Low/Low)	0.31	0.26	ns	NA
Participation High/Low (vs. Low/Low)	-0.14	0.33	ns	NA
Participation Low/High (vs. Low/Low)	-0.16	0.27	ns	NA
Number of students/schools	1,803/7			
School Level Variance	0.09			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference category in the model included: in Low/Low Overall Level of Participation. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. ""NA" indicates "not applicable" and "ns" indicates "not significant." The intercept-only model (model without predictors) for this outcome produced school variance of 0.07. Only students taking Standard STAAR and in Texas GEAR UP SG school in both Grade 7 and Grade 8 were included in the model.

Table D.44. Percentage of Students on STAAR Social Studies Level II Final by Overall Level of Participation and Texas GEAR UP SG School

School	Low/Low		Low/High		High/Low		High/High	
	n	% STAAR Level II Final and Above	n	% STAAR Level II Final and Above	n	% STAAR Level II Final and Above	n	% STAAR Level II Final and Above
School A	27	7.4%	148	10.1%	6	16.7%	77	7.8%
School B	25	0.0%	143	3.5%	5	0.0%	109	9.2%
School C	36	5.6%	113	6.2%	7	28.6%	63	17.5%
School D	27	3.7%	23	8.7%	57	0.0%	91	9.9%
School E	37	16.2%	16	12.5%	123	12.2%	80	12.5%
School F	47	19.1%	208	9.1%	3	0.0%	36	25.0%
School G	24	8.3%	62	16.1%	57	8.8%	153	12.4%

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.

Table D.45. Grade 8 STAAR Social Studies Level II Final by Overall Level of Participation: MLM Covariate Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio[a]
Intercept	-2.00	0.45	***	NA
Participation High/High (vs. Low/Low)	0.02	0.40	ns	NA
Participation High/Low (vs. Low/Low)	-0.30	0.45	ns	NA
Participation Low/High (vs. Low/Low)	-0.10	0.40	ns	NA
Grade 7 Reading Scale Score	1.73	0.14	***	NA
Female	-1.16	0.21	***	0.31 (3.20)
African American (vs. Hispanic)	-0.93	0.38	*	0.39 (2.54)
White (vs. Hispanic)	0.15	0.40	ns	NA
Economically Disadvantaged	-0.66	0.27	*	0.52 (1.93)
English Language Learner (ELL)	-0.08	0.50	ns	NA
Number of students/schools	1,544/7			
School Level Variance	<0.01			

Sources. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model included: in Low/Low Overall Level of Participation, male, Hispanic, not Economically Disadvantaged, non-ELL. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. "NA" indicates "not applicable" and "ns" indicates "not significant." The intercept-only model (model without predictors) for this outcome produced school variance of 0.07. Only students taking Standard STAAR and in Texas GEAR UP SG school in both Grade 7 and Grade 8 were included in the model.

[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

Appendix E: Individual Activities Offered and Student Outcome Analyses

E.1 Individual Activities Offered

E.1.1 Activity Descriptives

This section provides descriptives by Texas GEAR UP SG school for each of the activities as included in the multilevel models.

COMPREHENSIVE STUDENT SUPPORT SERVICES

Tutoring

Table E.1. Percentage of Students Who Participated in Tutoring by Grade, Subject, and School

School	Grade 7 (2012–13) % Students Participated				Grade 8 (2013–14) % Students Participated					
	n	Math	ELA	Any subject	n	Math	ELA	Science	Social Studies	Any subject
School A	322	15.5%	20.8%	32.6%	279	46.2%	18.3%	31.5%	20.8%	62.7%
School B	315	18.4%	17.8%	27.9%	311	13.5%	9.7%	30.6%	23.8%	48.6%
School C	251	21.9%	14.7%	31.9%	235	35.3%	28.5%	40.0%	0.0%	65.1%
School D	202	99.0%	98.5%	99.0%	200	95.0%	92.0%	94.0%	67.0%	97.0%
School E	276	91.7%	0.0%	91.7%	273	55.7%	34.1%	23.4%	11.0%	72.2%
School F	320	95.6%	0.0%	95.6%	325	64.3%	1.5%	29.5%	0.9%	70.2%
School G	322	35.1%	45.0%	54.7%	317	47.0%	9.2%	19.2%	0.0%	62.5%
Overall	**2010**	**51.5%**	**25.1%**	**60.1%**	**1940**	**49.2%**	**23.7%**	**35.4%**	**15.4%**	**66.8%**

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.

Mentoring

Table E.2. Percentage of Students Who Participated in Mentoring and Average Hours of Mentoring by Grade and School Year

School	Grade 7 (2012–13)			Grade 8 (2013–14)		
	n	%	Average Hours	n	%	Average Hours
School A	322	7.5%	1.2	279	14.7%	1.6
School B	315	9.8%	1.0	311	8.4%	1.2
School C	251	6.8%	1.2	235	18.3%	1.8
School D	202	9.4%	0.2	200	14.5%	0.1
School E	276	91.7%	25.9	273	15.0%	0.2
School F	320	2.2%	1.0	325	4.3%	0.2
School G	322	22.4%	0.8	317	39.4%	2.0
Overall	**2008**	**21.1%**	**4.4**	**1940**	**16.4%**	**1.0**

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.

Counseling

Table E.3. Percentage of Students Who Participated in Counseling and Average Hours of Counseling by Grade and School Year

School	Grade 7 (2012–13)			Grade 8 (2013–14)		
	n	%	Average Hours	n	%	Average Hours
School A	322	0.0%	-	279	99.3%	1.7
School B	315	0.0%	-	311	98.4%	2.4
School C	251	0.0%	-	235	97.0%	1.0
School D	202	98.0%	2.0	200	98.0%	0.3
School E	276	0.0%	-	273	34.8%	0.2
School F	320	0.0%	-	325	99.1%	6.8
School G	322	48.8%	0.7	317	18.9%	0.3
Overall	**2010**	**17.7%**	**0.3**	**1940**	**76.5%**	**2.0**

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.

College Visits

Table E.4. Percentage of Students Who Participated in College Visits and Average Number of College Visits by Grade and School

School	Grade 7 School Year (2012–13)			Grade 7 Summer (2012–13)		Grade 8 (2013–14)		
	n	%	Average Number of Visits	%	Average Number of Visits	n	%	Average Number of Visits
School A	322	75.8%	1.0	0.0%	-	279	25.1%	1.1
School B	315	63.8%	1.0	0.0%	-	311	21.2%	1.3
School C	251	57.0%	1.0	0.0%	-	235	9.4%	1.0
School D	202	98.5%	1.0	0.0%	-	200	20.0%	1.5
School E	276	0.0%	-	0.7%	1.0	273	22.0%	1.5
School F	320	0.0%	-	9.7%	1.0	325	25.2%	1.2
School G	322	73.3%	1.6	0.0%	-	317	46.1%	1.2
Overall	**2010**	**50.9%**	**1.1**	**1.6%**	**1.0**	**1940**	**25.1%**	**1.3**

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.

JOB-SITE VISITS AND JOB SHADOWING

Table E.5. Percentage of Students Who Participated in Job Site Visits/Job Shadowing and Average Number of Job Site Visits/Job Shadowing by Grade and School

School	Grade 7 (2012–13)			Grade 7 (2012–13) Summer			Grade 8 (2013–14)		
	n	%	Average Number of Visits	n	%	Average Number of Visits	n	%	Average Number of Visits
School A	322	0.0%	-	0	0.0%	-	279	0.0%	-
School B	315	0.0%	-	0	0.0%	-	311	0.0%	-
School C	251	0.0%	-	0	0.0%	-	235	0.0%	-
School D	202	0.0%	-	0	0.0%	-	200	0.0%	-
School E	276	0.0%	-	0	0.0%	-	273	6.2%	1.0
School F	320	0.0%	-	0	0.0%	-	325	0.0%	-
School G	322	19.6%	1.1	0	0.0%	-	317	28.7%	1.3
Overall	**2010**	**3.1%**	**1.1**	**0**	**0.0%**	**-**	**1940**	**5.6%**	**1.2**

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.

STUDENT WORKSHOPS AND EVENTS

Table E.6. Percentage of Students Who Participated in Student Workshops and Average Number of Student Workshops by Grade and School

School	Grade 7 School Year (2012–13)			Grade 7 Summer (2012–13)		Grade 8 (2013–14)		
	n	%	Average Number of Workshops	%	Average Number of Workshops	n	%	Average Number of Workshops
School A	322	0.0%	-	31.1%	1.0	279	99.3%	5.8
School B	315	0.3%	1.0	12.7%	1.1	311	98.4%	7.4
School C	251	0.0%	-	0.0%	-	235	97.9%	5.0
School D	202	0.0%	-	0.0%	-	200	100.0%	11.7
School E	276	73.9%	1.6	16.3%	1.7	273	100.0%	3.3
School F	320	79.1%	1.5	15.0%	1.8	325	99.4%	8.1
School G	322	91.0%	4.6	41.6%	1.0	317	99.1%	9.4
Overall	**2010**	**37.4%**	**2.7**	**18.3%**	**1.2**	**1940**	**99.1%**	**7.2**

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.

FAMILY ENGAGEMENT (STUDENT FAMILY EVENT)

Table E.7. Percentage of Students Who Participated in Family Events and Average Number of Family Events by Grade and School

School	Grade 7 (2012–13)			Grade 8 (2013–14)		
	n	%	Average Number of Events	n	%	Average Number of Events
School A	322	2.2%	1.0	279	14.3%	1.2
School B	315	27.3%	1.2	311	90.7%	1.6
School C	251	29.9%	1.2	235	19.2%	1.2
School D	202	0.0%	-	200	38.0%	1.1
School E	276	79.4%	1.1	273	4.8%	1.0
School F	320	12.8%	1.3	325	37.9%	1.4
School G	322	0.0%	-	317	65.6%	1.6
Overall	**2010**	**21.3%**	**1.1**	**1940**	**40.6%**	**1.5**

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.

EDUCATION FIELD TRIP (STEM)

Table E.8. Percentage of Students Who Participated in Education Field Trips (STEM) and Average Number of Field Trips by Grade and School

School	Grade 8 (2013–14)		
	n	%	Average Number of Trips
School A	279	13.3%	1.0
School B	311	0.0%	-
School C	235	9.4%	1.0
School D	200	12.0%	1.0
School E	273	0.0%	-
School F	325	10.5%	1.0
School G	317	0.0%	-
Overall	**1940**	**6.0%**	**1.0**

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Note. No students participated in STEM Education Field Trips in Grade 7.

EDUCATION FIELD TRIP (OTHER)

Table E.9. Percentage of Students Who Participated in Education Field Trips (Other) and Average Number of Field Trips by Grade and School

School	Grade 7 School Year (2012–13)			Grade 7 Summer (2012–13)		Grade 8 (2013–14)		
	n	%	Average Number of Trips	%	Average Number of Trips	n	%	Average Number of Trips
School A	322	0.0%	-	0.0%	-	279	87.1%	1.1
School B	315	0.0%	-	0.0%	-	311	31.2%	1.2
School C	251	0.0%	-	0.0%	-	235	0.0%	-
School D	202	0.0%	-	0.0%	-	200	9.5%	1.0
School E	276	0.0%	-	1.1%	1.0	273	23.1%	1.0
School F	320	0.0%	-	7.2%	1.0	325	0.0%	-
School G	322	11.2%	1.1	0.0%	-	317	0.0%	-
Overall	**2010**	**1.8%**	**-**	**1.3%**	**1.0**	**1940**	**21.6%**	**1.1**

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.

PARENT WORKSHOP/EVENT

Table E.10. Percentage of Students with a Parent Who Participated in Parent Events and Average Number of Parent Events by Grade and School

School	Grade 7 School Year (2012–13)			Grade 7 Summer (2012–13)		Grade 8 (2013–14)		
	n	%	Average Number of Events	%	Average Number of Events	n	%	Average Number of Events
School A	322	1.6%	1.0	5.0%	1.0	279	70.3%	2.4
School B	315	6.7%	1.2	0.0%	-	311	84.2%	2.2
School C	251	39.4%	1.9	2.8%	1.0	235	95.3%	3.3
School D	202	0.0%	-	0.0%	-	200	25.5%	2.0
School E	276	12.3%	1.3	0.0%	-	273	32.6%	1.7
School F	320	7.8%	1.2	0.0%	-	325	40.9%	1.8
School G	322	29.8%	2.2	0.0%	-	317	77.6%	2.5
Overall	**2010**	**13.9%**	**1.8**	**1.1%**	**1.0**	**1940**	**61.9%**	**2.4**

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.

E.2 Outcome Results

E.2.1 Algebra I Completion

Table E.11. Activities Associated with Grade 8 Algebra I Completion

Activity	Coefficient and Significance		Odds Ratio[a]	Effect Size
	Any Activity/Event	Dosage of Activity/Event		
Advanced Mathematics Enrollment in Grade 7	1.65***	--	5.2	NA
Mathematics Tutoring in Grade 7	0.56**	0.01	1.73	NA
Mathematics Tutoring in Grade 8	0.19	-0.03	NA	NA
Mentoring Grade 7	0.27	<0.001	NA	NA
Mentoring Grade 8	0.37*	0.03	1.45	NA
Counseling Grade 7	0.69*	0.27*	2.0	NA
Counseling Grade 8	-0.16	-0.01	NA	NA
Family Event Grade 7	-0.38*	0.19	0.68 (1.47)	NA
Family Event Grade 8	0.37**	0.51***	1.5	NA
College Visit Grade 7 School Year	0.63**	0.34*	1.7	NA
College Visit Grade 7 Summer	1.70***	1.66***	5.3	NA
College Visit Grade 8 School Year	-0.04	0.04	NA	NA
Student Workshop Grade 7 School Year	1.02**	-0.13	2.8	NA
Student Workshop Grade 7 Summer	0.75***	--	2.12	NA
Student Workshop Grade 8 School Year	-0.40	0.28***	NA	NA
Job Site Visit/Job Shadowing Grade 7 School Year	-0.33	-0.31	NA	NA
Job Site Visit/Job Shadowing Grade 8 School Year	-0.23	-0.10	NA	NA
Educational Trip (STEM)Grade 8 School Year	0.93***	0.94***	2.53	NA
Educational Trip (Other) Grade 7 School Year	0.47	0.49	NA	NA
Educational Trip (Other) Grade 7 Summer	1.00	1.00	NA	NA
Educational Trip (Other) Grade 8 School Year	0.97***	0.83***	2.7	NA
Parent Workshop Grade 7 School Year	0.76***	0.18	2.14	NA
Parent Workshop Grade 7 Summer	1.54**	1.53**	4.66	NA
Parent Workshop Grade 8 School Year	0.34	0.29***	NA	NA

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Separate multilevel models were run for each activity and for any activity (yes/no) versus dosage of participation (hours or number of events). Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%.

[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

Table E.12. Grade 8 Algebra I Completion: Grade 7 Advanced Mathematics Enrollment Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-23.80	1.65	***
Grade 7 STAAR Mathematics Scale Score	<0.01	<0.01	**
Math Advance Enrollment	1.62	0.17	***
Number of students/schools	1,600/7		
School Level Variance	0.51		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model are: low participation (11). Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .20.

Table E.13. Grade 8 Algebra I Completion: Hours of Math Tutoring Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-29.97	1.67	***
Grade 7 STAAR Mathematics Scale Score	0.02	<0.01	***
Hours of Math Tutoring in Grade 7	0.01	<0.01	
Hours of Math Tutoring in Grade 8	-0.03	0.02	
Number of students/schools	1,572/7		
School Level Variance	0.68		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model are: low participation (11). Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .20.

Table E.14. Grade 8 Algebra I Completion: Any Math Tutoring Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-31.47	1.71	***
Grade 7 STAAR Mathematics Scale Score	0.02	<0.01	***
Any Math Tutoring in Grade 7	0.55	0.15	**
Any Math Tutoring in Grade 8	0.19	0.15	
Number of students/schools	1,569/7		
School Level Variance	0.42		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model are: low participation (11). Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .20.

Table E.15. Grade 8 Algebra I Completion: Any Mentoring Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-30.62	1.65	***
Grade 7 STAAR Mathematics Scale Score	0.02	<0.01	***
Any Mentoring in Grade 7	0.27	0.23	
Any Mentoring in Grade 8	0.37	0.18	*
Number of students/schools	1,569/7		
School Level Variance	0.41		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model are: low participation (11). Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .20.

Table E.16. Grade 8 Algebra I Completion: Any Counseling Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-30.34	1.65	***
Grade 7 STAAR Mathematics Scale Score	0.02	<0.01	***
Any Counseling in Grade 7	0.69	0.28	*
Any Counseling in Grade 8	-0.16	0.26	
Number of students/schools	1,569/7		
School Level Variance	0.20		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model are: low participation (11). Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .20.

Table E.17. Grade 8 Algebra I Completion: Any College Visit Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-30.20	1.64	***
Grade 7 STAAR Mathematics Scale Score	<0.02	<0.01	***
Any College Visit in Grade 7	0.56	0.20	*
Any College Visit in Grade 7 Summer	1.67	0.50	***
Any College Visit in Grade 8	-0.03	0.15	
Number of students/schools	1,600/7		
School Level Variance	0.36		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model are: low participation (11). Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .20.

Table E.18. Grade 8 Algebra I Completion: Any Family Event Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-29.50	1.52	***
Grade 7 STAAR Mathematics Scale Score	0.02	<0.01	***
Any Family Event in Grade 7	0.31	0.22	
Any Family Event in Grade 8	0.63	0.17	***
Number of students/schools	1,600/7		
School Level Variance	0.59		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model are: low participation (11). Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .20.

Table E.19. Grade 8 Algebra I Completion: Any Student Workshop Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-29.85	1.76	***
Grade 7 STAAR Mathematics Scale Score	0.02	<0.01	***
Any Student Workshop in Grade 7	1.11	0.39	**
Any Student Workshop in Grade 7 Summer	0.75	0.17	***
Any Student Workshop in Grade 8	0.22	0.75	
Number of students/schools	1,600/7		
School Level Variance	0.70		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model are: low participation (11). Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .20.

Table E.20. Grade 8 Algebra I Completion: Any Job Site Visit Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-29.59	1.60	***
Grade 7 STAAR Mathematics Scale Score	0.20	<0.01	***
Any job site visit in Grade 7	-0.31	0.38	
Any job site visit in Grade 8	-0.23	0.31	
Number of students/schools	1,600/7		
School Level Variance	0.48		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model are: low participation (11). Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .20.

Table E.21. Grade 8 Algebra I Completion: Any Grade 8 Educational STEM Field Trip Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-29.47	1.59	***
Grade 7 STAAR Mathematics Scale Score	0.02	<0.01	***
Any STEM field trip in Grade 8	0.93	0.26	***
Number of students/schools	1,600/7		
School Level Variance	0.40		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model are: low participation (11). Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .20.

Table E.22. Grade 8 Algebra I Completion: Any Other Educational Field Trip Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-29.04	1.61	***
Grade 7 STAAR Mathematics Scale Score	0.02	<0.01	***
Any Other Educational field trip in Grade 7	0.48	0.66	
Any Other Educational field trip in Grade 7 summer	1.01	0.56	
Any Other Educational field trip in Grade 8	0.99	0.24	***
Number of students/schools	1,600/7		
School Level Variance	0.69		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model are: low participation (11). Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .20.

Table E.23. Grade 8 Algebra I Completion: Any Parent Event Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance	Odds Ratio
Intercept	-29.80	1.66	***	NA
Grade 7 STAAR Mathematics Scale Score	0.02	<0.01	***	NA
Any Parent Event in Grade 7	0.76	0.22	***	2.14
Any Parent Event in Grade 7 summer	1.54	0.50	**	4.66
Any Parent Event in Grade 8	0.34	0.18		NA
Number of students/schools	1,569/7			
School Level Variance	0.48			

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model are: low Participation (11). Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .20.

E.2.2 STAAR Algebra I EOC

Table E.24. Activities Associated with STAAR Algebra I EOC Level II Phase-in 1 and Above, 2013–14 (Grade 8)

Activity	Any Activity/ Event	Odds Ratio	Dosage of Activity/ Event	Effect Size
Advanced Mathematics Enrollment in Grade 7	0.81*	2.25	-	NA
Mathematics Tutoring in Grade 7	0.66	NA	0.01	NA
Mathematics Tutoring in Grade 8	-0.27	NA	-0.04	NA
Mentoring Grade 7	0.36	NA	0.03	NA
Mentoring Grade 8	-0.06	NA	<0.01	NA
Counseling Grade 7	-0.06	NA	-0.03	NA
Counseling Grade 8	-1.15*	0.32	<-0.01	NA
Family Event Grade 7	1.65*	5.22	1.46*	0.47
Family Event Grade 8	1.07**	2.92	0.42	NA
College Visit Grade 7 School Year	-0.24	NA	-0.23	NA
College Visit Grade 7 Summer	0.35	NA	0.30	NA
College Visit Grade 8 School Year	0.51	NA	0.44	NA
Student Workshop Grade 7 School Year	1.06**	2.90	0.38	NA
Student Workshop Grade 7 Summer	-0.08	NA	0.14	NA
Student Workshop Grade 8 School Year	-9.64	NA	0.04	NA
Job Site Visit/Job Shadowing Grade 7 School Year	1.16	NA	1.15	NA
Job Site Visit/Job Shadowing Grade 8 School Year	-0.01	NA	-0.04	NA
Educational Trip (STEM)Grade 8 School Year	-0.49	NA	-0.49	NA
Educational Trip (Other) Grade 7 School Year	12.35	NA	13.15	NA
Educational Trip (Other) Grade 7 Summer	12.50	NA	13.56	NA
Educational Trip (Other) Grade 8 School Year	-0.35	NA	-0.15	NA
Parent Workshop Grade 7 School Year	0.88	NA	0.17	NA
Parent Workshop Grade 7 Summer	0.57	NA	0.79	NA
Parent Workshop Grade 8 School Year	0.58	NA	0.21*	0.26

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Separate multilevel models were run for each activity and for any activity (yes/no) versus dosage of participation (hours or number of events). Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%.

Table E.25. Grade 8 STAAR Algebra I EOC Level II Phase-in 1 and Above: Advanced Mathematics Enrollment in Grade 7 Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	1.59	0.31	***
Grade 7 STAAR Mathematics Scale Score	1.02	0.25	***
Advanced Mathematics Enrollment in Grade 7	0.81	0.38	*
Number of students/schools	580/7		
School Level Variance	0.36		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model are: low participation (11). Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .18.

Table E.26. Grade 8 STAAR Algebra I EOC Level II Phase-in 1 and Above: Any Counseling Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	2.80	0.49	***
Grade 7 STAAR Mathematics Scale Score	1.22	0.25	***
Any Counseling in Grade 7	-0.06	0.44	
Any Counseling in Grade 8	-1.15	0.50	*
Number of students/schools	580/7		
School Level Variance	0.07		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model are: low participation (11). Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .18.

Table E.27. Grade 8 STAAR Algebra I EOC Level II Phase-in 1 and Above: Any Family Event Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	1.15	0.32	**
Grade 7 STAAR Mathematics Scale Score	1.13	0.25	***
Any Family Event in Grade 7	1.65	0.71	*
Any Family Event in Grade 8	1.07	0.38	**
Number of students/schools	580/7		
School Level Variance	0.24		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model are: low participation (11). Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .18.

Table E.28. Grade 8 STAAR Algebra I EOC Level II Phase-in 1 and Above: Dosage of Family Event Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	1.31	0.32	**
Grade 7 STAAR Mathematics Scale Score	1.13	0.25	***
Dosage of Family Event in Grade 7	1.46	0.67	*
Dosage of Family Event in Grade 8	0.42	0.22	
Number of students/schools	580/7		
School Level Variance	0.27		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model are: low participation (11). Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .18.

Table E.29. Grade 8 STAAR Algebra I EOC Level II Phase-in 1 and Above: Any Student Workshop Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	11.09	324.7	
Grade 7 STAAR Mathematics Scale Score	1.23	0.23	***
Any Student Workshop Grade 7 School Year	1.06	0.65	**
Any Student Workshop Grade 7 Summer	-0.08	0.35	
Any Student Workshop Grade 8 School Year	-9.64	324.8	
Number of students/schools	580/7		
School Level Variance	0.00		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model are: low participation (11). Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .18.

Table E.30. Grade 8 STAAR Algebra I EOC Level II Phase-in 1 and Above: Dosage of Parent Workshop Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	1.10	0.53	
Grade 7 STAAR Mathematics Scale Score	1.23	0.25	***
Dosage of Parent Workshop Grade 7 School Year	0.38	0.15	*
Dosage of Parent Workshop Grade 7 Summer	0.14	0.32	
Dosage of Parent Workshop Grade 8 School Year	0.04	0.06	
Number of students/schools	580/7		
School Level Variance	0.07		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model are: low participation (11). Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .18.

Table E.31. Activities Associated with STAAR Algebra I EOC Level II Final (Grade 8)

Activity	Any Activity/ Event	Odds Ratio[a]	Dosage of Activity/ Event	Effect Size
Advanced Mathematics Enrollment in Grade 7	0.73*	2.07	-	NA
Mathematics Tutoring in Grade 7	0.39	NA	0.01	NA
Mathematics Tutoring in Grade 8	-0.54*	0.58	-0.10*	-0.19
Mentoring Grade 7	0.12	NA	0.02	NA
Mentoring Grade 8	-0.31	NA	-0.04	NA
Counseling Grade 7	0.32	NA	0.12	NA
Counseling Grade 8	-0.88*	0.41 (1.21)	-0.11	NA
Family Event Grade 7	-0.54	NA	-0.34	NA
Family Event Grade 8	0.03	NA	0.08	NA
College Visit Grade 7 School Year	-0.42	NA	-0.30	NA
College Visit Grade 7 Summer	1.18	NA	1.19	NA
College Visit Grade 8 School Year	-0.27	NA	-0.21	NA
Student Workshop Grade 7 School Year	1.13**	3.10	0.28*	0.34
Student Workshop Grade 7 Summer	0.63**	1.88	0.27	NA
Student Workshop Grade 8 School Year	10.07	NA	<0.01	NA
Job Site Visit/Job Shadowing Grade 7 School Year	0.47	NA	0.54	NA
Job Site Visit/Job Shadowing Grade 8 School Year	0.20	NA	-0.10	NA
Educational Trip (STEM)Grade 8 School Year	<0.01	NA	<0.01	NA
Educational Trip (Other) Grade 7 School Year	0.04	NA	0.12	NA
Educational Trip (Other) Grade 7 Summer	0.96	NA	0.97	NA
Educational Trip (Other) Grade 8 School Year	0.04	NA	0.32	NA
Parent Workshop Grade 7 School Year	0.13	NA	-0.02	NA
Parent Workshop Grade 7 Summer	-0.92	NA	-0.97	NA
Parent Workshop Grade 8 School Year	-0.42	NA	0.07	NA

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness end-of-course (STAAR EOC), 2014.
Notes. Separate multilevel models were run for each implementation type and for any participation (yes/no) versus dosage of activity (hours or number of events). Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%.
[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

Table E.32. Grade 8 STAAR Algebra I EOC Level II Final: Advanced Mathematics Enrollment in Grade 7 Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-3.17	0.44	***
Grade 7 STAAR Mathematics Scale Score	2.64	0.23	***
Advanced Mathematics Enrollment in Grade 7	0.73	0.27	**
Number of students/schools	580/7		
School Level Variance	0.78		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model are: low participation (11). Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .23.

Table E.33. Grade 8 STAAR Algebra I EOC Level II Final: Any Mathematics Tutoring Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-2.74	0.45	***
Grade 7 STAAR Mathematics Scale Score	2.75	0.23	***
Any Mathematics Tutoring in Grade 7	0.39	0.32	
Any Mathematics Tutoring in Grade 8	-0.54	0.26	*
Number of students/schools	580/7		
School Level Variance	0.61		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model are: low participation (11). Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .24.

Table E.34. Grade 8 STAAR Algebra I EOC Level II Final: Dosage of Mathematics Tutoring Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-2.84	0.46	***
Grade 7 STAAR Mathematics Scale Score	2.73	0.23	***
Dosage of Mathematics Tutoring in Grade 7	0.01	0.01	
Dosage of Mathematics Tutoring in Grade 8	-0.10	0.04	*
Number of students/schools	580/7		
School Level Variance	0.78		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model are: low participation (11). Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .24.

Table E.35. Grade 8 STAAR Algebra I EOC Level II Final: Any Counseling Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-2.18	0.42	***
Grade 7 STAAR Mathematics Scale Score	2.77	0.23	***
Any Counseling in Grade 7	0.32	0.41	
Any Counseling in Grade 8	-0.88	0.39	*
Number of students/schools	580/7		
School Level Variance	0.24		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model are: low participation (11). Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .24.

Table E.36. Grade 8 STAAR Algebra I EOC Level II Final: Any Student Workshop Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-13.34	324.7	
Grade 7 STAAR Mathematics Scale Score	2.54	0.21	***
Any Student Workshop Grade 7 School Year	1.13	0.23	***
Any Student Workshop Grade 7 Summer	0.63	0.24	**
Any Student Workshop Grade 8 School Year	10.07	324.74	
Number of students/schools	580/7		
School Level Variance	0.00		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model are: low participation (11). Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%.

Table E.37. Grade 8 STAAR Algebra I EOC Level II Final: Dosage of Student Workshop Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-3.18	0.49	***
Grade 7 STAAR Mathematics Scale Score	2.64	0.23	***
Dosage of Student Workshop Grade 7 School Year	0.28	0.09	**
Dosage of Student Workshop Grade 7 Summer	0.27	0.25	
Dosage of Student Workshop Grade 8 School Year	<0.01	0.05	
Number of students/schools	580/7		
School Level Variance	0.12		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model are: low participation (11). Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .24.

E.2.3 STAAR Mathematics

Table E.38. Activities Associated with STAAR Mathematics Level II Phase-in 1 and Above, 2013–14 (Grade 8)

Activity	Any Activity/Event	Odds Ratio[a]	Dosage of Activity/Event	Effect Size
Advanced Mathematics Enrollment in Grade 7	0.81**	2.25	-	-
Mathematics Tutoring in Grade 7	0.07	NA	<0.01	NA
Mathematics Tutoring in Grade 8	-0.05	NA	-0.05**	-0.17
Mentoring Grade 7	0.38	NA	0.01	NA
Mentoring Grade 8	0.20	NA	0.01	NA
Counseling Grade 7	-0.32	NA	-0.14	NA
Counseling Grade 8	-0.42*	0.66 (1.47)	0.02	NA
Family Event Grade 7	0.62*	1.86	0.47*	0.14
Family Event Grade 8	0.50*	1.65	0.31*	0.15
College Visit Grade 7 School Year	0.28	NA	0.22	NA
College Visit Grade 7 Summer	-0.25	NA	-0.31	NA
College Visit Grade 8 School Year	0.87***	NA	0.59***	0.56
Student Workshop Grade 7 School Year	0.53**	1.71	0.22	NA
Student Workshop Grade 7 Summer	0.30	NA	0.17	NA
Student Workshop Grade 8 School Year	12.48	NA	0.13**	0.23
Job Site Visit/Job Shadowing Grade 7 School Year	-0.12	NA	-0.25	NA
Job Site Visit/Job Shadowing Grade 8 School Year	1.12*	3.08	0.89*	0.15
Educational Trip (STEM)Grade 8 School Year	0.78*	2.17	0.78*	0.10
Educational Trip (Other) Grade 7 School Year	-0.48	NA	-0.49	NA
Educational Trip (Other) Grade 7 Summer	0.73	NA	0.73	NA
Educational Trip (Other) Grade 8 School Year	0.72**	2.04	0.87**	0.25
Parent Workshop Grade 7 School Year	0.96**	2.60	0.47**	0.16
Parent Workshop Grade 7 Summer	0.16	NA	0.11	NA
Parent Workshop Grade 8 School Year	0.14	NA	0.08	NA

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) data through March 31, 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness end-of-course (STAAR EOC), 2014.

Notes. Separate multilevel models were run for each implementation type and for any participation (yes/no) versus dosage of activity (hours or number of events). Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%.

[a] For ease of interpretation, odds ratios of less than one have been transformed to reflect the odds of the non-reference group, calculated as 1/odds ratio of the reference group. The reversed odds ratio is presented in parentheses.

Table E.39. Grade 8 STAAR Mathematics Level II Phase-in 1 and Above: Advanced Mathematics Enrollment in Grade 7 Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	0.01	0.08	
Grade 7 STAAR Mathematics Scale Score	1.64	0.12	***
Advanced Mathematics Enrollment in Grade 7	0.81	0.33	**
Number of students/schools	966/7		
School Level Variance	0.00		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .35.

Table E.40. Grade 8 STAAR Mathematics Level II Phase-in 1 and Above: Dosage of Mathematics Tutoring Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	0.11	0.17	
Grade 7 STAAR Mathematics Scale Score	1.63	0.13	***
Dosage of Mathematics Tutoring in Grade 7	<0.01	<0.01	
Dosage of Mathematics Tutoring in Grade 8	-0.05	0.02	**
Number of students/schools	966/7		
School Level Variance	0.07		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .35.

Table E.41. Grade 8 STAAR Mathematics Level II Phase-in 1 and Above: Any Counseling Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	0.47	0.20	*
Grade 7 STAAR Mathematics Scale Score	1.64	0.12	***
Any Counseling in Grade 7	-0.32	0.22	
Any Counseling in Grade 8	-0.42	0.21	*
Number of students/schools	966/7		
School Level Variance	0.00		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .35.

Table E.42. Grade 8 STAAR Mathematics Level II Phase-in 1 and Above: Any Family Event Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-0.24	0.21	
Grade 7 STAAR Mathematics Scale Score	1.62	0.13	***
Any Family Event in Grade 7	0.62	0.27	*
Any Family Event in Grade 8	0.50	0.21	*
Number of students/schools	966/7		
School Level Variance	0.19		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .35.

Table E.43. Grade 8 STAAR Mathematics Level II Phase-in 1 and Above: Dosage of Family Event Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-0.18	0.19	
Grade 7 STAAR Mathematics Scale Score	1.64	0.13	***
Dosage of Family Event in Grade 7	0.47	0.23	*
Dosage of Family Event in Grade 8	0.31	0.13	*
Number of students/schools	966/7		
School Level Variance	0.17		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .35.

Table E.44. Grade 8 STAAR Mathematics Level II Phase-in 1 and Above: Any College Visit Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-0.25	0.22	
Grade 7 STAAR Mathematics Scale Score	1.63	0.13	***
Any College Visit in Grade 7	0.28	0.22	
Any College Visit in Grade 7 Summer	-0.25	0.83	
Any College Visit in Grade 8	0.87	0.20	***
Number of students/schools	966/7		
School Level Variance	0.19		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .35.

Table E.45. Grade 8 STAAR Mathematics Level II Phase-in 1 and Above: Dosage of College Visit Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-0.21	0.21	
Grade 7 STAAR Mathematics Scale Score	1.64	0.13	***
Dosage of College Visit in Grade 7	0.22	0.18	
Dosage of College Visit in Grade 7 Summer	-0.31	0.82	
Dosage of College Visit in Grade 8	0.59	0.16	***
Number of students/schools	966/7		
School Level Variance	0.16		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .35.

Table E.46. Grade 8 STAAR Mathematics Level II Phase-in 1 and Above: Any Job Site Visit/Job Shadowing Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	0.04	0.14	
Grade 7 STAAR Mathematics Scale Score	1.66	0.13	***
Any Job Site Visit/Job Shadowing in Grade 7	-0.12	0.74	
Any Job Site Visit/Job Shadowing in Grade 8	1.12	0.55	*
Number of students/schools	966/7		
School Level Variance	0.09		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .35.

Table E.47. Grade 8 STAAR Mathematics Level II Phase-in 1 and Above: Dosage of Job Site Visit/Job Shadowing Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	0.04	0.14	
Grade 7 STAAR Mathematics Scale Score	1.66	0.13	***
Dosage of Job Site Visit/Job Shadowing in Grade 7	-0.25	0.71	
Dosage of Job Site Visit/Job Shadowing in Grade 8	0.89	0.45	*
Number of students/schools	966/7		
School Level Variance	0.10		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model are: low participation (11). Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .35.

Table E.48. Grade 8 STAAR Mathematics Level II Phase-in 1 and Above: Any Educational Trip (STEM) Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	0.04	0.15	
Grade 7 STAAR Mathematics Scale Score	1.67	0.13	***
Any Educational Trip (STEM) in Grade 8	0.78	0.35	*
Number **of students/schools**	966/7		
School Level Variance	0.12		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .35.

Table E.49. Grade 8 STAAR Mathematics Level II Phase-in 1 and Above: Dosage of Educational Trip (STEM) Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	0.04	0.15	
Grade 7 STAAR Mathematics Scale Score	1.67	0.13	***
Dosage of Educational Trip (STEM) in Grade 8	0.78	0.35	*
Number **of students/schools**	966/7		
School Level Variance	0.12		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .35.

Table E.50. Grade 8 STAAR Mathematics Level II Phase-in 1 and Above: Any Educational Trip (Other) Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-0.06	0.20	
Grade 7 STAAR Mathematics Scale Score	1.65	0.13	***
Any Educational Trip (Other) in Grade 7	-0.48	1.25	
Any Educational Trip (Other) in Grade 7 Summer	0.73	1.30	
Any Educational Trip (Other) in Grade 8	0.72	0.27	**
Number of students/schools	966/7		
School Level Variance	0.20		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .35.

Table E.51. Grade 8 STAAR Mathematics Level II Phase-in 1 and Above: Dosage of Educational Trip (Other) Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-0.11	0.21	
Grade 7 STAAR Mathematics Scale Score	1.65	0.13	***
Dosage of Educational Trip (Other) in Grade 7	-0.49	1.25	
Dosage of Educational Trip (Other) in Grade 7 Summer	0.73	1.30	
Dosage of Educational Trip (Other) in Grade 8	0.87	0.24	**
Number **of students/schools**	966/7		
School Level Variance	0.25		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .35.

Table E.52. Grade 8 STAAR Mathematics Level II Phase-in 1 and Above: Any Parent Workshop Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-0.10	0.12	
Grade 7 STAAR Mathematics Scale Score	1.64	0.12	***
Any Parent Workshop in Grade 7	0.96	0.30	**
Any Parent Workshop in Grade 7 Summer	0.16	0.91	
Any Parent Workshop in Grade 8	0.14	0.16	
Number of students/schools	966/7		
School Level Variance	0.00		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .35.

Table E.53. Grade 8 STAAR Mathematics Level II Phase-in 1 and Above: Dosage of Parent Workshop Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-0.10	0.10	
Grade 7 STAAR Mathematics Scale Score	1.66	0.12	***
Dosage of Parent Workshop in Grade 7	0.47	0.18	**
Dosage of Parent Workshop in Grade 7 Summer	0.11	0.91	
Dosage of Parent Workshop in Grade 8	0.08	0.05	
Number of students/schools	966/7		
School Level Variance	0.00		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .35.

Table E.54. Activities Associated with STAAR Mathematics Level II Final (Grade 8)

Activity	Any Activity/Event	Odds Ratio	Dosage of Activity/Event	Effect Size
Advanced Mathematics Enrollment in Grade 7	1.03**	2.81	NA	NA
Mathematics Tutoring in Grade 7	-0.33	NA	<-0.01	NA
Mathematics Tutoring in Grade 8	-0.27	NA	0.01	NA
Mentoring Grade 7	-0.54	NA	-0.01	NA
Mentoring Grade 8	0.17	NA	0.05	NA
Counseling Grade 7	0.25	NA	-0.30	NA
Counseling Grade 8	-0.69	NA	0.09*	0.15
Family Event Grade 7	0.57	NA	0.72*	0.21
Family Event Grade 8	0.19	NA	-0.02	NA
College Visit Grade 7 School Year	-0.15	NA	-0.32	NA
College Visit Grade 7 Summer	0.28	NA	0.23	NA
College Visit Grade 8 School Year	0.32	NA	0.32	NA
Student Workshop Grade 7 School Year	0.29	NA	-0.02	NA
Student Workshop Grade 7 Summer	-0.05	NA	0.15	NA
Student Workshop Grade 8 School Year	8.35	NA	-0.03	NA
Job Site Visit/Job Shadowing Grade 7 School Year	-14.5	NA	-14.20	NA
Job Site Visit/Job Shadowing Grade 8 School Year	0.10	NA	0.06	NA
Educational Trip (STEM)Grade 8 School Year	0.57	NA	0.57	NA
Parent Workshop Grade 7 School Year	0.12	NA	-0.16	NA
Parent Workshop Grade 7 Summer	1.72	NA	1.50	NA
Parent Workshop Grade 8 School Year	0.11	NA	0.16	NA

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2014.
Notes. Separate multilevel models were run for each activity and for any activity (yes/no) versus dosage of participation (hours or number of events).

Table E.55. Grade 8 STAAR Mathematics Level II Final: Advanced Mathematics Enrollment in Grade 7 Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-3.63	0.31	***
Grade 7 STAAR Mathematics Scale Score	1.61	0.21	***
Advanced Mathematics Enrollment in Grade 7	1.03	0.35	**
Number of students/schools	966/7		
School Level Variance	0.31		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model are: low participation (11). Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .19.

Table E.56. Grade 8 STAAR Mathematics Level II Final: Dosage of Counseling Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-3.67	0.37	***
Grade 7 STAAR Mathematics Scale Score	1.80	0.20	***
Dosage of Counseling in Grade 7	-0.30	0.31	
Dosage of Counseling in Grade 8	0.09	0.04	*
Number of students/schools	966/7		
School Level Variance	0.48		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model are: low participation (11). Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .19.

Table E.57. Grade 8 STAAR Mathematics Level II Final: Dosage of Family Event Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-3.75	0.32	***
Grade 7 STAAR Mathematics Scale Score	1.74	0.20	***
Dosage of Family Event in Grade 7	0.72	0.32	*
Dosage of Family Event in Grade 8	-0.02	0.21	
Number of students/schools	966/7		
School Level Variance	0.22		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. The reference categories in the model are: low participation (11). Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .19.

E.2.4 STAAR Reading

Table E.58. Activities Associated with STAAR Reading Level II Phase-in 1 and Above, 2013–14 (Grade 8)

Activity	Any Activity/Event	Odds Ratio	Dosage of Activity/Event	Effect Size
Advanced Reading Enrollment in Grade 7	1.16***	3.20	NA	NA
Reading Tutoring in Grade 7	0.01	NA	<0.01	NA
Reading Tutoring in Grade 8	-0.30	NA	-0.06	NA
Mentoring Grade 7	-0.37	NA	-0.01	NA
Mentoring Grade 8	-0.04	NA	-0.01	NA
Counseling Grade 7	0.01	NA	-0.09	NA
Counseling Grade 8	-0.04	NA	-0.02	NA
Family Event Grade 7	-0.02	NA	0.02	NA
Family Event Grade 8	-0.09	NA	0.04	NA
College Visit Grade 7 School Year	0.14	NA	0.15	NA
College Visit Grade 7 Summer	0.87	NA	0.89	NA
College Visit Grade 8 School Year	0.29	NA	0.18	NA
Student Workshop Grade 7 School Year	-0.07	NA	0.06	NA
Student Workshop Grade 7 Summer	-0.14	NA	-0.19	NA
Student Workshop Grade 8 School Year	1.21	NA	-0.01	NA
Job Site Visit/Job Shadowing Grade 7 School Year	-0.48	NA	-0.39	NA
Job Site Visit/Job Shadowing Grade 8 School Year	0.68	NA	0.40	NA
Educational Trip (STEM)Grade 8 School Year	-0.19	NA	-0.19	NA
Educational Trip (Other) Grade 7 School Year	0.66	NA	0.69	NA
Educational Trip (Other) Grade 7 Summer	0.26	NA	0.29	NA
Educational Trip (Other) Grade 8 School Year	0.14	NA	0.23	NA
Parent Workshop Grade 7 School Year	0.18	NA	0.13	NA
Parent Workshop Grade 7 Summer	-0.26	NA	-0.31	NA
Parent Workshop Grade 8 School Year	0.07	NA	0.06	NA

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2014.
Notes. Separate multilevel models were run for each activity and for any activity (yes/no) versus dosage of participation (hours or number of events).

Table E.59. Grade 8 STAAR Reading Phase-in 1 and Above: Advanced Reading Enrollment in Grade 7 Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	1.37	0.09	***
Grade 7 STAAR Reading Scale Score	2.26	0.13	***
Advanced Reading Enrollment in Grade 7	1.16	0.28	***
Number of students/schools	1555/7		
School Level Variance	Did not converge		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .10.

Table E.60. Activities Associated with STAAR Reading Level II Final (Grade 8)

Activity	Any Activity/Event	Odds Ratio	Dosage of Activity/Event	Effect Size
Advanced Reading Enrollment in Grade 7	0.68***	1.98	-	NA
Reading Tutoring in Grade 7	-0.13	NA	-0.01	NA
Reading Tutoring in Grade 8	-0.01	NA	-0.07	NA
Mentoring Grade 7	0.09	NA	<0.01	NA
Mentoring Grade 8	-0.17	NA	-0.01	NA
Counseling Grade 7	-0.19	NA	-0.03	NA
Counseling Grade 8	-0.07	NA	-0.03	NA
Family Event Grade 7	-0.11	NA	-0.09	NA
Family Event Grade 8	0.31	NA	0.17*	0.10
College Visit Grade 7 School Year	-0.03	NA	0.02	NA
College Visit Grade 7 Summer	0.62	NA	0.61	NA
College Visit Grade 8 School Year	0.30	NA	0.28	NA
Student Workshop Grade 7 School Year	0.19	NA	0.02	NA
Student Workshop Grade 7 Summer	0.16	NA	0.07	NA
Student Workshop Grade 8 School Year	0.41	NA	0.02	NA
Job Site Visit/Job Shadowing Grade 7 School Year	-0.39	NA	-0.29	NA
Job Site Visit/Job Shadowing Grade 8 School Year	0.06	NA	-0.10	NA
Educational Trip (STEM) Grade 8 School Year	0.68	NA	0.68	NA
Educational Trip (Other) Grade 7 School Year	-0.73	NA	-0.45	NA
Educational Trip (Other) Grade 7 Summer	0.07	NA	0.09	NA
Educational Trip (Other) Grade 8 School Year	0.16	NA	0.20	NA
Parent Workshop Grade 7 School Year	0.08	NA	-0.03	NA
Parent Workshop Grade 7 Summer	0.60	NA	0.56	NA
Parent Workshop Grade 8 School Year	0.04	NA	0.07	NA

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2014.
Notes. Separate multilevel models were run for each activity and for any activity (yes/no) versus dosage of participation (hours or number of events).

Table E.61. Grade 8 STAAR Reading Level II Final: Advanced Reading Enrollment in Grade 7 Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-1.82	0.11	***
Grade 7 STAAR Reading Scale Score	0.27	0.15	***
Advanced Reading Enrollment in Grade 7	0.68	0.18	***
Number of students/schools	1555/7		
School Level Variance	<0.01		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of 0.07.

Table E.62. Grade 8 STAAR Reading Level II Final: Dosage of Family Event Activity Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-1.75	0.13	***
Grade 7 STAAR Reading Scale Score	2.77	0.15	***
Dosage of Family Event in Grade 7	-0.09	0.17	
Dosage of Family Event in Grade 8	0.17	0.09	*
Number of students/schools	1555/7		
School Level Variance	0.02		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .07.

E.2.5 STAAR Science

Table E.63. Activities Associated with STAAR Science Level II Phase-in 1 and Above (Grade 8)

Activity	Any Activity/Event	Odds Ratio	Dosage of Activity/Event	Effect Size
Advanced Mathematics Enrollment in Grade 7	1.12**	3.06	NA	NA
Science Tutoring in Grade 7	-0.67*	0.51	-0.10*	-0.24
Science Tutoring in Grade 8	0.28	NA	<0.01	NA
Mentoring Grade 7	0.14	NA	0.01	NA
Mentoring Grade 8	-0.21	NA	-0.04*	-0.10
Counseling Grade 7	-0.52**	0.59	-0.14	NA
Counseling Grade 8	-0.57***	0.56	0.04	NA
Family Event Grade 7	0.23	NA	0.04	NA
Family Event Grade 8	0.59**	1.81	0.26***	0.15
College Visit Grade 7 School Year	-0.19	NA	0.16	NA
College Visit Grade 7 Summer	1.10	NA	0.79	NA
College Visit Grade 8 School Year	0.60***	1.82	0.39***	0.15
Student Workshop Grade 7 School Year	0.19	NA	<0.01	NA
Student Workshop Grade 7 Summer	0.44*	1.55	0.37**	0.12
Student Workshop Grade 8 School Year	1.11	NA	0.02	NA
Job Site Visit/Job Shadowing Grade 7 School Year	0.30	NA	0.28	NA
Job Site Visit/Job Shadowing Grade 8 School Year	-0.66*	0.52	-0.60*	-0.11
Educational Trip (STEM)Grade 8 School Year	0.04	NA	0.04	NA
Educational Trip (Other) Grade 7 School Year	0.35	NA	0.37	NA
Educational Trip (Other) Grade 7 Summer	0.62	NA	0.63	NA
Educational Trip (Other) Grade 8 School Year	0.72**	2.06	0.69**	0.21
Parent Workshop Grade 7 School Year	0.26	NA	0.03	NA
Parent Workshop Grade 7 Summer	0.95	NA	0.93	NA
Parent Workshop Grade 8 School Year	0.47**	1.60	0.23***	0.27

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2014.
Notes. Separate multilevel models were run for each activity and for any activity (yes/no) versus dosage of participation (hours or number of events).

Table E.64. Grade 8 STAAR Science Level II Phase-in 1 and Above: Advanced Mathematics Enrollment in Grade 7 Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	0.10	0.30	
Grade 7 STAAR Mathematics Scale Score	2.03	0.13	***
Advanced Mathematics Enrollment in Grade 7	1.12	0.21	***
Number of students/schools	1542/7		
School Level Variance	0.57		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .35.

Table E.65. Grade 8 STAAR Science Level II Phase-in 1 and Above: Any Science Tutoring Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	0.35	0.25	
Grade 7 STAAR Science Scale Score	2.27	0.12	***
Any Science Tutoring in Grade 7	-0.67	0.31	*
Any Science Tutoring in Grade 8	0.28	0.15	
Number of students/schools	1542/7		
School Level Variance	0.35		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .35.

Table E.66. Grade 8 STAAR Science Level II Phase-in 1 and Above: Dosage of Science Tutoring Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	0.51	0.24	
Grade 7 STAAR Science Scale Score	2.27	0.12	***
Dosage of Science Tutoring in Grade 7	-0.10	0.04	*
Dosage of Science Tutoring in Grade 8	<0.01	0.02	
Number of students/schools	1542/7		
School Level Variance	0.32		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .35.

Table E.67. Grade 8 STAAR Science Level II Phase-in 1 and Above: Dosage of Mentoring Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	0.36	0.27	
Grade 7 STAAR Mathematics Scale Score	2.29	0.12	***
Dosage of Mentoring in Grade 7	0.01	0.01	
Dosage of Mentoring in Grade 8	-0.04	0.02	*
Number of students/schools	1542/7		
School Level Variance	0.46		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .35.

Table E.68. Grade 8 STAAR Science Level II Phase-in 1 and Above: Any Counseling Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	0.92	0.15	***
Grade 7 STAAR Mathematics Scale Score	2.10	0.11	***
Any Counseling in Grade 7	-0.52	0.18	**
Any Counseling in Grade 8	-0.57	0.16	**
Number of students/schools	1542/7		
School Level Variance	0.00		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .35.

Table E.69. Grade 8 STAAR Science Level II Phase-in 1 and Above: Any Family Event Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	0.05	0.32	
Grade 7 STAAR Mathematics Scale Score	2.26	0.12	***
Any Family Event in Grade 7	0.23	0.23	
Any Family Event in Grade 8	0.59	0.18	**
Number of students/schools	1542/7		
School Level Variance	0.66		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .35.

Table E.70. Grade 8 STAAR Science Level II Phase-in 1 and Above: Dosage of Family Event Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	0.18	0.30	
Grade 7 STAAR Mathematics Scale Score	2.25	0.12	***
Dosage of Family Event in Grade 7	0.04	0.18	
Dosage of Family Event in Grade 8	0.26	0.10	**
Number of students/schools	1542/7		
School Level Variance	0.58		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .35.

Table E.71. Grade 8 STAAR Science Level II Phase-in 1 and Above: Any College Visit Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	0.30	0.11	**
Grade 7 STAAR Mathematics Scale Score	2.10	0.11	***
Any College Visit in Grade 7	-0.19	0.13	
Any College Visit in Grade 7 Summer	1.10	0.60	
Any College Visit in Grade 8	0.60	0.15	***
Number of students/schools	1542/7		
School Level Variance	0.00		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .35.

Table E.72. Grade 8 STAAR Science Level II Phase-in 1 and Above: Dosage of College Visit Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	0.09	0.29	
Grade 7 STAAR Mathematics Scale Score	2.25	0.12	***
Dosage of College Visit in Grade 7	0.16	0.15	
Dosage of College Visit in Grade 7 Summer	0.79	0.63	
Dosage of College Visit in Grade 8	0.40	0.12	***
Number of students/schools	1542/7		
School Level Variance	0.49		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .35.

Table E.73. Grade 8 STAAR Science Level II Phase-in 1 and Above: Any Student Workshop Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-0.92	1.68	
Grade 7 STAAR Mathematics Scale Score	2.25	0.12	***
Any Student Workshop in Grade 7	0.19	0.29	
Any Student Workshop in Grade 7 Summer	0.44	0.18	*
Any Student Workshop in Grade 8	1.11	1.66	
Number of students/schools	1542/7		
School Level Variance	0.36		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .35.

Table E.74. Grade 8 STAAR Science Level II Phase-in 1 and Above: Dosage of Student Workshop Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	0.13	0.36	
Grade 7 STAAR Mathematics Scale Score	2.26	0.13	***
Dosage of Student Workshop in Grade 7	0.00	0.07	
Dosage of Student Workshop in Grade 7 Summer	0.37	0.14	**
Dosage of Student Workshop in Grade 8	0.02	0.04	
Number of students/schools	1542/7		
School Level Variance	0.43		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .35.

Table E.75. Grade 8 STAAR Science Level II Phase-in 1 and Above: Any Job Site Visit/Job Shadowing Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	0.37	0.27	
Grade 7 STAAR Mathematics Scale Score	2.28	0.12	***
Any Job Site Visit/Job Shadowing in Grade 7	0.30	0.44	
Any Job Site Visit/Job Shadowing in Grade 8	-0.66	0.32	*
Number of students/schools	1542/7		
School Level Variance	0.46		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .35.

Table E.76. Grade 8 STAAR Science Level II Phase-in 1 and Above: Dosage of Job Site Visit/Job Shadowing Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	0.38	0.27	
Grade 7 STAAR Mathematics Scale Score	2.29	0.12	***
Dosage of Job Site Visit/Job Shadowing in Grade 7	0.28	0.40	
Dosage of Job Site Visit/Job Shadowing in Grade 8	-0.60	0.24	*
Number of students/schools	1542/7		
School Level Variance	0.46		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .35.

Table E.77. Grade 8 STAAR Science Level II Phase-in 1 and Above: Any Educational Trip (Other) Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	0.15	0.26	
Grade 7 STAAR Mathematics Scale Score	2.23	0.12	***
Any Educational Trip (Other) in Grade 7	0.35	0.75	
Any Educational Trip (Other) in Grade 7 Summer	0.62	0.88	
Any Educational Trip (Other) in Grade 8	0.72	0.23	**
Number of students/schools	1542/7		
School Level Variance	0.41		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .35.

Table E.78. Grade 8 STAAR Science Level II Phase-in 1 and Above: Dosage of Educational Trip (Other) Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	0.14	0.26	
Grade 7 STAAR Mathematics Scale Score	2.23	0.12	***
Dosage of Educational Trip (Other) in Grade 7	0.37	0.73	
Dosage of Educational Trip (Other) in Grade 7 Summer	0.63	0.88	
Dosage of Educational Trip (Other) in Grade 8	0.69	0.19	***
Number of students/schools	1542/7		
School Level Variance	0.42		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .35.

Table E.79. Grade 8 STAAR Science Level II Phase-in 1 and Above: Any Parent Workshop Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-0.02	0.28	
Grade 7 STAAR Mathematics Scale Score	2.23	0.12	***
Any Parent Workshop in Grade 7	0.26	0.21	
Any Parent Workshop in Grade 7 Summer	0.95	0.62	
Any Parent Workshop in Grade 8	0.47	0.17	**
Number of students/schools	1542/7		
School Level Variance	0.43		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .35.

Table E.80. Grade 8 STAAR Science Level II Phase-in 1 and Above: Dosage of Parent Workshop Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-0.02	0.28	
Grade 7 STAAR Mathematics Scale Score	2.22	0.12	***
Dosage of Parent Workshop in Grade 7	0.03	0.12	
Dosage of Parent Workshop in Grade 7 Summer	0.93	0.62	
Dosage of Parent Workshop in Grade 8	0.23	0.05	***
Number of students/schools	1542/7		
School Level Variance	0.47		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .35.

Table E.81. Activities Associated with STAAR Science Level II Final (Grade 8)

Activity	Any Activity/ Event	Odds Ratio	Dosage of Activity/Event	Effect Size
Advanced Mathematics Enrollment in Grade 7	0.68***	1.98	-	NA
Mathematics Tutoring in Grade 7	-1.62**	0.20	-0.09	NA
Mathematics Tutoring in Grade 8	-0.17	NA	-0.01	NA
Mentoring Grade 7	-0.41	NA	-0.02	NA
Mentoring Grade 8	-0.26	NA	-0.04	NA
Counseling Grade 7	-0.49	NA	-0.22	NA
Counseling Grade 8	-0.54	NA	-0.05	NA
Family Event Grade 7	0.28	NA	0.23	NA
Family Event Grade 8	<0.01	NA	-0..02	NA
College Visit Grade 7 School Year	-0.57*	0.57	-0.48**	-0.19
College Visit Grade 7 Summer	1.06*	2.90	1.05*	0.09
College Visit Grade 8 School Year	0.26	NA	0.24*	0.09
Student Workshop Grade 7 School Year	0.52	NA	0.11	NA
Student Workshop Grade 7 Summer	0.34	NA	0.18	NA
Student Workshop Grade 8 School Year	-1.31	NA	0.01	NA
Job Site Visit/Job Shadowing Grade 7 School Year	-0.66	NA	-0.70	NA
Job Site Visit/Job Shadowing Grade 8 School Year	0.35	NA	0.14	NA
Educational Trip (STEM)Grade 8 School Year	0.05	NA	0.05	NA
Educational Trip (Other) Grade 7 School Year	0.15	NA	0.29	NA
Educational Trip (Other) Grade 7 Summer	1.04	NA	1.04	NA
Educational Trip (Other) Grade 8 School Year	0.52*	1.68	0.71**	0.22
Parent Workshop Grade 7 School Year	0.30	NA	-0.08	NA
Parent Workshop Grade 7 Summer	0.69	NA	0.62	NA
Parent Workshop Grade 8 School Year	0.23	NA	0.17***	0.20

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2014.
Notes. Separate multilevel models were run for each activity and for any activity (yes/no) versus dosage of participation (hours or number of events).

Table E.82. Grade 8 STAAR Science Level II Final: Advanced Mathematics Enrollment in Grade 7 Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-2.21	0.25	***
Grade 7 STAAR Mathematics Scale Score	1.97	0.13	***
Advanced Mathematics Enrollment in Grade 7	0.68	0.18	***
Number of students/schools	1542/7		
School Level Variance	0.32		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .23.

Table E.83. Grade 8 STAAR Science Level II Final: Any Mathematics Tutoring Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-1.73	0.27	***
Grade 7 STAAR Mathematics Scale Score	2.18	0.13	***
Dosage of Mathematics Tutoring in Grade 7	-1.62	0.54	**
Dosage of Mathematics Tutoring in Grade 8	-0.17	0.17	
Number of students/schools	1542/7		
School Level Variance	0.35		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .23.

Table E.84. Grade 8 STAAR Science Level II Final: Any College Visit Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-1.83	0.25	***
Grade 7 STAAR Mathematics Scale Score	2.19	0.13	***
Any College Visit in Grade 7	-0.57	0.22	**
Any College Visit in Grade 7 Summer	1.06	0.48	*
Any College Visit in Grade 8	0.26	0.18	
Number of students/schools	1542/7		
School Level Variance	0.24		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .23.

Table E.85. Grade 8 STAAR Science Level II Final: Dosage of College Visit Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-1.87	0.25	***
Grade 7 STAAR Mathematics Scale Score	2.19	0.13	***
Dosage of College Visit in Grade 7	-0.48	0.17	**
Dosage of College Visit in Grade 7 Summer	1.05	0.48	*
Dosage of College Visit in Grade 8	0.24	0.12	*
Number of students/schools	1542/7		
School Level Variance	0.23		

Source. Texas Education Agency, Texas GEAR UP SG GUIDES Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .23.

Table E.86. Grade 8 STAAR Mathematics Level II Final: Any Educational Trip (Other) Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-2.19	0.24	***
Grade 7 STAAR Mathematics Scale Score	2.16	0.13	***
Any Educational Trip (Other) in Grade 7	0.15	0.50	
Any Educational Trip (Other) in Grade 7 Summer	1.04	0.55	
Any Educational Trip (Other) in Grade 8	0.52	0.26	*
Number of students/schools	1542/7		
School Level Variance	0.30		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .23.

Table E.87. Grade 8 STAAR Mathematics Level II Final: Dosage of Educational Trip (Other) Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-2.27	0.26	***
Grade 7 STAAR Mathematics Scale Score	2.15	0.13	***
Dosage of Educational Trip (Other) in Grade 7	0.29	0.46	
Dosage of Educational Trip (Other) in Grade 7 Summer	1.04	0.55	
Dosage of Educational Trip (Other) in Grade 8	0.71	0.20	***
Number of students/schools	1542/7		
School Level Variance	0.34		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .23.

Table E.88. Grade 8 STAAR Mathematics Level II Final: Dosage of Parent Workshop Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-2.31	0.26	***
Grade 7 STAAR Mathematics Scale Score	2.14	0.13	***
Dosage of Parent Workshop in Grade 7	-0.08	0.12	
Dosage of Parent Workshop in Grade 7 Summer	0.62	0.52	
Dosage of Parent Workshop in Grade 8	0.17	0.05	***
Number of students/schools	1542/7		
School Level Variance	0.34		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .23.

E.2.6 STAAR Social Studies

Table E.89. Activities Associated with STAAR Social Studies Level II Phase-in 1 and Above (Grade 8)

Activity	Any Activity/Event	Odds Ratio	Dosage of Activity/ Event	Effect Size
Advanced Reading Enrollment in Grade 7	0.91***	2.48	NA	NA
Reading Tutoring in Grade 7	0.02	NA	-0.01	NA
Reading Tutoring in Grade 8	-0.33	NA	-0.03	NA
Mentoring Grade 7	0.09	NA	<0.01	NA
Mentoring Grade 8	-0.07	NA	-0.01	NA
Counseling Grade 7	-0.38	NA	-0.07	NA
Counseling Grade 8	-0.28	NA	-0.04	NA
Family Event Grade 7	0.29	NA	0.18	NA
Family Event Grade 8	0.11	NA	0.02	NA
College Visit Grade 7 School Year	-0.32*	0.73	-0.27*	-0.10
College Visit Grade 7 Summer	1.15*	3.15	1.14*	0.10
College Visit Grade 8 School Year	0.10	NA	0.09	NA
Student Workshop Grade 7 School Year	0.27	NA	0.14*	0.16
Student Workshop Grade 7 Summer	0.32*	1.38	0.14	NA
Student Workshop Grade 8 School Year	1.23	NA	0.06	NA
Job Site Visit/Job Shadowing Grade 7 School Year	0.92*	2.51	1.0**	0.13
Job Site Visit/Job Shadowing Grade 8 School Year	-0.56	NA	-0.58*	-0.11
Educational Trip (STEM)Grade 8 School Year	0.08	NA	0.08	NA
Educational Trip (Other) Grade 7 School Year	1.64**	5.16	1.59*	0.16
Educational Trip (Other) Grade 7 Summer	3.08** (se1.05)	21.82	3.08**	0.23
Educational Trip (Other) Grade 8 School Year	0.45*	1.57	0.44**	0.13
Parent Workshop Grade 7 School Year	0.31	NA	0.18	NA
Parent Workshop Grade 7 Summer	0.49	NA	0.51	NA
Parent Workshop Grade 8 School Year	0.17	NA	0.04	NA

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2014.
Notes. Separate multilevel models were run for each activity and for any activity (yes/no) versus dosage of participation (hours or number of events).

Table E.90. Grade 8 STAAR Social Studies Level II Phase-in 1 and Above: Advanced Reading Enrollment in Grade 7 Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-0.87	0.15	
Grade 7 STAAR Reading Scale Score	1.74	0.11	***
Advanced Reading Enrollment in Grade 7	0.91	0.18	***
Number of students/schools	1546/7		
School Level Variance	0.12		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .13.

Table E.91. Grade 8 STAAR Social Studies Level II Phase-in 1 and Above: Any College Visit Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-0.53	0.12	***
Grade 7 STAAR Reading Scale Score	1.90	0.10	***
Any College Visit in Grade 7	-0.32	0.16	*
Any College Visit in Grade 7 Summer	1.15	0.50	*
Any College Visit in Grade 8	0.10	0.14	
Number of students/schools	1546/7		
School Level Variance	0.01		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .13.

Table E.92. Grade 8 STAAR Social Studies Level II Phase-in 1 and Above: Dosage of College Visit Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-0.54	0.12	***
Grade 7 STAAR Reading Scale Score	1.90	0.10	***
Dosage of College Visit in Grade 7	-0.27	0.12	*
Dosage of College Visit in Grade 7 Summer	1.14	0.50	*
Dosage of College Visit in Grade 8	0.09	0.10	
Number of students/schools	1546/7		
School Level Variance	0.02		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .13.

Table E.93. Grade 8 STAAR Social Studies Level II Phase-in 1 and Above: Any Student Workshop Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-2.08	1.60	
Grade 7 STAAR Reading Scale Score	1.88	0.10	***
Any Student Workshop in Grade 7	0.27	0.21	
Any Student Workshop in Grade 7 Summer	0.32	0.16	*
Any Student Workshop in Grade 8	1.23	1.60	
Number of students/schools	1546/7		
School Level Variance	0.05		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .13.

Table E.94. Grade 8 STAAR Social Studies Level II Phase-in 1 and Above: Dosage of Student Workshop Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-1.32	0.30	***
Grade 7 STAAR Reading Scale Score	1.83	0.11	***
Dosage of Student Workshop in Grade 7	0.14	0.06	*
Dosage of Student Workshop in Grade 7 Summer	0.24	0.13	
Dosage of Student Workshop in Grade 8	0.06	0.03	
Number of students/schools	1546/7		
School Level Variance	0.19		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .13.

Table E.95. Grade 8 STAAR Social Studies Level II Phase-in 1 and Above: Any Job Site Visit/Job Shadowing Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-0.67	0.12	***
Grade 7 STAAR Reading Scale Score	1.91	0.10	***
Any Job Site Visit/Job Shadowing in Grade 7	0.92	0.38	*
Any Job Site Visit/Job Shadowing in Grade 8	-0.56	0.32	
Number of students/schools	1546/7		
School Level Variance	0.06		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .13.

Table E.96. Grade 8 STAAR Social Studies Level II Phase-in 1 and Above: Dosage of Job Site Visit/Job Shadowing Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-0.67	0.12	***
Grade 7 STAAR Reading Scale Score	1.91	0.11	***
Dosage of Job Site Visit/Job Shadowing in Grade 7	1.01	0.36	**
Dosage of Job Site Visit/Job Shadowing in Grade 8	-0.58	0.26	*
Number of students/schools	1546/7		
School Level Variance	0.06		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .13.

Table E.97. Grade 8 STAAR Social Studies Level II Phase-in 1 and Above: Any Educational Trip (Other) Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-0.83	0.13	***
Grade 7 STAAR Reading Scale Score	1.85	0.10	***
Any Educational Trip (Other) in Grade 7	1.64	0.69	*
Any Educational Trip (Other) in Grade 7 Summer	3.08	1.05	**
Any Educational Trip (Other) in Grade 8	0.45	0.20	*
Number of students/schools	1546/7		
School Level Variance	0.06		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .20.

Table E.98. Grade 8 STAAR Social Studies Level II Phase-in 1 and Above: Dosage of Educational Trip (Other) Participation Multilevel Model

Variable	Coefficient	Standard Error	Statistical Significance
Intercept	-0.84	0.13	***
Grade 7 STAAR Reading Scale Score	1.85	0.10	***
Dosage of Educational Trip (Other) in Grade 7	1.59	0.68	*
Dosage of Educational Trip (Other) in Grade 7 Summer	3.08	1.05	**
Dosage of Educational Trip (Other) in Grade 8	0.44	0.17	**
Number of students/schools	1546/7		
School Level Variance	0.06		

Source. Texas Education Agency, Texas GEAR UP SG Integrated Data Entry System (GUIDES) Data through March 31, 2014; Texas Education Agency, Public Education Information Management System (PEIMS), 2014; Texas Education Agency, State of Texas Assessments of Academic Readiness (STAAR), 2013 and 2014.
Notes. Asterisks indicate the level of statistical significance: * < 5%, ** < 1%, *** < 0.1%. The intercept-only model (model without predictors) for this outcome produced school variance of .13.