Results of the 2016 Arlington ISD Student Survey

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## Summary of Key Findings

In 2016, the fourth year of AISD student surveys continued to have high levels of participation across the district with $84.3 \%$ of all students participating. These high response rates, coupled with the representativeness of the response group, help ensure that the results and findings from the survey are reflective of the experience and perspectives of AISD students in Grades 6, 8, 10, and 12. In 2016, about $84 \%$ of students in grades 8,10 , or 12 participated 2 years ago in the survey. The key findings from this report are summarized below.

Key similarities across grade levels and student sub-groups:

- Quality of instruction was consistently rated most favorably in English and Social Studies.
- Across all grade levels in which languages other than English are offered, ratings on quality of instruction were consistently lower than other subjects.
- Higher performing students, including higher performing economically disadvantaged students and higher performing Hispanic students, consistently rated their instruction higher than lower performing students.
- Students who feel less safe at school rate their instructional quality lower than their peers.
- Across all grade levels, students reported often feeling comfortable asking questions, that teachers stopped to check understanding, and that in-class activities helped them learn.
- There is room for improvement in increasing Writing opportunities across subject areas in all grades.
- There is room for improvement in use of strategies that increase student engagement across all grade levels.
- Students who report that teachers stopped to check for understanding and held student attention more consistently, also rated their quality of instruction more highly.
- Across all grade levels, students reported similar perceptions of school safety and staff respect, with staff respect generally rated a bit higher than school safety across all grades.
- Most students (over 89\%) participated in at least 1 extra-curricular, community engagement, or volunteer activity.

Key differences across grade levels and student sub-groups:

- Though quality of instruction in Math was consistently lower in Grades 8, 10 and 12 , this was not the case for Grade 6 students, among whom a larger proportion agreed that quality of instruction in Math was "good" or "excellent" and among whom desirable instructional strategies were reported as frequently in Math as in other subject areas (which was not the case for the other grade levels).
- The proportion of students who reflected favorably on the quality of instruction in Science dipped markedly for Grade 10 students.
- There was significant variation in instructional quality ratings by course subject across school campuses.
- As concepts become more complex as grade level increases, fewer students are reporting that teachers are explaining why concepts matter outside of school.
- Grade 12 students were less likely than lower grade levels to report being prepared by the district to work with others, express themselves in Writing, and for their next steps in continuing their education.
- When Grade 12 students asked what they would change about AISD to be better prepared for life after high school, the largest category of response was related to changing something to be better prepared for the real world (e.g., courses or information related to financial planning, tax preparation, how to obtain a mortgage, or general preparedness for life after high school). Importantly, this response has increased substantially each year of the survey (by over 14\% since the first year of the survey).
- A substantially higher proportion of Grade 6 students compared to other students (approximately 19\%) reported feeling unsafe outside around their school and in bathrooms; however, this was a bit higher than last year. Relatedly, variation in the proportion of students who felt unsafe at school was large across school campuses, particularly for Grade 6 students.
- When examining changes in responses between the 2016 and 2014 surveys for repeat student respondents for student safety items, the biggest change is the increase in students reporting there are too many fights at their school and cyber bullying. For staff respect items, the biggest change is in the decline in students reporting that staff listen to what they have to say in $8^{\text {th }}$ grade and the decrease across grade levels in staff believing that every student can be a success.
- This year, there was a 5\% increase for Black students and 3\% increase for Hispanic students reporting not applying to colleges, a $4 \%$ increase among Asian students applying to 4-year schools, and 5\% increase among White students applying for 4-year schools.
- Students who commonly receive "B" grades in school are not applying for college or are applying for only 2-year colleges at much higher rates than their peers who are " $A$ " level students.
- There was significant variation in students' propensity to apply for college across school campuses.

In addition to this district report, campus-level reports are generated that provide each campus' results compared to the District average for that grade level, for every question on the survey. Those reports are available as a separate document, and the overall district-wide summary of those item-level results are included as an appendix to this document.

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## Background and Survey Methods

## Background

Arlington Independent School District (AISD) requires the collection of student perspective and experience data. These data are used to help inform annual performance measures that guide the District's improvement process as well as campus improvement plans. Gibson Consulting Group, Inc. (Gibson) collects student surveys from all students in Grades $6,8,10$, and 12 in the District. The grade 12 student survey was first collected in 2012-13 as a "student exit survey" for all Grade 12 students in the District. ${ }^{1}$ In 2013-14, AISD requested expansion of the student survey to include students in Grades 6, 8, and 10, as well as to continue the survey among the District's senior class. In 2014-15 and 2015-16, Gibson continued the student survey for these grades, resulting in four years of data collection for Grade 12 and three years of data collection for Grades 6, 8 and 10.

This report presents results of all analyses conducted across all student grade levels for the 2015-16 (hereafter, 2016) student survey. In addition, the research team developed school-level reports which will are available as a separate document. ${ }^{2}$ This report outlines the research team's methods for developing and administering the survey, and details results obtained in each of five priority areas identified by the District.

## Methods

## Survey Administration

As in prior years of the survey administration, each campus named a campus liaison to assist with survey administration. To efficiently reach all students in each of the targeted grades, the research team requested administrative data on all targeted students, organized by campus. For Grade 6 students, the data was organized by the students' homeroom teacher. For Grade 8 students, the information was organized by the students' computer course teacher. For students in Grades 10 and 12, the data was organized by the students' English teacher. If the student was not in an English class, they were listed along with the name of their second-period teacher.

The research team then created survey kits for each school campus organized by grade level. Survey kits contained one envelope for each teacher with targeted students. Each teacher envelope contained packets for each of their classes, which included instructions, class rosters, and a set of labels for each

[^0]student. Labels included the student's name, the survey URL (all surveys were administered online), and the students' own unique password for accessing the survey through the website. Each campus received a packet for a liaison that was recruited by the district to help facilitate survey distribution at the school and to track down students that did not have a valid course listing in the administrative data. Each liaison's packet was identical to the teacher packet, except that it included a roster of all students at that campus who did not fit into one of the teacher rosters.

Schools were given a two-week window during late April and May when surveys were to be administered during class time, though the window was staggered for different grade levels. Campus liaisons facilitated the process by helping to schedule computer lab time for each class and working to reach students not captured by one of the teacher packets. Schools and teachers were given flexibility in terms of administering the survey in a way that best worked for their particular school or classrooms (e.g., whether they sent the whole class at once, or some students on some days, etc.), but they were provided with instructions and a script to read to their class.

The final list of targeted students included 17,353 students across all of AISD's schools. Table 1 shows the total survey population at each grade level. ${ }^{3}$

Table 1. Total population of targeted students, by grade.

| Grade | Student Population |
| :--- | :---: |
| Grade 6 | 4,731 |
| Grade 8 | 4,264 |
| Grade 10 | 4,440 |
| Grade 12 | 3,918 |

Surveys were administered using Google Forms, an online survey platform. When the student typed in the survey URL they were immediately asked to enter their unique password, which was provided on individualized labels distributed by teachers. Passwords, which were cross-walked to students' local ID, allowed the research team to link survey data back to student demographic data, assured that students could only complete the survey one time. Once data were submitted using a password, that password could not be used again.

## Data Preparation and Analysis

A total of 14,917 surveys were completed and submitted (an $84.3 \%$ response rate overall). This is on par with the $83.9 \%$ response rate obtained in 2015 . Though this is slightly lower than the response rate in the

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first year of the full survey (2014), the overall rate is still admirably high and results in representation from the majority of the grades surveyed. ${ }^{4}$

Response rates by school were very high, with 47 of 51 elementary schools obtaining rates higher than $80 \%$ and 10 of 13 middle school obtaining response rates higher than $80 \%$. Four of the District's seven high schools obtained response rates higher than $80 \%$ among Grade 10 students and one among Grade 12 students.

Table 2. Response rate by grade level.

| Grade$\quad$Total Surveys <br> Completed | Response Rate | Response Rate | Response Rate <br> 2016 |  |
| :--- | :---: | :---: | :---: | :---: |
| Grade 6 | 4,181 | $88 \%$ | $91 \%$ | $93 \%$ |
| Grade 8 | 3,726 | $88 \%$ | $87 \%$ | $92 \%$ |
| Grade 10 | 3,665 | $83 \%$ | $81 \%$ | $85 \%$ |
| Grade 12 | 3,000 | $77 \%$ | $77 \%$ | $83 \%$ |

Substantial data cleaning efforts were undertaken in an effort to exclude respondents who may have provided systematically insincere or nonsensical responses. This included examining patterns of responses for "exaggerators", examining time stamps for suspicious entries, and identifying outliers. A total of 345 responses (about $2.3 \%$ ) were dropped from the analytic file for at least one of the following reasons:

- Submitted surveys for which the majority of responses were blank
- Surveys were completed in an unrealistic time frame (i.e., under one minute)
- Surveys were completed after school hours
- Responses were flagged as exaggerators (e.g., answered "yes" to every single yes/no question, or answered "no" to every single yes/no question)

The final analytic dataset included responses from 14,572 students.

For most questions, survey results were examined by means, standard deviations, and frequencies, both overall and by respondent subgroup. When appropriate, factor analyses were conducted to create scale scores within a particular area of interest.

## Respondent Characteristics

With such a high response rate, one would not expect to see differences between the responding sample and the targeted population on demographic characteristics, unless there was a systematic reason for non-response. Examination of the race/ethnicity categories and other demographic characteristics (e.g., gender, status as Limited English Proficient, receiving special education services, etc.) between the survey

[^2]respondents and the student population revealed that the respondent group was indeed representative of the targeted group across all measures.

With 42\% of the survey respondents identifying as Hispanic/Latino, 24\% as White, 24\% as Black/African American, and $8 \%$ Asian, the respondent sample was representative of the District's total student population in these grades in terms of ethnicity (see Table 3).

Table 3. Race/ethnicity composition of survey sample compared to survey target population.

| Race/Ethnicity | Respondents | All Targeted Students |
| :--- | :---: | :---: |
| Hispanic/Latino | $41.9 \%$ | $41.9 \%$ |
| White | $23.7 \%$ | $23.1 \%$ |
| Black/African American | $24.1 \%$ | $25.2 \%$ |
| Asian | $7.7 \%$ | $7.3 \%$ |
| Other $^{5}$ | $2.5 \%$ | $2.5 \%$ |

The resulting sample of student respondents was also representative of the District's students overall in terms of gender, the length of time they had been in the District, average GPA, and the percentage of students identified as LEP, SPED, and economically disadvantaged (receiving the Free/Reduced price lunch program) (see Table 4).

Table 4. Demographic characteristics of survey sample compared to all District targeted students.

| Demographic Characteristic | Respondents | All Targeted Students |
| :--- | :---: | :---: |
| Gender (\% Female) | $49.6 \%$ | $48.6 \%$ |
| Economically Disadvantaged (\%) | $63.6 \%$ | $64.3 \%$ |
| LEP (\%) | $15.4 \%$ | $15.5 \%$ |
| Special Education (\%) | $7.7 \%$ | $9.0 \%$ |
| GPA (Grades 10 \& 12 only) (mean) | 2.96 | 2.98 |
| Years in District (mean) | 6.3 | 6.3 |

[^3]
## Quality of Instruction/Instructional Strategies (All Grades)

## Quality of Instruction

Students were asked to rate perceptions of the quality of instruction they received in the district in each of six content areas: Math, English, Writing, Science, Social Studies, and languages other than English ${ }^{6}$. The response scale for the survey item ranged from "poor", "fair', "good" and "excellent". There was also an option to indicate they had not taken a class in a particular area, rather than providing a rating.

Figure 1 shows the percentage of students who provided a rating of "good" or "excellent", by grade level and subject area. In this figure, the lines for English and Social Studies are highlighted (in red and blue, respectively), while other results are greyed out. The largest proportion of students rated quality of instruction as "good" or "excellent" in English across these grades. In Grade 6, English was the highest rated subject (in terms of the proportion of students rating instruction as "good" or "excellent") along with Math and Science. In Grades 8 and 10, $75 \%$ or more of students rated the quality of English instruction as good or excellent.

Figure 1. Percent of Students Indicating Quality of English \& Social Studies Instruction was Good/ Excellent.


[^4]In 2016, 80\% of Grade 12 students rated English instruction as "good" or "excellent", comparable to the $77 \%$ of students who said the same in 2015. Ratings for the quality of Social Studies instruction increased gradually in higher grades - in Grade 6, $72 \%$ said instruction was good or excellent compared with $81 \%$ of those in Grade 12.

Results for Math were a bit different. Highlighted in Figure 2, the agreement level about high quality Math instruction was rated slightly more positively than Social Studies in Grade 6; however, the rating dropped precipitously from Grades 8 to 10 , and again from Grades 10 to 12 . This drop also occurred in prior years but the magnitude of the decline this year is smaller than in previous years. Looking across campuses, the range (or standard deviation) in these ratings was mostly uniform with the only exceptions being for smaller campuses.

Figure 2. Percent of Students Indicating Quality of Math Instruction was Good/Excellent.


Figure 3 shows the trend in results for Science courses across grades. Student agreement about the quality of Science instruction being "good" or "excellent" was high in $6^{\text {th }}$ and $8^{\text {th }}$ grade, however from Grade 8 to Grade 10 there was a large drop in the rating. The magnitude of this drop is consistent with survey data from prior years. One possible explanation for this drop is that the types of Science courses taken starting in $10^{\text {th }}$ grade have heavier Math and technical components that can be difficult for some students and may require different teaching methods than students have encountered in lower grade level Science courses. ${ }^{7}$

[^5]Figure 3. Percent of Students Indicating Quality of Science Instruction was Good/Excellent.


This dip in ratings for the quality of Science instruction is similar across all survey years, though the gap in ratings between Grades 8 and 10 was largest in 2015 when $79 \%$ of Grade 8 students rated Science instruction "good" or "excellent" compared with $61 \%$ of Grade 10 students - a difference of 18 percentage points. This difference was substantially smaller in both 2014 and 2016 ( 12 and 13 percentage point differences, respectively).

Finally, Figure 4 shows that quality of instruction ratings for Writing varied considerably between grades. While roughly three-quarters of students in Grades 6 and 10 rated the quality of instruction as "good" or "excellent", students in Grades 8 and 12 rated Writing instruction less positively. Two-thirds of students in Grade 8 and $70 \%$ in Grade 12 rated their Writing instruction as "good" or "excellent". In prior survey years, ratings for the quality of Writing instruction were relatively stable. However, between 2015 and 2016, ratings among students in Grade 6 dropped from $74 \%$ to $67 \%$. While ratings for Writing instruction varied across grades, ratings for the quality of instruction in languages other than English were relatively stable, both across grades and survey years, though there was a small positive increase in ratings of foreign language instruction between 2015 and 2016. For example, in 2015, 65\% of students in Grade 8 said the quality of foreign language instruction was "good" or "excellent" compared with 70\% in 2016.

[^6]Figure 4. Percent of Students Indicating Quality of Writing \& Other Languages Instruction was Good/Excellent.


The overall change in quality of instruction ratings over time that are discussed above are also visualized in Figure 5.

Figure 5. Overall Comparison of Students Indicating Quality of Instruction was Good/Excellent, by Course.


Repeat survey respondents. This survey year marks the first year in which a group of students in AISD is eligible to take the survey a second time. For 2016 the proportion of students who are taking the survey for the second time is about $84 \%$. Figure 6 shows an overview of the survey sample (all colored boxes represent years and grade levels that have been surveyed) and that the proportion of repeat student respondents is highest for grade 12 students ( $88 \%$; in the purple box) in 2016 who were grade 10 students in $2014.82 \%$ of grade 8 students in 2016 also previously took the survey in 2014 when they were in grade 6.

Figure 6. Percent of AISD students in 2016 that also took the survey two years ago.

| Grade | 2013 | 2014 | 2015 | 2016 |
| :--- | :---: | :---: | :---: | :---: |
| Grade 6 | x |  |  |  |
| Grade 8 | x |  |  | $\mathbf{8 2 \%}$ |
| Grade 10 | x |  |  | $\mathbf{8 0 \%}$ |
| Grade 12 |  |  |  | $\mathbf{8 8 \%}$ |

Figure 7 shows the change in the percent of these repeat survey respondents who rated their quality of instruction as good or excellent since the last time they took the survey. For Math students in grade 8, the proportion who rated their quality of instruction as good/excellent went down by 5 percentage points from their rating in grade 6. The largest increase across grades was for grade 12 Science and grades 8 through 10 Social Studies; the largest decrease in ratings was for Grade 10 Science and grade 8 Math, English, and Writing.

Figure 7. Change in Students Indicating Quality of Instruction was Good/Excellent, by Course.


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## Factors Associated with Student Ratings of Quality of Instruction

In the section above, we see that the quality of instruction ratings varied across subject area and grade level. Beyond these descriptive differences in quality of instruction, there may be systematic differences in ratings across salient student sub-groups. Information about the student and campus characteristics that are most associated with higher quality of instruction ratings can help inform District staff actions, interventions, and decision-making. Therefore, in this section, we explore the degree to which students' ratings of instructional quality (by subject area) are related to student GPA and other factors.

Based on extant studies on quality of instruction, we know that these ratings are often associated with student performance (students who perform better or have higher GPA tend to also rate the instruction quality higher than their comparable peers). In addition, we can explore whether other important factors, such as respondent characteristics, social climate, or attitudinal factors are associated with instructional quality ratings. ${ }^{8}$ This multivariate model, which includes many of these variables simultaneously, is used to examine which student factors are significantly associated with student quality of instruction ratings. For these analyses, the outcome of interest was the quality of instruction rating. Separate models were developed for each subject area. ${ }^{9}$ The main findings from the multivariate

## Factors Associated with Quality of Instruction Ratings for Math and English

Highest ratings on instruction quality:

- Higher performing students (GPA)
- Students who report enjoying learning
- Highest performing economically disadvantaged and Hispanic students
- Special education student ratings higher in Math (lower in English and Social Studies)
- Students who report enjoying learning
- Students who feel more safe
- Smaller class sizes, but only for Grade 12 English and Math courses

Statistically significant differences across campuses and grade levels. models presented in this section (summarized in box to the right) are the factors that are statistically significantly associated with higher (or lower) ratings for quality of instruction in Math and English. ${ }^{10}$

Results from these analyses revealed that, across all subject areas and controlling for all other variables in the model, higher student performance (GPA) was associated with significantly higher ratings of instructional quality. For example, students with higher GPAs ( 3.0 and above) are 2.2 times more likely than students with lower GPAs to rate Math instructional quality higher. Descriptively, about $52 \%$ of $12^{\text {th }}$ graders with low GPAs rated instruction as higher quality while about $72 \%$ of higher performing $12^{\text {th }}$

[^7]graders rated Math instruction highly (recall from Figure 2 the overall proportion of these students that rated Math instruction highly was $64 \%$ ).

Students who reported on the survey that they enjoy learning were more likely (about 1.8 times more likely) to rate quality of instruction higher overall. While students who received free or reduced lunch (i.e., which is a proxy for economically disadvantaged students) were neither more or less likely to rate instruction quality higher, when parsing out high performing from low performing economically disadvantaged students, the highest performing FRL students rated instructional quality significantly higher. That is, FRL students don't rate instructional quality any higher than their peers except for the subset of high performing FRL students.

When examining the association between student ethnicity and instructional quality ratings, results revealed that Hispanic students did not give uniformly higher or lower ratings than their peers overall, but when the data were disaggregated by GPA, the highest performing Hispanic students gave the highest quality of instruction ratings. Figure 8 shows the probability of regression-adjusted average quality of instruction rating (that is, adjusted for all covariates in the model) by race/ethnicity and performance level (GPA). This figure shows how higher performing Hispanic students gave the highest quality of instruction ratings in 2016 even when disaggregating by performance-level; in fact, the highest performing Hispanic students gave the highest quality of instruction ratings of any group in 2016.

Importantly, the increase in quality of instruction scores for 2016 in Figure 8 is a statistically significant increase over prior years (the increase from 2014 to 2015 was not statistically significant).

Figure 8. Regression-adjusted Average Quality of Instruction Rating by GPA and Race/Ethnicity Group.


$\rightarrow$ White
$\rightarrow-$ Black
$\Rightarrow-$ Hispanic

Note: Top panel includes regression-adjusted quality of instruction rating for Math for all race categories by year. Bottom panel includes these estimates disaggregated by student GPA level.

Next we examined students who reported on the survey feeling less safe at school. Students who reported on the survey feeling not safe gave significantly lower quality of instruction ratings (by a factor of about .1 times (or $10 \%$ ) lower than their peers). The model also accounted for students' Limited English Proficiency (LEP) status, special education status, gender, and campus. This means that the statistical comparisons evaluated by this model were made among similar students by controlling for these student characteristics. LEP and special education students gave significantly lower ratings, particularly in English courses.

Class sizes did not vary much across grade level and subject ${ }^{11}$ except in grade 12 where the lowest mean and highest standard deviation were observed. In the multivariate model, no significant effect could be detected for class size on quality of instruction rating except for in Grade 12 Math and English courses.

Results from these analyses also revealed that, controlling for all other variables, some campuses had significantly higher quality of instruction ratings in general, compared to other campuses. That is, beyond differences driven by student characteristics like ethnicity or achievement, there were other unmeasured things going on at these schools that help explain significant campus-to-campus differences. While these data did not measure the reasons why these campuses had higher or lower ratings after controlling for student performance and student characteristics, these results highlight campuses that had lower ratings from statistically similar peers at other campuses (an interpretation that results from addition of the control variables).

Figure 9 shows the percent difference in how likely students were to rate quality of instruction in each subject higher or lower than their peers at other campuses. The top panel shows the combined (or average) rating across campuses by year. For instance, Arlington High School had the highest overall rating in 2014 but by 2016 that changed to Lamar High School. Bowie High School had the lowest rating in 2014, ticked up to near the top in 2015 and then returned to the lowest rating in 2016.

The bottom panel of Figure 9 shows the percent difference in the quality of instruction rating score (percent difference on the 1 to 4 scale) across campuses in 2016 by subject area. For instance, in 2016 students were 20\% more likely to rate Math quality of instruction higher and nearly 26\% less likely to rate English instruction higher at Bowie High School (compared with Arlington High School as the base category). Categories that show no bar or percent difference were not statistically significant in the model. The bottom graph shows the absolute

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Figure 9. Multivariate model results for campuses with significantly higher of instruction ratings.


Note: Top panel shows regression-adjusted average quality of instruction rating comparing campuses across years. Bottom panel presents the percent difference in likelihood that students rated instruction higher at each campus. Only statistically significant bars/categories are shown. Small high school campuses were excluded from the comparison categories.

## Instructional Strategies

In addition to rating the quality of instruction overall by subject area, students are also asked about specific instructional strategies/techniques that Arlington ISD instructional leaders identified as integral to successful teaching practice (e.g., I was asked to show what I know in Writing, teachers held my attention, teachers checked whether students understood a concept before moving on, etc.). Students responded about the frequency (e.g., never, sometimes, most of the time, always) with which each was present in each of their content area courses, and these sets of items are asked at each grade level. Figures $6 \mathrm{a}-6 \mathrm{~d}$ show student responses to the item sets presented, by grade level. These responses in these figures are the average scores on the 1 to 4 point survey item scale.

Across all four grade levels, students reported that they are least often asked to show what they know in Writing across all content areas, except English. Being given a choice in how they demonstrate knowledge to their teacher was also less frequent than some of the other items. Also, looking across subject areas, responses to most items were lowest (meaning students reported the activities/strategies are less frequent) in Math, compared to all other subject areas. A major exception here is that in Grade 6, Figure 10a shows that the students reported that Math teachers checked their understanding at the highest rate overall (average of 3.2 out of 4 ). While in Grade 12 most responses did not reach the "most of the time" threshold in most of the subject areas (a 3 on the 4-point scale), in lower grades the "most of the time" threshold was commonly met or exceeded, particularly for students feeling comfortable asking questions, teachers checking student understanding before moving on, and in-class work helping students understand the materials. The strategy show what you know in Writing was lowest across each of the grade levels and was not higher for lower grade levels like it was for the other strategies. In Grade 6 , responses were generally the highest in Science and Math, while in Grades 8 and 10 they were highest in English and Social Studies.

Figure 10a. Frequency of Instructional Strategies across Content Areas, Grade 6.


Figure 10b. Frequency of instructional strategies across content areas, Grades 8.


Figure 10c. Frequency of instructional strategies across content areas, Grades 10.


Figure 10d. Frequency of instructional strategies across content areas, Grades 12.


## How are responses about instructional strategies correlated with quality of instruction ratings?

Overall, student responses that in-class assignments helped students learn the concepts and that teachers held student attention were most strongly correlated with higher quality of instruction ratings. For instance, in Science, the correlation between having in-class assignments that helped students learn the concepts and quality of instruction was .53 overall and highest for Grade 10 students (.60). That is, students who indicated that Science teachers more frequently assigned in-class work that helped students learn the concepts were also likely to report that quality of Science education in Arlington ISD was higher. Similarly, the correlation between Science instruction rating and teachers holding student attention was .52 overall and highest for Grades 10 students (.59). That is, students who responded to the survey that teachers engaged in these classroom strategies most often also rated the quality of instruction in those areas the highest overall.

Similarly, the results from a multivariate model (controlling for student and campus characteristics with a specification similar to the model presented in the previous section) show that the strategies detailed in Figure 10 were most strongly associated with higher Math quality of instruction ratings; that is, where these strategies were employed most often, teachers also received the highest quality of instruction ratings. ${ }^{12}$ Higher quality of instruction ratings in English were weakly associated with these strategies being used often, and overall the more technical courses like Math and Science received higher quality of instruction ratings where more of the strategies in Figure 6 are utilized often.

Teachers that were often providing opportunities for in-class assignments or projects and that had students reporting that they often felt comfortable asking questions also had the highest performing students. Finally, students who reported on the survey that they enjoyed learning are significantly more likely to report each of these strategies are being used often, especially that teachers held student attention.

## Student Engagement

Using a scale of 1 (never) to 4 (always) students responded to how often each engagement-related statement was true for them generally in their school. Table 5 shows the percentage of students who reported that each statement was true "never" or "sometimes", compared to "most of the time" or "always". One item was negative in direction, and is presented below in red font.

Similar to the prior survey years, about one-third of students reported that classes are boring "most of the time" or "always" in Grade 12 (Table 5). The percentage of students providing this response was smaller in Grade 6 (22\%) than in Grades 8, 10, and 12 ( $35 \%, 36 \%$ and $33 \%$, respectively). While there was a slight decline between 2015 and 2016 in the proportion of students in Grade 6 who agreed that classes were boring ( $25 \%$ in 2015 v. $22 \%$ in 2016), there was an uptick in the proportion of Grade 8 students who said the same ( $31 \%$ in 2015 v. $35 \%$ in 2016). This was the only negatively worded statement.

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Table 5. Frequency of engagement across all content areas, by grade level.

| How often are each of the following true for you? | Most of the Time / Always <br> (\%) |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
|  | Grade 6 | Grade 8 | Grade 10 | Grade 12 |
| Classes are boring. | $22 \%$ | $35 \%$ | $36 \%$ | $33 \%$ |
| I enjoyed learning in class. | $64 \%$ | $48 \%$ | $46 \%$ | $51 \%$ |
| My courses are challenging. | $44 \%$ | $40 \%$ | $52 \%$ | $48 \%$ |
| I was given opportunities to use technology as part of class <br> work. | $50 \%$ | $51 \%$ | $57 \%$ | $55 \%$ |
| Teachers explained why the things I was learning mattered <br> outside of school. | $65 \%$ | $44 \%$ | $34 \%$ | $33 \%$ |
| Material I learned in one class was connected to material I <br> was learning in another class. | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ | $32 \%$ |

Of the other, positively worded statements that reflect student engagement, closer to half of responding students reported that the statements were true "most of the time" or "always." Notably, while $65 \%$ of Grade 6 students agreed that teachers explain why the things they are learning matter outside of school, this percentage dramatically decreased as student grade increased, with $44 \%$ reporting this as true most of the time or always in Grade 8 and only $34 \%$ and $33 \%$ in Grades 10 and 12, respectively.

As Figure 11 illustrates, the percentage of students reporting that they are given opportunities to use technology as part of class work most of the time or always has increased over substantially over the last three to four years. Students in Grade 6 have seen the biggest increase in the use of technology in the classroom, increasing from $38 \%$ in 2014 to $50 \%$ in 2016 . This percentage has also increased for students in Grades 10 and 12, but has remained relatively static for Grade 8 students. Since 2013, the proportion of Grade 12 students who said they used technology "most of the time" or "always" has increased 20 percentage points ( $35 \%$ in 2013 to $55 \%$ in 2016).

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Figure 11. Percent of Students Indicating Technology Use in Classroom Most of the Time/Always.


## Student Preparedness

AISD staff identified three areas in which they want their Grade 12 students to feel prepared: 1) for next steps after graduation, 2) for expressing themselves in Writing, and 3) for working with others. When expanding the survey in 2014 to students to lower grades, the wording of these items was modified to be age and grade level appropriate, though the intent of the questions was maintained to the greatest extent possible. Results for the four grade levels are shown separately for the differently worded items in Table 6.

Overall, results were consistent with the prior year's results. On a scale of 1 (strongly disagree) to 4 (strongly agree), Grade 12 students agreed most strongly that high school is preparing them for working with others (2.96). Student responses about being prepared for next steps after graduating was rated lower (2.73) as well as being prepared to express myself in Writing (2.72). All three are rated above a midpoint of 2.5 on a four-point scale.

Students in Grades 6, 8, and 10 were more positive on all three items, with means falling above 3.0 for all three items for students in Grades 6 . Students in these grades most strongly agreed that they felt ready to start the next grade level (range from 3.3. to 3.4). They also agreed that they had the chance to work with classmates on assignments ( 3.2 on average), and that school was helping them to be a good writer (2.9 on average). While the average student score for classes helping them to be good writers went down significantly from 3.1 last year to 2.9 on the scale, this is on par with the 2014 average of 2.9.

Table 6. Mean preparedness in each of three areas, by grade level.

|  | Grade <br> 6 | Grade 8 | Grade <br> 10 | Grade $12$ |
| :---: | :---: | :---: | :---: | :---: |
| High school has prepared me for working with others. |  |  |  | 2.96 |
| High school has prepared me for my next steps after graduating. |  |  |  | 2.73 |
| High school has prepared me for expressing myself in Writing. |  |  |  | 2.72 |
| My teachers give me a chance to work with my classmates on assignments. | 3.26 | 3.19 | 3.11 |  |
| I feel ready to start the next grade level. | 3.41 | 3.39 | 3.33 |  |
| My school is helping me become a good writer. | 3.07 | 2.80 | 2.93 |  |

## Safety and Respect (All Grades)

To measure the extent to which students in Arlington ISD felt that their school was safe and the environment was respectful, survey items are borrowed from several existing and published student surveys, including the National Center for Education Statistics' Crime and Safety Survey ${ }^{13}$ and from the my Voice My School High School Exit Survey used in Chicago Public Schools. ${ }^{14}$ Some items are positively framed (e.g. the teachers here respect me), while others are negatively framed (e.g., most students in my school don't get along very well). Prior to conducting analyses, negatively framed items are reverse coded so that higher scores represented positive opinions for all questions.

To enable comparisons to previous years, two of the same subscales were created, as factor analyses provided sufficient evidence that these groups of items are psychometrically related across all grade levels surveyed. One construct was related to outward behaviors directly associated with school safety, and included items having to do with teasing, bullying, fighting, and putting others down. The second construct was related to teacher and staff respect for students, such as "teachers here respect me" and "staff listen to what I have to say." The items loading on each construct are shown in Table 8. ${ }^{15}$ Nine items loaded on the Safety construct, four items loaded on the Staff Respect construct. ${ }^{16}$

Table 8. Safety and Staff Respect constructs.

| School Safety | Staff Respect |
| :--- | :--- |
| Students at this school are teased or put down because <br> of their race/ethnicity or culture. | School staff believe that every student can be a <br> success. |
| Students at this school are often teased or picked on. | The teachers here respect me. |
| Most students in my school like to put others down. | School staff listen to what the students have to say. |
| There are too many fights in my school. | Teachers treat all students fairly in the classroom |
| Physical bullying is a problem at my school. |  |
| Verbal bullying is a problem at my school. |  |
| Cyber bullying is a problem at my school. |  |

Results among Grade 12 students were again comparable to results from the previous three years. Overall, mean scores were highest on the Staff Respect construct across all grade levels, with an average of 2.86 across the District, falling somewhere between a neutral response and "agree" on a four-point scale. The School Safety construct overall averaged 2.65, close to a neutral response. As can be seen in Figure 12, scores on both constructs were highest among students in Grade 6 and decreased somewhat as grade

[^10]level increased, particularly for the staff respect construct. Notably, all grade levels averaged a score on both constructs above the mid-point on the four-point scale. ${ }^{17}$

Figure 12. Average Scale Scores on Safety and Respect Constructs.
$\square$ Grade $6 \square$ Grade $8 \square$ Grade $10 \quad$ Grade $12 \square$ Grade 12 (2012-13)


When examining differences by school, there was some range in these construct means, though variation was relatively small. Figures 13 and 14 show the average scale score on each construct for each secondary school in the District (Figure 13) and each elementary school in the District (Figure 14). As can be seen, scores on the Staff Respect measure were generally higher across schools, with the exception of Nichols Junior High School that had a below average score. Scores on the School Safety measure were lower, though never dropping much below the 2.5 midpoint. Examining these scores by school can help the District identify campuses with particularly strong results that might be further examined for best practices, while also revealing campuses that could benefit from some targeted improvements.

[^11]Figure 13. School Safety and Staff Respect Scale Scores, by Secondary Campus.


Figure 14. School Safety and Staff Respect Scale Scores, by Elementary Campus.


Student safety by physical location on or around campus. An additional set of questions was posed to students to ask how safe they felt in seven physical locations in and around their school building. ${ }^{18}$ Table 10 shows the percentage of students at each school indicating that they do not feel safe in those locations (the percentage who answered "not safe", which was a 1 on a 4 point scale). Results were very similar to 2015 except that there were small increases in the percentage of Grades 8 and 10 students saying they did not feel safe in other common areas and in the hallways. Across Grades 8,10 , and $12,13 \%$ or fewer of students reported that they do not feel safe in any of the seven school locations, with the greatest number reporting not feeling safe outside around the school, followed by in locker rooms and bathrooms. However, nearly one in five Grade 6 students reported that they do not feel safe outside around the school or in school bathrooms.

Table 9. Safety in School Locations, by Grade Level.

|  | Grade | Grade | Grade | Grade <br> $\mathbf{8}$ |
| :--- | :---: | :---: | :---: | :---: |
| Outside around the school | $19 \%$ | $13 \%$ | $9 \%$ | $10 \%$ |
| In locker rooms | $\mathrm{n} / \mathrm{a}$ | $11 \%$ | $9 \%$ | $9 \%$ |
| In bathrooms | $15 \%$ | $12 \%$ | $10 \%$ | $9 \%$ |
| In the lunch room | $5 \%$ | $5 \%$ | $7 \%$ | $7 \%$ |
| In the hallways | $3 \%$ | $6 \%$ | $5 \%$ | $6 \%$ |
| In other common areas | $3 \%$ | $5 \%$ | $5 \%$ | $5 \%$ |
| In your classrooms | $3 \%$ | $3 \%$ | $3 \%$ | $4 \%$ |

To further examine this feeling of lack of safety reported among $18 \%$ of Grade 6 students, Figures 15 and 16 show the percentage of Grade 6 students responding that they do not feel safe outside around the school (Figure 15) and in bathrooms (Figure 16) by elementary school.

As can be seen, there are three elementary schools where over 30\% of their students do not feel safe outside around the school. Though schools may be less able to control or impact the safety of the neighborhoods in which they reside, there are two schools shown in Figure 12 where over 30\% of students do not feel safe in bathrooms, and many others with $20 \%$ to $30 \%$ reporting the same. Exploration of this survey data provides an opportunity to further investigate safety concerns in these schools.

[^12]Figure 15. Percent Responding They Don't Feel Safe Outside Around the School, by Elementary Campus.


Figure 16. Percent Responding They Don't Feel Safe in Bathroom, by Elementary Campus.


## School safety at and around schools

This section contains information about the percent of respondents who indicated that they are "mostly safe" or "very safe" (a 3 or 4 on the response scale) in the locations listed in Table 10 below. The annual survey report shows that students reporting that they feel safe in and around their school was a factor that was significantly associated with higher student engagement and with students' reporting higher satisfaction with the quality of instruction on the student survey.

In Table 10, the overall percent of students across all grades surveyed who reported feeling "mostly safe" or "very safe" in and around all the school locations listed was about 74\%. The location where the largest proportion of students felt mostly or very safe was in classrooms ( $86 \%$ overall) and in other common areas in the school building ( $76 \%$ overall). Students felt most safe in the latter location in Grade 6 ( $86 \%$ ). Table 10 also shows that the lowest percent of students reported feeling mostly or very safe outside around the schools ( $61 \%$ overall) with the lowest group being Grade 6 students (54\%).

While other common areas in the school building were generally noted as among the safest for students, the proportion of students who said they felt "mostly safe" or "very safe" in these areas decreased substantially from last year, particularly among Grade 8 and Grade 10 students. In 2015, 88\% of Grade 8 students said they felt "mostly safe" or "very safe" in other commons areas, compared with $70 \%$ in 2016 -an 18 percentage point drop in one year. A 16 percentage point drop was seen among Grade 10 students when asked the same question ( $89 \%$ in 2015 v. $73 \%$ in 2016).

Table 10. Safety in School Locations, by Grade Level (percent who answered "mostly safe" or "very safe")

| Location | Grade <br> 6 | Grade <br> 8 | Grade <br> 10 | Grade <br> 12 |
| :--- | :---: | :---: | :---: | :---: |
| Outside around the school (on school grounds/parking <br> lots) | $54 \%$ | $60 \%$ | $65 \%$ | $64 \%$ |
| In locker rooms | $\mathrm{n} / \mathrm{a}$ | $66 \%$ | $70 \%$ | $67 \%$ |
| In bathrooms | $58 \%$ | $61 \%$ | $66 \%$ | $66 \%$ |
| In the lunch room | $75 \%$ | $76 \%$ | $71 \%$ | $69 \%$ |
| In the hallways | $78 \%$ | $69 \%$ | $73 \%$ | $70 \%$ |
| In other common areas in the school building | $86 \%$ | $70 \%$ | $73 \%$ | $74 \%$ |
| In your classrooms | $87 \%$ | $85 \%$ | $86 \%$ | $85 \%$ |

## Factors associated with school safety ratings

This section shows additional information about the factors associated with the school safety ratings reported in the annual survey report. The results come from an inferential model that assesses the multivariate association between student characteristics, school factors, and a student self-reported school safety rating. The school safety rating is an index of the school safety survey items outlined in the annual report (e.g., students reporting they felt they and their peers are safe from being picked on, targeted, harmed, or bullied) and the resulting index is scaled from 1 to 4 , with a 4 indicating the student

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feels safe in all areas. ${ }^{19}$ The distribution of this scale that is used as the outcome or response variable in the multivariate model that follows is shown in Figure 17 below.

Figure 17. Distribution of Safety Scale/Index Used in Inferential Model


Next, we discuss the main findings from the inferential model of factors significantly associated with students feeling more safe in school. ${ }^{20}$ When it comes to student self-reported safety (e.g., regarding students feeling safe from being bullied, harmed, or picked on), the model findings include:
> Male students felt significantly more safe than female students.
> Compared with Hispanic students, , White, Black and Asian students felt significantly less safe (last year, White students indicated that they did not feel any more or less safe).
$>$ LEP students feel no more or less safe than their peers.

- Economically disadvantaged students with higher GPAs (higher performing) feel safer than economically disadvantaged students with lower GPAs. Lower GPA students (including both economically disadvantaged and non-economically disadvantaged students with low GPA) feel less safe overall.
> Special education students feel less safe than non-special education students.

[^13]
## Decomposing the Student safety and Staff Respect scales for repeat survey respondents.

When looking at the survey items for student safety and staff respect that comprise the scaled items, change in the responses over time is informative. Table 11 below shows the overall percent of students who agree that each item is mostly or always true. In red is the percentage point change since 2014 for only the sub-set of respondents who previously rated their safety or staff respect 2 years ago in a lower grade level.

For instance, the Grade 8 column 'change since 2014 ' indicates that change in the rating for the subset (of about $82 \%$ of respondents) that also responded to this question as 6 th graders in 2014. This group of $6^{\text {th }}$ graders increased their overall rating in grade 8 in 2016 by about $3 \%$ for this item. For each of the tables below, note that the largest change often occurs between $6^{\text {th }}$ and $8^{\text {th }}$ grade for these repeat student respondents. The biggest change is the increase in students reporting there are too many fights at their school and cyber bullying. For staff respect items, the biggest change is in the decline in students reporting that staff listen to what they have to say in $8^{\text {th }}$ grade and the decrease across grade levels in staff believing that every student can be a success.

Table 11. Student responses to the student safety and staff respect sub-scale items and change for repeat student respondents since 2014.

|  | Grade <br> 6 | Grade 8 |  | Grade 10 |  | Grade 12 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 | 2016 | Change since 2014 | 2016 | Change since 2014 | 2016 | Change since 2014 |
| Students at this school are teased or put down because of their race/ethnicity. | 33\% | 39\% | +3\% | 35\% | -3\% | 42\% | +2\% |
| Students at this school are often teased or picked on. | 54\% | 54\% | 0\% | 46\% | -8\% | 47\% | -2\% |
| Most students in my school like to put others down. | 45\% | 50\% | +5\% | 42\% | -5\% | 44\% | -2\% |
|  | Grade 6 | $\begin{gathered} \text { Grade } \\ 8 \end{gathered}$ |  | $\begin{gathered} \text { Grade } \\ 10 \end{gathered}$ |  | $\begin{gathered} \text { Grade } \\ 12 \end{gathered}$ |  |
|  | 2016 | 2016 | Change since 2014 | 2016 | Change since 2014 | 2016 | Change since 2014 |
| There are too many fights in my school. | 33\% | 48\% | +21\% | 41\% | +10\% | 40\% | +9\% |
| Physical bullying | 35\% | 34\% | 0\% | 25\% | -1\% | 29\% | +5\% |
| Verbal bullying | 55\% | 61\% | +3\% | 52\% | -5\% | 53\% | -5\% |
| Cyber bullying | 27\% | 42\% | +17\% | 41\% | +10\% | 47\% | +4\% |
|  | $\begin{gathered} \text { Grade } \\ 6 \end{gathered}$ | Grade <br> 8 |  | Grade 10 |  | Grade 12 |  |
|  | 2016 | 2016 | Change since 2014 | 2016 | Change since 2014 | 2016 | Change since 2014 |
| The teachers here respect me. | 86\% | 80\% | -4\% | 85\% | -3\% | 80\% | -4\% |
| School staff listen to what the students have to say. | 72\% | 59\% | -12\% | 62\% | -2\% | 61\% | +1\% |
| School staff believe that every student can be a success. | 91\% | 81\% | -9\% | 74\% | -9\% | 67\% | -7\% |
| Teachers treat all students fairly in the classroom. | 66\% | 54\% | -9\% | 57\% | +1\% | 55\% | +2\% |

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## Lifelong Learning Environment (Grade 12 only)

To measure the extent to which Arlington ISD schools foster an environment that develops lifelong learners, a set of questions was posed to students about the extent to which their school encourages various activities. Students answered 16 items on a scale of 1 (strongly disagree) to 4 (strongly agree). Two subscales are created from resulting data: one having to do with activities one does individually (e.g., be curious, get excited about learning) and another having to do with activities engaged in with other people (participating in community service, becoming involved in mentoring). These items are shown in Table 12.

Table 12. Items loading on Individual and With Others constructs.

| Individual |  |
| :---: | :---: |
| Wy school encourages students to... |  |
| Pursue topics that interest them. | Participate in community service or service projects. |
| Be curious. | Build leadership skills. |
| Get excited about learning. | Participate in school clubs and organizations. |
| Pursue different interests. | Become involved in mentoring. |
| Be creative. |  |
| Try new things. |  |

Scale scores were computed for each lifelong learner construct. The overall mean scores across the District were 2.9 on a 4 point scale for both constructs, indicating that, overall, students tended to agree that AISD schools create an environment that fosters the development of lifelong learners.

These results are consistent with results from prior years, both overall, and for every high school in the District, suggesting that this is a stable construct both year to year, and from campus to campus. Figure 18 displays scores on the Individual construct by high school campus for both 2014 and 2015, while Figure 19 displays scores on the With Others construct.

Figure 18. Mean Score on Individual Construct, by High School Campus, 2014-2016.


Figure 19. Mean Score on With Others Construct, by High School Campus, 2014-2016.


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## Preparation for College and the Workforce (Grade 12 only)

## Applications

The Grade 12 senior survey included different sets of questions related to preparation for college and the workforce. Overall rates of application to college are described below as well as rates by ethnicity and by a student's grade point average.

Overall, $80 \%$ of responding seniors indicated that they have applied to some type of college, either a technical school, a 2-year or a 4 -year college or university; this represented a slight decrease from the $83 \%$ who reported the same in the prior year, though this is on par with the proportion of Grade 12 students applying to college in both 2013 and 2014. While $24 \%$ indicated that they applied only to a 2year college, $28 \%$, respectively, indicated that they applied only to a 4 -year college, and that they applied to both 2- and 4-year colleges. These rates are similar to those from 2015, with a slightly lower proportion of 2015 seniors applying to each college category, with the exception of 4 -year only applications (see Figure 20).

Figure 20. Percent of Students Applying to 2- and 4- year Colleges, 2014-2016.


Change in these application rates was further examined by student ethnicity. Figure 21 helps illustrate how the percentage increase in student college applications was distributed in 2016. In 2015, AISD reported efforts to help Hispanic students in particular to increase college application rates. While there was an increase in the proportion of Hispanic students applying to 4-year colleges and to both 2 and 4year colleges in 2015 (three percent less Hispanic students applied for only 2-year schools), applications for Hispanic students declined from 2015 to 2016. Overall, there was a three-point increase in the proportion of Grade 12 Hispanic students who submitted no college applications. Additionally, there was a five percentage point increase in the proportion of Black students submitting no college applications from 2015 to 2016, seen in decreases in applications to only 2 -year and only 4 -year schools. Among White and Asian students, there were increases in the proportion of students applying to only 4-year schools (+5 percentage points and +4 percentage points, respectively). However, the proportion of non-applications among these students had a small uptick as well.

Figure 21. Change in Proportion of Students Applying to Different Types of Colleges, 2015 to 2016.


While submission of college applications decreased over the last year, the overall trend of college application submission is slightly positive for students of most ethnic groups. Figure 22 illustrates that between 2014 and 2016, the proportion of Asian, White, and Hispanic students submitting college applications increased slightly. White and Asian students in particular have increased their applications to only 4 -year schools (+6 percentage points for each), moving away from applying to both 2-year and 4 -year schools. However, with an increase in non-applications of four percentage points over two years, the trend shows that a larger proportion of Black students are choosing not to apply to college.

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Figure 22. Change in Proportion of Students Applying to Different Types of Colleges, 2014 to 2016.


Examining rates of application in 2016 by student ethnicity, Figure 23 shows that Hispanic students demonstrated the highest rates of not applying to college (25\%) compared to all other student subgroups (between 9\%-19\%), and the lowest rates of applying only to 4-year colleges (18\% compared to between $26 \%-46 \%)$. Hispanic students also showed the highest rates of applying only to 2 -year colleges (31\% compared to between 14\%-21\%).

Figure 23. Rates of College Application, by Ethnicity.


To further examine variation in college application rates, overall student GPA was used to categorize students as an A, B, or C student. Then, rates of application were examined by ethnicity, by these student GPA subgroups.

As can be seen in Figure 24, rates of college application to 2-or 4-year colleges were highest among $A$ and B group students, and lowest among $C$ students, as might be expected. B group students are students who still have strong chances of getting into 4 -year colleges, yet they applied for 4 -year and both 2 and 4 -year schools at much lower rates than A group students. Figure 24 also shows that, much like in 2015, the highest achieving Hispanic students (those with an A average) applied to both college types at notably lower rates than other student subgroups, yet applied to only 2 -year or only 4 -year colleges at higher rates than other student subgroups. Also, there is a large proportion of B and C group students for both the White and Hispanic student subgroups who reported not applying to college at all.

Figure 24. College Application Rates by Ethnicity, by Student GPA.


These data shed some light on particular areas in which additional supports may be needed to further encourage a college-going culture among high achieving students across all student subgroups.

## Guidance/Counseling

Students are asked whether they talked to school counselors about: 1) going to college or technical school after graduation, 2) ideas or options for getting a job after high school, 3) where they see themselves one year from now, and 4) where they see themselves 10 years from now. Students could respond yes to any one, none, or all of these items. The average total number of "yes" responses was examined by whether the student was identified through the previous analysis as having applied to a 2-year school only, to a 4-
year school only, to both 2-and 4-year schools, or did not apply at all. Results showed that on average, all students who applied to some type of college reported engaging in fewer of these activities than last year (Figure 25). Students applying to only 4 -year colleges and only 2 -year colleges reported engaging in fewer activities with counselors; however, there was a slight increase for students applying to both 2-and 4 -year schools.

Figure 25. Guidance/Counseling Activities, by Student Application Status.

$$
■ \text { 2013-14 } \quad \text { 2014-15 } \quad \text { 2015-16 }
$$



## Student Actions

Questions posed to students about actions they have taken in terms of preparing for college or careers (such as taking AP/IB courses, applied for scholarships, taken CTE classes, obtain technical certifications, etc.) were categorized into college-bound activities and career-bound activities. Next, a sum was calculated for each student across the six college-bound items and separately across the three careerbound items.

Table 13 shows the mean number of activities for which students responded "yes", grouped by the students' college application status. Across all application status groups, the average number of both college-bound and career-bound activities increased from last year. As was the case last year, among the college-bound items, students applying to 2 - and 4 - year colleges and students applying only to 4 -year colleges, reported engaging in substantially more college-bound items, on average, than students not applying to college or only applying to 2 -year college ( 3.5 and 3.8 compared with 1.3 and 2.1 ). For careerbound students, overall, there are few opportunities for students to engage in activities that are particularly career-focused, as the research team had difficulty identifying more than three items for which to ask students. Additionally, the rate at which students are engaging in those activities was quite low across all years, with an average of about one activity, regardless of post-secondary plans.

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Table 13. Average number of "yes" responses on college- and career-bound student actions.

| College Application <br> Status | College-bound <br> (Max of 6) |  |  | Career-bound <br> (Max of 3) |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\mathbf{2 0 1 4}$ | $\mathbf{2 0 1 5}$ | $\mathbf{2 0 1 6}$ | $\mathbf{2 0 1 4}$ | $\mathbf{2 0 1 5}$ | $\mathbf{2 0 1 6}$ |
| No applications | 1.6 | 1.4 | 1.3 | 0.8 | 0.7 | 0.7 |
| 2-year only | 2.1 | 2.1 | 2.1 | 0.8 | 0.8 | 0.8 |
| 2- and 4-year | 3.6 | 3.6 | 3.5 | 0.9 | 0.9 | 0.9 |
| 4-year only | 3.8 | 3.7 | 3.8 | 0.8 | 0.8 | 0.8 |

## Staff Support

Students are asked about whether any adults at their school supported or encouraged them in various ways, such as helping with college applications, talking to them about CTE courses or technical certification opportunities, etc. Similar to the student actions, a sum was created for each student across the eight college-bound items and across the four career-bound items.

Results are again comparable across survey years, though there was a small increase in the average number of college-bound activities that students applying for colleges reported engaging in (e.g., for students applying to both 2 - and 4 -year schools, the average was 6.0 compared to 5.7 last year). Once again, students not applying to college indicated "yes" to a notably smaller number of college-bound items than their peers, as might be expected (see Table 14). For the career-bound items, results are mostly similar to last year, with most students in most categories reporting "yes" to about half of the careerbound items.

Table 14. Average number of "yes" responses on college- and career-bound staff support items.

| College Application <br> Status | College-bound <br> (Max of 8) |  |  | Career-bound <br> (Max of 4) |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\mathbf{2 0 1 4}$ | $\mathbf{2 0 1 5}$ | $\mathbf{2 0 1 6}$ | $\mathbf{2 0 1 4}$ | $\mathbf{2 0 1 5}$ | $\mathbf{2 0 1 6}$ |
| None | 4.1 | 4.0 | 3.6 | 1.8 | 1.7 | 1.6 |
| 2-year only | 5.2 | 5.0 | 5.0 | 2.0 | 2.0 | 1.9 |
| 2- and 4-year | 6.1 | 5.7 | 6.0 | 2.1 | 1.7 | 2.0 |
| 4-year only | 5.9 | 5.8 | 5.6 | 1.9 | 2.0 | 1.8 |

## Factors associated with students reporting that they applied for college

In this section, we explore the degree to which students' reports of applying for college was related to student GPA and other salient factors. Previously, we examined college application rates and how they descriptively varied by student ethnicity subgroup and GPA category. Beyond these descriptive differences in quality of instruction, there may be systematic differences in ratings across student subgroups. These findings about the student and campus characteristics that are most associated with more (or less) likely to apply for college can help inform AISD staff policies and decision-making. Therefore, in this section, we investigate factors associated with student college applications.

It is a generally accepted notion that college application rates are associated with student performance (in that students with higher academic performance are more likely to apply to college); however, there are other important factors, such as respondent characteristics, student engagement in campus or community activities, or attitudinal factors that can be associated with propensity to apply for college. ${ }^{21}$ Understanding of how these

## Factors Associated with Student Applications for College

More likely to apply to college:

- More reported college-bound activities
- High performing (GPA) economically disadvantaged
- Reported engaging in volunteer and extracurricular activities

Less likely to apply to college:

- More reported counseling activities
- Special education students
- Low performing students
- Male students
- Reported that teachers don't respect them or take opinions seriously

Statistically significant differences across campuses. variables are related can be informative to school and district staff for directing resources or targeting interventions. It is important to remember, however, that these analyses do not measure several other important factors not available to this study, such as parental engagement, parental education level, advanced course-taking, or attendance rate.

To further examine the student factors that are most highly associated with college applications, we constructed a multivariate model for which the outcome of interest was the students' self-reported applications to 2-year, 4-year, and both 2 and $4-y e a r$ colleges. Separate models were run for each type of college application track since students applying for only 2 or only 4 year colleges are likely different from students who applied to an array of 2 and 4 -year schools. ${ }^{22}$ The main findings from the multivariate models

[^14](summarized in box to the right) are presented as the factors that were statistically significantly associated with higher (or lower) propensities to apply for college for AISD seniors. ${ }^{23}$

First, the aforementioned slight increase in students not applying to college in 2016 is not statistically significant in the models (controlling for all else). As expected, higher student performance (GPA) was associated with significantly higher likelihoods of applying for college. Specifically, students with higher GPA were four (4) times more likely to apply for only 4 -year colleges and 1.3 times more likely than their statistically similar peers to apply for both 2 - and 4 -year colleges. However, they were no more likely to apply for 2-year only schools.

Students who reported on the survey that they engaged in more college bound activities were more likely (about 1.3 times more likely) to apply for postsecondary schools of any type. Students who receive free or reduced lunch (i.e., which is a proxy for economically disadvantaged students) were neither more or less likely to apply for college overall; however, when parsing out high performing from low performing economically disadvantaged students, the highest performing FRL students were more likely apply for 4year colleges. That is, FRL students were not more likely to apply for college than their peers except for the sub-set of high performing FRL students. Students who reported engaging in more volunteer and community engagement activities were about 3.8 times more likely to apply for 4-year or both 2- and 4year schools, but not any more or less likely to apply for 2-year schools.

Students who received more college-oriented counseling supports were less likely to apply for 4 -year schools. Again, this relationship is not causal and one explanation for this is that students applying only for 4-year schools need less counseling supports than students who apply for 2-year schools or no schools because these students are more self-reliant or get those supports elsewhere. Students who receive special education services and students with lower GPAs were less likely to apply for college. Finally, male students were significantly less likely to apply for college. To put this in context, descriptively $87 \%$ of female Grade 12 students reported applying for college while $78 \%$ of male students applied. Also, while $33 \%$ females applied to both 2 - and 4 -year schools, this number was $28 \%$ for male students.

When controlling for all other variables in the model (that is, academic achievement, ethnicity, FRL status, etc.) some campuses had significantly higher rates of college applications (for statistically similar students given the controls in the model). While these data did not measure the reasons why these campuses had higher or lower rates after controlling for student performance and student characteristics, these results highlight campuses that had lower ratings from statistically similar peers at other campuses. Figure 26 shows the percent difference in students' propensity to apply for college, that is whether the likelihood to apply for college at each campus was higher or lower than their peers. For instance, students were 20\% less likely to apply for 2-year schools at Bowie High School and $2 \%$ more likely to apply at both 2 and 4-

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year schools at Martin High School. Categories that show no bar or percent difference are not statistically different in the model.

Figure 26. Multivariate model results for campuses with significantly higher likelihood of students applying for college


Note: Figure presents the percent difference in likelihood that students applied for college (by college application type). Only statistically significant bars/categories are shown.

## Facilities (Grade 12 only)

## Quality of Facilities

Grade 12 students responded to 29 survey items about school facilities. These items tapped students' perceptions about the cleanliness of school buildings, the functioning of equipment and furniture in the schools, the adequacy of space and facilities for the number of students attending, and the maintenance of school grounds and buildings. Most items are framed positively (e.g., classrooms are clean), while four items are negatively worded (e.g., hallways are too crowded). Students responded to each item on a scale of 1 (never true) to 4 (always true).

Table 15 displays the percentage of students who answered "always true" or "mostly true" to each item in 2014 through 2016, as well as a column showing the difference in these percentages from the prior year. Positive differences result when the percentage increased; negative differences result when the percentage decreased. Items are organized by area of questioning, and within each section, items are organized from the highest to lowest percent in 2015. For the majority of items (those that are worded in the positive direction), high percentages indicate a positive school characteristic, with many students indicating these things as true most of the time or always. For the four negatively worded items (in red font), high scores reflect a negative school characteristic, with many students indicating these negative things are true "most of the time" or "always". Shading is used in Table 14 to highlight particularly positive (green) and negative (red) areas of student responses, and if the difference between years was five percentage points or greater, it is presented in bold typeface.

Student ratings of school facilities were generally positive in all question areas. Seven-in-ten or more of the Grade 12 students surveyed agreed that "most of the time" or "always" classrooms were clean, the school building looked good from the outside, the athletic fields were in good condition, computers available for use were in good working order and had the appropriate software, library resources were sufficient, teachers had the technology they needed, and lab equipment was in good working order. More than half of students surveyed were positive about 21 of the 29 items included in the survey. Concerns related to school facilities focused on issues of overcrowding (hallways, lunch lines and parking lots) and bathroom cleanliness and condition.

Overall, Grade 12 students' ratings of school facilities are relatively similar over time, with the percentage of students agreeing with each statement changing by 3 points or less for roughly half of the items. However, students' ratings changed by five points or more in a number of instances, particularly related to parking. Over the last three years, the proportion of Grade 12 students agreeing that there are enough parking spots for everyone and that parking lots and surrounding streets are in good condition "most of the time" or "always" decreased by 12 percentage points for each. Additionally, the proportion of students saying the school looks good from the outside has dropped by nine points over the last three years from $79 \%$ to $70 \%$. Similar declines in facilities ratings were seen in other areas, particularly school
equipment. A smaller proportion of students agreed that Science lab, technology, and sports equipment was in good working order.

Table 15. School Facilities Ratings (Percent of Respondents Answering "mostly true" or "always true").

|  | 2014 | 2015 | 2016 | 2014-16 <br> Difference |
| :---: | :---: | :---: | :---: | :---: |
| Cleanliness |  |  |  |  |
| Classrooms are clean. | 72\% | 71\% | 70\% | -2 |
| Common areas (e.g., cafeteria, gym, outdoor areas, etc.) are clean. | 55\% | 53\% | 53\% | -2 |
| Hallways are clean. | 53\% | 51\% | 53\% | 0 |
| Bathrooms are clean. | 25\% | 24\% | 23\% | -2 |
| Equipment and Furniture |  |  |  |  |
| Computers that are available to use at school (including desktops, laptops, iPads, or other types of tablets) had the appropriate software programs loaded. | 80\% | 75\% | 75\% | -5 |
| Library resources are sufficient. | 78\% | 77\% | 74\% | -4 |
| Teachers had the technology equipment they needed (e.g., projector, computer, etc.). | 77\% | 73\% | 71\% | -6 |
| Computers that are available to use at school (including desktops, laptops, iPads, or other types of tablets) are in good working order. | 76\% | 72\% | 72\% | -2 |
| Science lab equipment was in good working condition. | 78\% | 75\% | 71\% | -7 |
| Any technology equipment teachers used in class was in good working order. | 73\% | 69\% | 66\% | -7 |
| Sports/gym equipment was in good working condition. | 68\% | 68\% | 61\% | -7 |
| Classroom furniture was in good working condition. | 66\% | 66\% | 64\% | -2 |
| The parking lots and surrounding streets are in good condition. | 66\% | 62\% | 54\% | -12 |
| Space and Facilities |  |  |  |  |
| Hallways are too crowded. | 81\% | 79\% | 80\% | -1 |
| There was too much traffic in and out of the school parking lot. | 77\% | 81\% | 77\% | 0 |
| There was enough space in the library for everyone who needed to use it. | 74\% | 72\% | 71\% | -3 |
| There are enough parking spots for everyone. | 69\% | 65\% | 57\% | -12 |
| Science labs had enough equipment for all students. | 70\% | 68\% | 65\% | -5 |
| There was a sufficient number of computers (including desktops, laptops, iPads, or other types of tablets) available to students. | 68\% | 67\% | 69\% | +1 |
| Lunch lines are too long. | 78\% | 74\% | 72\% | -6 |


|  | $\mathbf{2 0 1 4}$ | $\mathbf{2 0 1 5}$ | $\mathbf{2 0 1 6}$ | 2014-16 <br> Difference |
| :--- | :---: | :---: | :---: | :---: |
| There was enough sports/gym equipment for all students. | $61 \%$ | $62 \%$ | $58 \%$ | -3 |
| Classrooms are large enough to accommodate all the <br> students in the class (without having to squeeze or share <br> desk space). | $59 \%$ | $61 \%$ | $61 \%$ | $\mathbf{+ 2}$ |
| There are enough tables for everyone to sit to eat lunch. | $38 \%$ | $41 \%$ | $\mathbf{4 1 \%}$ | $\mathbf{+ 3}$ |
| Grounds and Building Maintenance | $\mathbf{7 9 \%}$ | $\mathbf{7 7 \%}$ | $\mathbf{7 5 \%}$ | $\mathbf{- 4}$ |
| The athletic fields are in good condition. | $\mathbf{7 9 \%}$ | $\mathbf{7 5 \%}$ | $\mathbf{7 0 \%}$ | $\mathbf{- 9}$ |
| The school building looked good from the outside. | $\mathbf{6 1 \%}$ | $57 \%$ | $56 \%$ | $\mathbf{- 1}$ |
| Rooms are available for students to use for group meetings <br> after the school day. | $\mathbf{5 3 \%}$ | $\mathbf{5 0 \%}$ | $\mathbf{4 6 \%}$ | $\mathbf{- 7}$ |
| Bathrooms are functioning properly. | $\mathbf{3 5 \%}$ | $\mathbf{3 6 \%}$ | $\mathbf{3 4 \%}$ | $\mathbf{- 1}$ |
| The temperature in the building was comfortable (not too <br> hot or not too cold). | $\mathbf{2 5 \%}$ | $\mathbf{3 2 \%}$ | $\mathbf{3 1 \%}$ | $\mathbf{+ 6}$ |
| There are leaky roofs or wet spots on the walls or floors. |  |  |  |  |

## After School/Outside of School Activities

In 2015, new survey items were added to ask students about their participation in school-affiliated extracurricular activities, community engagement activities, and community service activities. The four measures of interest include the percentage of students who participated in: co-curricular activities (calculated using district enrollment records), school-affiliated activities not associated with a class (e.g., academic student club), off-campus community engagement activities, community service/volunteer work outside of school.

The district defined co-curricular activities as those after-school activities that take place on school grounds, and are associated with a course for which they are receiving school credit. Thus, to calculate the percent of students who participate in co-curricular activities, district records on student course enrollment was provided. Overall, about $89 \%$ of all students in the district participated in at least one of these activities; in 2015, that rate was $94 \%$. ${ }^{24}$

Extra-curricular activities were defined as those activities occurring on school grounds, during out-ofschool time, and not associated with a class during the school day. Table 17 shows that over $80 \%$ of students answered "yes" to having participated in at least one extracurricular activity not associated with

[^16]a class, such as sports, music or art extracurricular activities. This metric included UIL activities or any one of the on-campus/school sponsored activities.

District leadership defined community engagement as group activities that are not school sponsored, and that take place off school grounds (e.g., sports leagues, music groups, drama clubs, etc.). For this metric, the number of students who answered yes to any of the off-campus/not-school sponsored items or the generic "any organized group activity outside of school" item were counted. Two-thirds or more of Grades 6,8 , and 10 students reported participating in community engagement activities and that number rose to $73 \%$ for Grade 12 students.

Finally, the percentage of Arlington ISD students who reported that they participated in community service, defined as having volunteered their time, was about one-third for Grades 6 and 8 students, 45\% for Grade 10 students, and 57\% for Grade 12 seniors. These percentages increased by about 3\% between 2015 and 2016 (except grade 8 saw no change for community service/volunteer rates).

Table 17. Participation in Afterschool Activities, by Grade Level.

|  | $\begin{gathered} \text { Grade } \\ 6 \end{gathered}$ | $\begin{gathered} \text { Grade } \\ 8 \end{gathered}$ | $\begin{gathered} \text { Grade } \\ 10 \end{gathered}$ | $\underset{12}{\text { Grade }}$ |
| :---: | :---: | :---: | :---: | :---: |
| At least one co-curricular class | 22\% | 82\% | 75\% | 60\% |
| At least one extracurricular activity not associated with a class | 87\% | 88\% | 81\% | 85\% |
| At least one off-campus community engagement activity | 66\% | 69\% | 66\% | 73\% |
| Community service/volunteer activity outside of school | 30\% | 39\% | 45\% | 57\% |
| At least 1 of any of the above activities (89\% overall) | 86\% | 94\% | 89\% | 82\% |

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## Appendix A: Technical Material

This report includes multivariate, inferential models conducted to investigate systematic patterns in student responses or outcomes by controlling for an array of important student and campus characteristics. These models add to the descriptive analysis in that they compare statistically similar students in order to isolate the factors that are most associated with each outcome of interest. In this technical appendix, we provide a brief explanation of the statistical models used to investigate several research questions that are presented in the main body of this report as well as the full regression results for each inferential model. In the report there are multivariate models assessing the factors most associated with (1) quality of instruction ratings (Table A1), (2) use of classroom strategies (Table A2), and (3) likelihood of applying for college (Tables A3 and A4). Table A5 contains the predictors of student perceptions of safety. For each of the models, the outcome or response variable is categorical - that is, the measure is not continuous and therefore the estimation techniques used herein adjust for the different properties and assumptions that are associated with modeling discrete, categorical outcomes such as agreement with instructional quality or type of college application.

To estimate the associations between variables, we employ an ordinal generalized linear model (OGLM) with a proportionality constraint. ${ }^{25}$ The OGLM is a heterogeneous choice model used as an alternative to simple ordinal regression because there are not proportional odds of measuring each of the outcomes (e.g., college application type or agreement that the instruction was of high quality) and the error variances are not the same for all students (that is, statistical Brandt tests confirm unmeasured variables are affecting the chances that the outcome variable category observed are different systematically across types or groups of students). To mitigate the biased estimates from these heterogeneous data, the OGLM estimates a model for both the observed variables as well as the errors (and uses the error model to correct the effects of the observed variables of interest). The coefficients presented in the model are calculated as odds ratios to help with interpretation, and these models include school-level clustered standard errors. Models that are used to calculate the school fixed effects (or intercepts) are run separately, and models A3 and A4 are run separately with each interaction of interest (GPA and student race/ethnicity interaction separate from the GPA and economic disadvantaged interaction) in order to avoid a 3-way interaction and provide more readily interpretable results.

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Table A1. Multivariate model of the factors associated with quality of instruction ratings

|  | Math | English | Science | Social Studies |
| :---: | :---: | :---: | :---: | :---: |
| White | 0.870 | 1.011 | 1.140 | 1.189* |
|  | (1.95) | (0.15) | (1.83) | (2.36) |
| Asian | 1.322** | 0.738** | 1.448** | 0.978 |
|  | (2.86) | (3.11) | (3.81) | (0.23) |
| Black | 1.003 | 1.114 | 0.982 | 1.012 |
|  | (0.04) | (1.55) | (0.27) | (0.17) |
| Other | 1.215 | 1.124 | 1.326 | 1.232 |
|  | (1.19) | (0.71) | (1.72) | (1.26) |
| Higher gpa | 2.239** | 1.265** | 1.533** | 0.969 |
|  | (14.92) | (4.32) | (7.96) | (0.57) |
| Male | 1.463** | 0.831** | 1.323** | 1.513** |
|  | (7.67) | (3.67) | (5.64) | (8.14) |
| lep | 0.889 | 0.591** | 0.810** | 0.627** |
|  | (1.47) | (6.49) | (2.65) | (5.68) |
| Econ Dis | 1.031 | 0.932 | 1.020 | 1.074 |
|  | (0.54) | (1.21) | (0.34) | (1.23) |
| Special Ed | 0.934 | 0.579** | 0.820* | 0.561** |
|  | (0.69) | (5.29) | (1.96) | (5.59) |
| Feel safe | 1.093* | 1.118** | 1.112** | 1.117** |
|  | (2.37) | (2.91) | (2.82) | (2.89) |
| Enjoy learning | 1.791** | 1.734** | 1.740** | 1.602** |
|  | (17.93) | (16.50) | (16.97) | (14.13) |
| Bowie High School | 1.203* | 0.808* | 0.885 | 0.957 |
|  | (2.14) | (2.42) | (1.41) | (0.50) |
| Juan Seguin High School | 1.257* | 0.930 | 0.756** | 1.296* |
|  | (2.26) | (0.69) | (2.76) | (2.53) |
| Lamar High School | 0.906 | 0.760** | 1.373** | 0.786** |
|  | (1.11) | (3.01) | (3.56) | (2.66) |
| Martin High School | 0.897 | 0.855 | 1.307** | 1.038 |
|  | (1.35) | (1.89) | (3.35) | (0.46) |
| Sam Houston High School | 0.829* | 0.869 | 1.228* | 1.378** |
|  | (2.16) | (1.58) | (2.37) | (3.60) |
| R2 | 0.05 | 0.03 | 0.04 | 0.03 |
| $N$ | 5,823 | 5,820 | 5,764 | 5,769 |

${ }^{*} p<0.05,{ }^{* *} p<0.01,{ }^{* * *} \mathrm{p}<0.001$. Coefficients presented as Odds Ratios. Z score in parentheses.

Table A2. Multivariate model of the factors associated with strategies students reported that teachers used in the classroom

|  | ```In-class assignment, projects, and activities helped me learn the concepts.``` | I felt comfortable asking questions. | Teachers stopped to check if students understood a concept before moving on. | I was asked to show what I knew in Writing. | I was given a choice in how I demonstrat ed knowledge. | Teachers held my attention. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Math | 2.662** | 2.496** | 2.626** | 1.598** | 1.946** | 2.781** |
|  | -53.34 | -51.93 | -53.93 | -28.35 | -39.61 | -55.09 |
| English | 0.963 | 0.933* | 0.946* | 0.961 | 0.906** | 0.942* |
|  | -1.37 | -2.56 | -2.06 | -1.49 | -3.7 | -2.17 |
| Writing | 1.086** | 1.086** | 1.093** | 1.199** | 1.171** | 1.065* |
|  | -3.15 | -3.18 | -3.42 | -7.1 | -6.15 | -2.39 |
| Science | 0.982 | 0.919** | 0.921** | 0.999 | 0.962* | 0.960* |
|  | -1.09 | -5.02 | -4.89 | -0.08 | -2.38 | -2.41 |
| Social Studies | 1.043* | 1.007 | 1.048* | 1.082** | 1.079** | 1.038* |
|  | -2.24 | -0.38 | -2.56 | -4.33 | -4.21 | -1.99 |
| White x Lower GPA | 0.989 | 1.027 | 0.833** | 1.058 | 0.861* | 0.875* |
|  | -0.18 | -0.43 | -2.91 | -0.91 | -2.42 | -2.07 |
| White x Higher GPA | 1.077 | 1.202** | 0.711** | 0.894* | 0.632** | 0.953 |
|  | -1.41 | -3.55 | -6.53 | -2.19 | -8.86 | -0.91 |
| Asian x Lower GPA | 1.093 | 0.887 | 1.146 | 1.118 | 1.18 | 0.985 |
|  | -0.69 | -0.94 | -1.06 | -0.91 | -1.35 | -0.11 |
| Asian x Higher GPA | 1.241** | 1.047 | 0.807** | 0.899 | 0.972 | 1.118 |
|  | -3.34 | -0.72 | -3.35 | -1.69 | -0.46 | -1.73 |
| Black x Lower GPA | 1.107 | 1.499** | 1.06 | 1.332** | 1.220** | 1.035 |
|  | -1.86 | -7.56 | -1.08 | -5.47 | -3.83 | -0.63 |
| Black x Higher GPA | 1.158* | 1.675** | 0.939 | 1.190** | 0.988 | 1.138* |
|  | -2.43 | -8.57 | -1.05 | -2.98 | -0.21 | -2.14 |
| Hispanic x Higher GPA | 1.124* | 1.01 | 0.865** | 0.818** | 0.858** | 1.116* |
|  | -2.4 | -0.21 | -3.01 | -4.28 | -3.28 | -2.24 |
| Other x Lower GPA | 0.989 | 1.143 | 0.854 | 1.212 | 0.968 | 0.863 |
|  | -0.07 | -0.89 | -1.03 | -1.32 | -0.22 | -0.96 |
| Other x Higher GPA | 1.191 | 1.544** | 0.739* | 0.951 | 0.745* | 1.009 |
|  | -1.34 | -3.35 | -2.37 | -0.4 | -2.33 | -0.07 |
| Male | 0.934* | 1.039 | 0.834** | 1.022 | 1.057 | 1.022 |
|  | -2.24 | -1.27 | -6.05 | -0.75 | -1.89 | -0.72 |
| LEP | 1.254** | 0.918 | 1.05 | 1.016 | 1.211** | 1.118* |
|  | -4.56 | -1.74 | -0.98 | -0.33 | -4.05 | -2.18 |


|  | In-class assignment, projects, and activities helped me learn the concepts. | I felt comfortable asking questions. | Teachers stopped to check if students understood a concept before moving on. | I was asked to show what I knew in Writing. | I was given a choice in how I demonstrat ed knowledge. | Teachers held my attention. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Economically Disadvantaged | 1.062 | 1.046 | 1.109** | 1.083* | 1.189** | 1.062 |
|  | -1.79 | -1.35 | -3.11 | -2.44 | -5.29 | -1.77 |
| Special Education | 1.073 | 0.924 | 1.198** | 1.094 | 1.155* | 1.283** |
|  | -1.1 | -1.24 | -2.81 | -1.46 | -2.34 | -3.77 |
| Feel Less Safe | 1.075** | 1.149** | 1.092** | 0.982 | 1.013 | 1.065** |
|  | -3.22 | -6.26 | -3.96 | -0.84 | -0.61 | -2.78 |
| Enjoy Learning | 1.689** | 1.520** | 1.532** | 1.396** | 1.557** | 2.051** |
|  | -24.95 | -20.24 | -20.57 | -16.59 | -21.88 | -33.36 |
| Year | 0.809** | 0.944 | 0.944 | 1.015 | 0.939 | 1.002 |
|  | -5.96 | -1.64 | -1.64 | -0.42 | -1.83 | -0.06 |
| R2 | 0.12 | 0.1 | 0.11 | 0.04 | 0.07 | 0.14 |
| $N$ | 16,832 | 16,849 | 16,788 | 16,720 | 16,725 | 16,773 |

## Correlation table for quality of instruction ratings and instructional strategies.

## For items:

| q7_a | In-class assignments, projects, and activities helped me learn the concepts |
| :--- | :--- |
| q7_b | I felt comfortable asking questions. |
| q7_c | Teachers stopped to check if students understood a concept before moving on. |
| q7_d | I was asked to show what I knew in Writing. |
| q7_e | I was given a choice in how I demonstrated knowledge |
| q7_f | Teachers held my attention. |


| Item q6_a : Math |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| (obs=13939) |  |  |  |  |  |  |
| q6_a | q7_a | q7_b | q7_c | q7_d | q7_e | q7_f |
| q6_a | 1.0000 |  |  |  |  |  |
| q7_a | 0.4633 | 1.0000 |  |  |  |  |
| q7_b | 0.4185 | 0.3883 | 1.0000 |  |  |  |
| q7_c | 0.4392 | 0.4232 | 0.4322 | 1.0000 |  |  |
| q7_d | 0.2239 | 0.3056 | 0.2564 | 0.3010 | 1.0000 |  |
| q7_e | 0.3400 | 0.4055 | 0.3543 | 0.4358 | 0.4061 | 1.0000 |
| q7_f | 0.4411 | 0.4534 | 0.4325 | 0.4675 | 0.3100 | 0.4397 |



| Item q6_f : Languages other than | English |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| (obs=7264) |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| q6_f | q7_a | q7__b | q7_c | q7_d | q7_e | q7_f |
| q6_f | 1.0000 |  |  |  |  |  |
| q7_a | 0.1430 | 1.0000 |  |  |  |  |
| q7_b | 0.1043 | 0.4558 | 1.0000 |  |  |  |
| q7_c | 0.1317 | 0.4652 | 0.5224 | 1.0000 |  |  |
| q7_d | 0.0972 | 0.3293 | 0.3081 | 0.3543 | 1.0000 |  |
| q7_e | 0.1241 | 0.4229 | 0.4083 | 0.4757 | 0.4356 | 1.0000 |
| q7_f | 0.1309 | 0.4868 | 0.5035 | 0.5307 | 0.3480 | 0.4907 |

Table A3. Multivariate model of the factors associated with applications to college (ethnicity and student performance (GPA) interaction term).

|  | 2-year college | 4-year college | Both 2 and 4 year college |
| :---: | :---: | :---: | :---: |
| College-bound Activities | 1.187** | 1.354** | 1.381 ** |
|  | (8.99) | (9.42) | (9.52) |
| Counseling Activities | 0.967 | 0.818** | 0.944* |
|  | (1.61) | (7.47) | (2.25) |
| White x Lower GPA | 0.660 | 0.049** | 0.187* |
|  | (0.62) | (5.64) | (2.50) |
| White x Higher GPA | 1.174 | 0.815 | 1.042 |
|  | (0.29) | (0.43) | (0.08) |
| Asian x Lower GPA | 1.331 | 0.168** | 0.543 |
|  | (0.41) | (2.97) | (0.63) |
| Asian x Higher GPA | 1.097 | 1.434 | 1.349 |
|  | (0.17) | (0.52) | (0.49) |
| Black x Lower GPA | 0.671 | 0.138** | 0.456 |
|  | (0.61) | (3.09) | (1.26) |
| Black x Higher GPA | 0.877 | 0.991 | 1.164 |
|  | (0.18) | (0.01) | (0.20) |
| Hispanic x Lower GPA | 0.759 | 0.050** | 0.217** |
|  | (0.49) | (4.95) | (2.70) |
| Other x Lower GPA | 0.808 | 0.380 | 0.673 |
|  | (0.41) | (1.87) | (0.69) |
| Other x Higher GPA | 0.499 | 0.072** | 0.291 |
|  | (1.13) | (2.81) | (1.69) |
| Male | 0.587** | 0.705** | 0.562** |
|  | (5.97) | (3.95) | (5.64) |
| LEP | 1.107 | 0.341** | 0.620** |
|  | (1.32) | (5.19) | (3.37) |


| Economically Disadvantaged | 2-year college | 4-year college | Both 2 and 4 <br> year college |
| :--- | :---: | :---: | :---: |
|  | 1.088 | $0.637^{* *}$ | 0.965 |
|  | $(0.78)$ | $(3.21)$ | $(0.41)$ |
| Feel Less Safe | 1.174 | $0.095^{* *}$ | $0.288^{* *}$ |
|  | $(0.92)$ | $(9.56)$ | $(5.99)$ |
| Extra-curricular Activities | 1.054 | 1.041 | 0.903 |
|  | $(0.62)$ | $(0.48)$ | $(1.14)$ |
| $N$ | 1.014 | 1.185 | $1.116^{*}$ |
|  | $(0.28)$ | $(1.84)$ | $(1.97)$ |

$p<0.05,{ }^{* *} p<0.01,{ }^{* * *} p<0.001$. Coefficients presented as Odds Ratios. Z score in parentheses.

Table A4. Multivariate model of the factors associated with applications to college (economic disadvantaged (FRL) and student performance (GPA) interaction term).

| College-bound Activities | 2-year college | 4-year college | Both 2 and 4 <br> year college |
| :--- | :---: | :---: | :---: |
|  | $1.186^{* *}$ | $1.353^{* *}$ | $1.379^{* *}$ |
|  | $(8.97)$ | $(9.61)$ | $(9.73)$ |
| White | 0.968 | $0.820^{* *}$ | $0.946^{*}$ |
|  | $(1.55)$ | $(7.30)$ | $(2.14)$ |
| Asian | 1.028 | $1.490^{*}$ | 1.095 |
|  | $(0.16)$ | $(2.48)$ | $(0.59)$ |
| Black | 1.394 | $3.715^{* *}$ | $2.053^{* *}$ |
|  | $(1.59)$ | $(5.79)$ | $(4.48)$ |
| Other | 0.955 | $2.816^{* *}$ | $1.969^{* *}$ |
|  | $(0.25)$ | $(3.86)$ | $(2.77)$ |
| Male | 0.790 | $1.905^{*}$ | 1.217 |
|  | $(0.83)$ | $(2.38)$ | $(0.61)$ |
| LEP | $0.772^{* *}$ | $0.163^{* *}$ | $0.316^{* *}$ |
|  | $(3.41)$ | $(12.35)$ | $(9.00)$ |
| Not Economically Disadvantaged x Lower GPA | 0.946 | $0.144^{* *}$ | $0.366^{* *}$ |
|  | $(0.41)$ | $(9.29)$ | $(8.08)$ |
| Not Economically Disadvantaged x Higher GPA | 1.241 | $2.231^{* *}$ | $1.448^{* *}$ |
|  | $(1.20)$ | $(4.06)$ | $(2.81)$ |
|  | $0.587^{* *}$ | $0.704^{* *}$ | $0.562^{* *}$ |
|  | $(6.22)$ | $(3.98)$ | $(5.43)$ |

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| Special Education | 2-year college | 4-year college | Both 2 and 4 <br> year college |
| :--- | :---: | :---: | :---: |
|  | $(1.49)$ | $(5.10)$ | $(3.32)$ |
|  | 1.173 | $0.095^{* *}$ | $0.288^{* *}$ |
|  | $(0.89)$ | $(10.04)$ | $(6.02)$ |
| Enjoy Learning | 1.053 | 1.038 | 0.901 |
|  | $(0.60)$ | $(0.44)$ | $(1.16)$ |
| Extra-curricular Activities | 1.015 | 1.188 | $1.117^{*}$ |
|  | $(0.30)$ | $(1.95)$ | $(2.15)$ |
| $N$ | 1.268 | $3.895^{* *}$ | $3.104^{* *}$ |
|  | $(1.52)$ | $(4.43)$ | $(7.43)$ |

${ }^{*} \mathrm{p}<0.05,^{* *} \mathrm{p}<0.01,{ }^{* * *} \mathrm{p}<0.001$. Coefficients presented as Odds Ratios. Z score in parentheses.
Table A5. Multivariate model of the factors associated student perceptions of school safety.

| Predictor | Coefficient (Z-score) |
| :---: | :---: |
| White | -2.336** |
|  | (6.41) |
| Asian | -2.254** |
|  | (4.56) |
| Black | -1.467** |
|  | (4.18) |
| Other | -2.610** |
|  | (3.12) |
| Male | 3.469** |
|  | (13.30) |
| LEP | -0.104 |
|  | (0.24) |
| Not Economically Disadvantaged x Lower GPA | -1.217** |
|  | (2.92) |
| Economically Disadvantaged x Higher GPA | 0.686 |
|  | (1.81) |
| Not Economically Disadvantaged x Higher GPA | 1.716** |
|  | (4.75) |
| Special Ed | -3.110** |
|  | (5.80) |
| Grade 12 | 0.195 |
|  | (0.75) |
| Constant | 65.353** |
|  | (186.48) |
| Sigma | 15.857** |
|  | (144.74) |
| $\begin{aligned} & \text { Chi2 } \\ & N \end{aligned}$ | 65.14 |
|  | 5,899 |

* $p<0.05,{ }^{* *} p<0.01,{ }^{* * *} \mathrm{p}<0.001$. Coefficients presented as Odds Ratios. Z score in parentheses.

CONSULTING GROUP

## Appendix B: Survey Instruments

We need your help and honesty! Your school district wants to hear your opinions about the quality of education you've received, your perceptions of school safety and school culture, and how prepared you feel for college and careers after high school. Please remember the following points:

1. YOUR ANSWERS ARE CONFIDENTIAL. Only the research team has access to your actual answers. Your teachers will not see your answers, your principal will not see your answers, your friends will not see your answers, etc. We will be analyzing the resulting data and presenting results to your school and to your district that are averaged across many students' answers.
2. YOUR PARTICIPATION IS VOLUNTARY. You may choose not to participate, or you can choose to skip certain questions. However, participating allows you to have your voice heard, and will provide valuable information that will help make changes in your school.
3. THERE ARE NO RIGHT OR WRONG ANSWERS. Read each question carefully and consider your answers. This is a great opportunity for you to give your school honest feedback about your experiences.
If you agree to participate, click on the NEXT button.

## PREPARING FOR AFTER HIGH SCHOOL

| Have you taken any of the following exams? |  |  |
| :--- | :---: | :---: |
| Answer YES or NO for each: | YES | NO |
| PSAT | 0 | 0 |
| SAT | 0 | 0 |
| ACT | 0 | 0 |
| Accuplacer | 0 | 0 |


| Have you done any of the following? |  |
| :--- | :---: |
| Answer YES or NO for each: | YES |
| Applied to a technical school or college? | NO |
| Applied to a 2-year community college? | 0 |
| Applied to a public 4-year college or university? | 0 |
| Applied to a private 4-year college or university? | 0 |
| Visited a college or technical school as a "prospective student" (someone who may attend next year)? | 0 |
| Taken an AP or IB course? | 0 |
| Taken a dual credit course where you earn college credit (this could have been located at your school or at the <br> college)? | 0 |


| Applied for a scholarship? | 0 |
| :--- | :---: |
| Taken a Career or Technical Education (CTE) class? | 0 |
| Obtained any technical certifications (for example, Microsoft certifications, a cosmetology license, become OSHA <br> certified, become an Emergency Medical Technician, a CWDSA Apprentice, etc.)? | 0 |
| Participated in community service? | 0 |
| Visited a GO center? | 0 |
| Met with a military recruiter? | 0 |
| Visited Career Cruising for something other than registering for classes? | 0 |

## PREPARING FOR AFTER HIGH SCHOOL (Cont.)

| Have you talked to a school counselor about: |  |
| :--- | :---: |
| Answer YES or NO for each: | YES |
| Going to college or going to a technical school after you graduate? | NO |
| Ideas or options for getting a job after high school? | 0 |
| Where you see yourself one year from now? | 0 |
| Where you see yourself 10 years from now? | 0 |


| Did anyone at your school (including counselors, teachers, coaches, assistant principals, or anyone else): | YES | NO |
| :--- | :---: | :---: |
| Answer YES or NO for each: | 0 | 0 |
| Encourage you to continue with your education beyond high school? | 0 | 0 |
| Help you identify schools to apply to? | 0 | 0 |
| Help you with application essays or personal statements? | 0 | 0 |
| Talk about different admissions requirements for two-year or four-year colleges? | 0 | 0 |
| Discuss the likelihood of being accepted to different types of schools? | 0 | 0 |
| Talk about what ACT/SAT scores you need to get into different schools? | 0 | 0 |
| Talk to you about technical certifications you could earn during high school? | 0 | 0 |
| Talk to you about Career and Technical Education class options? | 0 | 0 |
| Tell you about fee waivers for college entrance exams? | 0 | 0 |
| Encourage you to attend a school event about college and financial aid (e.g., FASFA night, College Night, etc.)? | 0 | 0 |
| Help you find scholarships to apply for? | 0 | 0 |
|  | 0 | 0 |


| Thinking about your time in high school... |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| ...rate the overall quality of the instruction in each of the following areas: | Poor | Fair | Good | Excellent | I didn't take a class in this area |
| Math | 0 | 0 | 0 | 0 | 0 |
| English | 0 | 0 | 0 | 0 | 0 |
| Writing | 0 | 0 | 0 | 0 | 0 |
| Science | 0 | 0 | 0 | 0 | 0 |
| Social Studies | 0 | 0 | 0 | 0 | 0 |
| Languages other than English | 0 | 0 | 0 | 0 | 0 |

## QUALITY OF INSTRUCTION (Cont.)

The next section asks you to answer the same set of questions separately for your Math, English, Science and Social Studies classes:

| How often were the following statements true... |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| ...for your MATH classes during high school: | Never | Sometimes | Most of the time | Always |
| In-class assignments, projects, and activities helped me learn the concepts my teacher was teaching. | 0 | 0 | 0 | 0 |
| I felt comfortable asking questions. | 0 | 0 | 0 | 0 |
| Teachers stopped to check if students understood a concept before moving on. | 0 | 0 | 0 | 0 |
| I was asked to show what I knew in Writing. | 0 | 0 | 0 | 0 |
| I was given a choice in how I demonstrated knowledge (e.g., a report, a presentation, a paper, a test). | 0 | 0 | 0 | 0 |
| Teachers held my attention. | 0 | 0 | 0 | 0 |


| How often were the following statements true... |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| ...for your ENGLISH classes during high school: | Never | Sometime <br> s | Most of the time | Always |
| In-class assignments, projects, and activities helped me learn the concepts my teacher was teaching. | 0 | 0 | 0 | 0 |
| I felt comfortable asking questions. | 0 | 0 | 0 | 0 |
| Teachers stopped to check if students understood a concept before moving on. | 0 | 0 | 0 | 0 |
| I was asked to show what I knew in Writing. | 0 | 0 | 0 | 0 |
| I was given a choice in how I demonstrated knowledge (e.g., a report, a presentation, a paper, a test). | 0 | 0 | 0 | 0 |
| Teachers held my attention. | 0 | 0 | 0 | 0 |

CONSULTING GROUP

| How often were the following statements true... | Never | Sometimes | Most of <br> the time |
| :--- | :---: | :---: | :---: |
| ..for your SCIENCE classes during high school: |  |  |  |
| In-class assignments, projects, and activities helped me learn the concepts my teacher <br> was teaching. | 0 | 0 | 0 |
| I felt comfortable asking questions. | 0 | 0 | 0 |
| Teachers stopped to check if students understood a concept before moving on. | 0 | 0 | 0 |
| I was asked to show what I knew in Writing. | 0 | 0 | 0 |
| I was given a choice in how I demonstrated knowledge (e.g., a report, a presentation, a <br> paper, a test). | 0 | 0 | 0 |


| How often were the following statements true... |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| ...for your SOCIAL STUDIES classes during high school: | Never | Sometimes | Most of the time | Always |
| In-class assignments, projects, and activities helped me learn the concepts my teacher was teaching. | 0 | 0 | 0 | 0 |
| I felt comfortable asking questions. | 0 | 0 | 0 | 0 |
| Teachers stopped to check if students understood a concept before moving on. | 0 | 0 | 0 | 0 |
| I was asked to show what I knew in Writing. | 0 | 0 | 0 | 0 |
| I was given a choice in how I demonstrated knowledge (e.g., a report, a presentation, a paper, a test). | 0 | 0 | 0 | 0 |
| Teachers held my attention. | 0 | 0 | 0 | 0 |


| Thinking about your time in high school... |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| ...how often were each of the following statements true for you? | Never | Sometimes | Most of the time | Always |
| Material I learned in one class was connected to material I was learning in another class. | 0 | 0 | 0 | 0 |
| Teachers explained why the things I was learning mattered outside of school. | 0 | 0 | 0 | 0 |
| My courses were challenging. | 0 | 0 | 0 | 0 |
| I was given opportunities to use technology to learn course subjects. | 0 | 0 | 0 | 0 |
| Classes were boring. | 0 | 0 | 0 | 0 |
| I enjoyed learning in class. | 0 | 0 | 0 | 0 |


| Think about how well prepared you feel for what follows high school. |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
| How much do you agree with the following statements: | Strongly Disagree | Disagree | Agree | Strongly Agree |
| High school has prepared me for my next steps after graduation. | 0 | 0 | 0 | 0 |
| High school has prepared me for expressing myself in Writing. | 0 | 0 | 0 | 0 |
| High school has prepared me for working with others. | 0 | 0 | 0 | 0 |

## Looking back, if you could change one thing about the way Arlington ISD prepared you for life after high school, what would it be?

## How much do you agree or disagree with each of the statements below:

| My school encourages students to: | Strongly <br> Disagree | Disagree | Agree | Strongly <br> Agree |
| :---: | :---: | :---: | :---: | :---: |
| Pursue topics that interest them. | 0 | 0 | 0 | 0 |
| Be curious. | 0 | 0 | 0 | 0 |
| Get excited about learning. | 0 | 0 | 0 | 0 |
| Pursue different interests. | 0 | 0 | 0 | 0 |
| Be creative. | 0 | 0 | 0 | 0 |
| Participate in community service or service projects. | 0 | 0 | 0 | 0 |
| Build leadership skills. | 0 | 0 | 0 | 0 |
| Participate in school clubs and organizations. | 0 | 0 | 0 | 0 |
| Read materials (e.g., magazines, newspapers, books) not required as part of class work. | 0 | 0 | 0 | 0 |
| Try new things. | 0 | 0 | 0 | 0 |
| Strive to do more than the minimum required. | 0 | 0 | 0 | 0 |
| Become involved in mentoring (either being a mentor or being mentored). | 0 | 0 | 0 | 0 |
| Voice opinions. | 0 | 0 | 0 | 0 |
| Engage in class discussions. | 0 | 0 | 0 | 0 |
| Celebrate academic achievements. | 0 | 0 | 0 | 0 |
| Overcome challenges faced during high school. | 0 | 0 | 0 | 0 |

## SCHOOL FACILITIES

| Thinking about your time in high school... |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| ...how often were each of the following true: | Never True | Sometimes True | Mostly True | Always True |
| Classrooms were clean. | 0 | 0 | 0 | 0 |
| Hallways were clean. | 0 | 0 | 0 | 0 |
| Bathrooms were clean. | 0 | 0 | 0 | 0 |
| Common areas (e.g., cafeteria, gym, outdoor areas, etc.) were clean. | 0 | 0 | 0 | 0 |
| Bathrooms were functioning properly. | 0 | 0 | 0 | 0 |
| Science labs had enough equipment for all students. | 0 | 0 | 0 | 0 |
| Science lab equipment was in good working condition. | 0 | 0 | 0 | 0 |
| Classrooms were large enough to accommodate all the students in the class (without having to squeeze or share desk space). | 0 | 0 | 0 | 0 |
| Classroom furniture was in good working condition. | 0 | 0 | 0 | 0 |
| Hallways were too crowded. | 0 | 0 | 0 | 0 |
| Teachers had the technology equipment they needed (e.g., projector, computer, etc.). | 0 | 0 | 0 | 0 |
| Any technology equipment teachers used in class was in good working order. | 0 | 0 | 0 | 0 |
| There was a sufficient number of computers (including desktops, laptops, iPads, or other types of tablets) available to students. | 0 | 0 | 0 | 0 |
| Computers that were available to use at school (including desktops, laptops, iPads, or other types of tablets) were in good working order. | 0 | 0 | 0 | 0 |
| Computers that were available to use at school (including desktops, laptops, iPads, or other types of tablets) had the appropriate software programs loaded on them. | 0 | 0 | 0 | 0 |
| Rooms were available for students to use for group meetings after the school day. | 0 | 0 | 0 | 0 |
| Lunch lines were too long. | 0 | 0 | 0 | 0 |
| There were enough tables for everyone to sit to eat lunch. | 0 | 0 | 0 | 0 |
| Sports/gym equipment was in good working condition. | 0 | 0 | 0 | 0 |

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| There was enough sports/gym equipment for all students. | 0 | 0 | 0 | 0 |
| :---: | :---: | :---: | :---: | :---: |
| Library resources were sufficient. | 0 | 0 | 0 | 0 |
| There was enough space in the library for everyone who needed to use it. | 0 | 0 | 0 | 0 |
| The temperature in the building was comfortable (not too hot or not too cold). | 0 | 0 | 0 | 0 |
| There were enough parking spots for everyone. | 0 | 0 | 0 | 0 |
| The parking lots and surrounding streets were in good condition. | 0 | 0 | 0 | 0 |
| The school building looked good from the outside. | 0 | 0 | 0 | 0 |
| There were leaky roofs or wet spots on the walls or floors. | 0 | 0 | 0 | 0 |
| The athletic fields were in good condition. | 0 | 0 | 0 | 0 |
| There was too much traffic in and out of the school parking lot. | 0 | 0 | 0 | 0 |

Arlington ISD has a goal of being a leader in education and providing "world-class facilities" in its schools. What does it mean to you to attend a school with "world-class facilities"?

| Thinking about your time in high school... |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| ...how much do you agree or disagree with the following statements about your school: | Strongly Disagree | Disagree | Agree | Strongly Agree |
| Other students in my school take my opinions seriously. | 0 | 0 | 0 | 0 |
| The teachers here respect me. | 0 | 0 | 0 | 0 |
| School staff listen to what the students have to say. | 0 | 0 | 0 | 0 |
| School staff believe that every student can be a success. | 0 | 0 | 0 | 0 |
| Teachers treat all students fairly in the classroom. | 0 | 0 | 0 | 0 |
| Most students in my school don't get along very well. | 0 | 0 | 0 | 0 |
| Most students in my school treat each other with respect. | 0 | 0 | 0 | 0 |
| Students at this school are teased or put down because of their race/ethnicity or culture. | 0 | 0 | 0 | 0 |
| My classmates often disrespect teachers at this school. | 0 | 0 | 0 | 0 |
| I worry about crime and violence at my school. | 0 | 0 | 0 | 0 |
| Students at this school are often teased or picked on. | 0 | 0 | 0 | 0 |
| I sometimes stay home because I don't feel safe at school. | 0 | 0 | 0 | 0 |
| Most students in my school like to put others down. | 0 | 0 | 0 | 0 |
| I have at least one adult at this school that I can talk to if I don't feel safe at school. | 0 | 0 | 0 | 0 |
| There are too many fights in my school. | 0 | 0 | 0 | 0 |
| Physical bullying (which is defined as repeatedly hitting, kicking, or shoving someone weaker on purpose) is a problem at my school. | 0 | 0 | 0 | 0 |
| Verbal bullying (which is defined as repeatedly teasing, putting down, or insulting someone on purpose) is a problem at my school. | 0 | 0 | 0 | 0 |
| Cyber bullying (which involves using technology (cell phone, email, internet chat and posting, etc.) to tease or put down someone) is a problem at my school. | 0 | 0 | 0 | 0 |
| Other students at my school try to stop bullying when they see it happening. | 0 | 0 | 0 | 0 |

CONSULTING GROUR

| Thinking about your time in high school... | Not safeSomewhat <br> safe | Mostly safe | Very safe |  |
| :--- | :---: | :---: | :---: | :---: |
| ...how safe do you feel: | 0 | 0 | 0 | 0 |
| In the hallways? | 0 | 0 | 0 | 0 |
| In the lunch room? | 0 | 0 | 0 | 0 |
| In other common areas of the school? | 0 | 0 | 0 | 0 |
| In locker rooms? | 0 | 0 | 0 | 0 |
| In bathrooms? | 0 | 0 | 0 | 0 |
| Outside around the school (on school grounds or parking lots)? | 0 | 0 | 0 | 0 |

## AFTER-SCHOOL ACTIVITIES

For the following questions, tell us whether you have participated in the activity this year ABOVE AND BEYOND those that are linked to a class period.

| After-school activity that is on-campus, school-sponsored but NOT linked to a class period during the school day. | Yes | No |
| :--- | :---: | :---: |
| Sports | 0 | 0 |
| Music (for example, band, choir, orchestra) | 0 | 0 |
| Theater/Drama | 0 | 0 |
| Dance | 0 | 0 |
| Art   <br> Academic or non-academic student clubs (for example, Math team, debate team, Boy Scouts/Girl Scouts, 0 0 | 0 | 0 |


| Non-school activity that is off-campus, not school-sponsored, and NOT linked to a class period during the school <br> day. | Yes | No |
| :--- | :---: | :---: |
| Sports | 0 | 0 |
| Music (for example, band, choir, orchestra) | 0 | 0 |
| Theater/Drama | 0 | 0 |
| Dance | 0 | 0 |
| Art | 0 | 0 |
| Academic or non-academic student clubs (for example, Math team, debate team, Boy Scouts/Girl Scouts,   <br> multicultural club) 0 0 |  |  |


| Other activities: |  |
| :--- | :---: |
| During this school year, have you participated in... | Yes |
| Any other type of organized group activity outside of school? | No |
| UIL Activities? | 0 |
| Community service/volunteered your time (for example, in a food pantry, an animal shelter, or raising money for an <br> organization)? | 0 |
| Student government or student council at your school? | 0 |

## BACKGROUND INFORMATION

| Do you plan to continue your education this summer or in the fall...? | YES | NO |
| :--- | :---: | :---: |
| Answer YES or NO for each: | 0 | 0 |
| To attend a technical college (e.g., obtain a technical degree or certification)? | 0 | 0 |
| To attend a 2 year college (e.g., pursue an Associate's degree)? | 0 | 0 |
| To attend a 4 year college (e.g., pursue a Bachelor's degree)? |  |  |

## BACKGROUND INFORMATION (continued)

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| What are the reasons why you are not planning to continue your education? (select all that apply) |  |
| :--- | :---: |
| I cannot afford to attend school | $\square$ |
| I don't feel academically prepared | $\square$ |
| My goals don't require additional education | $\square$ |
| My grades/test scores are not high enough | $\square$ |
| I don't like attending school | $\square$ |
| I have childcare/family responsibilities | $\square$ |
| I don't know how to go about applying/enrolling for further education (e.g., applications, finding financial assistance, etc.) | $\square$ |
| I'm joining the military | $\square$ |
| Other (please specify) | $\square$ |


| What is the highest level of education that either of your parents/guardians completed? |  |
| :--- | :---: |
| Did not attend any high school | 0 |
| Attended high school, but did not graduate | 0 |
| Graduated high school | 0 |
| Attended some college, but did not graduate | 0 |
| Graduated from two-year college | 0 |
| Graduated from four-year college | 0 |
| Obtained a graduate degree (e.g., master's degree, law degree, medical degree, doctorate degree, etc.) | 0 |

## Appendix C: Calculation of the After-School Activities Performance Metrics

Questions 31 through 33 in the survey are combined to calculate the final after-school reported metrics. These questions ask:

For the following questions, tell us whether you have participated in the activity this year ABOVE AND BEYOND those that are linked to a class period.

| Q31 After-school activity that is on-campus, school-sponsored but NOT linked to a class period <br> during the school day. | Yes | No |
| :--- | :--- | :--- |
| Sports | O | O |
| Music (for example, band, choir, orchestra) | O | O |
| Theater/Drama | O | O |
| Dance | O | O |
| Art | O | O |
| Academic or non-academic student clubs (for example, Math team, debate team, Boy Scouts/Girl <br> Scouts, multicultural club) | O |  |


| Q32 Non-school activity that is off-campus, not school-sponsored, and NOT linked to a class period <br> during the school day. | Yes | No |
| :--- | :--- | :--- |
| Sports | O | O |
| Music (for example, band, choir, orchestra) | O | O |
| Theater/Drama | O | O |
| Dance | O | O |
| Art | O | O |
| Academic or non-academic student clubs (for example, Math team, debate team, Boy Scouts/Girl <br> Scouts, multicultural club) | O |  |


| Other activities: |  |  |
| :--- | :--- | :--- |
| Q33 During this school year, have you participated in... | O Y | No |
| a. Any other type of organized group activity outside of school? | O | O |
| b. UIL Activities? | O | O |
| c. Community service/volunteered your time (for example, in a food pantry, an animal shelter, or <br> raising money for an organization)? | O |  |
| d. Student government or student council at your school? | O | O |

These questions were used along with the course enrollment data from AISD to create the following table in the report each year:

Table xx. Participation in afterschool activities, by grade level.

|  | Grade | Grade | Grade | Grade |
| :--- | :---: | :---: | :---: | :---: |
| At least one co-curricular activities | 6 | $\%$ | 10 | 12 |
| At least one extracurricular activity not <br> associated with a class | $\%$ | $\%$ | $\%$ | $\%$ |
| At least one off-campus community <br> engagement activity | $\%$ | $\%$ | $\%$ | $\%$ |
| Community service/volunteer outside of <br> school | $\%$ | $\%$ | $\%$ | $\%$ |
| At least 1 of any of the above activities $(\mathrm{xx} \%$ <br> overall) | $\%$ | $\%$ | $\%$ | $\%$ |

Each row or element in the table above is calculated as described below:

At least one co-curricular activities - This was calculated using the enrollment in co-curricular activities data that was provided in early August by the district. It is the percent of students in the survey dataset (with a linkable student record and who completed the survey) who had at least one of the co-curricular courses provided in the data.

At least one extracurricular activity not associated with a class - calculated using the percent that said 'yes' to Q31 (all of the 6 subcomponents) or Q33a or Q33d (so add up the 'yes's and
then divide by 8 and multiply by 100 to get the \%) and who completed the survey and had a linkable student record file.

At least one off-campus community engagement activity-calculated using the percent that said 'yes' to Q32 (all of the 6 subcomponents) or Q33b (so add up the 'yes's and then divide by 7 and multiply by 100 to get the \%) and who completed the survey and had a linkable student record file.

Community service/volunteer outside of school - calculated as the percent who said yes to Q33c (and had linkable data and completed the survey)

At least 1 of any of the above activities - Calculated within grade level across all the questions Q31, Q32, and Q33 - percent who said yes to at least one of the Q31, Q32, or Q33 questions OR had at least 1 co-curricular course listed in the data provided by AISD.


[^0]:    ${ }^{1}$ Copies of the survey instruments for all grades are included in Appendix A. The 2012-13 report of survey results contains full details of the development of the student exit survey, and the 2013-14 report includes details of how that instrument was modified for use in Grades 6,8 and 10. In 2014-15, an additional section of questions about participation in student activities was added to the survey instrument, as documented in the 2015 report. In 201516, no substantive changes were made to the survey in from the 2015 administration.
    ${ }^{2}$ A copy of the District-wide survey report (which includes all campuses, organized by grade level) is structurally similar to the campus reports and is included in Appendix D.

[^1]:    ${ }^{3}$ This number was very similar to the total population surveyed in $2015(17,453)$.

[^2]:    ${ }^{4}$ The 2014 student survey response rate across all grade levels was $88 \%$. In 2013 , only grade 12 students were surveyed and the response was $83 \%$ - by contrast, the $12^{\text {th }}$ grade response rate for 2014 was $83 \%$ and the response rates for 2015 and 2016 were 77\%.

[^3]:    ${ }^{5}$ Other includes two or more races, Native Hawaiian or Other Pacific Islander, and American Indian or Alaska Native.

[^4]:    6 "Languages other than English" was not asked about for $6^{\text {th }}$ grade students.

[^5]:    ${ }^{7}$ C.f. Behar, M; Polat, P (2007). The Science topics perceived difficult by pupils of primary 6-8 classes. Diagnosing the problems and remedy solutions. Educational Sciences: Theory and Practice. 7(3). 1113-1130.

[^6]:    Chiappetta, E.L., Koballa Jr, T.R. (2006) Science Instruction in the Middle and Secondary Schools. Developing Fundamental Knowledge and Skills for Teaching; 6th ed.; Pearson:Merrill Prentice Hall; Ohio.
    Osborne, J., Simon, S., \& Collins, S. (2003). Attitudes towards Science: A review of the literature and its implications. International journal of Science education, 25(9), 1049-1079.

[^7]:    ${ }^{8}$ C.f. Wiers-Jenssen, J., Stensaker, B. R., \& Grogaard, J. B. (2002). Student satisfaction: towards an empirical deconstruction of the concept. Quality in higher education, 8(2), 183-195.
    ${ }^{9}$ The full description of the methodology and the multivariate model results are presented in Table A1 in Appendix A. These models only contain results for high school students ( $10^{\text {th }}$ and $12^{\text {th }}$ grade) since GPA data are not available for students in grades 6 and 8.
    ${ }^{10}$ It is important to note that these results are not causal. For instance, for the purposes of this model we cannot say that being a student who received higher grades (higher GPA) causes higher quality of instruction ratings, nor can we conclude that students experiencing higher quality of instruction have a higher GPA or performance. However, this model does show patterns of association among these factors, controlling for salient student characteristics and campus factors. Results for other subject areas included in the appendix.

[^8]:    ${ }^{11}$ Mean=[19.73-22.83] and Standard Deviation=[3.85-9.9].

[^9]:    ${ }^{12}$ Note that these multivariate models are not causal in nature; rather, they express the associations between strategies that students report being used in the classroom and quality of instruction ratings, controlling for a battery of student and school characteristics. A full description of the methodology, the item correlations, and the multivariate model results are presented in Table A2 in Appendix A. These models contain results all students who responded to these questions in Grades 6, 8, 10, and 12.

[^10]:    ${ }^{13}$ http://nces.ed.gov/programs/crime/
    ${ }^{14}$ http://www.cps.edu/spotlight/pages/Spotlight391.aspx
    ${ }^{15}$ The "student respect" construct that emerged in the 2012-13 Grade 12 data did not emerge systematically across grade levels in 2015. Thus, this construct was not further explored.
    ${ }^{16}$ Items with loading values lower than 6 on any factor are dropped.

[^11]:    ${ }^{17}$ For context on these scores: while there are no safety and respect survey inventories that contain the exact same items in the scale constructs used here nor statistically comparable student groups, several national level surveys on school safety/climate are used for validated items used on the AISD student survey and those surveys report average school safety and staff respect scale scores that are slightly higher for these items. The SRS Safe Schools survey and Perceptions of School Safety Rating survey both have a similar construct of items that typically score at 2.8 to 3.3 , slightly higher than those reported in Figure 7; however, these scores are compiled across all grades in high school and/or middle school and not select grade levels like in this survey. For more on comparable safety and climate indices, confer:
    Voight, A. \& Hanson, T. (2012). Summary of existing school climate instruments for middle school. San Francisco: REL West at WestEd;
    Santoro, G., et al. (2002). Perceptions of School Safety: Year 2 of the School Safety Survey. University of South Florida. FMHI Publication \#207-7.; and
    Jimerson, S. R., \& Furlong, M. J. (2006). The handbook of school violence and school safety. From research to practice.

[^12]:    ${ }^{18}$ Grade 6 students were not asked about safety in locker rooms.

[^13]:    ${ }^{19}$ The average score on this scale in Figure 1 is 2.67 which is equivalent to saying that the average student reported feeling safe to about $67 \%$ of the survey items in the index.
    ${ }^{20}$ The full results of the multivariate model are provided in the Appendix and these results are for Grades 10 and 12 students only since GPA and other student characteristics used on the model were not made available for Grades 6 and 8.

[^14]:    ${ }^{21}$ C.f. DesJardins, S. L., Dundar, H., \& Hendel, D. D. (1999). Modeling the college application decision process in a land-grant university. Economics of Education Review, 18(1), 117-132.
    Long, B. T. (2004). How have college decisions changed over time? An application of the conditional logistic choice model. Journal of Econometrics, 121(1), 271-296.
    Watt, K. M., Huerta, J., \& Lozano, A. (2007). A comparison study of AVID and GEAR UP 10th-grade students in two high schools in the Rio Grande Valley of Texas. Journal of education for students placed at risk, 12(2), 185-212.
    ${ }^{22}$ The full description of the methodology and the multivariate model results are presented in Tables A3 and A4 in Appendix A. These models only contain results for Grade 12 students since they are the only students asked about college applications.

[^15]:    ${ }^{23}$ It is important to note that these results are not causal. For instance, for the purposes of this model we cannot say that being a student who received higher grades (higher GPA) causes a propensity to apply for college, nor can we conclude that students more likely to apply for college causes them to experience a higher GPA or performance. However, this model does show patterns of association among these factors, controlling for salient student characteristics and campus factors.

[^16]:    ${ }^{24}$ The calculation of this metric includes combining across survey items and course data provided by AISD. The details of this calculation are included in Appendix C.

[^17]:    ${ }^{25}$ Following the parameterization outlined in Allison, P. D. 1999. Comparing logit and probit coefficients across groups. Sociological Methods and Research 28: 186-208 and as implemented in Williams, R. 2006. Generalized ordered logit/partial proportional odds models for ordinal dependent variables. Stata Journal 6: 58-82 including robustness checks using a Hauser logistic response model with proportionality constraints (LRPC).
    These models have been widely used in modeling similar school outcomes in sociological and educational peerreviewed research, c.f. Hauser, R. M., and M. Andrew. 2006. Another look at the stratification of educational transitions: The logistic response model with partial proportionality constraints. Sociological Methodology 36: 1-26 as well as Mare, R.D. 2006. Response: Statistical models of educational stratification-Hauser and Andrew's models for school transitions. Sociological Methodology 36: 27-37.

