MEMORANDUM March 25, 2019

TO: Courtney Busby

Officer, Special Populations

FROM: Carla Stevens

Assistant Superintendent, Research and Accountability

SUBJECT: APEX LEARNING ONLINE INSTRUCTION, 2017–2018

The Apex Online Learning Report for 2017–2018 describes district data trends of Apex Learning courses. Apex Learning is a district-funded virtual platform with online instructional course options for all students in grades 7–12. Apex Learning online courses are designed for credit recovery and original credit, including Advanced Placement (AP) and dual credit. Results presented in this report are aggregated by school year, district, grade level, campus, and demographic characteristics.

## Key findings include:

- Since 2010, Apex Learning has been used across the district to offer students personalized, virtual high school courses for original or credit recovery and blended tutorial solutions.
   Despite shifts in how the online platform is utilized or the variations in the types of courses being taken, Apex Learning continues to be a widely-used resource for students and teachers throughout HISD.
- Findings show a 19 percent decline in Apex courses, from 9,830 Apex course completions in 2014–2015 to 7,984 Apex course completions in 2017–2018. Further disaggregation by credit type reveals that the proportion of Apex courses for credit recovery has declined and the proportion of Apex courses for original credit has increased.
- Analysis of the demographic characteristics of students enrolled in an Apex Learning course in 2017–2018 suggests that the profile of a student who took an Apex course may be different from the profile of other HISD students. In 2017–2018, when students who took an Apex course were compared to students who took other online courses and compared to student who took an online course other than Apex, students who took an Apex course were more likely to be identified as at risk and an English learner, but less likely to be identified as gifted and talented.

Further distribution of this report is at your discretion. Should you have any further questions, please contact me at 713-556-6700.

Carla Stevens CJS

Attachment

cc: Noelia Longoria Maria Bonilla



# RESEARCH

**Educational Program Report** 

APEX LEARNING ONLINE INSTRUCTION, 2017–2018





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## **Apex Learning Online Instruction, 2017–2018**

## **Executive Summary**

## **Program Description**

In order to provide equitable opportunities and equal access to an effective, personalized education, the Houston Independent School District (HISD) offers Apex Learning, a district-funded virtual platform with online instructional course options, to all students in grades 7–12. Apex Learning online courses are designed for credit recovery and original credit, including Advanced Placement (AP), and dual credit.

The purpose of this report is to provide district leaders with data trends to inform the monitoring of Apex Learning in HISD. This report analyzes the enrollment and performance of students enrolled in online courses through Apex Learning compared to other online platforms from 2014–2015 to 2017–2018. It identifies course completion rates by credit type, subject, and grade level, while incorporating student demographic information when appropriate. Moreover, this report provides additional analysis of APEX Learning course completion for 2016–2017 graduates.

## **Highlights**

- Since 2010, Apex Learning has been used across the district to offer students personalized, virtual high school courses for original or credit recovery and blended tutorial solutions. Despite shifts in how the online platform is utilized or the variations in the types of courses being taken, Apex Learning continues to be a widely-used resource for students and teachers throughout HISD.
- Findings show a 19 percent decline in Apex courses, from 9,830 Apex course completions in 2014–2015 to 7,984 Apex course completions in 2017–2018. Further disaggregation by credit type reveal that the proportion of Apex courses for credit recovery has declined and the proportion of Apex courses for original credit has increased.
- Analysis of the demographic characteristics of students enrolled in an Apex Learning course in 2017–2018 suggests that the profile of a student who took an Apex course may be different from the profile of other HISD students. In 2017–2018, when students who took an Apex course were compared to students who took other online courses and compared to student who took an online course other than Apex, students who took an Apex course were more likely to be identified as at risk and an English learner (EL), but less likely to be identified as gifted and talented (G/T).

## Recommendations

- Future qualitative research with campus leadership at specific high schools might explore the reasons
  why the absolute number of online courses and proportion of Apex courses by credit type have
  fluctuated each year
- Future research should continue to explore demographic trends in students who take Apex courses.
   This data analysis could inform continuous improvement strategies specific to Grad Lab programs or on the collaborative development of new courses with Apex Learning, Inc.
- Future research may explore the differences in instructional quality and student readiness between
  fully-online Apex courses, blended Apex courses, and Apex as an instructional supplement. In order to
  conduct such analyses, senior leadership may consider collecting additional metrics or information that
  would identify the way in which a campus or classroom is using Apex with their students.

## Introduction

In an effort to provide equitable opportunities and equal access to an effective, personalized education, the Houston Independent School District (HISD) offers online instructional course options to all students in grades 7–12. The largest of these district-funded virtual platforms is Apex Learning. The district began using Apex Learning courses in January 2010 through its Graduation Laboratories (Grad Labs) located at each high school. Through the Grad Labs, also known as the APEX Credit Recovery Initiative, online courses were available as an alternative method for students who need to complete credit requirements for graduation. This initiative placed computer labs with special APEX Learning software at 45 HISD high school campuses and graduation coaches at 24 of these campuses (HISD Research and Accountability, 2012).

Over time, additional Apex Learning resources have been offered to students throughout the district. Beginning in the 2013–2014 academic year, students in middle and high school were offered access to courses designed for credit recovery and original credit, including Advanced Placement (AP), and dual credit. In addition, individual schools had the option to contract for Apex Learning test review courses to support students preparing for state-mandated exams. Finally, Apex courses were made available to classroom teachers to be used as a supplement to instruction.

Apex Learning is marketed as a comprehensive online platform that offers personalized, virtual high school courses for original or credit recovery, and blended tutorial solutions. According to literature from the company, "Apex Learning comprehensive courses enable schools to meet these challenges by making rigorous content accessible and engaging through the use of active learning strategies and opt-in scaffolding delivered at students' differing levels of academic readiness" (Apex Learning, 2013).

The purpose of this report is to provide district leaders with data trends to inform the monitoring of Apex Learning in HISD. This report analyzes the enrollment and performance of students enrolled in online courses through Apex Learning compared to other online platforms from 2014–2015 to 2017–2018. It identifies course completion rates by credit type, subject, and grade level, while incorporating student demographic information when appropriate. Moreover, this report provides additional analysis of APEX Learning course completion for 2016–2017 graduates.

## Methods

## **Data Collection and Analysis**

- Online course completions were drawn from Chancery and saved as Historical Grades files for the
  corresponding year. Courses completed during the academic year and the following summer are
  included in the counts of courses. Apex Learning courses include those designated as APEX (Apex
  Learning) and APEXIS (Apex Learning Instructor Supplemented).
- Courses for original credit, credit recovery, and review courses for state-mandated tests were counted
  using local course names from Chancery. AP courses were counted using state numbers that began
  with "A" from Chancery.
- Graduates are defined as the count and percentage of students who graduate from any HISD high school at some time during the school year. The total for each respective year includes summer graduates, all students in grade 12 who graduated, graduates from other grades, and students served

by special education who graduate. This report does not include the four-year longitudinal graduation for the percentages of students from a class of students beginning in ninth grade who graduate, remain enrolled, and receive a Texas Certificate of High School Equivalency (TxCHSE).

• State of Texas Assessments of Academic Readiness End of Course (STAAR EOC) results included those for the five tests required for graduation. Students take the associated EOC exam when they complete Algebra I, Biology, English I, English II, and U.S. History regardless of grade level. Following a multi-year phase-in of standards, the following four performance categories for STAAR were implemented in spring 2017: Masters Grade Level, Meets Grade Level, Approaches Grade Level, and Did Not Meet Grade Level. The passing standard for STAAR EOC results is indicative of performing at or above the Approaches Grade Level Standard for all students (first time and retesters combined) by subject. Test files contain both initial test and retest scores; only students' highest test results in each subject were included in the analyses.

#### **Data Limitations**

In some cases, duplicate course listings were found in the list of online course completions. Duplicates were identified as observations in which the student, course, final grade, and credits earned were entered more than once. Duplicates may have occurred if the system automatically documented course completions and the completions were also manually entered at the school level.

Beginning in 2014-2015 school year House Bill (HB) 5 required the Commissioner of Education to adopt a transition plan to implement HB 5 and replace the Minimum High School Program (MHSP), Recommended High School Program (RHSP), and Distinguished Achievement Program (DAP) with the Foundation High School Program (FHSP). These rules allowed students who entered high school before 2014-2015, including 2017 graduates, the option to graduate under the new FHSP, the MHSP, the RHSP, or the DAP. Due to students' ability to self-select between the former and current graduation plans, this report does not present descriptive statistics of 2017 graduates who took an Apex course by graduation plan.

Due to the small number of students that took a STAAR EOC exam which corresponded with an Apex courses for credit recovery (n=98) in 2017–2018, this report did not compare of the rate of passing students who took the corresponding STAAR EOC credit recovery course through APEX with the rate of passing students who took the STAAR EOC credit recovery course in a traditional classroom.

Since 2014–2015, one percent or less of Apex courses were classified as dual credit or Advanced Placement (AP). In 2017–2018, 22 HISD students completed 32 AP courses through Apex. Due to the small sample size, this report did not compare the rate of passing students who took the corresponding AP course through APEX compared with the rate of passing students who took the AP course in a traditional classroom.

## Results

What were the completion rates of all students enrolled in an APEX Learning course from 2014–2015 to 2017–2018?

- **Figure 1** shows the proportion of online courses, by Apex Learning or other provider¹ completed by students from 2014–2015 to 2017–2018. More details on online courses by provider since 2014–2015 can be found in **Appendix A (Table A-1**, p.14). Across four years, from 2014–2015 to 2017–2018, the proportion of online courses taken through Apex Learning ranged from 68 to 77 percent.
- In 2017–2018, 11,230 online courses were completed by 5,947 students. Of those courses, 71 percent (n=7,984) were completed through Apex Learning (Figure 1).

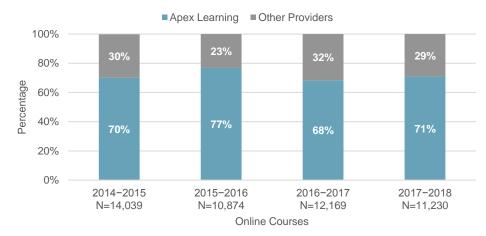


Figure 1. Online Courses by Provider, 2014–2015 to 2017–2018

Source: Historical Grades Files, 2014–2015, 2015–2016, 2016–2017, 2017–2018

- From 2014–2015 to 2017–2018, the number of online courses taken by HISD students declined 20 percent, from 14,039 to 11,230 online courses (Figure 1).
- Figure 2 (p. 5) shows the proportion of online courses by provider and credit type completed by students from 2014–2015 to 2017–2018. More details on course credit type by provider since 2014–2015 can be found in Appendix A (Table A-2, p.14) The absolute number of Apex online courses has decreased from 9,830 courses in 2014–2015 to 7,984 courses in 2017–2018.
- Across four years, from 2014–2015 to 2017–2018, the majority of online courses through Apex Learning were for credit recovery or original credit. For each of these respective years, less than one percent of Apex courses were dual credit courses and less than one percent were Advanced Placement courses (Figure 2).

<sup>&</sup>lt;sup>1</sup> For readability of this report, *Other Providers* includes Houston Community College (HCC), HIL, Texas TechD (Texas Tech Distance Learning Program), TxVSN StU (Texas Virtual School Network), UT DL (University of Texas), and Additional Providers (API (American Preparatory Institute), Aventa, HVS, Nova Net, Penn Foster, Plato, SSCP, and Other Providers).

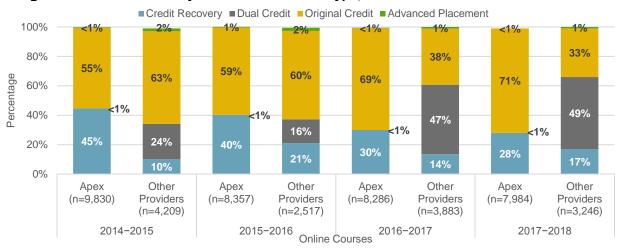


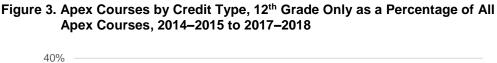
Figure 2. Online Courses by Provider and Credit Type, 2014-2015 to 2017-2018

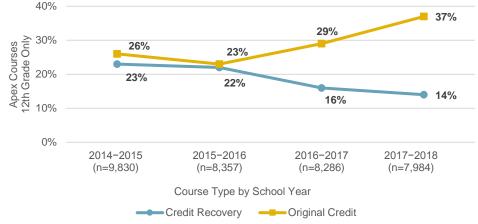
Source: Historical Grades Files, 2014-2015, 2015-2016, 2016-2017, 2017-2018

- From 2014–2015 to 2017–2018, the proportion of Apex courses for credit recovery decreased by 17 percentage points, from 45 percent (n=4,394) to 28 percent (n=2,243) of all Apex courses for each respective year (Figure 2).
- Conversely, from 2014–2015 to 2017–2018, the proportion of Apex courses for original credit increased 16 percentage points, from 55 percent (n=4,394) to 71 percent (n=5,708) of all Apex course for each respective year (Figure 2).

What were the completion rates of 12<sup>th</sup> grade students enrolled in an APEX Learning course from 2014–2015 to 2017–2018?

• **Figure 3** shows the distribution of Apex courses for 12<sup>th</sup> grade students only from 2014–2015 to 2017–2018. More details on Apex course credit type by grade level since 2014–2015 can be found in Appendix A (**Table A-3 and A-4**, p. 15).





Source: Historical Grades Files, 2014–2015, 2015–2016, 2016–2017, 2017–2018

Notes: Annual percentages in this figure will not equal 100. For Apex courses by credit type for other grade levels, see Table. A-4, p.16.

- The absolute number of credit recovery courses for all grade levels through Apex Learning decreased by 49 percent, from 4,394 courses in 2014–2015 to 2,243 courses in 2017–2018. From 2014–2015 to 2017–2018, the proportion of the Apex courses taken annually by 12th grade students for credit recovery has deceased nine percentage points; reaching its lowest percentage to date in 2017–2018 (14 percent, n=1,116) (Figure 3, p.5).
- In contrast, the absolute number of original credit courses through Apex Learning increased six percent, from 5,388 courses in 2014–2015 to 5,708 courses in 2017–2018. From 2014–2015 to 2017–2018, the proportion of Apex courses taken annually for original credit by 12th grade students increased 11 percentage points, reaching its highest percentage to date in 2017–2018 (37 percent, n=2,969) (Figure 3).
- **Figure 4** presents the distribution of Apex courses for credit recovery by subject area for 12<sup>th</sup> grade students only from 2014–2015 to 2017–2018. More details on the number of Apex courses for credit recovery by subject area for students in 12<sup>th</sup> grade since 2014–2015 can be found in Appendix A (**Table A-5**, p. 16).
- In 2014–2015, 2,250 of 4,394 Apex Learning courses for credit recovery were taken by 12<sup>th</sup> grade students. <sup>2</sup> Of these 2,250 courses, the greatest proportion (32 percent, n=727) were in the subject of English Language Arts (ELA).
- From 2014–2015 to 2017–2018, the absolute number of 12<sup>th</sup> graders who took ELA credit recovery courses decreased from 727 courses in 2014–2015 to 260 courses in 2017–2018.

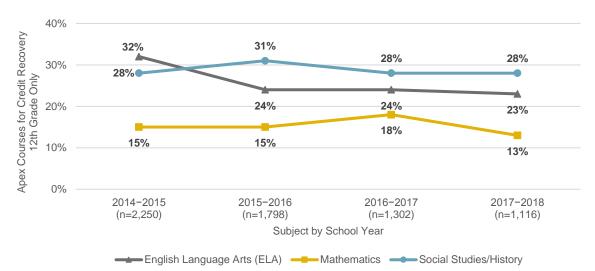


Figure 4. Apex Courses for Credit Recovery by Subject Area, 12th Grade Only, 2014–2015 to 2017–2018

Source: Historical Grades Files, 2014–2015, 2015–2016, 2016–2017, 2017–2018

Notes: The three subject categories with the highest proportions are represented. Annual percentages in this figure will not equal 100. For Apex courses for credit recovery by subject for 12<sup>th</sup> grade students, see Table A-5, p.16.

• In 2017–2018, the greatest proportion of credit recovery courses taken by 12<sup>th</sup> grade students were in the subject of Social Studies/History; of the 1,116 Apex credit recovery courses, 28 percent were for Social Studies/History (n=315). That same year, 2017–2018, 19 percent of Apex credit recovery

<sup>&</sup>lt;sup>2</sup> In 2014–2015, 45 percent of the 9,830 total Apex Learning courses were identified as credit recovery courses (n=4,394).

courses taken by 12<sup>th</sup> grade students were for a Language Other than English (n=206) (Table A-5, p. 16).

- **Figure 5** presents the number of Apex courses for original credit by subject area for 12<sup>th</sup> grade students only from 2014–2015 to 2017–2018.<sup>3</sup> More details on the number of Apex courses for original credit by subject area for students in 12<sup>th</sup> grade since 2014–2015 can be found in Appendix A (Table A-5, p.16).
- In 2014–2015, 2,544 of 5,388 Apex Learning courses for original credit were taken by 12<sup>th</sup> grade students. <sup>4</sup> Of these 2,544 courses, the greatest proportion (32 percent, n=817) were for a Language Other than English, a non-core subject (Figure 5).
- In 2017–2018, similar to Apex courses for credit recovery, the greatest proportion of Apex Learning courses for original credit taken by 12th grade students were in the subject of Social Studies/History; of the 2,969 Apex original credit courses, 30 percent were for Social Studies/History (n=904) (Figure 5).
- From 2014–2015 to 2017–2018, the proportion of Apex Learning courses for original credit taken by 12th grade students in the subject of PE/Health increased by nine percentage points (10 percent to 19 percent) (Figure 5).

40% Apex Courses for Original Credit 32% 32% 30% 30% 30% 31% 30% 27% 25% 20% 19% 15% 10% 14% 10% 0% 2014-2015 2015-2016 2016-2017 2017-2018 (n=2,544)(n=1,946)(n=2,387)(n=2,969)Subject by School Year Language Other than English Social Studies/History

Figure 5. Apex Courses for Original Credit by Subject Area, 12th Grade Only, 2014-2015 to 2017-2018

Source: Historical Grades Files, 2014–2015, 2015–2016, 2016–2017, 2017–2018

Notes: The three subject categories with the highest proportions are represented. Annual percentages in this figure will not equal 100. For Apex courses for original credit by subject for 12<sup>th</sup> grade students, see Table A-5, p.16.

## What were the demographic characteristics of all students enrolled in online courses in 2016–2017 and 2017–2018?

• **Figure 6** (p. 8) presents the proportion of students enrolled in Apex courses by grade level in 2016–2017 and 2017–2018. More details on demographics for students enrolled in Apex Learning courses, other online courses, and the district for 2016–2017 and 2017–2018 can be found in Appendix A (**Table A-6**, p.17).

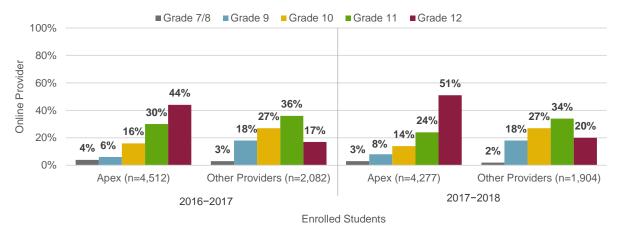
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<sup>&</sup>lt;sup>3</sup> The absolute number of total original credit courses through Apex Learning increased six percent, from 5,388 courses in 2014–2015 to 5,708 courses in 2017–2018.

<sup>&</sup>lt;sup>4</sup> In 2014–2015, 55 percent of the 9,830 total Apex Learning courses were identified as original credit courses (n=5,388).

- In 2017–2018, 51 percent of students enrolled in Apex courses were in grade 12, a seven percentage point increase from the previous school year, 2016–2017 (Figure 6).
- For both 2016–2017 and 2017–2018, the proportion of students in 12<sup>th</sup> grade who took an Apex course was higher than the proportion of students in 12<sup>th</sup> grade who took an online course from other providers (Figure 6).

Figure 6. Comparative Composition by Grade for Students Enrolled in Online Courses by Provider, 2016–2017 and 2017–2018

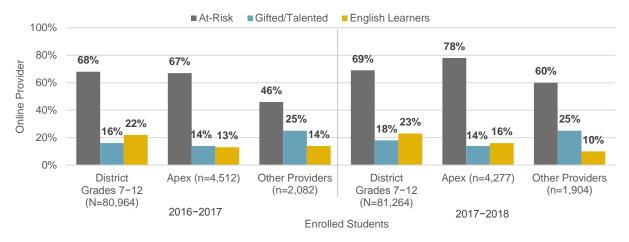


Source: Historical Grades Files, 2016-2017, 2017-2018

Note: A student who took online courses through both Apex Learning and Other Providers is counted twice.

• Figure 7 compares the composition of students enrolled in Apex Learning courses and other online providers by At-Risk, Gifted/Talented (G/T), and English Learner (EL) indicators. More details can be found in Appendix A (Table A-6, p. 17). In both 2016–2017 and 2017–2018, the proportion of students enrolled in Apex Learning courses identified as at risk was higher than the proportion of students enrolled in other online courses identified as at risk. From 2016–2017 to 2017–2018, the proportion of at-risk students enrolled in Apex Learning courses increased 11 percentage points (67 percent to 78 percent).

Figure 7. Comparative Composition of Key Indicators for Students Enrolled in Online Courses by Provider, Grade 7–12 Only, 2016–2017 and 2017–2018



Sources: Historical Grades Files, 2014–2015, 2015–2016, 2016–2017, 2017–2018; Chancery Student Demographics, May 2015, May 2016, May 2017, May 2018

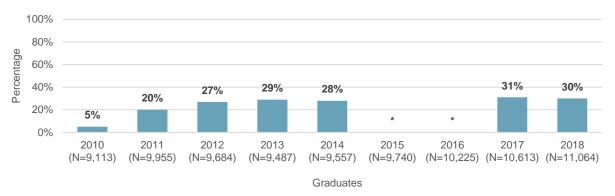
Note: A student who took online courses through both Apex Learning and Other Providers is counted twice.

- In both 2016–2017 and 2017–2018, the proportion of students enrolled in Apex Learning courses identified as G/T was lower than the proportion of students enrolled in other online courses identified as G/T. In 2017–2018, the proportion of G/T students enrolled in Apex Learning courses was 11 percentage points lower (14 percent) than the proportion of G/T students enrolled in other online courses (25 percent) (Figure 7, p.8).
- From 2016–2017 to 2017–2018, the proportion of EL students enrolled in Apex Learning courses increased by three percentage points (13 percent to 16 percent). In 2017–2018, the proportion of students enrolled in Apex Learning courses identified as ELs was seven percentage points lower than the proportion of EL students in grades 7–12 across the district (16 percent compared to 23 percent) (Figure 7).

Of 2017 and 2018 graduates, how many completed at least one course through APEX Learning at any point in grades 9–12?

Figure 8 shows the rates of graduates who completed at least one Apex Learning course in HISD in grades 9–12 from 2010 through 2018. Additional information on 2017 and 2018 graduates by demographic characteristics can be found in Appendix A (Table A-7, p.18). Beginning in January 2010, Apex Learning was offered to graduating seniors in need of credit recovery. For the 2009–2010 school year, five percent of graduating seniors completed at least one Apex online course.

Figure 8. Graduates Who Completed at Least One Apex Learning Course in HISD in Grades 9–12, 2010 to 2018



Sources: Historical Grades Files, 2013–2014, 2014–2015, 2015–2016, 2016–2017; Chancery Student Demographics, May 2014, May 2015, May 2016, May 2017; 2017 Chancery Graduates File; Research and Accountability, 2012, 2014

- Of the 11,064 students who graduated from HISD in 2018, 30 percent (n=3,276) completed at least one Apex Learning course at any point in grades 9–12; the proportion of graduates completing an Apex course during high school increased by 25 percentage points from 2010 to 2018 (Figure 8).
- **Figure 9** (p.10) presents the demographic composition of 2017 and 2018 graduates by whether or not the graduate ever took an online learning course, and further disaggregates online courses by Apex Learning courses only. In 2018, compared to graduates who never took an online course (n=7,013) and to graduates who took an online course other than Apex Learning (n=775), graduates with at least one Apex course (n=3,276) were more likely to be ELs, and less likely to be G/T or receiving special education services. For 2017 and 2018 graduates by demographic characteristics and online course type, see Appendix A (Table A-7, p.18).

<sup>\*</sup> No data available because Apex Learning did not receive a district evaluation in the 2014-2015 and 2015-2016.

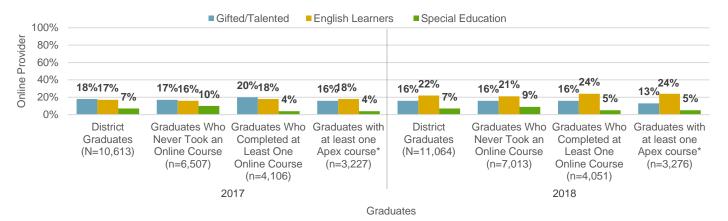


Figure 9. Comparative Demographic Composition of Graduates by Online Learning Course, 2017 and 2018

Sources: Historical Grades Files, 2014–2015, 2015–2016, 2016–2017, 2017–2018; Chancery Student Demographics, May 2015, May 2016, May 2017, May 2018; 2017 Chancery Graduates File

- From 2017 to 2018, the proportion of graduates in the district identified as English Learners increased by five percentage points (17 percent to 22 percent). Correspondingly, the proportion of graduates in the district identified as English Learners with at least one Apex Learning course increased by six percentage points (18 percent to 24 percent) (Figure 9).
- The proportion of 2018 graduates identified as English Learners with at least one Apex Learning course
  was three percentage points higher (24 percent) than 2018 graduates who never took an online learning
  course (21 percent) (Figure 9).
- The proportion of 2018 graduates with a G/T identifier with at least one Apex Learning course was three
  percentage points lower (13 percent) than 2018 graduates who never took an online learning course
  (16 percent) and 15 percentage points lower than 2018 graduates who look an online learning course
  other than Apex (28 percent) (Figure 9 and Table A-7, p.18).

In 2017-2018, how many credit recovery courses associated with STAAR EOC content were completed through APEX, and how many students who completed them met the passing standards on these exams?

Table 1. Number of STAAR EOC Exams with Corresponding Apex Courses, by Passing Rate, 2017–2018

STAAR Proficiency Level	Algebra I	Biology	English I	English II	U.S. History	Total by Passing Standard
Did not Meet Grade Level	10	6	10	21	13	60
At or Above Approaches Grade Level	5	4	8	5	16	38
Total STAAR EOC Exams by Subject	15	10	18	26	29	98

Sources: Historical Grades Files, 2017–2018; Chancery Student Demographics, May 2018; STAAR EOC 2017–2018 Spring Final, June 21, 2018

<sup>\*</sup> N refers to students who took at least one Apex Learning online course during high school. This is a subset of graduates who completed at least one online course.

• In 2017–2018, four percent of the 2,243 Apex courses taken for credit recovery corresponded with a STAAR EOC exam (n=98); 38 percent of the Apex courses for credit recovery associated with a STAAR EOC exam corresponded with a passing standard of at or above Approaches Grade Level (n=38).

## **Discussion**

For nearly a decade, Apex Learning has been utilized by the Houston Independent School District as the primary vendor for online courses for specific students who struggle to meet academic requirements, students who are high-performing but not sufficiently challenged, and students whose circumstances prevent them from attending traditional classes regularly enough to complete them.

Since 2014–2015, the absolute number of all online courses completed in the district declined by 20 percent. At the same time, findings show a 19 percent decline in Apex courses, from 9,830 Apex course completions in 2014–2015 to 7,984 Apex course completions in 2017–2018. Further disaggregation by credit type reveal that the proportion of Apex courses for credit recovery has declined annually since 2014–2015 to a rate of 28 percent of Apex courses used for credit recovery in 2017–2018. Conversely, from 2014–2015 to 2017–2018, the proportion of Apex courses for original credit increased by 16 percentage points. The reason for this decline in Apex for credit recovery, and the corresponding increase in Apex for original credit is unclear. Senior leadership may want to understand why original credit has increased. One possibility for the increase in original credit is because schools may not be able to hire teachers with certifications in hard to staff areas, like languages other than English. Another possibility is that students may be self-selecting to enroll in lower-stakes, untested courses that are required for graduation, like History/Social Studies (excluding U.S. History) and Physical Education. Future qualitative research with campus leadership at specific high schools might explore the reasons why the absolute number of online courses and proportion of Apex courses by credit type have fluctuated each year (see Appendix A, **Table A-8**, p.19–20 for additional information).

Analysis of the demographic characteristics of students enrolled in an Apex Learning course in 2017–2018 suggests that the profile of a student who took an Apex course may be different from the profile of other HISD students. Analysis of 2018 graduates with at least one Apex course during their four years in high school compared to other graduates in the same year suggests that these graduates were more likely to be ELs, and less likely to be G/T. Notably, the proportion of 2018 graduates with a G/T identifier with at least one Apex Learning course was 15 percentage points lower than 2018 graduates who look an online learning course other than Apex.

Analysis of Apex courses taken only in 2017–2018 tells a slightly different story. In 2017–2018, when students who took an Apex course were compared to students who took other online courses, students who took an Apex course were more likely to be identified as at risk and an EL, but less likely to be identified as G/T. In 2017–2018, at-risk students who took an Apex course (78 percent) were overrepresented in comparison to at-risk students in the district in grades 7–12 (69 percent), and the proportion of EL students who took an Apex course (16 percent) was lower than the proportion of EL students in the district in grades 7–12 (23 percent). Additionally, in 2017–2018, the proportion of students with a G/T identifier with at least one Apex Learning course (14 percent) was 11 percentage points lower than students who look an online learning course other than Apex (25 percent) with a G/T identifier. Future research should continue to explore demographic trends in students who take Apex courses. This data analysis could inform continuous improvement strategies specific to Grad Lab programs or on the collaborative development of new courses with Apex Learning, Inc.

Across campuses and classrooms utilizing Apex Learning, courses are delivered in a variety of formats. Despite the variation in how it is used in the classroom, Apex learning, unlike other online learning platforms, requires additional oversight and compliance from the district, which theoretically could reduce the variation in the quality of implementation. However, Apex staff reported that an increasing number of Apex courses were used informally by classroom teachers to supplement their courses with a blended, online learning component (M. Bonilla, personal communication, July 19, 2018). In other words, Apex may be used as it was designed or it may be used in a way that supports other, face-to-face curriculum. Future research may explore the differences in instructional quality and student readiness between fully-online Apex courses, blended Apex courses, and Apex as an instructional supplement. In order to conduct such analyses, senior leadership may consider collecting additional metrics or information that would identify the way in which a campus or classroom is using Apex with their students.

Since 2010, Apex Learning has been used across the district to offer students personalized, virtual high school courses for original or credit recovery, and blended tutorial solutions. Despite shifts in how the online platform is utilized or the variations in the types of courses being taken, Apex Learning continues to be a widely-used resource for students and teachers throughout HISD.

## References

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## **Appendix A**

Table A-1. Online Course Completions by		-2015	2015 <sup>-</sup>	-2016	2016-	-2017	2017-	-2018
	N	%	N	%	N	%	N	%
Apex Learning	9,830	70.0%	8,357	76.9%	8,286	68.1%	7,984	71.1%
HCC (Houston Community College)	1,535	10.9%	767	7.1%	2,243	18.4%	1,766	15.7%
HIL	819	5.8%	655	6.0%	998	8.2%	836	7.4%
UT DL (University of Texas)	746	5.3%	262	2.4%	196	1.6%	240	2.1%
Texas TechD (Texas Tech Distance Learning Program)	205	1.5%	127	1.2%	139	1.1%	109	1.0%
TxVSN StU (Texas Virtual School Network)	5	<0.1%	2	<0.1%	3	<0.1%	57	0.5%
Additional Providers*	899	6.4%	704	6.5%	304	2.5%	238	2.1%
Total Online Course Completions	14,039	100.0%	10,874	100.0%	12,169	100.0%	11,230	100.0%

\*Includes API (American Preparatory Institute), Aventa, HVS, Nova Net, Penn Foster, Plato, SSCP, and Other Providers

	2044	-2015	2045	-2016	2046	-2017	2047	-2018
•						-		
	N N	<u> </u>	N	%	N	<u> </u>	N	<u></u> %
Apex Learning	9,830	70.0%	8,357	76.9%	8,286	68.1%	7,984	71.1%
Credit Recovery	4,394	44.7%	3,364	40.3%	2,526	30.5%	2,243	28.1%
Dual Credit	4	<0.1%	1	<0.1%	2	<0.1%	1	<0.1%
Original Credit	5,388	54.8%	4,953	59.3%	5,723	69.1%	5,708	71.5%
Advanced Placement*	44	0.4%	39	0.5%	35	0.4%	32	0.4%
Courses for which Credit was Awarded	9,327	94.9%	7,939	95.0%	7,964	96.1%	7,790	97.6%
Other Providers	4,209	30.0%	2,517	23.1%	3,883	31.9%	3,246	28.9%
Credit Recovery	427	10.1%	532	21.1%	525	13.5%	545	16.8%
Dual Credit	1,031	24.5%	408	16.2%	1,832	47.2%	1,585	48.8%
Original Credit	2,671	63.5%	1,522	60.5%	1,479	38.1%	1,086	33.5%
Advanced Placement*	80	1.9%	55	2.2%	47	1.2%	30	0.9%
Courses for which Credit was Awarded	4,053	96.3%	2,379	94.5%	3,701	95.3%	3,017	92.9%
Total Online Course Completions	14,039	100.0%	10,874	100.0%	12,169	100.0%	11,230	100.0%

Sources: Historical Grades Files, 2014–2015, 2015–2016, 2016–2017, 2017–2018

Notes: Other Providers includes Houston Community College (HCC), HIL, Texas TechD (Texas Tech Distance Learning Program), TxVSN StU (Texas Virtual School Network), UT DL (University of Texas), and Additional Providers (API (American Preparatory Institute), Aventa, HVS, Nova Net, Penn Foster, Plato, SSCP, and Other Providers).

\*Includes AP classes for both orginal credit and credit recovery

Table A-3. Online Cours	T							0040
	2014· N	-2015 %	2015· N	-2016 %	2016 <sup>-</sup> N	-2017 %	2017· N	-2018 %
Apex Learning	9,830	100.0%	8,357	100.0%	8,286	100.0%	7,984	71.1%
7th/8th	99	1.0%	128	1.5%	178	2.1%	116	1.5%
9th	744	7.6%	747	8.9%	434	5.2%	630	7.9%
10th	1,342	13.7%	1,511	18.1%	1,485	17.9%	1,052	13.2%
11th	2,826	28.7%	2,209	26.4%	2,493	30.1%	2,080	26.1%
12th	4,819	49.0%	3,762	45.0%	3,696	44.6%	4,106	51.4%
Other Providers	4,209	100.0%	2,517	100.0%	3,882	100.0%	3,246	28.9%
7th/8th	194	4.6%	208	8.3%	68	1.8%	39	1.2%
9th	621	14.8%	295	11.7%	541	13.9%	406	12.5%
10th	881	20.9%	507	20.1%	932	24.0%	765	23.6%
11th	1,239	29.4%	682	27.1%	1,738	44.8%	1,351	41.6%
12th	1,274	30.3%	825	32.8%	603	15.5%	685	21.1%
Total Online Course Completions	14,039	100.0%	10,874	100.0%	12,168	100.0%	11,230	100.0%

Sources: Historical Grades Files, 2014–2015, 2015–2016, 2016–2017, 2017–2018

Notes: Other Providers includes Houston Community College (HCC), HIL, Texas TechD (Texas Tech Distance Learning Program), TxVSN StU (Texas Virtual School Network), UT DL (University of Texas), and Additional Providers (API (American Preparatory Institute), Aventa, HVS, Nova Net, Penn Foster, Plato, SSCP, and Other Providers).

Table A-4. Apex Cour	rses Cor	npletions	by Cre	dit Type	e and G	Grade, 2	2014–20	) 15 to 2	017-20	18						
		2014-2	2015			2015-	-2016			2016-	-2017			2017-	-2018	
		N=	9,830*		N= 8,357*			N= 8,286*				N= 7,984 <sup>*</sup>				
		edit overy	Orig Cre	1		edit overy	_	jinal edit		edit overy		jinal edit		edit overy		ginal edit
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
7th/8th	3	<1%	96	1.0%	16	0.2%	112	1.3%	2	0.0%	176	2.1%	5	0.1%	111	1.4%
9th	305	3.1%	439	4.5%	279	3.3%	465	5.6%	120	1.4%	312	3.8%	147	1.8%	479	6.0%
10th	559	5.7%	780	7.9%	540	6.5%	961	11.5%	384	4.6%	1,096	13.2%	339	4.2%	712	8.9%
11th	1,277	13.0%	1,529	15.6%	731	8.7%	1,469	17.6%	718	8.7%	1,752	21.1%	636	8.0%	1,437	18.0%
12th	2,250	22.9%	2,544	25.9%	1,798	21.5%	1,946	23.3%	1,302	15.7%	2,387	28.8%	1,116	14.0%	2,969	37.2%
Total Online Course Completions	4,	394	5,3	888	3,3	364	4,9	953	2,5	526	5,7	723	2,2	243	5,	708

Sources: Historical Grades Files, 2014–2015, 2015–2016, 2016–2017, 2017–2018

Notes: Annual percentages may not total 100 because Advanced Placement and Dual Credit courses have been omnited from this table.

<sup>\*</sup>Across all four years, 2014–2015 through 2017–2018, Advanced Placement and Dual Credit accounted for <1 percent of Apex courses taken annually: 2014–2015 (n=48), 2015–2016 (n=40), 2016–2017 (n=37), 2017–2018 (n=33)

		2014-	2015			2015 <sup>-</sup>	-2016			2016-	-2017			2017-	-2018	
		N=	4,794			N=	3,744			N=	3,689			N=	4,085	
		redit overy		ginal edit		edit overy		ginal edit		edit overy		ginal edit		edit overy		ginal edit
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Core Subjects																
English Language Arts (ELA)	727	32.3%	356	14.0%	426	23.7%	268	13.8%	314	24.1%	315	13.2%	260	23.3%	238	8.0%
Mathematics	343	15.2%	118	4.6%	268	14.9%	76	3.9%	237	18.2%	118	4.9%	144	12.9%	157	5.3%
Science	310	13.8%	157	6.2%	241	13.4%	118	6.1%	162	12.4%	200	8.4%	145	13.0%	250	8.4%
Social Studies/History	623	27.7%	790	31.1%	561	31.2%	592	30.4%	362	27.8%	775	32.5%	315	28.2%	904	30.4%
Non-Core Subjects																
Languages Other than English	198	8.8%	817	32.1%	261	14.5%	582	29.9%	171	13.1%	605	25.3%	206	18.5%	798	26.9%
PE/Health	43	1.9%	260	10.2%	36	2.0%	271	13.9%	53	4.1%	357	15.0%	40	3.6%	576	19.4%
Other	6	0.3%	46	1.8%	5	0.3%	39	2.0%	3	0.2%	17	0.7%	6	0.5%	46	1.5%
otal Online Course Completions	2,	,250	2,	,544	1,	798	1,	,946	1,	302	2,	387	1,	116	2	,969

				2016-	-2017					2017-	-2018		
		Dist	rict	Student	s enrolled	in online	courses	Dist	rict	Student	s enrolled	in online o	ourses*
		Dist	rict	Аре			ner*	Dist	rict	Ар			er*
		N	%	n	%	n	%	N	%	n	%	n	%
Grade	7th	13,543	16.7	0	0.0	1	<0.1	13,930	17.1	0	0.0	1	<0.1
	8th	13,581	16.8	162	3.6	55	2.6	13,370	16.5	108	2.5	37	1.9
	9th	16,679	20.6	289	6.4	367	17.6	16,512	20.3	356	8.3	336	17.6
	10th	13,641	16.8	723	16.0	556	26.7	13,630	16.8	608	14.2	505	26.5
	11th	12,430	15.4	1,346	29.8	747	35.9	12,220	15.0	1,019	23.8	652	34.2
	12th	11,090	13.7	1,991	44.1	356	17.1	11,584	14.3	2,186	51.1	373	19.6
Ethnicity	Black/African American	19,551	24.1	1,241	27.5	412	19.8	19,561	24.1	1,021	23.9	428	22.5
	American Indian	191	0.2	12	0.3	6	0.3	166	0.2	10	0.2	3	0.2
	Asian/Pacific Islander	3,202	4.0	180	4.0	132	6.3	3,198	3.9	158	3.7	116	6.1
	Hispanic/Latino	49,123	60.7	2,691	59.6	1,310	62.9	49,603	61.1	2,675	62.5	1,137	59.7
	White	8,128	10.0	337	7.5	184	8.8	7,856	9.7	367	8.6	198	10.4
	Two or More	769	0.9	44	1.0	24	1.2	862	1.1	37	0.9	18	0.9
	Unknown	0	0.0	7	0.2	14	0.7	0	0.0	9	0.2	4	0.2
Gender	Female	40,338	49.8	2,214	49.1	1,149	55.2	40,535	49.9	2,144	50.1	1,089	57.2
	Male	40,626	50.2	2,291	50.8	919	44.1	40,711	50.1	2,124	49.7	811	42.6
	Unknown	0	0.0	7	0.2	14	0.7	0	0.0	9	0.2	4	0.2
Gifted/Talented	No	68,060	84.1	3,854	85.4	1,539	73.9	66,699	82.1	3,659	85.6	1,430	75.1
	Yes	12,904	15.9	651	14.4	529	25.4	14,547	17.9	609	14.2	470	24.7
	Unknown	0	0.0	7	0.2	14	0.7	0	0.0	9	0.2	4	0.2
At-Risk	No	25,853	31.9	1,498	33.2	1,118	53.7	24,954	30.7	947	22.1	765	40.2
	Yes	55,111	68.1	3,007	66.6	950	45.6	56,292	69.3	3,321	77.6	1,135	59.6
	Unknown	0	0.0	7	0.2	14	0.7	0	0.0	9	0.2	4	0.2
Special Education	n No	74,021	91.4	4,332	96.0	1,987	95.4	74,235	91.4	4,048	94.6	1,843	96.8
	Yes	6,943	8.6	173	3.8	81	3.9	7,011	8.6	220	5.1	57	3.0
	Unknown	0	0.0	7	0.2	14	0.7	0	0.0	9	0.2	4	0.2
Economically	No	22,738	28.1	1,238	27.4	596	28.6	24,464	30.1	1,053	24.6	508	26.7
Disadvantaged	Yes	58,226	71.9	3,267	72.4	1,472	70.7	56,782	69.9	3,215	75.2	1,392	73.1
	Unknown	0	0.0	7	0.2	14	0.7	0	0.0	9	0.2	4	0.2
English Learner	No	62,867	77.6	3,933	87.2	1,778	85.4	62,944	77.5	3,565	83.4	1,706	89.6
	Yes	18,097	22.4	572	12.7	290	13.9	18,302	22.5	703	16.4	194	10.2
	Unknown	0	0.0	7	0.2	14	0.7	0	0.0	9	0.2	4	0.2
		80,964	100.0	4,512	100.0	2,082	100.0	81,246	100.0	4,277	100.0	1,904	100.0

Sources: PEIMS Snapshot, 2016–2017, 2017–2018; Historical Grades Files, 2016–2017, 2017–2018; Chancery Student Demographics, May 2017, May 2018

Note: A student who took online courses through both Apex Learning and Other Providers is counted twice.

\*Includes API (American Preparatory Institute), Aventa, HVS, Nova Net, Penn Foster, Plato, SSCP, and Other Providers

					·	2016-	-2017		·	·				·		2017-	-2018	·	·		
		All Gra		Graduat Never T Online C	ook an	Graduat Comple Least Or Cou	ne Online rse²	Compl		Graduat Compl Least Or Online (	eted at ne Other Course <sup>4</sup>	All Gra						Comp		Gradua Compl Least O Online (	ne Other Course <sup>4</sup>
		N	%	n	%	n	%	n	%	n	%	N	%	n	%		ı	n	%	n	%
Ethnicity	Black/African American	2,628	24.8	1,663	25.6	965	23.5	823	25.1	142	17.1	2,668	24.1	1,639	23.4	1,029	25.4	850	25.9	179	23.1
	American Indian	21	0.2	14	0.2	7	0.2	6	0.2	1	0.1	22	0.2	12	0.2	10	0.2	8	0.2	2	0.3
	Asian/Pacific Islander	458	4.3	284	4.4	174	4.2	110	3.4	64	7.7	513	4.6	342	4.9	171	4.2	111	3.4	60	7.7
	Hispanic/Latino	6,307	59.4	3,725	57.3	2,582	62.9	2,046	62.4	536	64.7	6,628	59.9	4,159	59.3	2,469	60.9	2,021	61.7	448	57.8
	White	1,104	10.4	761	11.7	343	8.4	267	8.1	76	9.2	1,123	10.2	782	11.2	341	8.4	262	8.0	79	1.2
	Two or More	95	0.9	60	0.9	35	0.9	25	0.8	10	1.2	110	1.0	79	1.1	31	8.0	24	0.7	7	0.9
Gender	Female	5,528	52.1	3,426	52.7	2,102	51.2	1,644	50.2	458	55.3	5,729	51.8	3,596	51.3	2,133	52.7	1,658	50.6	475	61.3
	Male	5,085	47.9	3,081	47.4	2,004	48.8	1,633	49.8	371	44.8	5,335	48.2	3,417	48.7	1,918	47.3	1,618	49.4	300	38.7
Gifted/Talented	No	8,698	82.0	5,396	82.9	3,302	80.4	2,755	84.1	547	66.0	9,279	83.9	5,883	83.9	3,396	83.8	2,836	86.6	560	72.3
	Yes	1,915	18.0	1,111	17.1	804	19.6	522	15.9	282	34.0	1,785	16.1	1,130	16.1	655	16.2	440	13.4	215	27.7
Special Educatio	n No	9,825	92.6	5,889	90.5	3,936	95.9	3,148	96.1	788	95.1	10,267	92.8	6,413	91.4	3,854	95.1	3,119	95.2	735	94.8
	Yes	788	7.4	618	9.5	170	4.1	129	3.9	41	5.0	797	7.2	600	8.6	197	4.9	157	4.8	40	5.2
English Learner	No	8,823	83.1	5,461	83.9	3,362	81.9	2,679	81.8	683	82.4	8,629	78.0	5,535	78.9	3,094	76.4	2,496	76.2	598	77.2
-	Yes	1,790	16.9	1,046	16.1	744	18.1	598	18.2	146	17.6	2,435	22.0	1,478	21.1	957	23.6	780	23.8	177	22.8
		10.613	100.0	6,507	100.0	4.106	100.0	3,277	100.0	829	100.0	11,064	100.0	7,013	100.0	4,051	100.0	3,276	100.0	775	100.0

Sources: Historical Grades Files, 2016–2017, 2017–2018; Chancery Student Demographics, May 2017, May 2018; 2017, 2018 Chancery Graduates File

<sup>&</sup>lt;sup>1</sup> N refers to students who never took an online course of any type during high school.

<sup>2</sup> N refers to students w ho took at least one online course of any type during high school. Includes Apex Learning, API (American Preparatory Institute), Aventa, HVS, Nova Net, Penn Foster, Plato, SSCP, and Other Providers

<sup>&</sup>lt;sup>3</sup> N refers to students w ho took at least one Apex Learning online course during high school.

<sup>1</sup> N refers to students who took at least one online course during high school other than Apex Learning. Includes API (American Preparatory Institute), Aventa, HVS, Nova Net, Penn Foster, Plato, SSCP, and Other Providers

		Apex L	earning	Difference	Oth	er**	То	tal
		2016-2017	2017-2018	Y2-Y1	2016-2017	2017-2018	2016-2017	2017-2018
Beechnut Academy	COMB	0	0	0	1	0	1	0
Garden Oaks	COMB	0	0	0	0	1	0	1
Harper Alternative	COMB	0	0	0	24	5	24	5
Leland Young Men's College Prep Academy	COMB	135	30	-105	0	0	135	30
Long Academy	COMB	145	78	-67	1	75	146	153
Rice School PK-8	COMB	0	1	1	0	0	0	1
Rogers, T.H.	COMB	0	8	8	14	1	14	9
Secondary DAEP	COMB	0	1	1	0	99	0	100
Sharpstown International School	COMB	70	2	-68	63	172	133	174
Texas Connections Academy at Houston	COMB	0	0	0	2	166	2	166
Young Women's College Prep Academy	COMB	43	21	-22	86	17	129	38
		393	141	-252	191	536	584	677
Baylor College MS	MS	0	0	0	1	0	1	0
Burbank MS	MS	0	0	0	1	0	1	0
Chrysalis HS	MS	0	9	9	0	0	0	9
Deady MS	MS	0	0	0	2	0	2	0
Edison MS	MS	0	0	0	1	0	1	0
High School Ahead Academy	MS	45	0	-45	0	0	45	0
Lanier MS	MS	0	4	4	11	1	11	5
Meyerland MS	MS	0	9	9	5	0	5	9
Pershing MS	MS	0	5	5	4	0	4	5
Pin Oak MS	MS	1	26	25	15	1	16	27
Revere MS	MS	35	10	-25	0	0	35	10
Tanglewood MS	MS	0	1	1	0	0	0	1
Williams MS	MS	0	0	0	0	1	0	1
		81	64	-17	40	3	121	67

Source: Historical Grades Files, 2016-2017, 2017-2018

<sup>\*</sup> In 2016–2017, Advanced Virtual Academy was catagorized as an independent campus with 319 Apex courses taken by students.

<sup>\*\*</sup> Includes API (American Preparatory Institute), Aventa, HVS, Nova Net, Penn Foster, Plato, SSCP, and Other Providers

Austin HS Bellaire HS Carnegie HS Challenge Early College HS Challenge Early College HS Chavez HS DeBakey HS Energized for STEM Central HS Energized for STEM West HS East Early College HS Eastwood Academy HS Eastwood Academy HS Energy Institute HS Furr HS Houston Academy for International Studies HS High School for Law and Justice High School for Performing and Visual Arts Heights HS Houston Math Science Technology Center HS Jones HS Jordan HS Kashmere HS Lamar HS Liberty HS Madison HS Middle College HS - Fraga Middle College HS - Fraga Middle College HS - Gulfton Milby HS Mount Carmel Academy HS North Forest HS North Houston Early College HS Northside HS Scarborough HS			earning  2017-2018  - 361 408 43 1 80 0 1 0 7 97 2 373 52 151 5 122 528 105 2 0 2,241 328	72-Y1	0 53 295 7 13 0 81 0 0 224 0 30 0 201 3 48 1 36 912 96 2	2017-2018  - 0 241 7 15 0 120 0 0 214 0 25 112 27 5 11 0 8 520 54 10	2016-2017 319 354 737 86 13 138 88 2 2 227 22 58 489 285 176 75 81 830 1,066 197 2	
Austin HS Bellaire HS Carnegie HS Challenge Early College HS Challenge Early College HS Chavez HS DeBakey HS Energized for STEM Central HS Energized for STEM West HS East Early College HS East wood Academy HS Eastwood Academy HS Energy Institute HS Furr HS Houston Academy for International Studies HS High School for Law and Justice High School for Performing and Visual Arts Heights HS Houston Math Science Technology Center HS Jones HS Jordan HS Kashmere HS Lamar HS Liberty HS Madison HS Middle College HS - Fraga Middle College HS - Gulfton Milby HS Mount Carmel Academy HS North Forest HS North Houston Early College HS Northside HS Scarborough HS		301 442 79 0 138 7 2 2 3 22 28 489 84 173 27 80 794 154 101 0	408 43 1 80 0 1 0 7 97 2 373 52 151 5 122 528 105 2 0 2,241	-34 -36 1 -58 -7 -1 -2 4 75 -26 -116 -32 -22 -22 42 -266 -49 -99 0	53 295 7 13 0 81 0 0 224 0 30 0 201 3 48 1 36 912 96 2	241 7 15 0 120 0 0 214 0 25 112 27 5 11 0 8 520 54	354 737 86 13 138 88 2 2 227 22 58 489 285 176 75 81 830 1,066 197 2	649 50 16 80 120 1 0 221 97 27 485 79 156 16 122 536 625 56
Bellaire HS Carnegie HS Challenge Early College HS Challenge Early College HS Chavez HS DeBakey HS Energized for STEM Central HS Energized for STEM West HS East Early College HS Eastwood Academy HS Eastwood Academy HS Energy Institute HS Furr HS Houston Academy for International Studies HS High School for Law and Justice High School for Performing and Visual Arts Heights HS Houston Math Science Technology Center HS Jordan HS Kashmere HS Lamar HS Liberty HS Middle College HS - Fraga Middle College HS - Fraga Middle College HS - Gulfton Milby HS Mount Carmel Academy HS North Forest HS North Houston Early College HS Northside HS Scarborough HS		442 79 0 138 7 2 2 3 22 28 489 84 173 27 80 794 154 101 0 1,692	408 43 1 80 0 1 0 7 97 2 373 52 151 5 122 528 105 2 0 2,241	-34 -36 1 -58 -7 -1 -2 4 75 -26 -116 -32 -22 -22 42 -266 -49 -99 0	295 7 13 0 81 0 0 224 0 30 0 201 3 48 1 36 912 96 2	241 7 15 0 120 0 0 214 0 25 112 27 5 11 0 8 520 54	737 86 13 138 88 2 2 227 22 58 489 285 176 75 81 830 1,066 197 2	649 50 16 80 120 1 0 221 97 27 485 79 156 16 122 536 625 56
Carnegie HS Challenge Early College HS Challenge Early College HS Chavez HS DeBakey HS Energized for STEM Central HS Energized for STEM West HS East Early College HS East wood Academy HS East wood Academy HS Energy Institute HS Furr HS Houston Academy for International Studies HS High School for Law and Justice High School for Performing and Visual Arts Heights HS Houston Math Science Technology Center HS Jones HS Jordan HS Kashmere HS Lamar HS Liberty HS Madison HS Middle College HS - Fraga Middle College HS - Gulfton Milby HS Mount Carmel Academy HS North Forest HS North Houston Early College HS Northside HS Scarborough HS		79 0 138 7 2 2 2 3 22 28 489 84 173 27 80 794 154 101 0	43 1 80 0 1 0 7 97 2 373 52 151 5 122 528 105 2 0 2,241	-36 1 -58 -7 -1 -2 4 75 -26 -116 -32 -22 -22 42 -266 -49 -99 0	7 13 0 81 0 0 224 0 30 0 201 3 48 1 36 912 96 2	7 15 0 120 0 0 214 0 25 112 27 5 11 0 8 520	86 13 138 88 2 2 227 22 58 489 285 176 75 81 830 1,066 197 2	50 16 80 120 1 0 221 97 27 485 79 156 16 122 536 625 56
Challenge Early College HS Chavez HS DeBakey HS Energized for STEM Central HS Energized for STEM West HS East Early College HS Energy Institute HS Energy Institute HS Furr HS Houston Academy for International Studies HS High School for Law and Justice High School for Performing and Visual Arts Heights HS Houston Math Science Technology Center HS Jones HS Jordan HS Kashmere HS Lamar HS Liberty HS Madison HS Middle College HS - Fraga Middle College HS - Gulfton Milby HS Mount Carmel Academy HS North Forest HS North Houston Early College HS Northside HS Scarborough HS		0 138 7 2 2 3 22 28 489 84 173 27 80 794 154 101 0 1,692	1 80 0 1 0 7 97 2 373 52 151 5 122 528 105 2 0 2,241	1 -58 -7 -1 -2 4 75 -26 -116 -32 -22 -22 42 -266 -49 -99 0	13 0 81 0 0 224 0 30 0 201 3 48 1 36 912 96 2	15 0 120 0 0 214 0 25 112 27 5 11 0 8 520	13 138 88 2 2 2 227 22 58 489 285 176 75 81 830 1,066 197 2	16 80 120 1 0 221 97 27 485 79 156 16 122 536 625 56
Chavez HS DeBakey HS Energized for STEM Central HS Energized for STEM West HS East Early College HS Eastwood Academy HS Energy Institute HS Energy Institute HS Furr HS Houston Academy for International Studies HS High School for Law and Justice High School for Performing and Visual Arts Heights HS Houston Math Science Technology Center HS Jones HS Jordan HS Kashmere HS Lamar HS Liberty HS Madison HS Middle College HS - Fraga Middle College HS - Gulfton Milby HS Mount Carmel Academy HS North Forest HS North Houston Early College HS Northside HS Scarborough HS		138 7 2 2 3 22 28 489 84 173 27 80 794 154 101 0 1,692	80 0 1 0 7 97 2 373 52 151 5 122 528 105 2 0 2,241	-58 -7 -1 -2 4 75 -26 -116 -32 -22 -22 42 -266 -49 -99 0	0 81 0 0 224 0 30 0 201 3 48 1 36 912 96 2	0 120 0 0 214 0 25 112 27 5 11 0 8 520	138 88 2 2 227 22 58 489 285 176 75 81 830 1,066 197 2	80 120 1 0 221 97 27 485 79 156 16 122 536 625 56
Chavez HS DeBakey HS Energized for STEM Central HS Energized for STEM West HS East Early College HS Eastwood Academy HS Energy Institute HS Energy Institute HS Furr HS Houston Academy for International Studies HS High School for Law and Justice High School for Performing and Visual Arts Heights HS Houston Math Science Technology Center HS Jones HS Jordan HS Kashmere HS Lamar HS Liberty HS Madison HS Middle College HS - Fraga Middle College HS - Gulfton Milby HS Mount Carmel Academy HS North Forest HS North Houston Early College HS Northside HS Scarborough HS		7 2 2 3 22 28 489 84 173 27 80 794 154 101 0	0 1 0 7 97 2 373 52 151 5 122 528 105 2 0 2,241	-7 -1 -2 4 75 -26 -116 -32 -22 -22 42 -266 -49 -99 0	81 0 0 224 0 30 0 201 3 48 1 36 912 96 2	120 0 0 214 0 25 112 27 5 11 0 8 520 54	88 2 2 227 22 58 489 285 176 75 81 830 1,066 197	120 1 0 221 97 27 485 79 156 16 122 536 625 56
Energized for STEM Central HS Energized for STEM West HS East Early College HS Eastwood Academy HS Energy Institute HS Furr HS Houston Academy for International Studies HS High School for Law and Justice High School for Performing and Visual Arts Heights HS Houston Math Science Technology Center HS Jones HS Jordan HS Kashmere HS Lamar HS Liberty HS Madison HS Middle College HS - Fraga Middle College HS - Gulfton Milby HS Mount Carmel Academy HS North Forest HS North Houston Early College HS Northside HS Scarborough HS		2 2 3 22 28 489 84 173 27 80 794 154 101 0	1 0 7 97 2 373 52 151 5 122 528 105 2 0 2,241	-1 -2 4 75 -26 -116 -32 -22 -22 42 -266 -49 -99 0	0 0 224 0 30 0 201 3 48 1 36 912 96 2	0 0 214 0 25 112 27 5 11 0 8 520	2 2 227 22 58 489 285 176 75 81 830 1,066 197 2	1 0 221 97 27 485 79 156 16 122 536 625 56
Energized for STEM Central HS Energized for STEM West HS East Early College HS Eastwood Academy HS Energy Institute HS Furr HS Houston Academy for International Studies HS High School for Law and Justice High School for Performing and Visual Arts Heights HS Houston Math Science Technology Center HS Jones HS Jordan HS Kashmere HS Lamar HS Liberty HS Madison HS Middle College HS - Fraga Middle College HS - Gulfton Milby HS Mount Carmel Academy HS North Forest HS North Houston Early College HS Northside HS Scarborough HS	HS H	2 3 22 28 489 84 173 27 80 794 154 101 0	0 7 97 2 373 52 151 5 122 528 105 2 0 2,241	-2 4 75 -26 -116 -32 -22 -22 42 -266 -49 -99 0	0 224 0 30 0 201 3 48 1 36 912 96 2	0 214 0 25 112 27 5 11 0 8 520	2 227 22 58 489 285 176 75 81 830 1,066 197	0 221 97 27 485 79 156 16 122 536 625 56
East Early College HS Eastwood Academy HS Energy Institute HS Furr HS Houston Academy for International Studies HS High School for Law and Justice High School for Performing and Visual Arts Heights HS Houston Math Science Technology Center HS Jones HS Jordan HS Kashmere HS Lamar HS Liberty HS Madison HS Middle College HS - Fraga Middle College HS - Gulfton Milby HS Mount Carmel Academy HS North Forest HS North Houston Early College HS Northside HS Scarborough HS	HS HS HS HS HS HS HS HS HS	3 22 28 489 84 173 27 80 794 154 101 0	7 97 2 373 52 151 5 122 528 105 2 0 2,241	4 75 -26 -116 -32 -22 -22 42 -266 -49 -99 0	224 0 30 0 201 3 48 1 36 912 96 2	214 0 25 112 27 5 11 0 8 520	227 22 58 489 285 176 75 81 830 1,066 197	221 97 27 485 79 156 16 122 536 625 56
East Early College HS Eastwood Academy HS Energy Institute HS Furr HS Houston Academy for International Studies HS High School for Law and Justice High School for Performing and Visual Arts Heights HS Houston Math Science Technology Center HS Jones HS Jordan HS Kashmere HS Lamar HS Liberty HS Madison HS Middle College HS - Fraga Middle College HS - Gulfton Milby HS Mount Carmel Academy HS North Forest HS North Houston Early College HS Northside HS Scarborough HS	HS HS HS HS HS HS HS HS HS	3 22 28 489 84 173 27 80 794 154 101 0	7 97 2 373 52 151 5 122 528 105 2 0 2,241	4 75 -26 -116 -32 -22 -22 42 -266 -49 -99 0	0 30 0 201 3 48 1 36 912 96 2	0 25 112 27 5 11 0 8 520	227 22 58 489 285 176 75 81 830 1,066 197	97 27 485 79 156 16 122 536 625 56
Eastwood Academy HS Energy Institute HS Furr HS Houston Academy for International Studies HS High School for Law and Justice High School for Performing and Visual Arts Heights HS Houston Math Science Technology Center HS Jones HS Jordan HS Kashmere HS Lamar HS Liberty HS Madison HS Middle College HS - Fraga Middle College HS - Gulfton Milby HS Mount Carmel Academy HS North Forest HS North Houston Early College HS Northside HS Scarborough HS	HS HS HS HS HS HS HS HS	28 489 84 173 27 80 794 154 101 0	2 373 52 151 5 122 528 105 2 0 2,241	-26 -116 -32 -22 -22 42 -266 -49 -99 0	30 0 201 3 48 1 36 912 96 2	25 112 27 5 11 0 8 520	58 489 285 176 75 81 830 1,066 197	27 485 79 156 16 122 536 625 56
Energy Institute HS Furr HS Houston Academy for International Studies HS High School for Law and Justice High School for Performing and Visual Arts Heights HS Houston Math Science Technology Center HS Jordan HS Kashmere HS Lamar HS Liberty HS Madison HS Middle College HS - Fraga Middle College HS - Gulfton Milby HS North Forest HS North Houston Early College HS Northside HS Scarborough HS	HS HS HS HS HS HS HS HS	28 489 84 173 27 80 794 154 101 0	2 373 52 151 5 122 528 105 2 0 2,241	-26 -116 -32 -22 -22 42 -266 -49 -99 0	30 0 201 3 48 1 36 912 96 2	25 112 27 5 11 0 8 520	58 489 285 176 75 81 830 1,066 197	27 485 79 156 16 122 536 625 56
Furr HS Houston Academy for International Studies HS High School for Law and Justice High School for Performing and Visual Arts Heights HS Houston Math Science Technology Center HS Jones HS Jordan HS Kashmere HS Lamar HS Liberty HS Madison HS Middle College HS - Fraga Middle College HS - Gulfton Milby HS Mount Carmel Academy HS North Forest HS North Houston Early College HS Northside HS Scarborough HS	HS HS HS HS HS HS HS	489 84 173 27 80 794 154 101 0	373 52 151 5 122 528 105 2 0 2,241	-116 -32 -22 -22 42 -266 -49 -99 0	0 201 3 48 1 36 912 96 2	112 27 5 11 0 8 520 54	489 285 176 75 81 830 1,066 197	485 79 156 16 122 536 625 56
Houston Academy for International Studies HS High School for Law and Justice High School for Performing and Visual Arts Heights HS Houston Math Science Technology Center HS Jones HS Jordan HS Kashmere HS Lamar HS Liberty HS Madison HS Middle College HS - Fraga Middle College HS - Gulfton Milby HS Mount Carmel Academy HS North Forest HS North Houston Early College HS Northside HS Scarborough HS	HS HS HS HS HS HS HS	84 173 27 80 794 154 101 0	52 151 5 122 528 105 2 0 2,241	-32 -22 -22 42 -266 -49 -99	201 3 48 1 36 912 96 2	27 5 11 0 8 520 54	285 176 75 81 830 1,066 197	79 156 16 122 536 625 56
High School for Law and Justice High School for Performing and Visual Arts Heights HS Houston Math Science Technology Center HS Jones HS Jordan HS Kashmere HS Lamar HS Liberty HS Madison HS Middle College HS - Fraga Middle College HS - Gulfton Milby HS Mount Carmel Academy HS North Forest HS North Houston Early College HS Northside HS Scarborough HS	HS HS HS HS HS HS	173 27 80 794 154 101 0	151 5 122 528 105 2 0 2,241	-22 -22 42 -266 -49 -99	3 48 1 36 912 96 2	5 11 0 8 520 54	176 75 81 830 1,066 197	156 16 122 536 625 56
High School for Performing and Visual Arts Heights HS Houston Math Science Technology Center HS Jones HS Jordan HS Kashmere HS Lamar HS Liberty HS Madison HS Middle College HS - Fraga Middle College HS - Gulfton Milby HS Wount Carmel Academy HS North Forest HS North Houston Early College HS Northside HS Scarborough HS	HS HS HS HS HS HS	27 80 794 154 101 0	5 122 528 105 2 0 2,241	-22 42 -266 -49 -99 0	48 1 36 912 96 2	11 0 8 520 54	75 81 830 1,066 197 2	16 122 536 625 56
Heights HS Houston Math Science Technology Center HS Jones HS Jordan HS Kashmere HS Lamar HS Liberty HS Madison HS Middle College HS - Fraga Middle College HS - Gulfton Milby HS Wount Carmel Academy HS North Forest HS North Houston Early College HS Northside HS Scarborough HS	HS HS HS HS HS	80 794 154 101 0 1,692	122 528 105 2 0 2,241	42 -266 -49 -99 0	1 36 912 96 2	0 8 520 54	81 830 1,066 197 2	122 536 625 56
Houston Math Science Technology Center HS Jones HS Jordan HS Kashmere HS Lamar HS Liberty HS Madison HS Middle College HS - Fraga Middle College HS - Gulfton Milby HS Wount Carmel Academy HS North Forest HS North Houston Early College HS Northside HS Scarborough HS	HS HS HS HS HS	794 154 101 0 1,692	528 105 2 0 2,241	-266 -49 -99 0	36 912 96 2	8 520 54	830 1,066 197 2	536 625 56
Jones HS	HS HS HS HS	154 101 0 1,692	105 2 0 2,241	-49 -99 0	912 96 2	520 54	1,066 197 2	625 56
Jordan HS	HS HS HS	101 0 1,692	2 0 2,241	-99 0	96 2	54	197 2	56
Kashmere HS         H           Lamar HS         H           Liberty HS         H           Madison HS         H           Middle College HS - Fraga         H           Middle College HS - Gulfton         H           Milby HS         H           Mount Carmel Academy HS         H           North Forest HS         H           North Houston Early College HS         H           Northside HS         H           Scarborough HS         H	HS HS HS	0 1,692	0 2,241	0	2		2	
Lamar HS Liberty HS Wadison HS Widdle College HS - Fraga Middle College HS - Gulfton Wilby HS Wount Carmel Academy HS North Forest HS North Houston Early College HS Northside HS Scarborough HS	HS HS	1,692	2,241	_		10		10
Liberty HS  Madison HS  Middle College HS - Fraga  Middle College HS - Gulfton  Milby HS  Mount Carmel Academy HS  North Forest HS  North Houston Early College HS  Northside HS  Scarborough HS	HS					123	1,786	2,364
Madison HS Middle College HS - Fraga Middle College HS - Gulfton Milby HS Mount Carmel Academy HS North Forest HS North Houston Early College HS Northside HS Scarborough HS		50		270	4	123	62	329
Middle College HS - Fraga Middle College HS - Gulfton Milby HS Mount Carmel Academy HS North Forest HS North Houston Early College HS Northside HS Scarborough HS	10	94	72	-22	41	1	135	73
Middle College HS - Gulfton Milby HS Mount Carmel Academy HS North Forest HS North Houston Early College HS Northside HS Scarborough HS	HS	2	115	113	0	0	2	115
Milby HS  Mount Carmel Academy HS  North Forest HS  North Houston Early College HS  Northside HS  Scarborough HS	HS	157	143	-14	33	2	190	145
Wount Carmel Academy HS North Forest HS North Houston Early College HS Northside HS Scarborough HS	HS	85	149	64	3	10	88	159
North Forest HS  North Houston Early College HS  Northside HS  Scarborough HS	HS	8	149	10	7	0	15	18
North Houston Early College HS  Northside HS  Scarborough HS	HS	90	4	-86	0	0	90	4
Northside HS Scarborough HS	HS	0	2		250	208		210
Scarborough HS	ns HS	255	323	2 68			250	
§					0	0	255	323
	HS	196	125	-71	132	0	328	125
•	HS	368	488	120	377	261	745	749
, ,	HS	18	45	27	62	216	80	261
S	HS	57	57	0	44	83	101	140
, .	HS	37	20	-17	0	0	37	20
	HS	143	83	-60	0	17	143	100
	HS	37	15	-22	36	55	73	70
	HS	110	181	71	1	0	111	181
	HS	471	274	-197	298	196	769	470
•	HS	115	26	-89	225	62	340	88
	HS	240	434	194	20	77	260	511
•	HS	106	99	-7	20	0	126	99
Yates HS	HS	228 <b>7,812</b>	199	-29	3	26 <b>2,707</b>	231 <b>11,464</b>	225 <b>10,486</b>
Total Total			7,779	-33	3,652			10.486

Source: Historical Grades Files, 2016-2017, 2017-2018

<sup>\*</sup> In 2016–2017, Advanced Virtual Academy was catagorized as an independent campus with 319 Apex courses taken by students.

<sup>\*\*</sup> Includes API (American Preparatory Institute), Aventa, HVS, Nova Net, Penn Foster, Plato, SSCP, and Other Providers