

Performance Impact Analysis: Replacing PSAT with ACT 2023-24

I. Proposed Action.

This Performance Impact Analysis (PIA) justifies the change of removing the administration of the PSAT to students in grades 9, 10, and 11 and replacing it with the administration of the ACT Aspire in grade 9 and the ACT in grade 11 beginning in SY2024-25. This change will continue to identify students for AP Potential. Additionally, targeted students will be recruited to take the PSAT NMSQT in grade 11 for the opportunity to qualify for the National Merit Scholarship beginning in SY2024-25.

II. Issues.

This change will resolve the following issues:

- **Duplicative testing/data results:** Remove current duplicative testing efforts and lost instructional time from administering both the PSAT and the ACT to identify students for AP Potential because both tests provide equivalent information. The AP Potential report shows school officials the names of all students who show potential to do well in Advanced Placement and International Baccalaureate (IB) courses.
- **Cumbersome whole grade testing:** Reduce cumbersome whole grade testing in grade 11 by recruiting students with a likelihood of high performance based on their prior academic measures. These students will be targeted to take the PSAT NMSQT.
- **Unnecessary costs:** Lower capital costs associated with the administration of PSAT (~\$120,000 per year). The PSAT is paid for through TUSD Maintenance and Operations (M&O) funding.
- **Site-based stress:** Reduce the added stress and logistics at the site level for both students and staff in administering the PSAT.

III. Objectives.

Since SY2017-18, all students in grades 9, 10, and 11 must take the Preliminary Scholastic Aptitude Test (PSAT) from College Board in October each year. The results are used to invite students to enroll in Advanced Placement (AP) and International Baccalaureate (IB) courses based on their AP Potential scores in

grades 9 – 11 and potentially to qualify for National Merit Scholarships in grade 11. When this initiative was instituted, Tucson Unified School District (TUSD) had no other means to identify AP Potential or to provide an opportunity for students to qualify for National Merit Scholarships.

Beginning in SY2021-22, the AZ Department of Education has required that all students in grade 9 take the ACT Aspire and that all students in grade 11 take the ACT (American College Testing) for state level accountability. Additionally, ACT recently published research with AP Potential cut scores for ACT, ACT Aspire, and Pre-ACT. TUSD's Assessment and Evaluation (A&E) Department now has access to the necessary information to identify students with AP Potential using the ACT research results.

Qualification for National Merit Scholarships is limited to about 3% of the testing population each year at the state level. Rather than require all grade 11 students to take the PSAT/NMSQT for possible National Merit qualification in TUSD, the test will be voluntary, and any student can opt-in to test. Schools can choose to test all grade 11 students, a selection of classes, and/or specific cohorts of students. Teachers and parents can also recommend students to participate. Additionally, students will be recruited to participate based on prior academic performance measures. These identified students will be strongly encouraged to participate by the Advanced Learning Experiences (ALE) Department and the home school. The added attention from both high schools and the ALE Department providing information about the test opportunity to these students may help motivate them to do their best.

High school principals were surveyed in the spring 2024 about the administration of the PSAT. The results in Charts 1 and 2 below indicate that 94% of principals did not disagree with (1) replacing the PSAT with the ACT Aspire and ACT and with (2) supporting an opt-in model for the PSAT/NMSQT for grade 11. These results are not surprising because of the staff time expenditure to administer the PSAT testing, the loss of instructional time for teachers, and the inconsistent use of test results by administrators and staff in high schools. One exception to this trend was University High School (UHS) where administrators value the PSAT/NMSQT results. UHS consistently has grade 11 students who qualify as National Merit Semifinalists on the PSAT/NMSQT each year.

Chart 1.

I support replacing the required PSAT(grades 9, 10, 11) with the ACT Aspire (grade 9) and ACT (grade 11) to provide AP Potential scores.

Answered: 17 Skipped: 0

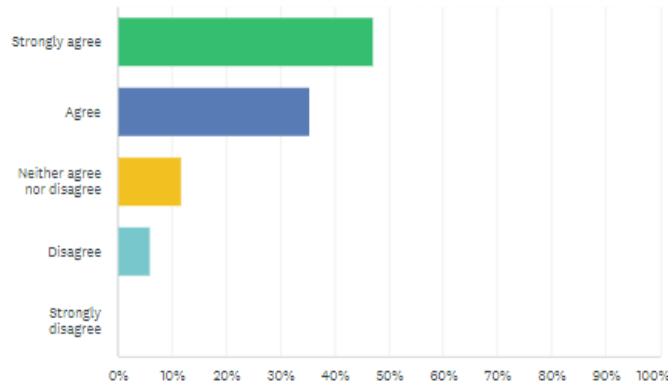
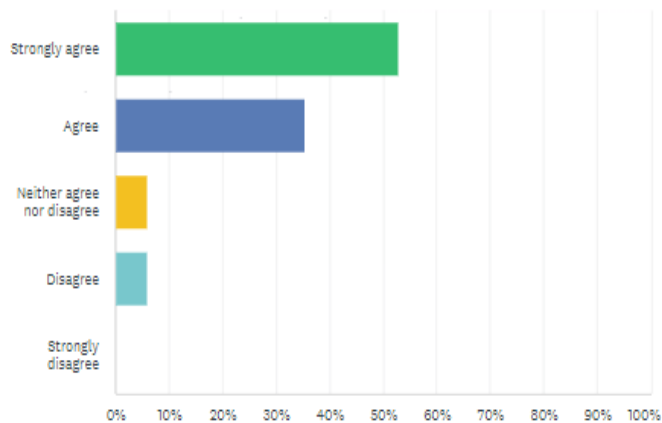


Chart 2.

I support opt-in PSAT opportunities for 11th grade students who want to take it and/or who want to qualify for the National Merit Scholarship (district funded).

Answered: 17 Skipped: 0



In summary, by removing the testing requirements of the PSAT, TUSD will reduce mandatory testing events at the high school level, increase instructional time, and lower costs. At the same time, equitable access to AP courses will be preserved as well as the opportunity for any grade 11 student to test for the National Merit

Scholarship. It is no longer necessary to administer the PSAT in grades 9 – 11 to receive AP Potential results because TUSD’s A&E Department has developed an equivalent internal process to identify these students using the research produced by ACT. It is also no longer necessary to test all grade 11 students when a targeted, data-driven process can be used to recruit students who have the greatest likelihood of success. On average, less than 50 TUSD students (or <2%) qualify per year for the National Merit Scholarship.

IV. USP Program Background.

The Unitary Status Plan advocates to ‘increase the number of AAC (Advanced Academic Courses) offerings, as appropriate, to provide equal access and equitable opportunities for all students to participate in these courses, including expanding the number of AP courses offered at District high schools and the number of grades in which such courses are offered.’ (P. 31)

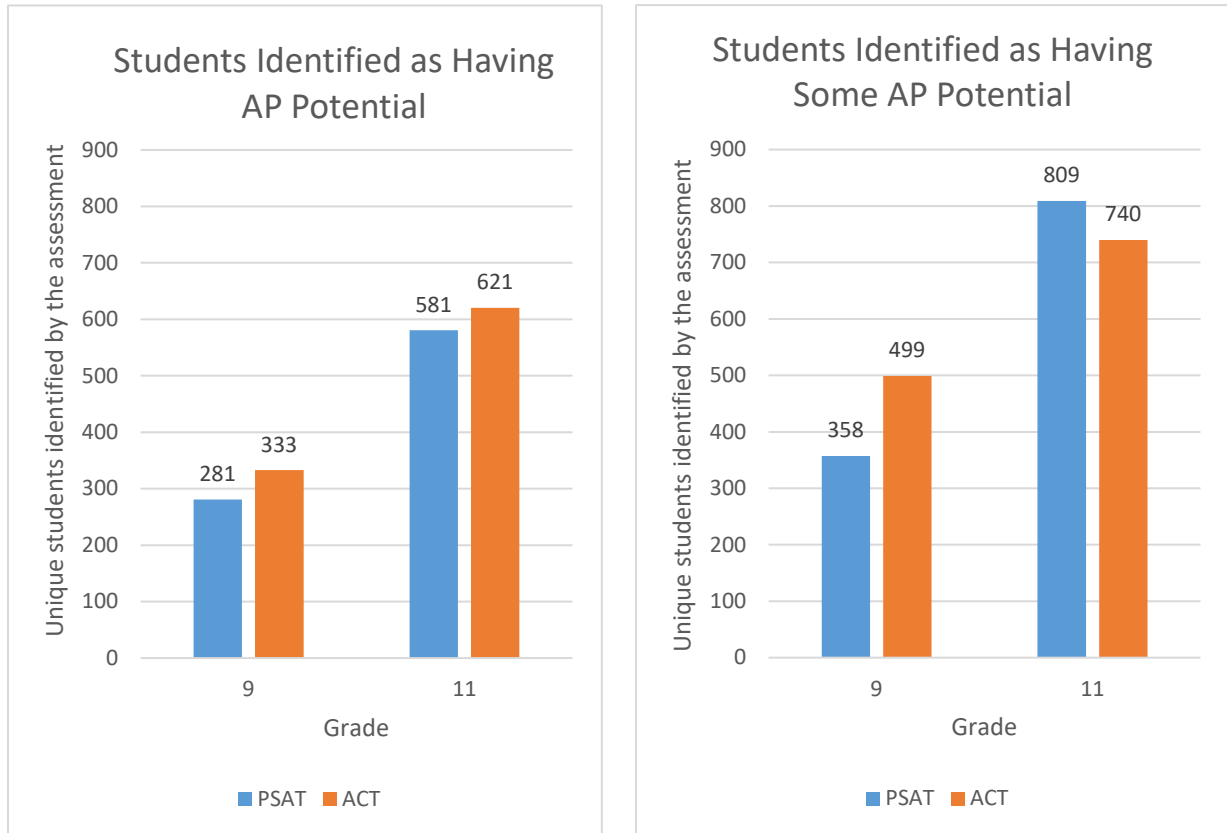
1. AP Potential

A&E conducted research with TUSD student using ACT Aspire/ACT data and PSAT data over two years from 2021-22 and 2022-23. The ACT Aspire and ACT data was used to predict potential AP Potential scores which could be compared to the PSAT AP Potential scores from the same students. The data from this research is presented in Charts 3 – 5 below and the full report is available in Appendix 1. Both approaches identified students with AP Potential and with Some AP Potential for compatibility. The difference between the two metrics is:

- Potential: =>60% chance of scoring 3+ on a corresponding AP exam
- Some Potential: 40%-59% chance of scoring 3+ on a corresponding AP exam.

The findings indicate that the ACT Aspire/ACT identified more students in grade 9 (N=+193) than the PSAT for AP Potential and Some AP Potential. In grade 11, the ACT identified more students as having AP Potential (N=+40) However, the PSAT identified more students (N=+69) in grade 11 as having Some AP Potential. This data indicates that overall, the ACT identifies slightly more students and should be considered an equivalent replacement for the PSAT for the identification of AP Potential. Please see Chart 3 for a comparison of the two approaches.

Chart 3. Comparison of ACT Aspire/ACT Results with PSAT Results for AP Potential Identification using the same Cohort of Students over Two years (2021-22 and 2022-23).



The PSAT administered in grade 9 currently identifies students for AP Potential in only two subjects including World History and European History for enrollment in grade 10. Moreover, the PSAT administered the following year in grade 10 identifies students for AP Potential in all AP subject offerings for enrollment in grade 11. The PSAT is administered in October each year and results are available by the following January.

In the spring, counselors meet with students individually to create course schedules for the following school year. Counselors work with students to develop a four-year plan of courses and/or check for credits needed for graduation. Students are recruited to enroll in AP courses based on multiple data points including student grades/transcripts, family preferences, as well as the results from the AP Potential report. Counselors also use the two weeks before school to encourage students to enroll in AP courses. Beginning in late July and continuing

through the first ten days of school, many schedules are changed for students and families in adjusting for class size and student choice.

The ACT Aspire is different from the PSAT in the following ways:

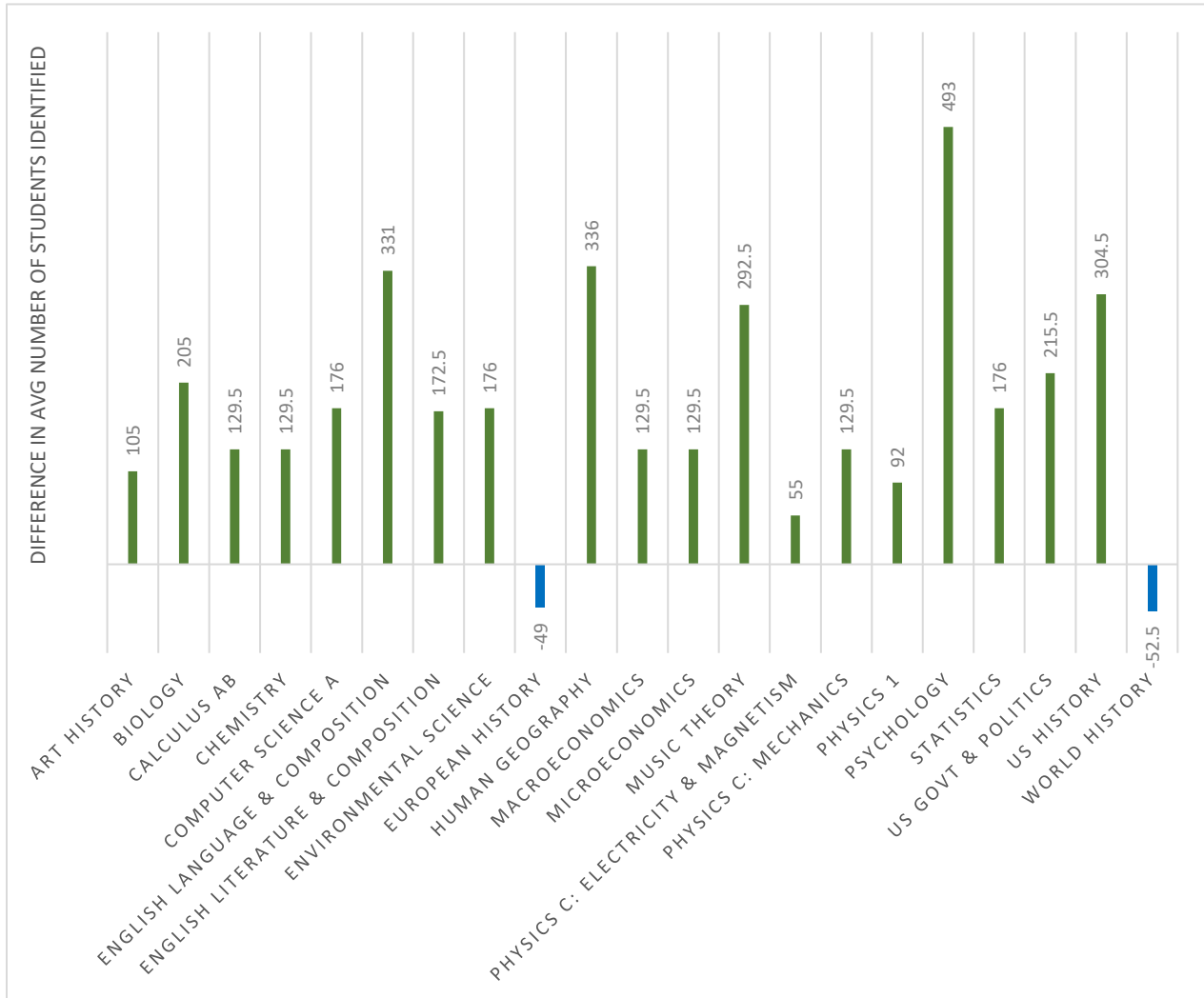
- All available AP subject offerings are available to identified students for enrollment in grade 10.
- The ACT Aspire AP Potential results can be built into students four-year plan and expand opportunities for placement in advanced academic courses a year sooner.
- The ACT Aspire scores and corresponding AP Potential identification will be made available to stakeholders during June rather than in January each year.

Counselor practices will remain largely the same using ACT Aspire AP Potential results. Beginning in late June, A&E will send the ALE Department and the high schools the AP Potential student lists. Shortly thereafter, the high schools will send letters to families whose incoming grade 10 students are identified as AP Potential with information about AP courses. The ALE Department and the African American and Mexican American Student Services Departments will follow up with targeted families.

At the end of July, counselors will recruit incoming grade 10 students identified as AP Potential who have not already (1) enrolled in AP courses or (2) been recruited for AP course enrollment. Course changes are very common during this two to three-week window and counselors will reach out directly to the identified students' families. With the ACT Aspire AP Potential results, schools can decide if incoming grade 10 students showing AP Potential should be scheduled only into AP World History and European History or if other AP courses might also be an option. Finally, counselors will continue their practices of identifying and recruiting grade 11 and 12 students for AP courses in the spring using student grades/transcripts, and family preferences as well as ACT Aspire AP Potential results.

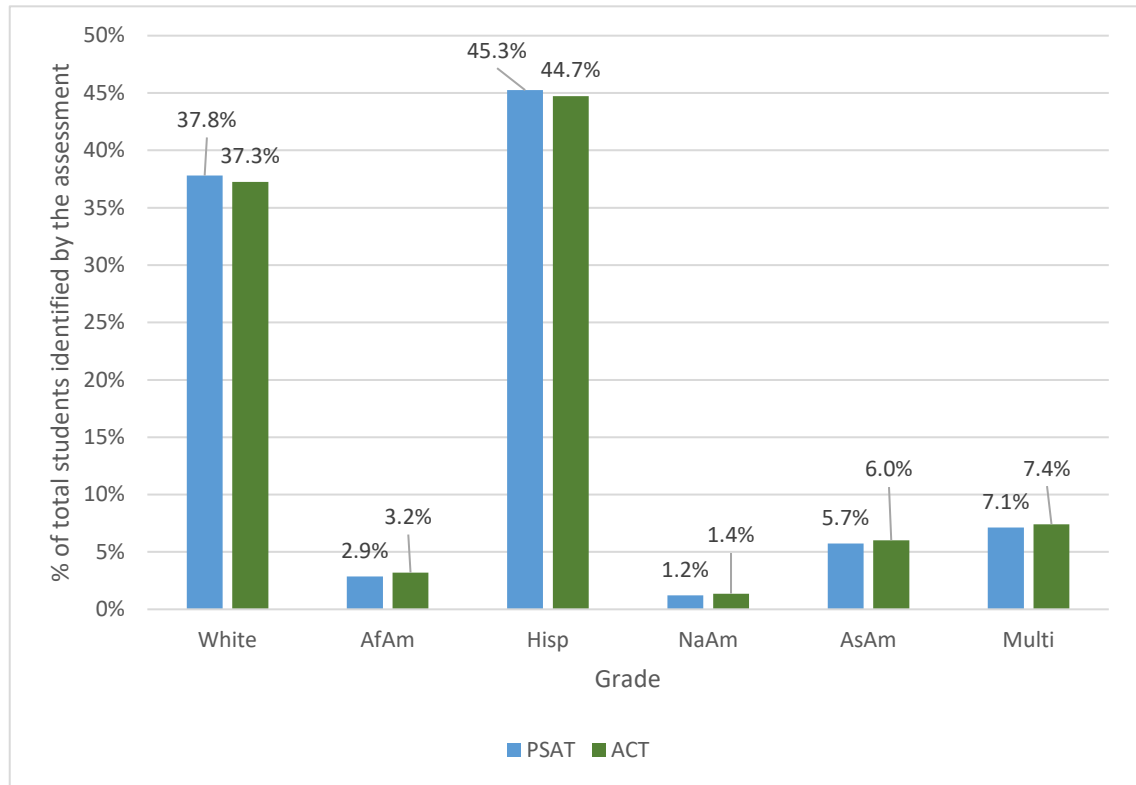
Chart 4 shows the subjects that the ACT Aspire and the PSAT provides AP Potential for in grade 10 for the same students. The ACT Aspire provides AP Potential for twenty-one subjects whereas the PSAT provides AP Potential for two subjects. In other words, the ACT Aspire provides more choice to incoming grade 10 students because the PSAT recommends AP Potential for World History and European History only.

**Chart 4. Difference in the Number of Grade 9 Students identified as having AP Potential or Some AP Potential (ACT in Green and PSAT in Blue)
2 year Average**



Equal and equitable opportunities for all students to participate in advanced academic courses is a TUSD priority. Replacing the PSAT with the ACT will not alter the ethnic distribution of identified students for AP Potential. When broken out by USP ethnicity, our research indicated that the ACT Aspire identifies an equivalent number of students as the PSAT. Please see Chart 5 below.

**Chart 5. Ethnicity of Students identified as Having AP Potential or Some AP Potential
2 Year Average**



According to the Advanced Learning Experiences (ALE) Manual, ‘every January, the College Board provides training to counselors and administrators regarding the PSAT AP Potential Report. This report shows school officials the names of all students who show potential to do well in Advanced Placement and IB courses. After the report is compiled, the ALE department provides the list and email message to the District’s Communications Department. The ALE office sends an automated message to the families of all students who show potential to do well in AACs. With this information, schools work directly with the District’s ALE Director to consider how to reduce barriers and increase interest and opportunities to participate in AP courses. The African American and Mexican American Student Services departments also use the list to contact African American and Mexican American students who show potential to do well in AP courses, encouraging them to enroll to help improve their educational opportunities’. (P. 29)

The only changes to the current practice outlined above, beginning in SY2024-25 will be that the A&E Department will generate a report each June detailing the names of all incoming grade 10 students who show potential in AP and IB courses using the ACT Aspire and ACT results rather than relying on the PSAT for this information. This list will be shared with the ALE Department, the African American and Mexican American Student Services Departments, as well as high school administrators and counselors. For incoming 10th grade students with AP Potential who have not already enrolled or been recruited into AP courses, outreach will begin in July to families and AP course scheduling by school counselors would occur at the end of July. The January training from College Board to counselors and administrators will no longer be needed.

2. National Merit Scholarship Exam

The Preliminary SAT/National Merit Scholarship Qualifying Test (PSAT/NMSQT) is the qualifying test for entry to the National Merit Scholarship Program. The test is administered during the third year of high school or grade 11. National Merit semifinalists represent less than 1 percent of U.S. high school seniors and include the highest-scoring entrants in each state. The number of semifinalists is based on the number of high school graduates in a state, not the number of PSAT takers. Arizona has nearly 400 students qualify each year. Qualifying scores are generally about 1420 or higher on the PSAT.

In accordance with the Unitary Status Plan (USP), all students in grade 11 are required to take the PSAT/NMSQT. Less than 50 students score high enough in TUSD to be named a semifinalist each year and the majority of the qualifying students are enrolled in University High School. It is a waste of both time and resources to require all students to test when >98% will not benefit from the results.

A&E and ALE propose a modified approach to the administration of the PSAT/NMSQT. The test should be available to all students on a voluntary basis. Students can sign up, teachers and other school personnel can recommend students for testing, and/or parents can request testing for their student. Additionally, A&E will use multiple measures to identify students with a likelihood of high performance on the PSAT/NMSQT using grade 8 AASA scores, grade 9 ACT Aspire scores, and/or the high school ACT

Quarterly Mimic interim assessments offered in grades 9 - 11. These measures will provide students with multiple opportunities to demonstrate strong academic performance.

A&E conducted additional research using assessment data from 11th graders tested with PSAT in Fall 2023 to understand the impact this recruitment model will have. Grade 9 ACT Aspire and grade 10 ACT Quarterly Mimic interim assessments were used to identify approximately 200 students who would have been invited to test with PSAT/NMSQT in Fall 2023 under the proposed model. Students from UHS were omitted under the assumption that most if not all of them would opt-in to testing.

For each assessment, scores were rank ordered within ethnicities. The top scoring students from each ethnicity were selected in proportions that correspond to the ethnic distribution of high school students in TUSD. Using this method with a combination of grade 9 ACT Aspire scores and grade 10 ACT Quarterly Mimic interim assessment scores, A&E was able to identify a group of students who:

- May not have otherwise opted in to testing.
- Were likely to achieve the highest PSAT/NMSQT scores in the district outside of UHS.
- Mirrored TUSD high school students as a whole in their ethnic distribution.

Of the grade 11 students who tested with PSAT/NMSQT in 2023, only three scores from schools other than UHS fell into the range most commonly associated with achievement of National Merit Semifinalist status.

Any student will be welcomed to opt-in to test based on teacher/staff/parent recommendation or self-recommendation. Schools can decide if they want all grade 11 students to test, a subset of students, or particular classes to test. This list will be due to the A&E department at the end of Semester 1 each year.

In addition to these opt-in students, A&E will also create a list of about 200 grade 11 students who meet established academic criteria for success on the PSAT/NMSQT and are not already included in the opt in list. These students will be representative of TUSD's high school USP ethnic distribution so that recruitment of students is equitable. A&E will rank order

all grade 11 students based on the results of the multiple measures by ethnicity. Students will be recruited within their ethnic subgroup. For example, in Table 1 below, African American students make up 10% of TUSD’s high school population. The highest ranking 20 African American students who have not already opted-in to test will be actively recruited. The approach assures that the highest performing students within each ethnic category will be recognized for their academic prowess and recruited to take the PSAT/NMSQT.

Table 1. 2023-24 TUSD 40th Day Ethnic Distribution of in High School Students and the Corresponding Number of Grade 11 Students to be Invited to Test on the PSAT/NMSQT		
USP Ethnicity	Percent of HS Population	Number of Students to be recruited
African American	10%	20
Asian American-PI	3%	6
Hispanic	61%	122
Multi-Racial	4%	8
Native American	3%	6
White	19%	38
Total	100%	200

A&E will provide a grade 11 student list to the ALE Department and to the school administration where students are enrolled each February. The student list will include both opt-in students and ranked students identified through prior academic performance who are not already included on the opt-in list.

The school administration and counselors will recognize and recruit these students to participate in the PSAT/NMSQT for the following October and the ALE Department will reach out to the parents to emphasize their student’s academic excellence and the importance of doing well on this test to be awarded potential college scholarship funds. Students may be more motivated to take this test seriously if they understand the scholarship benefits and that they have been identified as someone who might be able to qualify as a semifinalist.

V. **Impact Analysis: Impact on Protected Classes (AA, LatinX, including EL students).**

A. **Impact on Effectiveness of USP Program or Activity**

- **Identification of students from the AP Potential to enroll into AP courses:** Based on the A&E research results presented in this PIA, the anticipated impact of these changes will be that more students will be identified as having AP Potential than current practices provide. Additionally, students will be identified for a greater range of AP subjects earlier. This improvement will support ALE's goal of providing advanced academic courses to more students with a wide range of course offerings. Having greater course choice may encourage students to take more AP courses based on interest.
 - **Measure:** Number of grade 9 students identified as having AP Potential each year by USP ethnicity and student enrollment numbers in AP courses each year by grade and ethnicity. These measures will be implemented for three years beginning in SY 2024-25 to monitor the impact of replacing the PSAT with the ACT and make adjustments, if needed.
 - **Cost:** A reduction in cost of about \$100,000 per year by not administering the PSAT in grades 9 – 10 and administering the PSAT/NMSQT as opt-in for grade 11.

- **Students qualifying for the National Merit Scholarship:** TUSD will target the recruitment of students having the greatest potential to demonstrate high performance on the PSAT/NMSQT based on multiple academic measures by ethnicity in addition to offering an opt-in model with teacher, parent, and student recommendations. This approach ensures that all students are equitably encouraged to participate and that all students with an academic profile that might meet the rigors of becoming a semifinalist are recruited to participate. No impact is anticipated on the percent of students from TUSD who qualify as semifinalists on the PSAT/NMSQT.
 - **Measures:** Number of students recruited using multiple measures by USP ethnicity and total number of grade 11 students participating in the PSAT/NMSQT. These measures will be implemented for three years beginning in

SY 2024-25 to monitor the impact of replacing the PSAT with the ACT and make adjustments, if needed.

- **Cost:** A reduction in cost of ~\$20,000 by not requiring all grade 11 students to take the PSAT/NMSQT.

B. Impact on Other District Programs or Obligations under the USP

No impact is anticipated in other district programs or activities beyond the Quality of Education section of the USP. Please see below how this change of replacing the PSAT with the ACT will impact the Quality of Education. Please note that the funding for the PSAT comes from M&O and will not impact Desegregation funding.

1. Compliance

- No potential impact on the Compliance requirements under the USP.

2. Student Assignment

- No potential impact on the Student Assignment requirements under the USP.

3. Transportation

- No potential impact on the Transportation requirements under the USP.

4. Admin/Certified Staff

- No potential impact on the Admin/Certified Staff requirements under the USP.

5. Quality of Education

- The anticipated impact is that more students will be identified as having AP Potential using the ACT Aspire/ACT than current practices provided by the PSAT. Additionally, the PSAT/NMSQT will utilize a more equitable and targeted approach to recruit students in place of whole grade 11 required testing. Replacing the PSAT with the ACT Aspire/ACT will increase instructional time at the high school by removing the requirement of the administration of the PSAT in grades 9 - 11. At the district level, costs associated with the PSAT testing will be saved. Desegregation funding is not impacted. The District will monitor

for at least the next three years the impact of replacing the PSAT with the ACT and adjust, if needed.

- i. AP Potential: More students will be identified, and they will be recommended for a greater range of AP subjects earlier. This improvement will support ALE's goal of providing advanced academic courses to more students with a wide range of course offerings.
- ii. PSAT/NMSQT: An opt-in model will be offered with teacher, parent, and student recommendations as well as the identification of high performing students by ethnicity. This approach ensures that all grade 11 students are equitably encouraged to participate and that all students with an academic profile that might meet the rigors of becoming a semifinalist are recruited to participate. No impact is anticipated on the percent of students from TUSD who qualify as semifinalists on the PSAT/NMSQT.

6. Discipline

- No potential impact on the Discipline requirements under the USP.

7. Family and Community Engagement

- No potential impact on the Family and Community Engagement requirements under the USP.

8. Extracurricular Activities

- No potential impact on the Extracurricular Activities requirements under the USP.

9. Facilities and Technology

- No potential impact on the Facilities and Technology requirements under the USP.

10. Accountability and Transparency

- No potential impact on the Accountability and Transparency requirements under the USP.

C. Data Sources

As part of this initiative, A&E and ALE will work together to examine the number of students identified for AP Potential each year for the next three years and the corresponding enrollment in AP and IB courses by high school. This process monitoring will ensure that the replacement of the PSAT with the ACT Aspire/ACT provides equivalent or improved access to AP and IB courses for all students.

Additionally, student qualification for National Merit semifinalists will be monitored each year for the following three years to examine if opt-in and targeted recruitment maintains or improves the number of TUSD semifinalists.

D. Assumptions

i. Existing Practices Assumptions:

- a. The existing practices of administering the PSAT to all students in grades 9 – 11 is cumbersome in lost instructional time at the school level and a financial drain at the district level. This administration of the PSAT is currently duplicative because the district is required by the state of Arizona to administer the ACT Aspire in grade 9 and the ACT in grade 11. The ACT Aspire/ACT provides equivalent AP Potential information when compared to the PSAT. Additionally, targeted recruitment of students to take the grade 11 PSAT/NMSQT removes the requirement that all students must test when >98% of students are not expected to qualify as a semifinalist.

ii. Anticipated Impact Assumptions:

- a. The anticipated impact assumptions are:
 - i. TUSD will continue to provide the same or improved services to schools documenting students with AP Potential from the results of the ACT Aspire/ACT that was provided from the PSAT.
 - ii. TUSD will continue to recognize, recruit, and encourage students to opt-in to the PSAT/NMSQT.

- iii. **Comparison of Existing Practices with the Proposed Change:**
 - a. The proposed change to replace the PSAT with the ACT Aspire in grade 9 and ACT in grade 11 provides the following benefits:
 - i. Earlier identification of students with AP Potential in grade 10.
 - ii. Greater AP course options for students in grade 10.
 - iii. Targeted recruitment of students to take the PSAT/NMSQT for possible qualification as a semifinalist. This process is less cumbersome than requiring all grade 11 students to take the test.
 - iv. Financial savings from the M&O budget of ~\$120,000.
 - v. The majority of high school principals support these changes.

- iv. **Consideration of possible Mitigation Measures:**
 - a. A&E and ALE will monitor the number of students identified for AP Potential over the next three years to ensure that practices are either maintained or improved and that access is equitable by ethnicity to the PSAT. If the number of students identified for AP Potential decreases or becomes less equitable, A&E can review, and potentially revise the cut score criteria of the ACT Aspire.
 - b. A&E and ALE will monitor the number of students who opt-in to take the PSAT/NMSQT over the next three years to ensure that any interested student has an opportunity to take the test. If the numbers of students decrease who take the test or if the ethnic diversity of students who take the test is not representative of district averages, increased efforts in student recruitment and information to families will be made available.

E. Research Based Sources

Research Literature Review:

- AP Potential Score Correlations
- AP Potential Expectancy Tables
- Zhang, X., Patel, P., Ewing, M. (2014). AP Potential Predicted by PSAT/NMSQT Scores Using Logistic Regression. (College Board Research Statistical Report 2014-1). New York: The College Board.
- Radunzel, J., Allen, J. (2020). Predicting Success on Advanced Placement Exams Using ACT Aspire, PreACT, and ACT Test Scores. (ACT Research & Policy Research Report). Iowa City: ACT, Inc.
- National Merit Scholarship Entry Requirements: <https://www.nationalmerit.org/s/1758/interior.aspx?sid=1758&qid=2&pgid=1876>
- National merit Semifinalist Cutoffs Class of 2025: <https://www.compassprep.com/national-merit-semifinalist-cutoffs/>

VI. Conclusion.

By removing the testing requirements of the PSAT, TUSD will reduce the mandatory PSAT testing events, increase instructional time, decrease staff and student stress, and lower M&O costs. At the same time, equitable access to AP courses will be preserved as well as equitable opportunities to test for the National Merit Scholarship.

Date: _____

Prepared by _____

Reviewed and Approved: _____

APPENDIX 1.

Please see the Powerpoint presentation called: PIA- PSAT vs ACT - A&E 2024

AP Potential: PSAT vs. ACT

Assessment & Evaluation

February 2024



Agenda

- Background: PSAT in TUSD
- PSAT AP Potential
- ACT AP Potential
- Key comparisons
- Application to TUSD data
- Potential impacts
- Summary

Background: PSAT in TUSD

- All students in grades 9, 10, 11
 - Whole-grade testing originated as USP requirement:

Unitary Status Plan, Page 31: Increase the number of AAC (Advanced Academic Courses) offerings, as appropriate, to provide equal access and equitable opportunities for all students to participate in these courses, including expanding the number of AP courses offered at District high schools and the number of grades in which such courses are offered.

- National Merit qualifying exam when taken by 11th grade
- AP Potential

Background: PSAT in TUSD

- Current practice is highly resource intensive:

Annual budgetary
expense for testing

\$150,000 (A&E)

Opportunity costs

- Time-consuming accommodations process begins in August
- STC time and effort to prepare for and administer testing for up to 1,800 students in a single day
- STC time and effort for make-up testing
- Lost instructional time

Background: PSAT in TUSD

- Prior to 2021-22, there was no alternative for equitably identifying student AP Potential
- Two important changes since then:
 - ACT published research with AP Potential cut scores for ACT, ACT Aspire, and Pre-ACT
 - Arizona Department of Education adopted ACT and ACT Aspire as the state's mandatory assessments for high school accountability

Background: PSAT in TUSD

- In addition to this, student interest in AP courses has declined in favor of dual credit offerings:

Course Type	40 th Day Enrollment as % of all HS					
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
AP	28%	24%	24%	22%	21%	20%
Dual Credit	7%	8%	12%	13%	14%	14%

Background: PSAT in TUSD

- These changes present TUSD with an opportunity to reduce costs while preserving equitable access to AP courses
- This research investigates the feasibility of using ACT/ACT Aspire to identify AP Potential so that PSAT testing can be made optional for all students

PSAT AP Potential

- What is it?
 - Indicator of students with strong chance of passing AP exam
 - Developed by College Board in 2014 using statistical relationship between PSAT performance and AP performance
 - Two possible levels: “**Potential**” and “**Some Potential**”
- **Potential**: $\geq 60\%$ chance of scoring 3+ on corresponding AP exam
- **Some Potential**: 40-59% chance of scoring 3+ on corresponding AP exam

PSAT AP Potential

- How is it derived?
 - Logistic regression model (same method as Quarterly Assessment cut scores and other A&E research)
 - Uses **what is known** to estimate **the probability of a not-yet-known outcome**
 - Model finds PSAT score that corresponds to different probabilities of success on AP Exam
 - AP Potential is based on different combinations of Reading/Writing and Math subtest scores depending on the subject
 - Score (or combination of scores) used depends on which has the strongest link to AP exam success

Further reading:

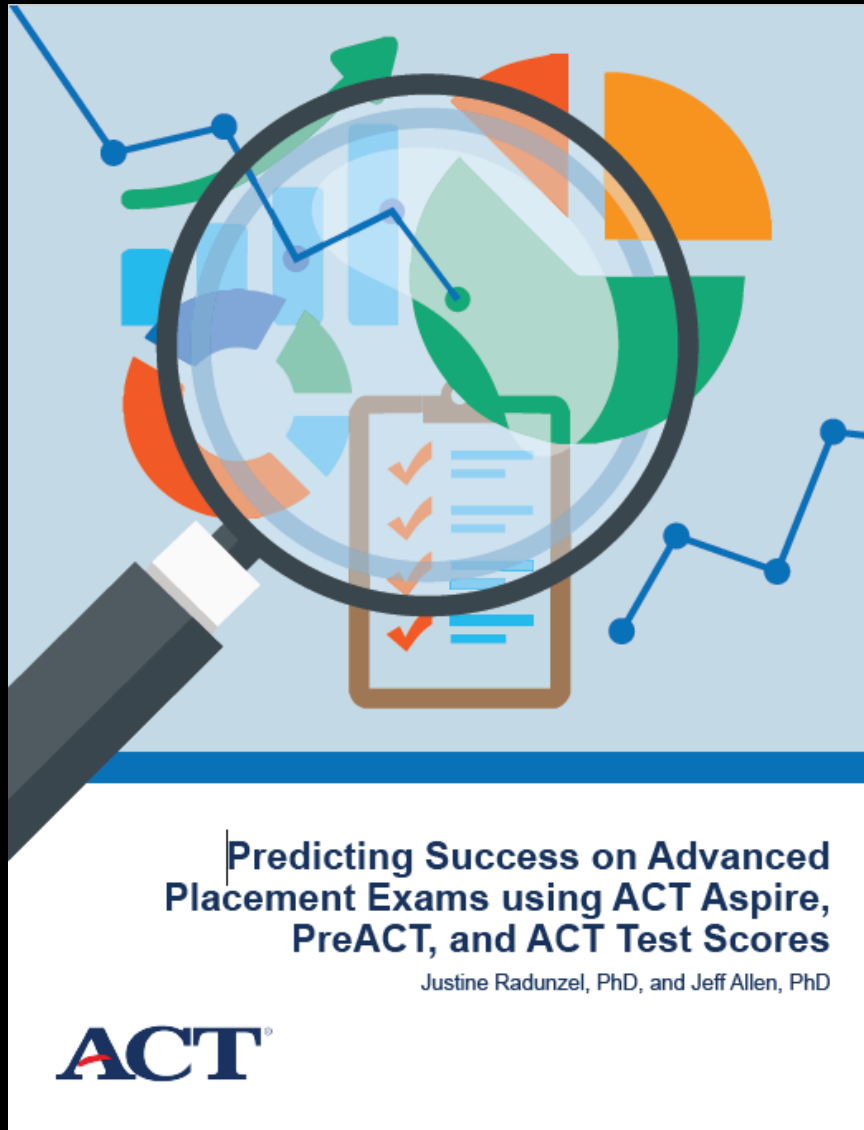
[AP Potential Score Correlations](#)

[AP Potential Expectancy Tables](#)

Zhang, X., Patel, P., Ewing, M. (2014). [AP Potential Predicted by PSAT/NMSQT Scores Using Logistic Regression](#). (College Board Research Statistical Report 2014-1). New York: The College Board.

ACT AP Potential

- What is it?
 - In 2020, ACT researchers replicated the **same methods** used by CollegeBoard in 2014
 - ACT, ACT Aspire, and Pre-ACT all showed similar correlations and classification accuracy
 - The researchers published detailed score correspondence tables for ACT Aspire, Pre-ACT, and ACT



ACT AP Potential

Example of score correspondence table and how it can be used by districts to set cut scores for AP Potential

Further reading:
 Rdaunzel, J., Allen, J. (2020). [*Predicting Success on Advanced Placement Exams Using ACT Aspire, PreACT, and ACT Test Scores*](#). (ACT Research & Policy Research Report). Iowa City: ACT, Inc.

Table A9. Probabilities of AP Exam Success by PreACT/ACT or ACT Aspire E+R Score for AP US History and AP World History

E+R score		AP US History				AP World History			
		3 or higher		4 or higher		3 or higher		4 or higher	
PreACT/ACT	ACT Aspire	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring
20	824-825	0.038	0.023	0.016	0.010	0.075	0.036	0.031	0.013
21	826-827	0.041	0.027	0.018	0.011	0.085	0.041	0.034	0.014
22	828-829	0.047	0.031	0.020	0.013	0.095	0.048	0.038	0.016
23	830-832	0.053	0.035	0.022	0.014	0.107	0.054	0.042	0.018
24	833-834	0.061	0.040	0.025	0.016	0.121	0.062	0.047	0.021
25	835-837	0.069	0.046	0.028	0.018	0.135	0.071	0.052	0.023
26	838-839	0.078	0.052	0.032	0.020	0.151	0.082	0.058	0.026
27	840-841	0.089	0.059	0.036	0.023	0.168	0.093	0.065	0.030
28	842-844	0.101	0.067	0.040	0.026	0.188	0.106	0.072	0.034
29	845-846	0.114	0.077	0.045	0.029	0.208	0.121	0.079	0.038
30	847-848	0.128	0.087	0.050	0.033	0.231	0.137	0.088	0.043
31	849-850	0.144	0.099	0.056	0.037	0.255	0.155	0.097	0.048
32	851-852	0.162	0.112	0.063	0.042	0.280	0.175	0.107	0.055
33	853	0.182	0.127	0.071	0.047	0.307	0.197	0.118	0.062
34	854-855	0.203	0.143	0.079	0.053	0.336	0.221	0.130	0.069
35	856-857	0.226	0.161	0.088	0.060	0.365	0.246	0.143	0.078
36	858	0.251	0.180	0.098	0.067	0.396	0.274	0.158	0.087
37	859-860	0.277	0.202	0.109	0.075	0.427	0.304	0.173	0.098
38	861	0.305	0.225	0.121	0.084	0.460	0.335	0.189	0.109
39	862-863	0.335	0.250	0.135	0.094	0.492	0.368	0.207	0.122
40	864	0.366	0.277	0.149	0.105	0.525	0.403	0.226	0.136
41	865-866	0.398	0.305	0.165	0.117	0.557	0.438	0.246	0.152
42	867	0.432	0.335	0.182	0.131	0.589	0.474	0.267	0.169
43	868	0.465	0.367	0.201	0.146	0.620	0.510	0.289	0.187
44	869	0.499	0.400	0.221	0.162	0.650	0.546	0.312	0.207
45	870-871	0.533	0.435	0.242	0.179	0.679	0.581	0.337	0.229
46	872	0.567	0.468	0.265	0.198	0.707	0.616	0.362	0.252
47	873	0.600	0.502	0.289	0.218	0.733	0.650	0.388	0.276
48	874	0.633	0.537	0.314	0.240	0.758	0.682	0.414	0.302
49	875	0.664	0.571	0.340	0.263	0.781	0.712	0.442	0.329
50	876	0.694	0.605	0.368	0.288	0.803	0.741	0.469	0.357

Key Differences

PSAT

- In TUSD, students test in grades 9, 10, and 11 (approx. 9,000 per year)
- Students test in the Fall
- Students who take PSAT 8/9 (most 9th graders) can only receive AP Potential for World History and European History
- Whole-grade testing originated as a USP requirement (negotiable)

ACT

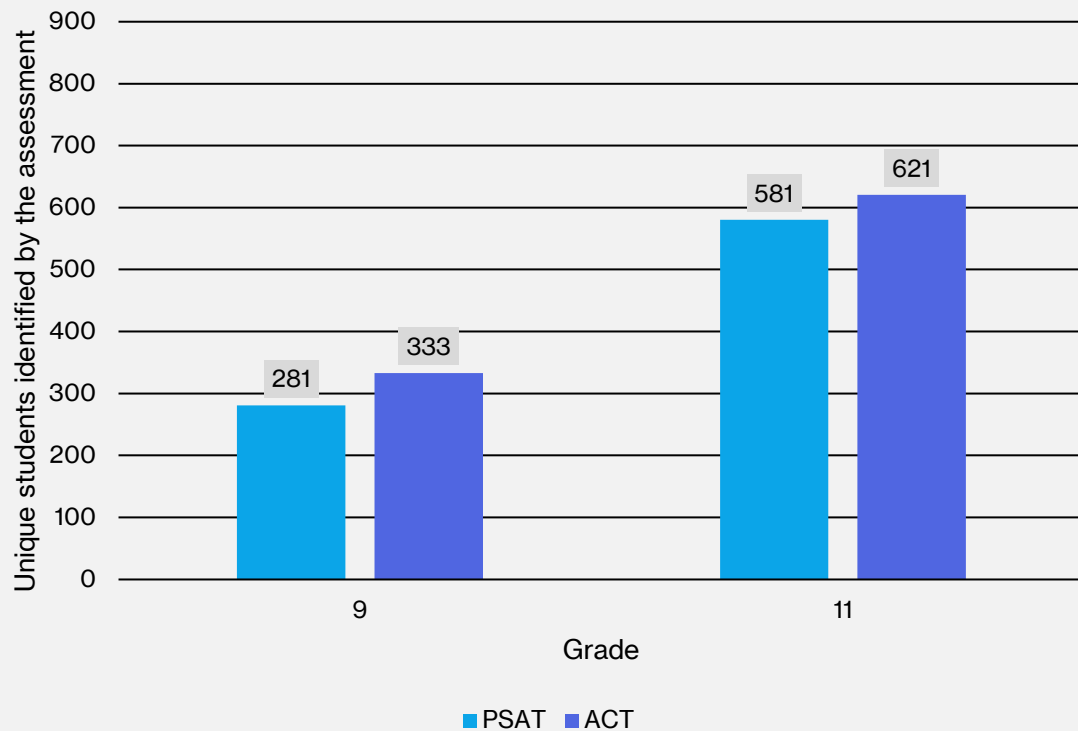
- In TUSD, students test in grades 9 (ACT Aspire) and 11 (ACT) (approx. 6,000 per year)
- Students test in the Spring
- All students can receive AP Potential for all available subjects
- Research not available for two subjects that do appear in PSAT results tables:
 - Govt & Pol: Comp
 - Physics 2
- Whole-grade testing originated as a state accountability requirement (non-negotiable)

Potential impacts in TUSD - Method

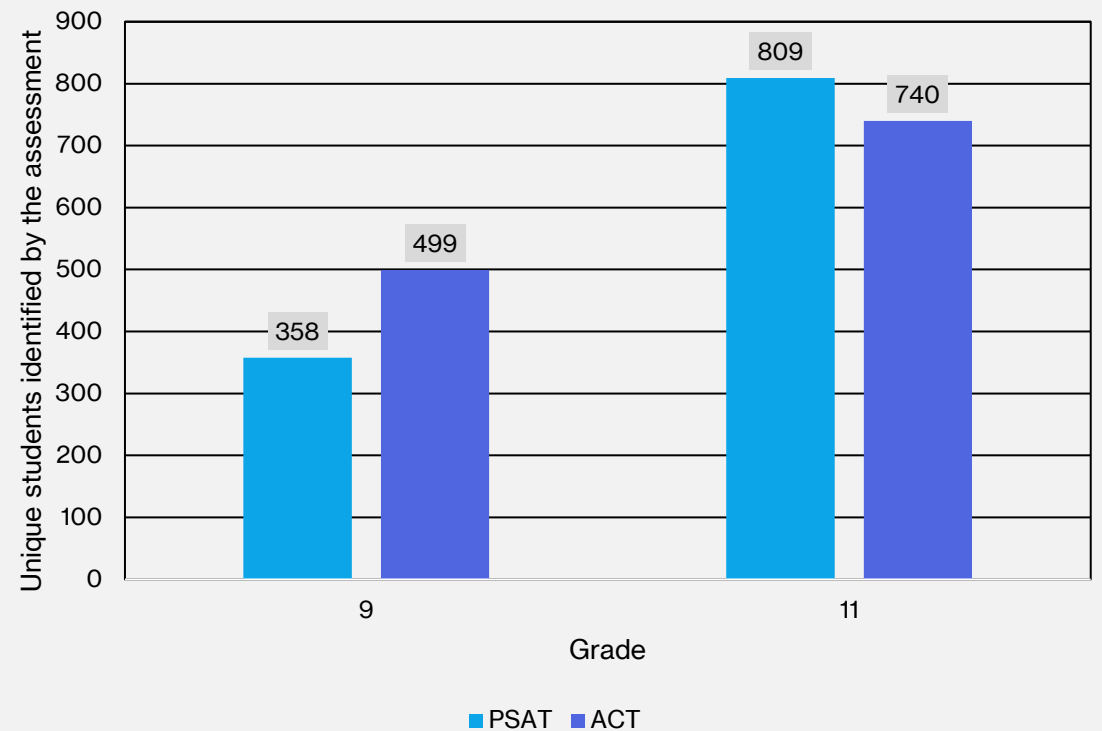
- Used ACT research to populate alternative AP Potential indicators for all students tested with ACT and ACT Aspire in 2021-22 and 2022-23
- Compared this with AP Potential indicators reported for these students by PSAT 8/9 and PSAT NMSQT

Findings – Students With Potential or Some Potential

Students Identified as Having **AP Potential**
(averaged over two years)



Students Identified as Having **Some AP Potential**
(averaged over two years)



Findings – Students With Potential or Some Potential

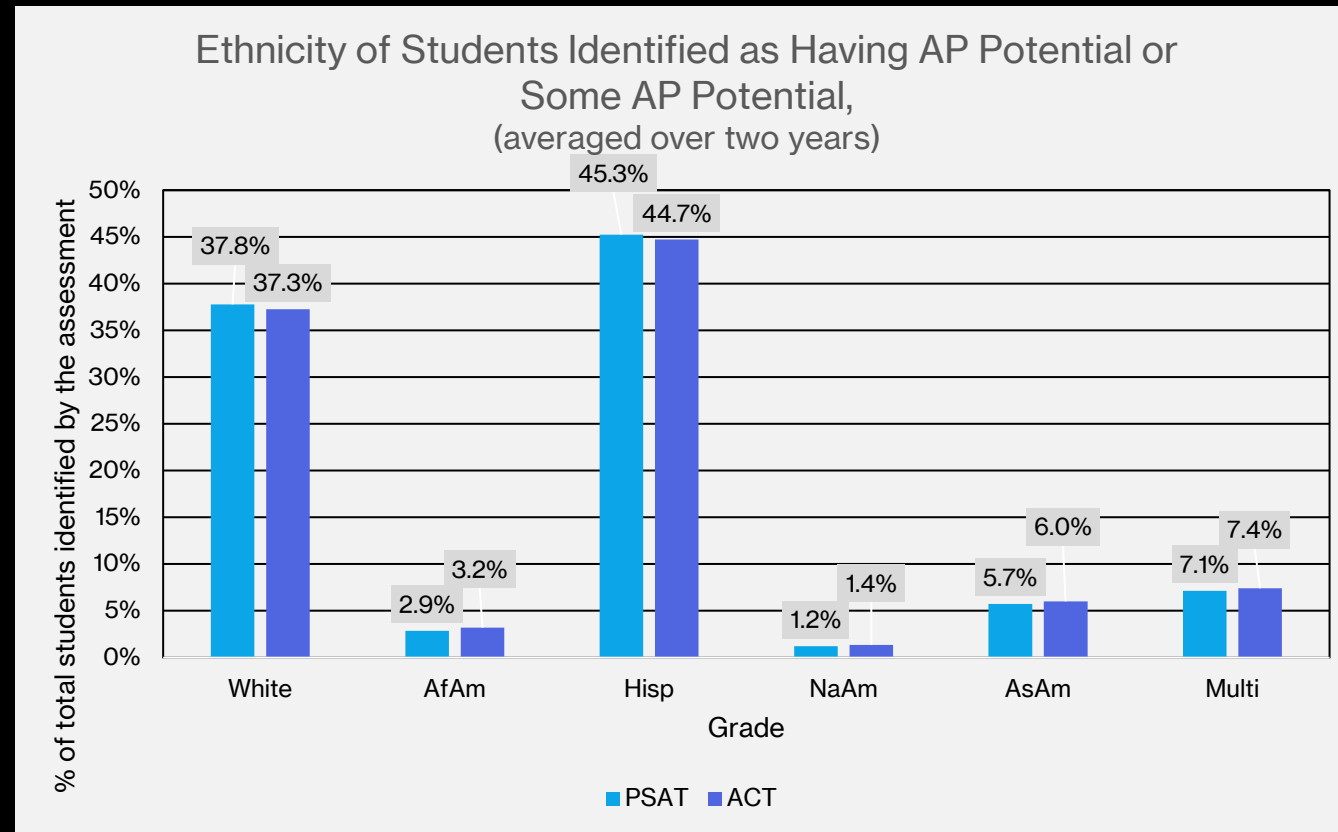
- In grades where both tests are taken, **ACT** generally identifies more students
- **PSAT** and **ACT** also identify students at similar rates:

Students identified with AP Potential as a percent of all testers		
Tested Grade	PSAT	ACT
Grade 9	9.7%	10.2%
Grade 11	23.0%	21.9%

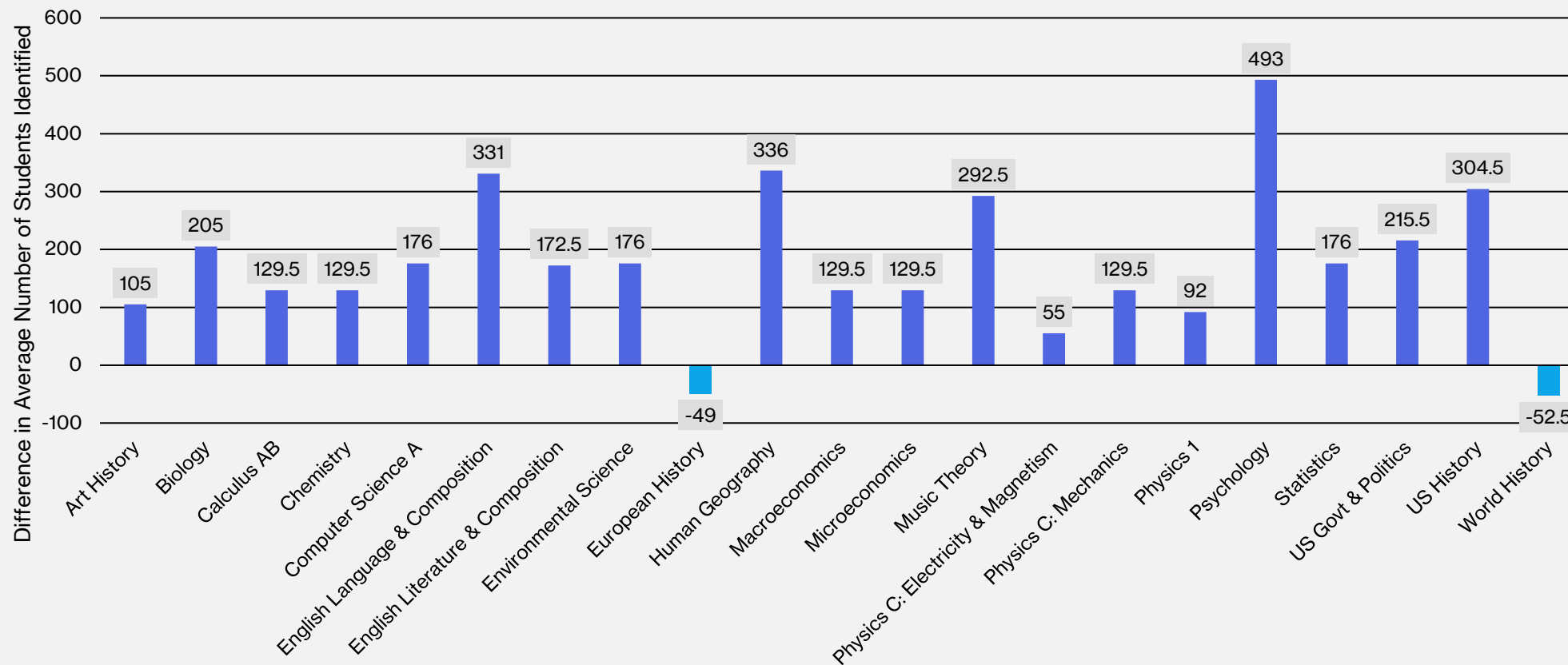
Students identified with Some AP Potential as a percent of all testers		
Tested Grade	PSAT	ACT
Grade 9	12.4%	15.3%
Grade 11	32.1%	26.1%

Findings – Students With Potential or Some Potential

- Identified students also have similar ethnic distributions:



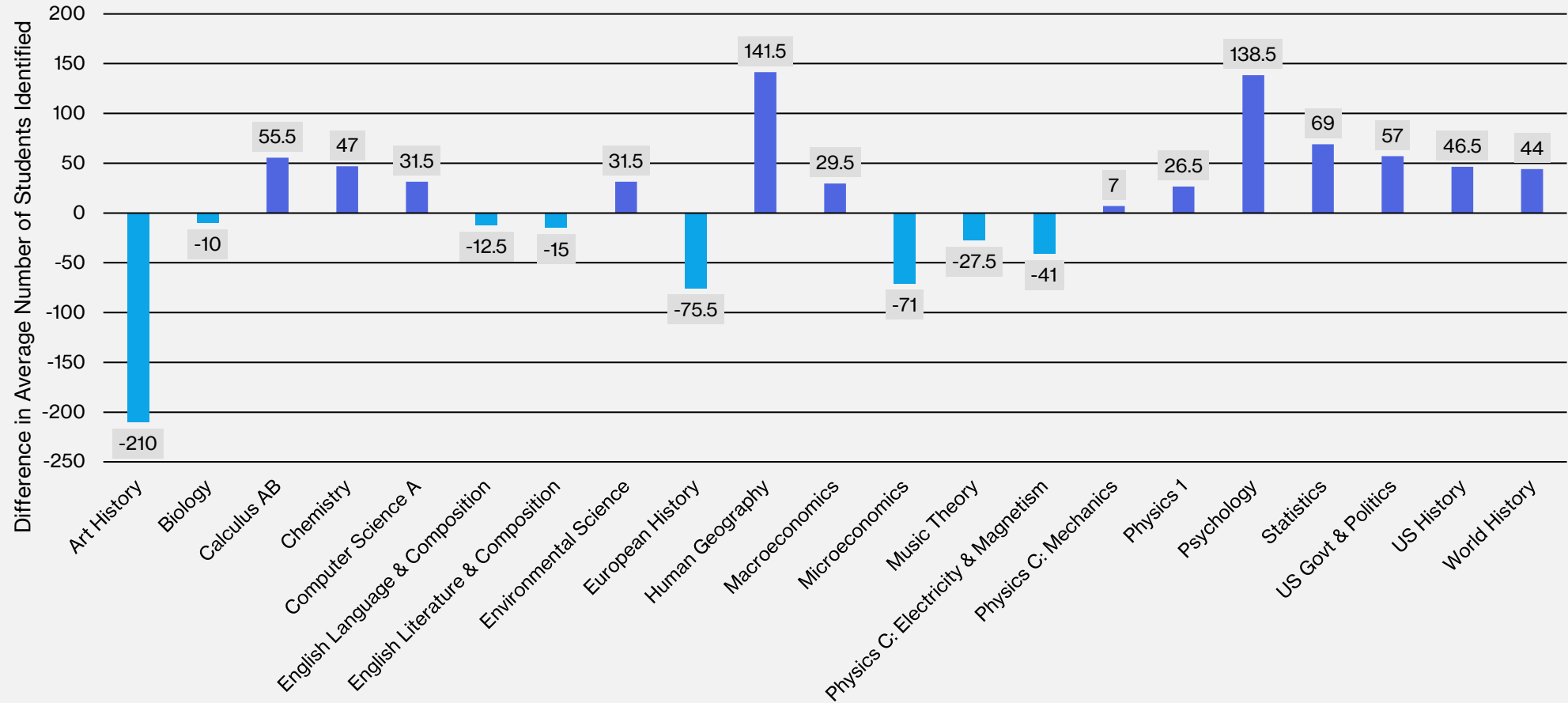
Difference in # of **Grade 9** students identified as having AP Potential or Some AP Potential
PSAT vs. ACT
 (two-year average)



Findings – **Grade 9** AP Potential

*Gov't & Pol: Comp. and Physics 2 omitted

Difference in # of **Grade 11** students identified as having AP Potential or Some AP Potential
PSAT vs. ACT
 (two-year average)



Findings – **Grade 11** AP Potential

*Gov't & Pol: Comp. and Physics 2 omitted

Findings – AP Potential by Course

- A true apples-to-apples comparison is possible only for Grade 11
 - No **ACT** in Grade 10
 - **PSAT** does not identify all courses in Grade 9
- **ACT** identifies many more 9th graders for AP Potential/Some Potential due to wider course availability
- Courses for which **ACT** identifies more 11th graders as having AP Potential or Some AP Potential (**purple** course titles are among the top 5 most popular 12th grade AP courses in TUSD):
 - **Calculus AB**
 - Chemistry
 - Computer Science A
 - Environmental Science
 - Human Geography
 - Macroeconomics
 - Music Theory
 - Physics C: Mechanics
 - Physics 1
 - Psychology
 - **Statistics**
 - **US Gov't & Politics**
 - US History
 - World History

Findings – Comparison by Grade-Level Course Enrollment

Most Popular AP Courses Grade 10

Course	2023-24 Enrollment
World History	407
European History	176
Chemistry	133
Computer Science Principles	79
Spanish Language	49

AP Potential Grade 9 PSAT

Course	N
World History	485
European History	284.5
Chemistry	0
Computer Science Principles	0
Spanish Language*	0

AP Potential Grade 9 ACT

Course	N
World History	432.5
European History	235.5
Chemistry	129.5
Computer Science Principles	176
Spanish Language*	0

*PSAT and ACT do not identify AP Potential for non-English language courses

Findings – Most Common Subjects with AP Potential

Most Common AP Potential Grade 9 PSAT	
Course	N
World History	485
European History	284.5
Physics 2	205
Human Geography	189.5
Art History	187.5

Highlighted courses have high numbers of students with AP Potential but are not among the most popular in TUSD for the subsequent grade

Most Common AP Potential Grade 9 ACT	
Course	N
Human Geography	525.5
Psychology	493
World History	432.5
English Language & Composition	331
US History	304.5
Art History	292.5
Music Theory	292.5
European History	235.5
US Govt & Politics	215.5
Biology	205

Findings – Comparison by Grade-Level Course Enrollment

Most Popular AP Courses Grade 11

Course	2023-24 Enrollment
US History	462
English Language & Composition	377
Physics 1	183
Psychology	77
Spanish Language	69

AP Potential Grade 9-10 PSAT

Course	N
US History	372.5
English Language & Composition	475
Physics 1	120.5
Psychology	510
Spanish Language	0

AP Potential Grade 9 ACT

Course	N
US History	304.5
English Language & Composition	331
Physics 1	92
Psychology	493
Spanish Language	0

Findings – Most Common Subjects with AP Potential

Most Common AP Potential Grade 10 PSAT	
Course	N
Physics 2	658
Art History	644
Human Geography	545
World History	545
Psychology	510
English Language & Composition	475
Music Theory	450.5
European History	393.5
US History	372
Biology	331.5

Findings – Comparison by Grade-Level Course Enrollment

Most Popular AP Courses Grade 12

Course	2023-24 Enrollment
US Govt & Pol	354
English Literature & Composition	228
Statistics	147
Biology	136
Calculus AB	116

AP Potential Grade 11 PSAT

Course	N
US Govt & Pol	396
English Literature & Composition	636
Statistics	358.5
Biology	485
Calculus AB	310

AP Potential Grade 11 ACT

Course	N
US Govt & Pol	436
English Literature & Composition	365.5
Statistics	393.5
Biology	455.5
Calculus AB	333.5

Findings – Most Common Subjects with AP Potential

Most Common AP Potential Grade 11 PSAT	
Course	N
Physics 2	836
Art History	805
Human Geography	722.5
World History	722.5
Psychology	683
English Language & Composition	636
Music Theory	622.5
European History	559
US History	530
Biology	485

Most Common AP Potential Grade 11 ACT	
Course	N
Human Geography	837.5
Psychology	795
World History	741.5
English Language & Composition	601.5
Art History	573.5
Music Theory	573.5
US History	556
European History	466.5
Biology	455.5
US Govt & Pol	436

Findings - Current enrollment capacity versus ACT AP Potential

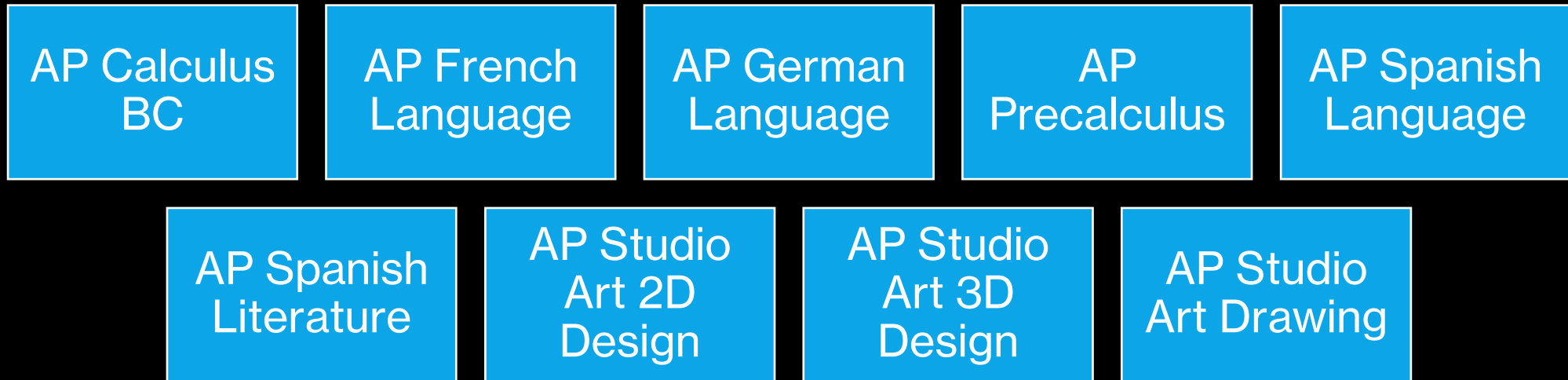
Course Title	Number of Sections Offered	Number of Students Enrolled (S1 23-24)	Total Capacity	ACT AP Potential - Grade 9	ACT AP Potential - Grade 11	ACT AP Potential - Total	Excess Demand (AP Potential beyond Total Capacity)
AP Art History	1	8	33	292.5	595	887.5	854.5
AP Biology	11	221	363	205	475	680	317
AP Calculus AB	7	134	231	129.5	365.5	495	264
AP Chemistry	9	202	297	129.5	365.5	495	198
AP Computer Science	7	80	231	176	427.5	603.5	372.5
AP Computer Science Principles	12	188	396	176	427.5	603.5	207.5
AP Engl Lang & Com-CRC Mexican Am&African Am Eng	8	208	264	331	623.5	954.5	690.5
AP Engl Lit & Comp-CRC Mexican Am&African Am Eng	1	15	33	172.5	379	551.5	518.5
AP English Language 1 (English Language and Comp)	10	176	330	331	623.5	954.5	624.5
AP English Literature 1 (Eng Lit and Comp)	11	229	363	172.5	379	551.5	188.5
AP Environmental Science EnvSci	15	430	495	176	427.5	603.5	108.5
AP European History	7	189	231	235.5	483.5	719	488
AP Human Geography	13	352	429	525.5	864	1389.5	960.5
AP Literature WRT 101 S1 (dual credit)	2	16		172.5	379	551.5	551.5
AP Macroeconomics	6	116	198	129.5	365.5	495	297
AP Microeconomics	7	126	231	129.5	365.5	495	264
AP Music Theory	2	21	66	292.5	595	887.5	821.5
AP Physics 1: Algebra-Based	10	205	330	92	245.5	337.5	7.5
AP Physics C Electricity and Magnetism (E&M)	2	29	66	55	194.5	249.5	183.5
AP Physics C Mechanics	2	30	66	129.5	365.5	495	429
AP Physics:Mechanics 1 PhysMech	1	2	33	129.5	365.5	495	462
AP Psychology	11	233	363	493	821.5	1314.5	951.5
AP Statistics	8	177	264	176	427.5	603.5	339.5
AP United States History	18	477	594	304.5	576.5	881	287
AP US Government and Politics	17	363	561	215.5	453	668.5	107.5
AP World History - Modern	20	424	660	432.5	766.5	1199	539

Findings – Comparison by Grade Level Course Enrollment

- **ACT** AP Potential identifies more than enough students to fill all available seats for all AP courses for which AP Potential can be generated
 - For all but one course (Physics 1), there are >100 students with **ACT** AP Potential than there are seats to fill
- **ACT** provides AP Potential for 9th graders in two popular 10th grade subjects that **PSAT** does not:
 - Chemistry
 - Computer Science Principles

Findings – Comparison by Grade Level Course Enrollment

- AP courses offered in TUSD that do not have a corresponding AP Potential indicator from **PSAT** or **ACT**:



Summary

PSAT

Advantages

- The only National Merit qualifying exam
- Identifies more than enough students to meet enrollment needs

Disadvantages

- Requires a large amount of resources to administer whole-grade testing for three grades
- Assesses AP potential for only two courses for most 9th graders

ACT

Advantages

- No additional resources required: already administered whole-grade for state accountability
- Assesses potential for a wider variety of AP courses in 9th grade; may identify students earlier in their academic careers
- Identifies more than enough students to meet enrollment needs
- Identifies more students than PSAT in Grade 9 and nearly the same number of students in Grade 11

Disadvantages

- Not a National Merit qualifying exam; interested students will still need to take PSAT

Conclusion & Next Steps

- Consequences of eliminating whole-grade **PSAT** testing and using **ACT** to identify AP Potential:

AP Potential will be generated from ACT scores by A&E

AP Potential will be identified **earlier** in a student's HS career

Enough students will be identified as having AP Potential to **exceed enrollment needs**

Students with AP Potential will be **demographically similar** with ACT as they were with PSAT

Students will need to **opt in** to PSAT testing to be eligible for National Merit

Students who opt in to PSAT testing will **still be eligible** to receive PSAT AP Potential

UHS will be able to continue with site-level whole-grade PSAT testing

Reduced workload for overburdened STCs

Shift in focus of work from administration of PSAT to outreach to potential National Merit Scholars

Conclusion & Next Steps

- Recommendations:
 - Eliminate requirement for whole-grade **PSAT** testing
 - Use **ACT Aspire** and **ACT** scores as alternative means of identifying AP Potential (A&E)
 - Recruit underrepresented students with National Merit interest/potential for opt-in **PSAT** testing (ALE, schools)