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To: Provost Edward Feser
From: Jon Boeckenstedt, Vice Provost for Enrollment Management
Re: Recommendation on Admissions and Testing at OSU
Date: January 13, 2020

Most adults in the United States who attended a four-year college immediately after high school remember taking either the SAT or ACT as a part of the admissions process; taking the tests has become a *de facto* rite of passage for many teenagers considering university enrollment, and the results of the examinations serve as powerful sorting mechanisms for university admissions offices, despite many concerns and objections about the appropriateness of the tests for that purpose, and despite substantial research indicating that the tests measure social capital and opportunity more than they measure college readiness.

In recent years, a growing number of colleges and universities across the nation have conducted research on the efficacy of standardized admissions tests in predicting academic performance, and have examined issues of equity and justice in the use of them in the admissions process. As a result, many institutions have dropped the requirement of a standardized test for admission (making it optional for students who wish to submit), and a few have even completely eliminated consideration of the tests in the admissions process for all applicants, becoming "test-blind."

As Oregon State University examines the issues surrounding the use of standardized testing in the university admissions process, it is important to consider the SAT and ACT in context, including the history of tests, their use today, their value, and whether the use of the tests is consistent with our mission and commitment to access as Oregon's Land Grant University.

It is Enrollment Management's recommendation that Oregon State eliminate the requirement for undergraduate applicants to submit standardized tests for admission as soon as the Fall, 2021 term. In order to fully implement this policy, it is recommended that we make formal announcement no later than the Spring of 2020.

A BRIEF HISTORY OF TESTS

In 1899, the presidents of 12 universities found the College Entrance Examination Board, which created a single, five-day examination consisting of multiple essays on topics ranging from Latin and Greek to physics and history. But the development of IQ tests about 1905, coupled with early discussions about diversifying the enrollment at those institutions (which meant economic diversity at that time), led those leaders to wonder if there might be a way to identify natural intelligence even among those who did not have the advantages of a first-rate (private) education. A Princeton researcher named Carl

Brigham had developed an IQ-like test that he believed would identify native intellect for the US Military, in order to sort candidates quickly and efficiently for proper role assignment, and universities asked him to develop a version to use for college admissions.

That test, first administered as a trial in 1926, became the original SAT (Scholastic Aptitude Test), which was originally purported to measure native ability or "aptitude" (the "A" in SAT no longer stands for anything; the SAT is no longer considered an acronym). Brigham, who was connected to the American eugenics movement, believed that the test would favor those of Nordic (British and Northern European) ancestry, whom he believed had superior native intellect and were thus worthy of an elite education. The participating universities believed the test would create a level playing field for public school students outside the northeast who were competing with graduates of Exeter and Andover. (It is important to note that Brigham later retracted his statements and repudiated his research.)

Harvard experimented with using the original SAT only for scholarship applicants, believing the reputation of the private preparatory schools from which it selected the majority of non-scholarship candidates was sufficient to ensure preparation, but later began administering it for all candidates for admission.

Joseph Soares, in the book *SAT Wars* (published 2011), notes that in the 1920's and 30's, many in university administration also found the SAT a convenient way to limit the enrollment of recent Jewish immigrants, who worked hard and had exceptional grades, but who lacked the social capital that was expected of the gentlemen who enrolled at prestigious private universities of the day. Over time, the SAT took hold at many of these universities, almost exclusively in the Northeastern US, but it was still not widely used at public universities.

Until the mid-1950's, most public universities in America did not require the SAT or any achievement test, relying instead upon information on performance in accredited high schools in their state. It was only when UC Berkeley, seeing itself in competition with Harvard and wanting to look more like it, started requiring the examination for admission, that the adaptation of the SAT became more widespread. Soon, researchers connected to the University of Iowa created the ACT, which was widely adopted by large public universities in the Midwest as a replacement for the SAT. The belief in the value of the tests soared, especially as college enrollment did, and soon virtually every four-year college or university in America required the exam for admission, even if they were not using it to make distinctions between and among candidates. Thus, virtually every adult in the US alive today who enrolled in a four-year university has known no other admissions system than the one that requires testing.

Researchers have long known that high school grades in college preparatory courses are by far and away the best predictor of college grades, and that standardized tests (which are consistent with high school performance about 70% of the time, thus adding no additional information) add almost nothing to a university's ability to predict academic performance. Still, the SAT has often been valued for other reasons. In the early 1960's, as Yale adopted a "need-blind" admission policy, researchers knew that the SAT could serve as a powerful predictor of family income, and thus continuing to require the test helped to assure that the financial aid budget would not be overspent. Nearly 60 years later, the test scores of wealthier applicants remain higher—by a substantial margin—than students from lower income families. This is no secret, and a fact that the testing companies acknowledge. Why this is true is subject to great debate, and sorting out the factors contributing to these differences is difficult. There is

widespread agreement that attending K-12 schools with greater resources and having college-educated parents are both advantageous. Others point to the ability of wealthier students to afford to take the test multiple times, and to pay for expensive test-preparation services as contributing to the advantages already conferred by wealth. After decades of adhering to claims that test preparation was not effective, both the College Board and ACT have launched their own test preparation websites in the last few years.

TEST OPTIONAL APPROACHES

In recent years, the number of colleges and universities who have eliminated the SAT or ACT as a requirement for freshman admission has grown substantially. While test opponents point to over 1,000 post-secondary options for students without tests, many of these institutions never required tests in the first place. But even among the institutions viewed as competitive in admission, the number is growing.

The National Center for Fair & Open Testing (Fairtest), for instance, lists over 365 four-year institutions in their respective "Top Tier" of US News and World Report that do not require tests for some or any candidates. Some of these are "test flexible" and some are public institutions bound by state mandates (The public universities in Texas, for instance, who operate under legislative mandate to admit any state resident in the top 8% of the high school graduating class, regardless of scores.) The highest profile institution to adopt a test-optional approach is the University of Chicago.

There are several reasons for this move away from reliance on test scores:

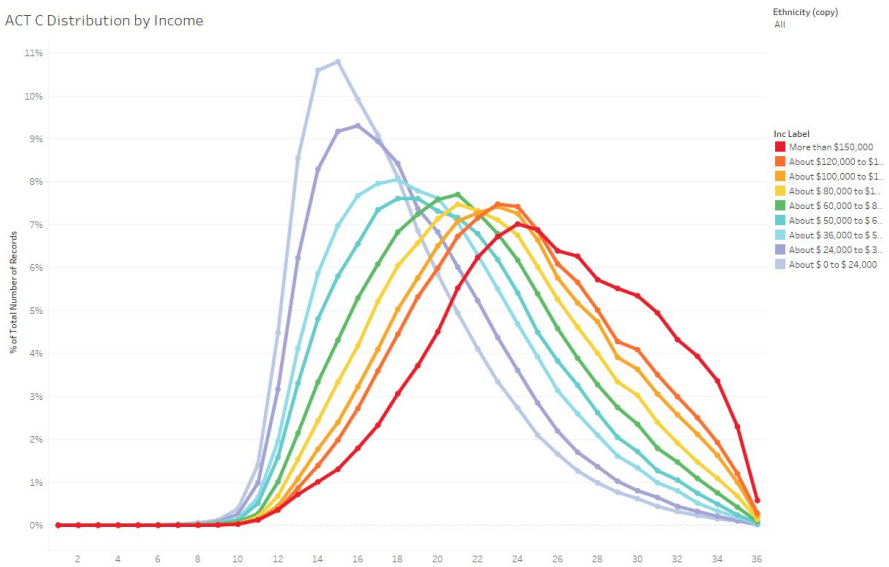
- Most research conducted by colleges and universities on their own data, going back to 1984 with Bates College, and 20 years to the original California study, suggest that tests uniquely explain just a small percentage of the variance in freshman grades, and little if anything with regard to retention or graduation. In short, many believe colleges don't need tests to make good admissions decisions.
- The largest single longitudinal study of test-optional admissions suggests the practice increases applications as well as representation of under-represented groups, and that students who apply without tests perform as well as those who do not, controlling for other factors.
- Even those studies that support tests (many of which are funded by The College Board or ACT) concede that the high school GPA in college prep classes is the best predictor of college grades.
- In fact, the considerable and substantial work of Saul Geiser in the Office of the Provost at UC Berkeley has determined that HS GPA is the only thing that helps an admissions office decide whether a candidate is capable of doing university-level academic work, and that concerns about grade inflation or unequal high school quality are substantially overstated.
- While tests do measure some cognitive ability, speed processing is among the most obvious of these, and there is no available research on the benefits of speed in college classes conducted over a quarter or semester.
- While the tests could be used by themselves as a proxy for high school performance (about 70% of tests have scores consistent with high school GPA), they under-predict performance for women and under-represented students of color, and over-predict for men and Caucasian students. Wayne Camara, the former VP at College Board, and now at ACT, says the issue of women's performance is among his greatest puzzles, given that girls and women at all levels of education have higher grades than boys and men.

- The College Board and ACT are nominally not-for-profit companies that sell services to colleges; they are accountable to no government agency or consumer bureau, and are not required to report effectiveness of their products to anyone.
- The above-mentioned advantage of parental resources skew distributions toward wealthier students, who are already more likely to attend college.

For instance: This is a distribution of ACT Composite scores by self-reported family income. Note that we use ACT instead of SAT because College Board data is less accessible at a granular level, but this concordance shows the strong correlation between the two tests, which have become even more alike since the redesign of the SAT in 2016. (All charts are reproduced in full size at the end) For quick reference:

ACT	SAT
36	1600
30	1370
25	1200
21	1080
18	970
15	850

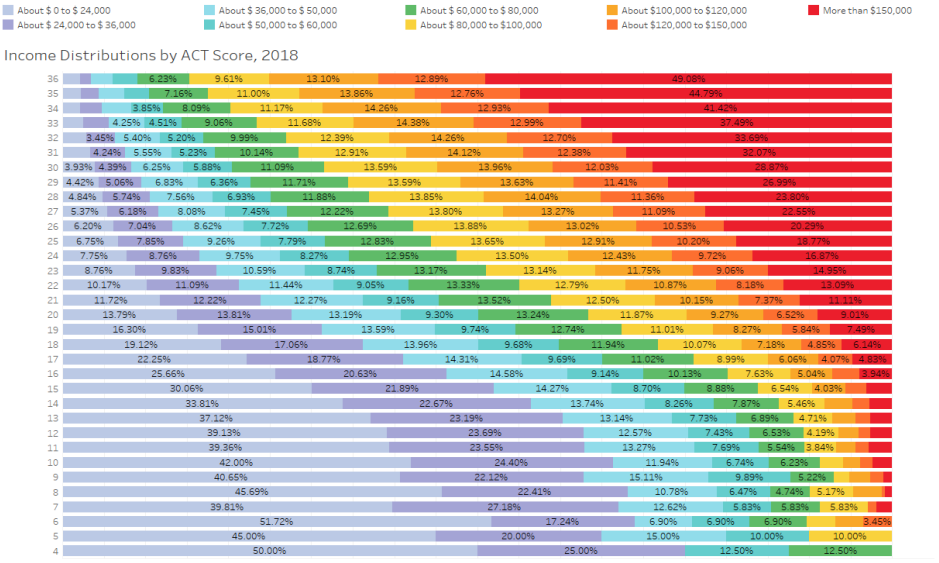
Chart: Distribution of ACT Composite Scores by Self-reported Family Income



These are the same data, broken out by ACT Composite on the y-Axis, showing the percent of scorers at that level by income. For instance, well over 40% of all students who score 34, 35, or 36 (above a 1500 SAT) on the exam have a self-reported family income of $150,000 or more. Conversely, just over 10% of

those who score a 21—the national average, or about 1080 on the SAT—are in this high income category.

Chart: Distribution of Self-reported Family Incomes by ACT Composite Score



The same perfect step-wise pattern is shown by a taker's self-reported ethnicity:

Chart: Distribution of Ethnicity by ACT Composite Score

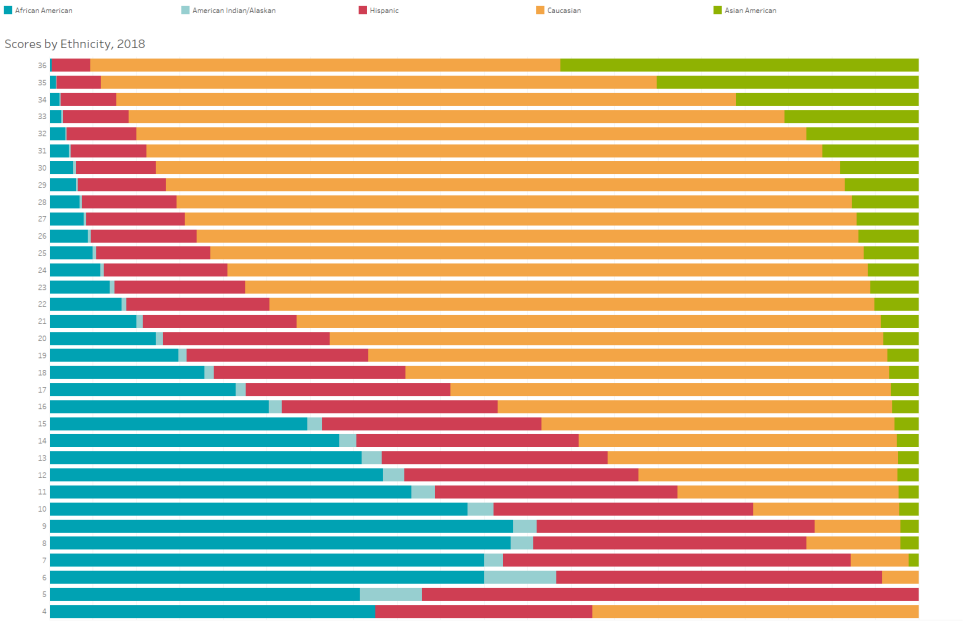


Chart: Mean ACT Composite Scores by Combination of Ethnicity and Family Income

And this is a distribution of ACT Composite Scores by self-reported ethnicity and income. Gold values are lower, while purple values are higher.

Mean ACT by Income and Ethnicity, 2018

	African American	American Indian/Alaskan	Hispanic	Caucasian	Asian American	Grand Total
More than $150,000	20.82	21.66	24.30	25.36	28.80	25.30
About $120,000 to $150,000	19.98	20.66	22.89	24.09	27.47	23.94
About $100,000 to $120,000	19.70	20.10	22.22	23.64	26.78	23.43
About $ 80,000 to $100,000	19.12	19.63	21.36	22.86	25.74	22.53
About $ 60,000 to $ 80,000	18.61	18.86	20.43	22.21	24.48	21.67
About $ 50,000 to $ 60,000	17.80	18.30	19.61	21.44	23.70	20.65
About $ 36,000 to $ 50,000	17.47	17.42	19.14	20.90	22.91	19.92
About $ 24,000 to $ 36,000	16.68	16.67	18.28	19.71	21.88	18.69
About $ 0 to $ 24,000	16.19	16.04	17.47	18.91	21.03	17.78
Grand Total	17.38	17.75	19.51	22.49	24.55	21.31

While data on the SAT from the College Board are not as readily available in raw format, the organization does provide some summary reports of testing outcomes by ethnicity:

CollegeBoard SAT

2017 Total and Section Score User Group Percentile Ranks by Gender and Race/Ethnicity

A student's percentile rank represents the percentage of students whose score is equal to or lower than their score. For example, if a student's score is in the 75th percentile, 75% of a comparison group achieved scores at or below that student's score. SAT User Percentiles are based on the actual scores of students in the graduating class of 2017 who took the new SAT (first offered in March 2016).

Please keep in mind that relationships between test scores and other factors such as educational background, gender, racial/ethnic background, parental education, and household income are complex and interdependent. These factors do not directly affect test performance; rather, they are associated with educational experiences both on tests and in schoolwork.

		Total Group			Female			Male			American Indian/ Alaska Native			Asian/ Asian American		
Total Score	Section Score	Total	ERW	Math	Total	ERW	Math	Total	ERW	Math	Total	ERW	Math	Total	ERW	Math
1600	800	99+	99+	99+	99+	99+	99+	99+	99+	99+	99+	99+	99+	99+	99+	99
1500	750	99	99	97	99	99	98	99	99	96	99+	99+	99+	96	98	87
1400	700	95	95	94	96	95	95	94	95	91	99	99	98	85	91	75
1300	650	88	87	86	90	87	89	86	86	82	96	96	96	70	78	60
1200	600	76	73	76	78	74	80	73	73	71	90	89	90	52	60	46
1100	550	59	57	61	61	57	66	56	56	57	79	76	80	35	42	31
1000	500	40	39	40	41	38	44	38	39	37	59	57	59	19	26	17
900	450	22	22	25	23	21	27	22	23	23	38	37	41	9	13	9
800	400	9	10	12	9	9	13	10	11	12	19	18	23	3	5	3
700	350	2	3	4	2	2	4	2	3	4	5	5	8	1	1	1
600	300	1-	1	1	1-	1-	1-	1-	1	1	1-	1	1	1-	1-	1-
500	250	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-
400	200	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-
Mean		1060	533	527	1050	534	516	1070	532	538	963	486	477	1181	569	612
Standard deviation		195	100	107	187	97	101	203	103	112	173	91	94	195	99	112
Number		1,715,481			906,019			809,462			7,782			158,031		

		Black/ African American			Hispanic/Latino			Native Hawaiian/ Pacific Islander			White			Two or More Races		
Total Score	Section Score	Total	ERW	Math	Total	ERW	Math	Total	ERW	Math	Total	ERW	Math	Total	ERW	Math
1600	800	99+	99+	99+	99+	99+	99+	99+	99+	99+	99+	99+	99+	99+	99+	99+
1500	750	99+	99+	99+	99+	99+	99	99+	99+	99	99	98	98	98	98	97
1400	700	99	99	99	99	98	98	99	99	98	94	93	93	94	93	93
1300	650	98	96	97	95	94	94	95	94	94	84	81	83	84	82	83
1200	600	93	90	93	88	85	88	88	87	88	68	64	70	69	65	72
1100	550	83	79	85	74	71	76	75	73	75	46	43	51	50	46	55
1000	500	67	62	67	54	52	55	54	52	54	26	25	28	30	28	33
900	450	44	40	48	33	31	36	33	31	37	11	11	15	15	13	19
800	400	20	18	26	14	14	18	16	14	19	4	4	6	5	5	8
700	350	5	5	9	3	4	6	3	3	6	1	1	2	1	1	2
600	300	1	1	2	1-	1	1	1-	1-	1	1-	1-	1-	1-	1-	1-
500	250	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-
400	200	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-
Mean		941	479	462	990	500	489	986	498	488	1118	565	553	1103	560	544
Standard deviation		162	87	88	174	92	93	174	88	96	177	92	96	186	95	102
Number		225,860			408,067			4,131			760,362			57,049		

There are many reasons standardized tests continue to hold appeal for many. Robert Sternberg, former provost at Oklahoma State University, lists several including:

- The illusion of quantitative precision: The SAT purportedly measures academic achievement on a 120-point scale, the ACT on a 34-point scale.
- Similarity: Many people in college and university settings got to where they are because they were good on standardized tests.
- Accountability: The ability to shift the blame to malfunctioning tests when students don't perform.
- Public perception and media mania: Rankings in *US News and World Report*, for instance, often cause colleges to report false numbers.
- Tests work to some degree. The standardized tests are predictive, at low to moderate levels, of many outcomes for many groups under fairly diverse circumstances. Whether they add predictive value in addition to that of high school GPA is less clear. Nevertheless, the tests still provide an easy metric for universities.

It is important to recognize the difference between an achievement test like an exam given in a biology class in high school, and a standardized, norm-referenced test. While the former measures performance against a set standard, and everyone taking the test is theoretically capable of earning a high or low grade, a norm-referenced test is explicitly designed to sort students along a standard distribution. Fifty percent of all test takers will always score in the bottom half of the available scores, by design and purpose.

Additionally, standardized tests have very low rates of false positives; the combination of content knowledge, formal preparation, emotional control, and time management necessary to earn a top score is likely attractive to highly selective institutions who have to make fine distinctions between and among extraordinarily qualified applicants. This is not the reality, of course, for the vast majority of colleges and universities in America, including Oregon State, and, in fact, for many of these institutions, building a reputation by denying admission to large numbers of students is actually antithetical to their mission.

Further, the public's fascination and misunderstanding of the SAT and ACT causes many students with high grades predictive of academic success, and low test scores to eliminate themselves from consideration to even moderately selective universities. In short, this blunt instrument—which, by some estimates, reduces classroom instruction on content by as much as 15% in favor of explicit test preparation--sends a false signal to thousands of students a year.

DISCUSSIONS IN CALIFORNIA

Although undergraduate admissions at Oregon State University is selective, we are not so selective that we are forced to make small, or sometimes meaningless, distinctions between and among candidates with similar qualifications. While OSU currently requires the SAT or ACT, the use of test scores in OSU's admissions is both tempered and appropriate; that is, the tests are always viewed in context of a student's opportunity, and are never used as a single "cut factor" for any student. . More recently, we have ceased the use of the SAT or ACT for admission to the honors college.

But there are two pragmatic business reasons that it may be wise for OSU to go test optional. One is a longer-term issue looming on the horizon, and one is more pressing and immediate.

The issue of immediate concern is the possibility that the University of California System may soon eliminate completely the requirement of the SAT or ACT in the admissions process, possibly as soon as the Fall 2021 cycle (that is, the opening of the application in August of 2020, which would require several months of lead time, and thus likely be announced in the spring of 2020). A proposal to eliminate the tests for admission to UC Berkeley has been before the Faculty Senate there for three years; however, a recent lawsuit threatens to bring about the elimination of the tests via legal means, which may not be successful, but has hastened conversations about change in this area. A recent conference resulted in endorsements of the SAT elimination from the chancellors of both UC Berkeley and UC Santa Cruz.

In 2018, California exported over 35,000 students to four-year institutions outside the state. Oregon, with 3,200 Californians enrolled, was second only to Arizona, with 3,700. Among Oregon institutions enrolling California students, U of O enrolled the most (just over 1,200) while OSU (just under 500), the University of Portland (288) and Southern Oregon University (150) all enrolled substantial numbers.

The effects on Oregon State if UC eliminates tests and we continue to mandate them as an admissions requirement are uncertain. On the one hand, applications from California may fall. Over 150,000 freshmen students who lived in California enrolled in four-year private and public universities in 2016, and almost 128,000 of them attended a California institution; 111,000 of them attended public institutions. Assuming a substantial percentage of them considered only a California public institution, it is very likely that the College Board and ACT will reduce substantially the number of testing dates and testing locations if the UC System makes a policy change. OSU requiring the tests would then likely impose a burden at worst, or an inconvenience at best, on applicants. Considering that Boston College saw a sharp drop in applications after simply adding one additional essay question to its application, requiring a test that is more difficult to take is likely to have a negative effect on OSU's applications from California.

On the other hand, it is possible applications from California may grow, if, in the short term students continue to take the tests in substantial (albeit lesser) numbers, and that admission to the public universities in the UC system ends up being disrupted. UC applicants applying to the very top institutions who previously would not have been admitted might now be, while those who were relatively safe bets for a UC campus of their choice under a test requirement may find themselves admitted only to UC campuses they don't really aspire to attend. That could cause an out-state migration of California students who would have stayed in-state, or it could shift more students to community colleges in California.

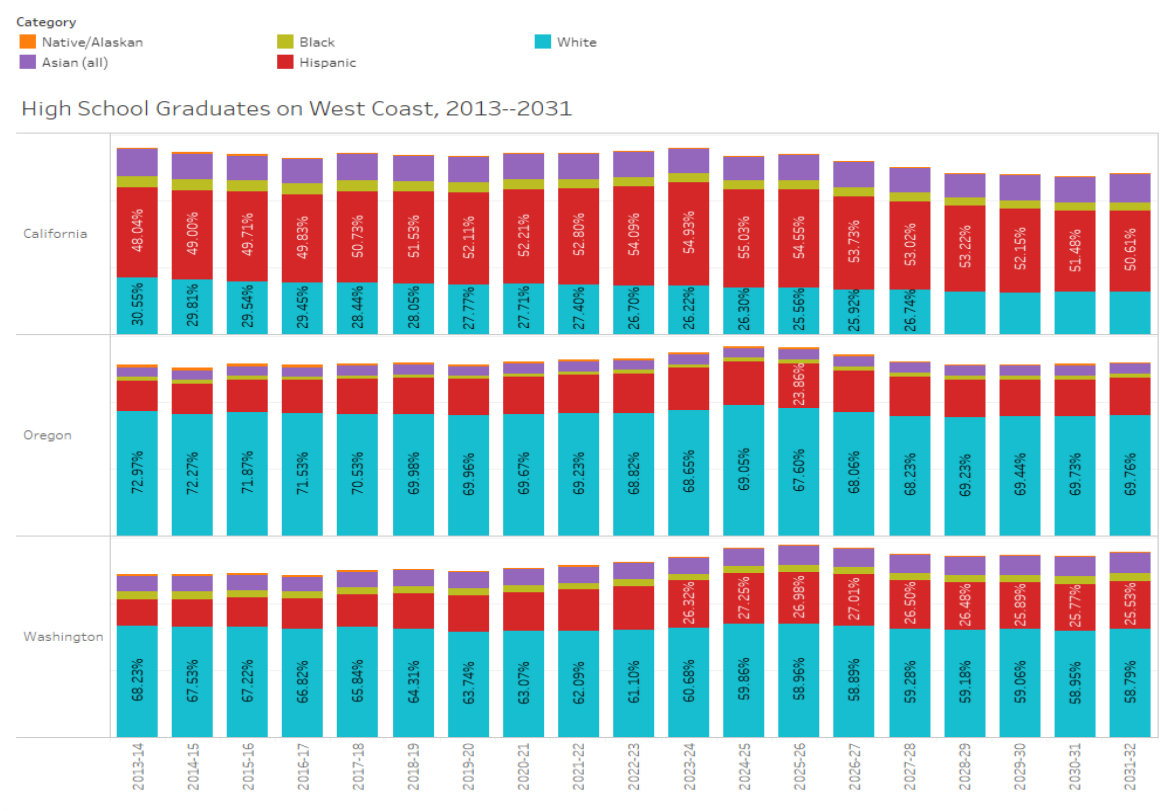
Similarly, students who take one of the exams and who receive a high score may expect to be rewarded for that performance; if the UC System no longer considers that score, or stops considering it as valuable, those students may want to be recognized for it by another institution, and may be more likely to consider institutions where the test is still considered.

Not all of our non-resident students come from California, of course, and OSU is second (behind the University of Portland) in the state in enrolling students from border states Washington, Idaho, and Nevada. It is not clear how a test-optional policy would affect perception of OSU in those states, but Idaho has recently gone to a "Direct Admit" model, where every qualified high school graduate in the state is automatically notified of admission without even applying, and simply needs to notify the

university selected of a confirmation. Imposing a test requirement for those Idaho students may lead to less enrollment, given the perception of significant additional burden.

The longer-term issue centers upon changing demographics within the state of Oregon and the west coast. Looking back five years and forward 12 more, we see an eventual drop in the number of high school graduates, but also a fairly dramatic reshaping of the demographics of the public high school graduating classes in these states; all will see fairly sharp drops in high school graduates in the middle of the 2020s, and it is important for OSU to be responsive to—and on the front lines of—evolving admissions processes. Given the rate of the adoption of test-optional admissions processes (especially once California moves) it is likely that college entrance examinations as we know them will be considerably less prevalent by the middle of the next decade.

Chart: Distribution of High School Graduates over time by Ethnicity: CA, OR, WA



SUMMARY OF PROS AND CONS OF GOING TEST OPTIONAL

Advantages:

- Eliminating a barrier to admission for growing populations of well-qualified high school students from low-income families or students in under-resourced high schools, consistent with Oregon State's land grant and access missions
- Increasing applications from groups traditionally not served well both in the State of Oregon and from outside Oregon
- Increasing enrollment of under-served populations without relying on policies that rely heavily upon explicit use of race or ethnicity, even simply as one factor among many in a holistic review (which require a number of legal considerations and related resource outlay in implementing).
- Test-optional policies are almost universally supported by high school counselors and are gaining prominence nationwide.
- If the pending lawsuits are successful in California, schools that use the tests are similarly vulnerable to equal protection challenges and OSU would be ahead of the curve on that.

Disadvantages:

- There are many people in the media who still believe that standardized tests are an objective measure of academic ability, and who are vocal critics of test-optional policies. While a minority, they are extremely vocal in their opposition to the policy, claiming it is a) done solely to raise test score averages reported to publications, b) a backwards attempt at affirmative action, or c) a lowering of academic standards. These claims are less credible as more universities adopt the approach, and as institutions can point to growing research supporting the elimination of the test requirement.
- We will have to re-engineer many parts of our admission and financial aid policies to eliminate the use of tests.
- While it is very unlikely that we would deny some students we currently admit, it is also likely that we will admit a small number of students we would have normally denied. It will be important for our research going forward to keep track of these students to see if and how we need to revise our admissions approach, if these students turn out to struggle academically. Still, given our historic and continued use of high school GPA and the Insight Resume questions as the basis for most admissions decisions, this is not anticipated to be a problem.

RECOMMENDATION

It is Enrollment Management's recommendation that Oregon State adopt a test-optional admissions policy for students entering as freshman who enroll in Fall, 2021 and beyond. As the preponderance of research suggests the tests add little to our ability to predict academic performance, and as we learn more about the disparate effect of tests on different groups of students, and as many more high-profile institutions adopt a similar approach, it seems prudent to make this move now.

I have had some preliminary communications with the Enrollment Management staff at the University of Oregon, who have confirmed that they, too, are considering a similar move; I believe there would be

great synergy in both the state flagship and the land grant institutions making a simultaneous announcement about a test-optional policy. I also suggest that the state of Oregon and its public educational institutions already have a strong, independent and proud brand that makes such an announcement entirely appropriate.

I would like to implement this change simultaneously with a rigorous, four-year research program designed to study the effects of this move going forward. While hundreds of universities have adopted this approach in the past 30 years, and while none of them have reversed the decision, it is still important for us to understand the ramifications of a major policy decision going forward; if there is any indication that the policy is leading us to make bad admissions decisions, we would reserve the right to revert to requiring tests in the future.

I am happy to discuss this recommendation and to clarify or modify any points as necessary, and look forward to actively discussing this policy with stakeholders at Oregon State.

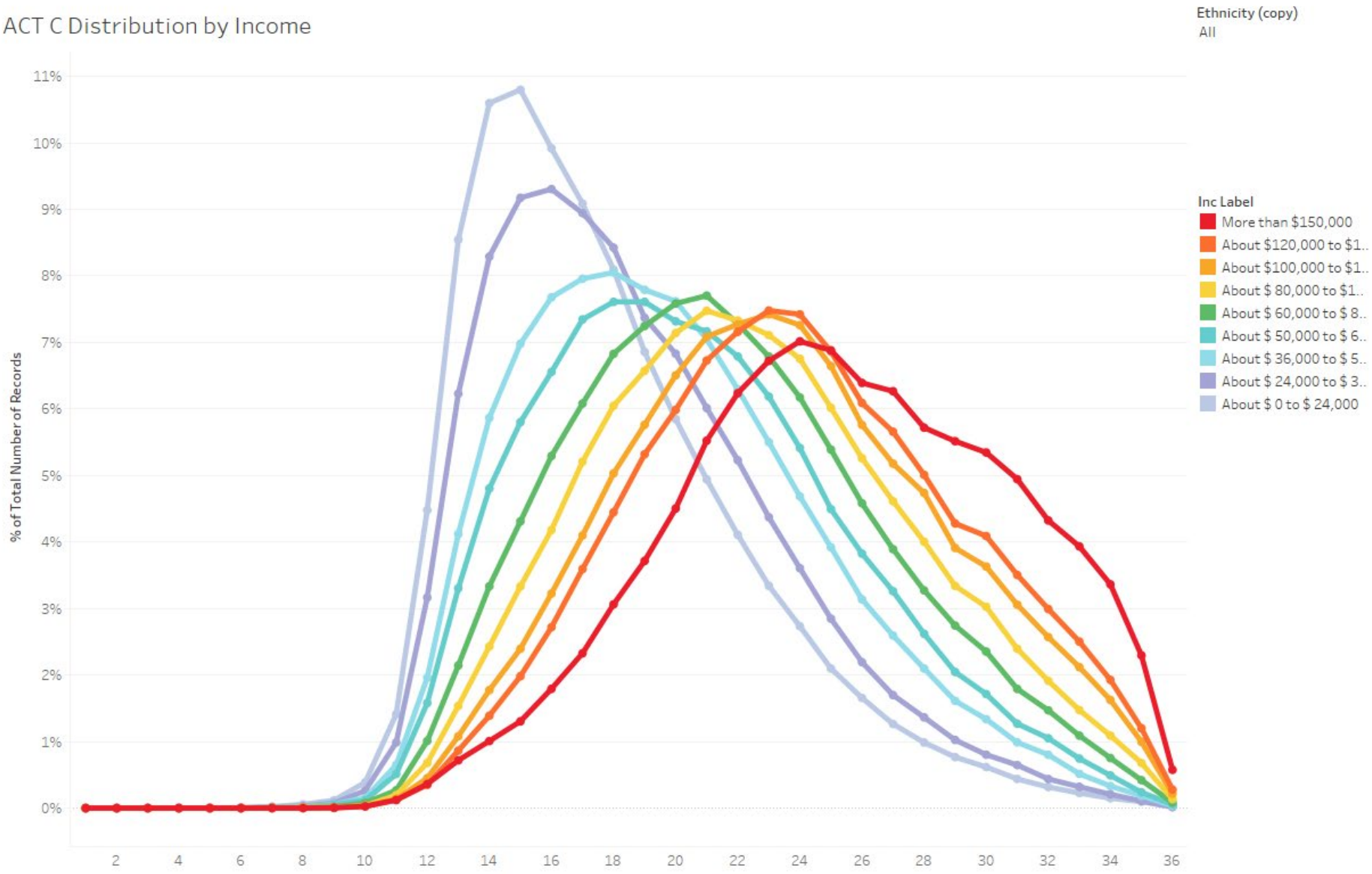
Compendium:

The Racist Beginnings of Standardized Testing (National Education Association Website).

Interviews: Test Prep Experts, Admissions Officials, SAT Critics and Educators (PBS Frontline, here).

For Tests that are Predictively Powerful and Without Social Prejudice (Joseph Soares; first essay here).

Charts Addendum


ACT C Distribution by Income
Ethnicity (copy)
All
% of Total Number of Records
11%
10%
9%
8%
7%
6%
5%
4%
3%
2%
1%
0%
2
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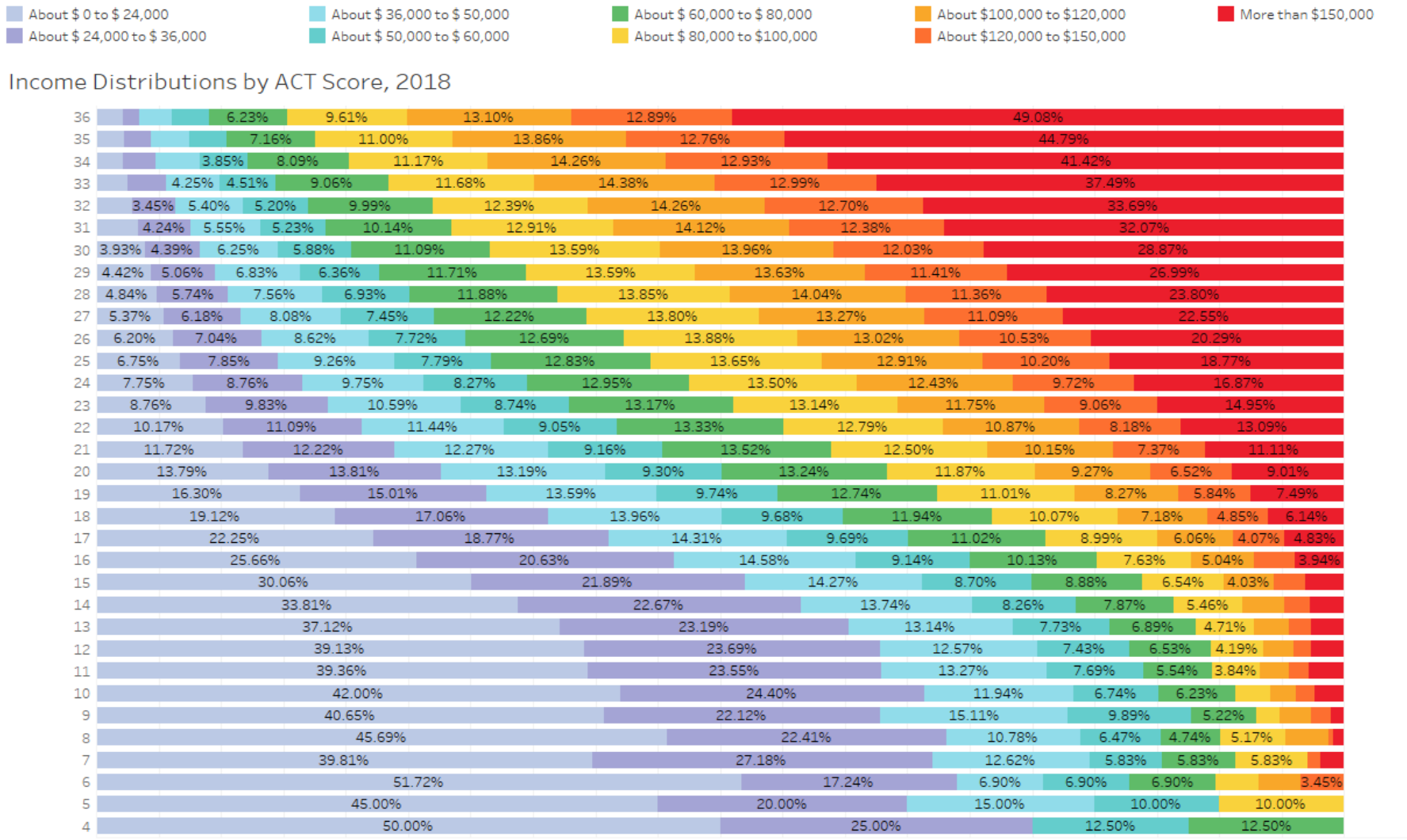
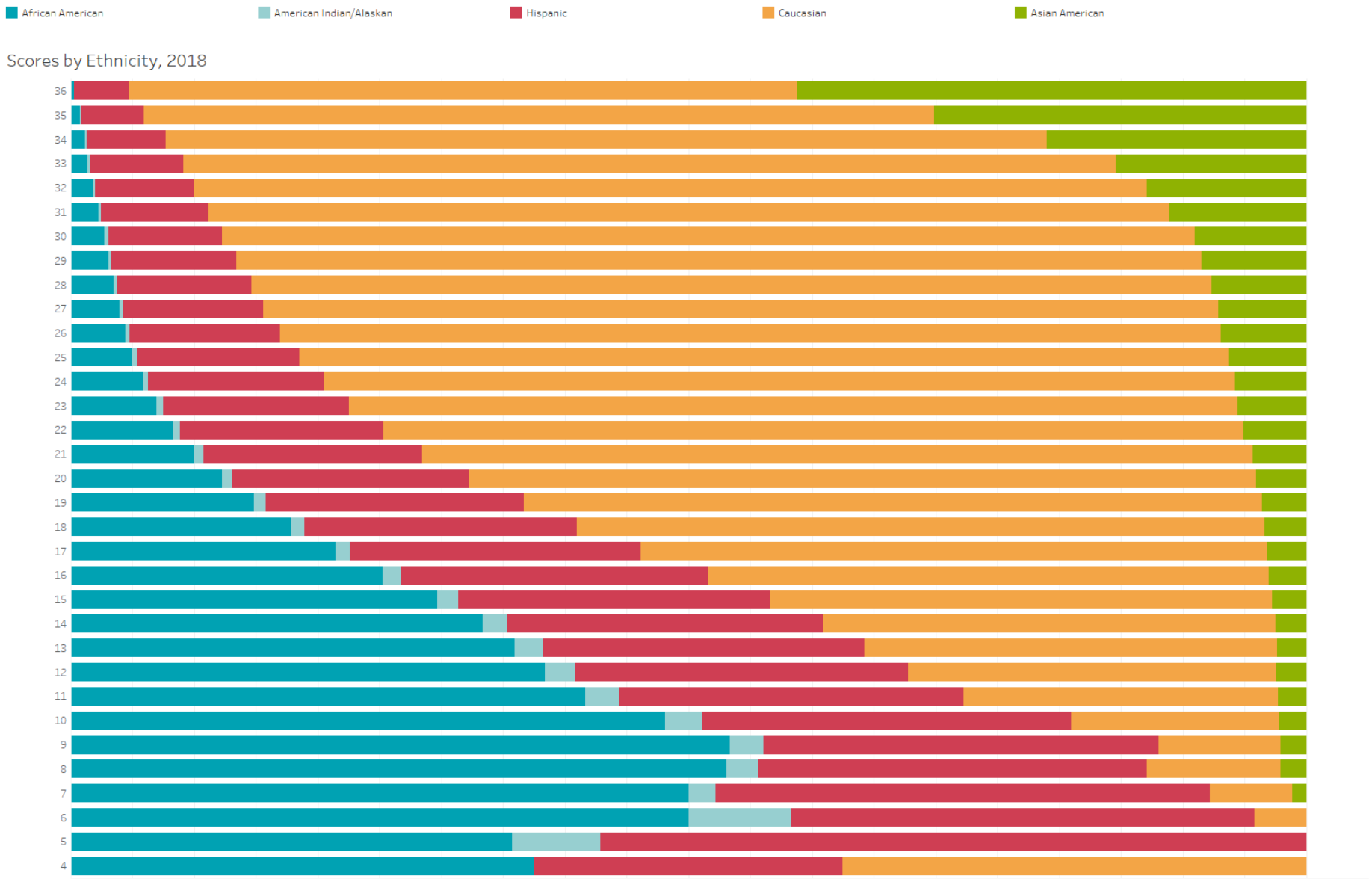
Inc Label
More than $150,000
About $120,000 to $1..
About $100,000 to $1..
About $ 80,000 to $1..
About $ 60,000 to $ 8..
About $ 50,000 to $ 6..
About $ 36,000 to $ 5..
About $ 24,000 to $ 3..
About $ 0 to $ 24,000


About $ 0 to $ 24,000
About $ 24,000 to $ 36,000
About $ 36,000 to $ 50,000
About $ 50,000 to $ 60,000
About $ 60,000 to $ 80,000
About $ 80,000 to $100,000
About $100,000 to $120,000
About $120,000 to $150,000
More than $150,000
Income Distributions by ACT Score, 2018
36 6.23% 9.61% 13.10% 12.89% 49.08%
35 7.16% 11.00% 13.86% 12.76% 44.79%
34 3.85% 8.09% 11.17% 14.26% 12.93% 41.42%
33 4.25% 4.51% 9.06% 11.68% 14.38% 12.99% 37.49%
32 3.45% 5.40% 5.20% 9.99% 12.39% 14.26% 12.70% 33.69%
31 4.24% 5.55% 5.23% 10.14% 12.91% 14.12% 12.38% 32.07%
30 3.93% 4.39% 6.25% 5.88% 11.09% 13.59% 13.96% 12.03% 28.87%
29 4.42% 5.06% 6.83% 6.36% 11.71% 13.59% 13.63% 11.41% 26.99%
28 4.84% 5.74% 7.56% 6.93% 11.88% 13.85% 14.04% 11.36% 23.80%
27 5.37% 6.18% 8.08% 7.45% 12.22% 13.80% 13.27% 11.09% 22.55%
26 6.20% 7.04% 8.62% 7.72% 12.69% 13.88% 13.02% 10.53% 20.29%
25 6.75% 7.85% 9.26% 7.79% 12.83% 13.65% 12.91% 10.20% 18.77%
24 7.75% 8.76% 9.75% 8.27% 12.95% 13.50% 12.43% 9.72% 16.87%
23 8.76% 9.83% 10.59% 8.74% 13.17% 13.14% 11.75% 9.06% 14.95%
22 10.17% 11.09% 11.44% 9.05% 13.33% 12.79% 10.87% 8.18% 13.09%
21 11.72% 12.22% 12.27% 9.16% 13.52% 12.50% 10.15% 7.37% 11.11%
20 13.79% 13.81% 13.19% 9.30% 13.24% 11.87% 9.27% 6.52% 9.01%
19 16.30% 15.01% 13.59% 9.74% 12.74% 11.01% 8.27% 5.84% 7.49%
18 19.12% 17.06% 13.96% 9.68% 11.94% 10.07% 7.18% 4.85% 6.14%
17 22.25% 18.77% 14.31% 9.69% 11.02% 8.99% 6.06% 4.07% 4.83%
16 25.66% 20.63% 14.58% 9.14% 10.13% 7.63% 5.04% 3.94%
15 30.06% 21.89% 14.27% 8.70% 8.88% 6.54% 4.03%
14 33.81% 22.67% 13.74% 8.26% 7.87% 5.46%
13 37.12% 23.19% 13.14% 7.73% 6.89% 4.71%
12 39.13% 23.69% 12.57% 7.43% 6.53% 4.19%
11 39.36% 23.55% 13.27% 7.69% 5.54% 3.84%
10 42.00% 24.40% 11.94% 6.74% 6.23%
9 40.65% 22.12% 15.11% 9.89% 5.22%
8 45.69% 22.41% 10.78% 6.47% 4.74% 5.17%
7 39.81% 27.18% 12.62% 5.83% 5.83% 5.83%
6 51.72% 17.24% 6.90% 6.90% 6.90% 3.45%
5 45.00% 20.00% 15.00% 10.00% 10.00%
4 50.00% 25.00% 12.50% 12.50%


African American
American Indian/Alaskan
Hispanic
Caucasian
Asian American
Scores by Ethnicity, 2018
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Mean ACT by Income and Ethnicity, 2018

	African American	American Indian/Alaskan	Hispanic	Caucasian	Asian American	Grand Total
More than $150,000	20.82	21.66	24.30	25.36	28.80	25.30
About $120,000 to $150,000	19.98	20.66	22.89	24.09	27.47	23.94
About $100,000 to $120,000	19.70	20.10	22.22	23.64	26.78	23.43
About $ 80,000 to $100,000	19.12	19.63	21.36	22.86	25.74	22.53
About $ 60,000 to $ 80,000	18.61	18.86	20.43	22.21	24.48	21.67
About $ 50,000 to $ 60,000	17.80	18.30	19.61	21.44	23.70	20.65
About $ 36,000 to $ 50,000	17.47	17.42	19.14	20.90	22.91	19.92
About $ 24,000 to $ 36,000	16.68	16.67	18.28	19.71	21.88	18.69
About $ 0 to $ 24,000	16.19	16.04	17.47	18.91	21.03	17.78
Grand Total	17.38	17.75	19.51	22.49	24.55	21.31

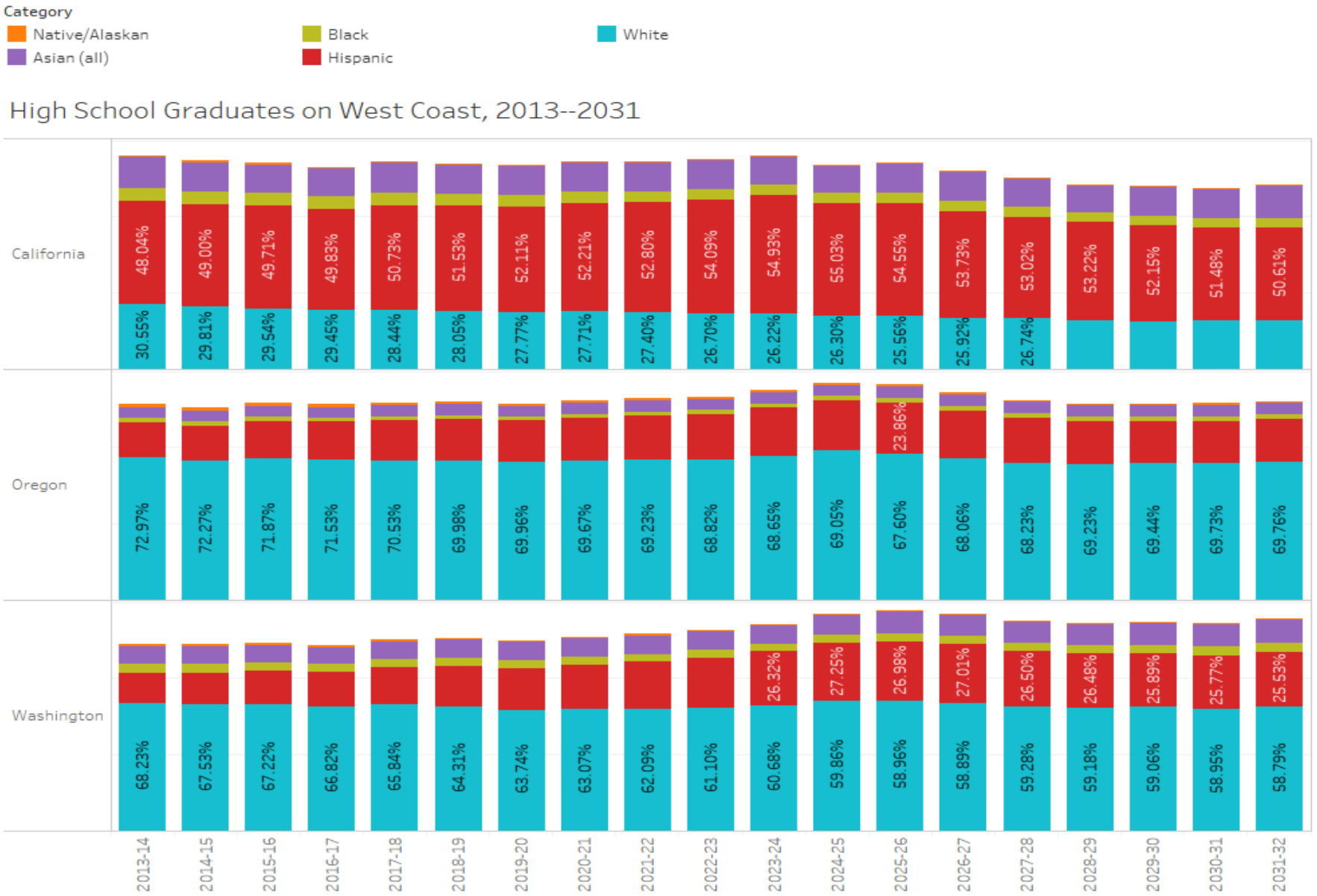
2017 Total and Section Score User Group Percentile Ranks by Gender and Race/Ethnicity

A student's percentile rank represents the percentage of students whose score is equal to or lower than their score. For example, if a student's score is in the 75th percentile, 75% of a comparison group achieved scores at or below that student's score. SAT User Percentiles are based on the actual scores of students in the graduating class of 2017 who took the new SAT (first offered in March 2016).

Please keep in mind that relationships between test scores and other factors such as educational background, gender, racial/ethnic background, parental education, and household income are complex and interdependent. These factors do not directly affect test performance; rather, they are associated with educational experiences both on tests and in schoolwork.

		Total Group			Female			Male			American Indian/ Alaska Native			Asian/ Asian American		
Total Score	Section Score	Total	ERW	Math	Total	ERW	Math	Total	ERW	Math	Total	ERW	Math	Total	ERW	Math
1600	800	99+	99+	99+	99+	99+	99+	99+	99+	99+	99+	99+	99+	99+	99+	99
1500	750	99	99	97	99	99	98	99	99	96	99+	99+	99+	96	98	87
1400	700	95	95	94	96	95	95	94	95	91	99	99	98	85	91	75
1300	650	88	87	86	90	87	89	86	86	82	96	96	96	70	78	60
1200	600	76	73	76	78	74	80	73	73	71	90	89	90	52	60	46
1100	550	59	57	61	61	57	66	56	56	57	79	76	80	35	42	31
1000	500	40	39	40	41	38	44	38	39	37	59	57	59	19	26	17
900	450	22	22	25	23	21	27	22	23	23	38	37	41	9	13	9
800	400	9	10	12	9	9	13	10	11	12	19	18	23	3	5	3
700	350	2	3	4	2	2	4	2	3	4	5	5	8	1	1	1
600	300	1-	1	1	1-	1-	1-	1-	1	1	1-	1	1	1-	1-	1-
500	250	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-
400	200	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-
Mean		1060	533	527	1050	534	516	1070	532	538	963	486	477	1181	569	612
Standard deviation		195	100	107	187	97	101	203	103	112	173	91	94	195	99	112
Number			1,715,481			906,019			809,462			7,782			158,031	

		Black/ African American			Hispanic/Latino			Native Hawaiian/ Pacific Islander			White			Two or More Races		
Total Score	Section Score	Total	ERW	Math	Total	ERW	Math	Total	ERW	Math	Total	ERW	Math	Total	ERW	Math
1600	800	99+	99+	99+	99+	99+	99+	99+	99+	99+	99+	99+	99+	99+	99+	99+
1500	750	99+	99+	99+	99+	99+	99	99+	99+	99	99	98	98	98	98	97
1400	700	99	99	99	99	98	98	99	99	98	94	93	93	94	93	93
1300	650	98	96	97	95	94	94	95	94	94	84	81	83	84	82	83
1200	600	93	90	93	88	85	88	88	87	88	68	64	70	69	65	72
1100	550	83	79	85	74	71	76	75	73	75	46	43	51	50	46	55
1000	500	67	62	67	54	52	55	54	52	54	26	25	28	30	28	33
900	450	44	40	48	33	31	36	33	31	37	11	11	15	15	13	19
800	400	20	18	26	14	14	18	16	14	19	4	4	6	5	5	8
700	350	5	5	9	3	4	6	3	3	6	1	1	2	1	1	2
600	300	1	1	2	1-	1	1	1-	1-	1	1-	1-	1-	1-	1-	1-
500	250	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-
400	200	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-	1-
Mean		941	479	462	990	500	489	986	498	488	1118	565	553	1103	560	544
Standard deviation		162	87	88	174	92	93	174	88	96	177	92	96	186	95	102
Number			225,860			408,067			4,131			760,362			57,049	


Category
Native/Alaskan
Black
White
Asian (all)
Hispanic
High School Graduates on West Coast, 2013--2031
California
Oregon
Washington
48.04% 49.00% 49.71% 49.83% 50.73% 51.53% 52.11% 52.21% 52.80% 54.09% 54.93% 55.03% 54.55% 53.73% 53.02% 53.22% 52.15% 51.48% 50.61%
30.55% 29.81% 29.54% 29.45% 28.44% 28.05% 27.77% 27.71% 27.40% 26.70% 26.22% 26.30% 25.56% 25.92% 26.74%
72.97% 72.27% 71.87% 71.53% 70.53% 69.98% 69.96% 69.67% 69.23% 68.82% 68.65% 69.05% 67.60% 68.06% 68.23% 69.23% 69.44% 69.73% 69.76%
23.86%
68.23% 67.53% 67.22% 66.82% 65.84% 64.31% 63.74% 63.07% 62.09% 61.10% 60.68% 59.86% 58.96% 58.89% 59.28% 59.18% 59.06% 58.95% 58.79%
26.32% 27.25% 26.98% 27.01% 26.50% 26.48% 25.89% 25.77% 25.53%
2013-14 2014-15 2015-16 2016-17 2017-18 2018-19 2019-20 2020-21 2021-22 2022-23 2023-24 2024-25 2025-26 2026-27 2027-28 2028-29 2029-30 2030-31 2031-32