The Impact of Superscoring on the Distribution of ACT Scores

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With the announcement of superscoring of the ACT® beginning in September 2020, stakeholders have raised questions about the impact of this new scoring method on the distribution of ACT scores. While not the focus of that particular study, a recent ACT research report found that, among students in the 2018 ACT-tested graduating class (N=1,914,814), the mean ACT Composite score was 20.8 when based on the students' most recent score and was 21.3 when based on superscoring—resulting in an increase of half a point.[1] Our own analysis of the 2019 ACT-tested graduating class (N=1,782,820) shows the same half-point increase when moving from a mean ACT Composite score based on the students' most recent score (20.7) to one based on superscoring (21.2).

Although these results provide a general summary of the changes that we might anticipate due to the shift to superscoring, stakeholders may also have information needs that go beyond changes in average scores. In particular, many states and higher education institutions have policies in place whereby students automatically qualify for college admission or merit aid if their ACT Composite score meets a minimum threshold. For purposes such as these, having a more thorough understanding of the shift in the distribution of ACT Composite scores due to superscoring is critically important.

In response to this need, we have created a publicly-available Tableau dashboard that reports nationally and for each state the distribution of students across the full ACT Composite score scale based on three scoring methods: most recent score, highest score from a single test attempt, and ACT Superscore based on the highest subject test scores across all test attempts.

ACT Superscore Database

The ACT Superscore Database provides score distributions based on three scoring methods—most recent score, highest score from a single test attempt, and superscore based on the highest subject test scores across all test attempts—and can be accessed from act.org/dataviz.

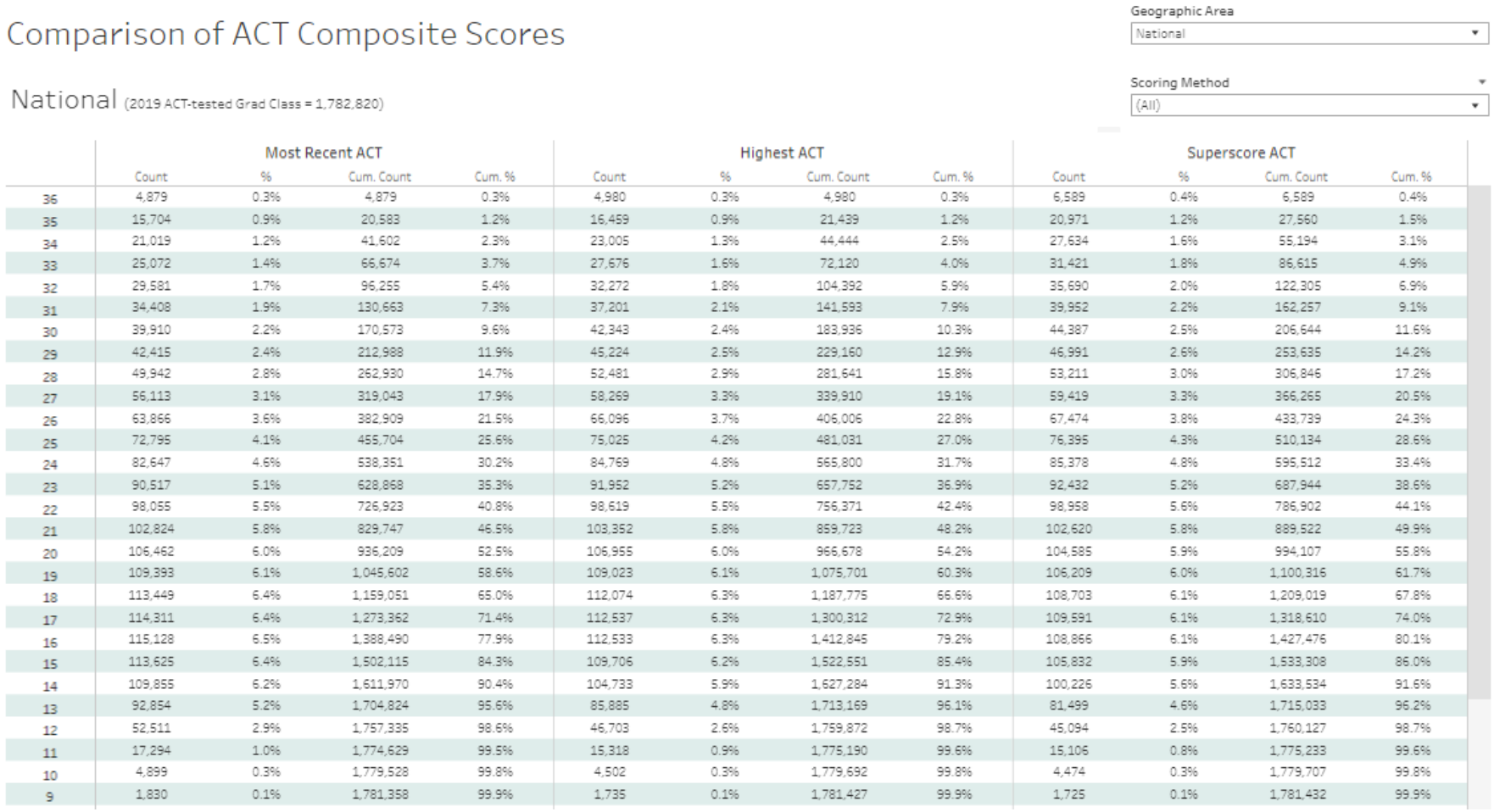
Similar information is available for higher education institutions wanting to review their school's ACT-tested enrolled students. Requests can be submitted using the form found here.

Figure 1 provides a screenshot of this dashboard, showing the counts, percentages, cumulative counts, and cumulative percentages of students in the 2019 ACT-tested graduating class based on the three scoring methods. Such information can help stakeholders understand how many more students might earn scores at or above a specific ACT score given the change to superscoring.[2] There are two important takeaways from this figure. First, at any point in the score scale, changes in the cumulative share of students who earn at or above a particular ACT Composite score will be greater when comparing the most recent scoring method to superscoring than when comparing the highest scoring method to superscoring. Second, regardless of the comparison made, differences across the three scoring methods in the cumulative share of students who earn at or above a particular ACT Composite score will always be greater toward the center of the distribution and smaller toward the tails of the distribution.

As an example to help interpret the information in Figure 1, 170,573 students (9.6%) earned an ACT Composite score of 30 or higher when based on most recent score, whereas 206,644 students (11.6%) earned an ACT Composite score of 30 or higher when based on superscoring. This represents an increase of 36,071 students, or an additional 2% of the 2019 ACT-tested graduating class. The increase in the cumulative share of students is less pronounced when comparing the highest Composite scoring method to the superscoring method.[3] As we see in Figure 1, the cumulative percentage of students earning an ACT Composite score of 30 or higher increases by a little over 1 percentage point—from 10.3% to 11.6%—when making this comparison.

In addition to reporting this information in tabular form, we also provide a second dashboard that contains a means comparison and a visual comparison of the shift in the distributions from the most recent and highest ACT Composite scores to the ACT Superscore. Figure 2 provides a screenshot of this dashboard for the 2019 ACT-tested graduating class, showing histograms for the student count based on each of the three score methods. This dashboard also provides a visual representation of the difference in the student count when shifting from the most recent and highest scoring methods to superscoring.

Figure 1. Tableau Screenshot of ACT Score Distributions (Counts, Percentages, Cumulative Counts, Cumulative Percentages) by Scoring Method, Nationally



Comparison of ACT Composite Scores

Geographic Area: National

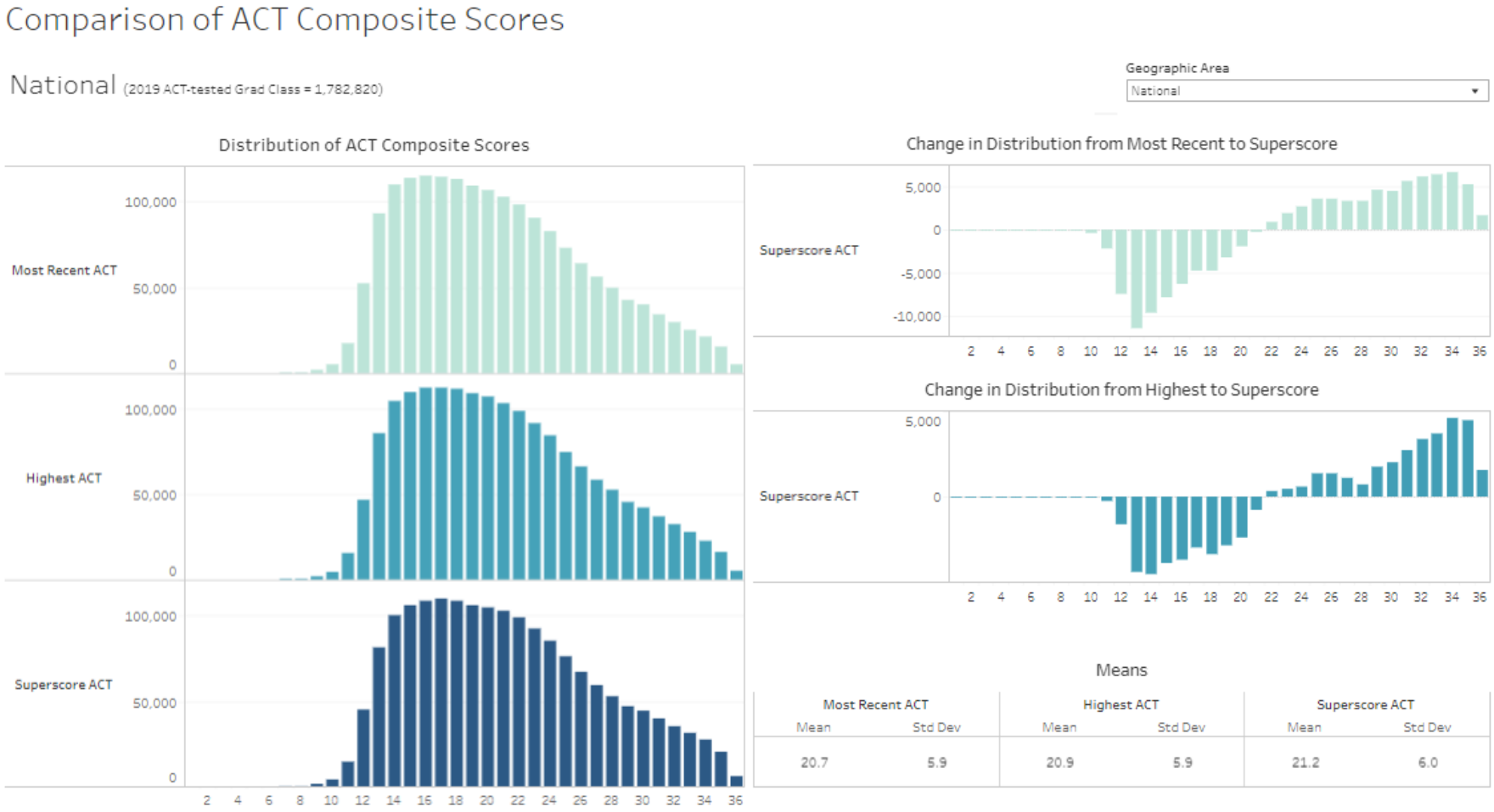
Scoring Method: (All)

National (2019 ACT-tested Grad Class = 1,782,820)

	Most Recent ACT				Highest ACT				Superscore ACT			
	Count	%	Cum. Count	Cum. %	Count	%	Cum. Count	Cum. %	Count	%	Cum. Count	Cum. %
36	4,879	0.3%	4,879	0.3%	4,980	0.3%	4,980	0.3%	6,589	0.4%	6,589	0.4%
35	15,704	0.9%	20,583	1.2%	16,459	0.9%	21,439	1.2%	20,971	1.2%	27,560	1.5%
34	21,019	1.2%	41,602	2.3%	23,005	1.3%	44,444	2.5%	27,634	1.6%	55,194	3.1%
33	25,072	1.4%	66,674	3.7%	27,676	1.6%	72,120	4.0%	31,421	1.8%	86,615	4.9%
32	29,581	1.7%	96,255	5.4%	32,272	1.8%	104,392	5.9%	35,690	2.0%	122,305	6.9%
31	34,408	1.9%	130,663	7.3%	37,201	2.1%	141,593	7.9%	39,952	2.2%	162,257	9.1%
30	39,910	2.2%	170,573	9.6%	42,343	2.4%	183,936	10.3%	44,387	2.5%	206,644	11.6%
29	42,415	2.4%	212,988	11.9%	45,224	2.5%	229,160	12.9%	46,991	2.6%	253,635	14.2%
28	49,942	2.8%	262,930	14.7%	52,481	2.9%	281,641	15.8%	53,211	3.0%	306,846	17.2%
27	56,113	3.1%	319,043	17.9%	58,269	3.3%	339,910	19.1%	59,419	3.3%	366,265	20.5%
26	63,866	3.6%	382,909	21.5%	66,096	3.7%	406,006	22.8%	67,474	3.8%	433,739	24.3%
25	72,795	4.1%	455,704	25.6%	75,025	4.2%	481,031	27.0%	76,395	4.3%	510,134	28.6%
24	82,647	4.6%	538,351	30.2%	84,769	4.8%	565,800	31.7%	85,378	4.8%	595,512	33.4%
23	90,517	5.1%	628,868	35.3%	91,952	5.2%	657,752	36.9%	92,432	5.2%	687,944	38.6%
22	98,055	5.5%	726,923	40.8%	98,619	5.5%	756,371	42.4%	98,958	5.6%	786,902	44.1%
21	102,824	5.8%	829,747	46.5%	103,352	5.8%	859,723	48.2%	102,620	5.8%	889,522	49.9%
20	106,462	6.0%	936,209	52.5%	106,955	6.0%	966,678	54.2%	104,585	5.9%	994,107	55.8%
19	109,393	6.1%	1,045,602	58.6%	109,023	6.1%	1,075,701	60.3%	106,209	6.0%	1,100,316	61.7%
18	113,449	6.4%	1,159,051	65.0%	112,074	6.3%	1,187,775	66.6%	108,703	6.1%	1,209,019	67.8%
17	114,311	6.4%	1,273,362	71.4%	112,537	6.3%	1,300,312	72.9%	109,591	6.1%	1,318,610	74.0%
16	115,128	6.5%	1,388,490	77.9%	112,533	6.3%	1,412,845	79.2%	108,866	6.1%	1,427,476	80.1%
15	113,625	6.4%	1,502,115	84.3%	109,706	6.2%	1,522,551	85.4%	105,832	5.9%	1,533,308	86.0%
14	109,855	6.2%	1,611,970	90.4%	104,733	5.9%	1,627,284	91.3%	100,226	5.6%	1,633,534	91.6%
13	92,854	5.2%	1,704,824	95.6%	85,885	4.8%	1,713,169	96.1%	81,499	4.6%	1,715,033	96.2%
12	52,511	2.9%	1,757,335	98.6%	46,703	2.6%	1,759,872	98.7%	45,094	2.5%	1,760,127	98.7%
11	17,294	1.0%	1,774,629	99.5%	15,318	0.9%	1,775,190	99.6%	15,106	0.8%	1,775,233	99.6%
10	4,899	0.3%	1,779,528	99.8%	4,502	0.3%	1,779,692	99.8%	4,474	0.3%	1,779,707	99.8%
9	1,830	0.1%	1,781,358	99.9%	1,735	0.1%	1,781,427	99.9%	1,725	0.1%	1,781,432	99.9%

Note: Clicking on the Figure 1 screenshot will activate a hyperlink to the Tableau dashboard.

Figure 2. Tableau Screenshot of Visual Representation of the Shift in the ACT Score Distributions from Most Recent and Highest ACT Composite Score to ACT Superscore, Nationally



Note: Clicking on the Figure 2 screenshot will activate a hyperlink to the Tableau dashboard.

Notes

1. Mattern, K., & Radunzel, J. (2019). *Does superscoring increase subgroup differences?* Iowa City, IA: ACT. Retrieved from https://www.act.org/content/dam/act/unsecured/documents/R1774-superscoring-subgroup-2019-07.pdf

2. This information is based on a high school graduating class that took the ACT prior to the change to superscoring. Students in this graduating class who retested took the full ACT. Announcement of the change to superscoring and the option to retake individual subject tests may influence students' behavior regarding retesting with the ACT, and this may have an impact on how many students increase their ACT Composite score through the superscoring method.

3. According to ACT's internal review of colleges' score use practices, more postsecondary institutions use the highest Composite score than the most recent Composite score.

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