

Updating ACT Aspire Norms

ACT Aspire started with the goal of reporting three-year rolling norms with equal weights to each student record. These were user norms, with a broad representation across the country. Beginning with fall 2015 reporting, the norm data have been statistically weighted to more closely match a national distribution in terms of selected student demographics and achievement in order to facilitate meaningful comparisons.

This section describes the development of ACT Aspire norms based on tests administered through spring 2015. First, the inclusion rules for the samples are described, followed by a description of a weighting methodology designed to produce nationally representative norms. Then, the updated ACT Aspire norm tables, summary statistics, and demographic information for the weighted samples are presented.

ACT Aspire Norm Samples

For grades 3-8, the norm samples include students who took ACT Aspire on-grade subject tests in 2013 spring, 2014 spring, and 2015 spring, as consistent with the goal to include three years of rolling data.

For grades 9 and 10, the norm samples are restricted to students who took ACT Aspire in consecutive years. The grade 9 samples include students who took grade 8 ACT Aspire and grade 9 ACT Aspire subject tests approximately one year apart. Similarly, the grade 10 samples include students who took ACT Aspire in grade 9 and grade 10 approximately one year apart. As described later, these longitudinal samples are used to anchor the grade 9 and grade 10 norm samples to the grade 8 score distribution. Table 1.1 provides the sample sizes by grade level and subject area.

Table 1.1: Sample Sizes Used for Norm Establishment

Grade level	Subject area				
	English	Mathematics	Reading	Science	Writing
3	102,213	176,117	176,128	73,337	89,557
4	100,592	173,117	173,383	74,618	94,322
5	100,037	172,635	172,437	99,966	93,023
6	98,838	172,865	172,723	72,081	94,949
7	103,297	179,967	179,501	104,468	99,005
8	112,999	190,450	190,086	89,559	107,996
9	3,875	4,149	3,925	3,877	3,364
10	6,436	6,634	6,600	6,172	4,862

Weighting Methodology for ACT Aspire Norms

Students assessed with ACT Aspire are not representative of the national population of U.S. elementary and secondary school students. To support interpretations of *nationally representative* norms, weights are assigned to ACT Aspire-tested samples so that the weighted samples are similar to the national population of U.S. elementary and secondary school students on school affiliation (public vs. private), and race/ethnicity and academic achievement among public school students.

For grades 3-8, the weighting strategy first estimates the population of U.S. elementary and secondary public school students with respect to race/ethnicity and district mean achievement level. Then, the public school ACT Aspire-tested students are weighted to match on these characteristics. Finally, the weighted public school data is combined with the private school data with the final weighting reflecting the frequency of school affiliation (public or private) in the population. An important assumption of this

approach is that a district’s mean achievement level can be measured by its mean ACT Composite score¹, and that this measure reflects achievement in the lower grade levels. To examine this assumption, correlations between district mean ACT Composite score and district mean ACT Aspire scores in the lower grade levels are presented below (Table 1.2). For most subject areas and grade levels, district mean ACT Composite score is highly correlated with district mean ACT Aspire score. For Writing, the correlations are less consistent across grade levels and are generally lower. The correlations in Table 1.2 suggest that district mean ACT Composite score reflects achievement in lower grade levels.

Table 1.2: Correlation of District Mean ACT Composite Scores with District Mean ACT Aspire Score

Grade level	Subject area				
	English	Mathematics	Reading	Science	Writing
3	0.69	0.61	0.72	0.52	0.51
4	0.61	0.70	0.74	0.57	0.08
5	0.63	0.69	0.73	0.66	0.59
6	0.74	0.65	0.68	0.58	0.62
7	0.70	0.79	0.66	0.71	0.38
8	0.73	0.81	0.58	0.66	0.26
9	0.79	0.79	0.73	0.72	0.61
10	0.72	0.74	0.66	0.70	0.47

Note: Districts with at least 50 ACT Aspire-tested students are included.

For grade 9, a sample of students tested with ACT Aspire in grades 8 and 9 is used. After the norms are developed for grade 8, the longitudinal samples (one for each subject area) are weighted to match the national grade 8 score distribution. The weighted score distribution of the grade 9 scores are then calculated. For grade 10, the same approach is used, but with the national grade 9 score distribution serving as the anchor.

The weighting procedure for grades 3-8 is described in detail below. In what follows, *target population* refers to the population of U.S. elementary and secondary school students. The following steps were taken to weight each ACT Aspire norming sample²:

- 1) Determine the target population’s relative frequency of students enrolled in public and private schools.³
- 2) Among public school students within the target population, determine the relative frequency by race/ethnicity and school percent eligible for free or reduced lunch (school FRL). Table 1.3 shows the categorizations of these variables and relative frequencies in the public school target population⁴.

¹ When a district tests virtually all students with the ACT, as is often done with ACT state and district testing, a district’s mean ACT Composite score measures the mean achievement level of the district’s graduating students.

² There is one norming sample for each grade level and subject area.

³ Estimated from Market Data Retrieval (MDR) data, the target population includes 90.5% public-school and 9.5% private-school enrollees.

⁴ The public school target population relative frequencies for race/ethnicity and school FRL are derived from the Common Core of Public School Universe Survey Data provided by the National Center for Education Statistics.

- 3) Identify all public school districts that administer the ACT test to all 11th grade students; we refer to ACT-tested students within these districts as the *ACT state and district testing public school sample*. Weight this sample to the public school target population on race/ethnicity and school FRL. Weights are determined by the ratio of the population and sample percentages of each combination of race/ethnicity and school FRL:

$$\text{weight}(\text{Race} = x, \text{FRL} = y) = \frac{\text{Population \%}(\text{Race} = x, \text{FRL} = y)}{\text{Sample \%}(\text{Race} = x, \text{FRL} = y)}$$

We refer to this weighted sample as the *ACT public school population*. The ACT public school population is nearly identical to the public school target population with respect to relative frequencies of race/ethnicity and school FRL groups (Table 1.3).

- 4) For each student in the ACT public school population, determine the mean ACT Composite score within their district. Categorize district mean ACT score⁵ and student race/ethnicity, and calculate the relative frequency of each combination of race/ethnicity and district mean ACT Composite score level (DMACT) within the ACT public school population.
- 5) For each ACT Aspire norm sample, determine public/private school affiliation and, for public school students, race/ethnicity and DMACT. For students enrolled in public schools, calculate the sample percentage for each combination of race/ethnicity and DMACT. Weight the sample to the target population on public/private school affiliation and, for public school students, race/ethnicity and DMACT. Weights are determined by the ratio of the population and sample percentages:

$$\text{Public weight}(\text{Race} = x, \text{DMACT} = y) = \frac{\text{Pop.\% public}}{\text{Sample \% public}} \times \frac{\text{ACT Public Pop.\%}(\text{Race}=x, \text{DMACT}=y)}{\text{Public Sample \%}(\text{Race}=x, \text{DMACT}=y)}$$

$$\text{Private weight} = \frac{\text{Pop.\% private}}{\text{Sample \% private}}$$

For an example norm sample (grade 5 English), the relative frequencies of the weighting variables are provided in Table 1.4 for the target population, the unweighted sample, and the weighted sample. The weighted sample is identical to the target population with respect to school affiliation, and the public school sample is identical to the public school target population on race/ethnicity and district mean ACT Composite score. As shown in Table 1.4, the weighted mean ACT Aspire grade 5 English score is higher than the unweighted mean. This is expected because the unweighted district mean ACT Composite score was lower than the target population's district mean ACT Composite score.

⁵ See Table 1.3 for the categorization of district mean ACT Composite score.

Table 1.3: Target Public School Population and ACT Public School Population

Variable	Population of public U.S. elementary and secondary students	ACT state and district testing public school sample	
		Unweighted	ACT public school population ⁶
Race/ethnicity			
Asian	4.7%	3.3%	4.7%
Black/African American	15.5%	14.6%	15.5%
Hispanic	25.0%	13.1%	25.0%
Native American	1.1%	0.7%	1.1%
White	50.6%	55.4%	50.6%
Unknown/Other ⁷	3.1%	12.9%	3.1%
FRL % of enrolled school			
0-10%	6.8%	5.7%	6.8%
10-20%	8.9%	12.0%	8.9%
20-35%	14.9%	23.1%	14.9%
35-50%	17.4%	23.0%	17.4%
50-65%	16.8%	18.8%	16.8%
65-80%	15.0%	10.1%	15.0%
80-90%	9.5%	3.6%	9.5%
90-100%	10.0%	3.3%	10.0%
Unknown	0.8%	0.5%	0.8%
District mean ACT score			
<17.5		10.1%	16.1%
17.5-18.2		9.2%	9.5%
18.2-18.7		11.3%	15.9%
18.7-19.2		10.3%	9.6%
19.2-19.5		8.6%	7.7%
19.5-20.1		9.9%	8.5%
20.1-20.8		12.4%	9.7%
20.8-21.4		8.3%	6.3%
21.4-22.6		9.3%	7.2%
>22.6		10.6%	9.6%
Mean (SD) district mean ACT score		19.9 (2.5)	19.3 (2.8)
Mean (SD) ACT Composite score		19.9 (5.3)	19.3 (5.3)

Note: Shading represents variables used in weighting.

⁶ ACT state and district testing public school sample weighted to national population of U.S. elementary and secondary students on race/ethnicity and school FRL.

⁷ For the public school target population, the relative frequency for Unknown/Other is obtained by subtracting the sum of the individual race/ethnicity counts from total enrollment counts. For the ACT data, the unknown/other category includes Native Hawaiian/Other Pacific Islander, two or more races, prefer not to respond, and no response.

Table 1.4: One Example of ACT Aspire Norm Sample Weighting: Grade 5 English

Variable	Population of U.S. elementary and secondary students	ACT Aspire norm sample: grade 5 English	
		Unweighted	Weighted
Sex			
Female	49.0%	49.0%	48.5%
Male	51.0%	51.0%	51.5%
School affiliation			
Public	90.5%	95.4%	90.5%
Private	9.5%	4.6%	9.5%
Public school frequencies			
Race/ethnicity			
Asian	4.7%	1.6%	4.7%
Black/African American	15.5%	32.5%	15.5%
Hispanic	25.0%	6.9%	25.0%
Native American	1.1%	0.7%	1.0%
White	50.6%	49.9%	50.6%
Unknown/Other	3.1%	8.4%	3.1%
FRL % of enrolled school			
0-10%	6.8%	1.5%	7.6%
10-20%	8.9%	2.8%	3.0%
20-35%	14.9%	10.3%	15.6%
35-50%	17.4%	12.0%	11.6%
50-65%	16.8%	25.6%	27.2%
65-80%	15.0%	19.0%	14.1%
80-90%	9.5%	11.4%	7.9%
90-100%	10.0%	10.4%	6.3%
Unknown	0.8%	7.1%	6.6%
District mean ACT score ⁸			
<17.5	16.1%	27.5%	16.1%
17.5-18.2	9.5%	25.8%	9.5%
18.2-18.7	15.9%	11.3%	15.9%
18.7-19.2	9.6%	13.3%	9.6%
19.2-19.5	7.7%	2.8%	7.7%
19.5-20.1	8.5%	1.5%	8.5%
20.1-20.8	9.7%	6.4%	9.7%
20.8-21.4	6.3%	7.7%	6.3%
21.4-22.6	7.2%	3.0%	7.2%
>22.6	9.6%	0.7%	9.6%
Mean (SD) district mean ACT score	19.3 (2.8)	18.4 (1.7)	19.6 (2.5)
Mean (SD) ACT Aspire score		422.3 (7.1)	423.1 (7.1)

Note: Shading represents variables used in weighting.

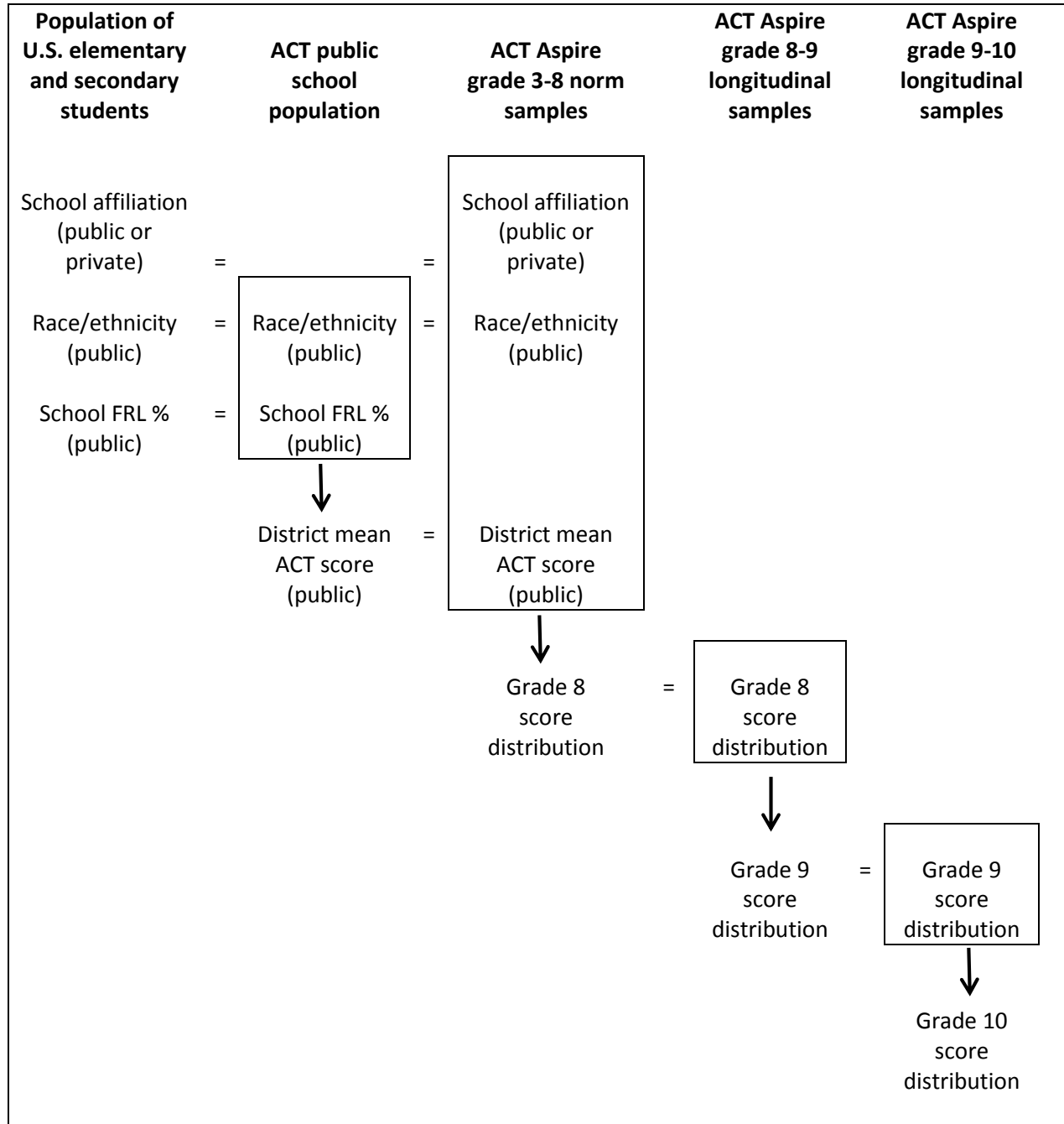
⁸ Frequencies from ACT public school population.

Figure 1.1 summarizes the weighting procedure for the ACT Aspire norms. Tables 1.5 – 1.9 present the demographic information on the weighted samples for each grade and subject test.

Norm Tables and Summary Statistics

The norm table is defined as the cumulative percent of students scoring at or below a given score in the norm sample. A smoothing process was applied to the empirical cumulative percentages to reduce the sampling error and increase the precision of the norms. The norms tables are presented in Tables 1.10-1.14 for each subject respectively. The mean scale score values for students in each grade and subject test are given in Table 1.15. These represent estimated mean scores if all students in the target population (all U.S. elementary and secondary school students) were to take the test.

Figure 1.1: Conceptual diagram of chain-linked weighting strategy



Note: Variables used for weighting are included in boxes.

Table 1.5. 2015 ACT Aspire Weighted English Norm Group Demographics

	Grade (%)							
	3 (n = 102,213)	4 (n = 100,592)	5 (n = 100,037)	6 (n = 98,838)	7 (n = 103,297)	8 (n = 112,999)	9 (n = 3,875)	10 (n = 6,436)
Gender								
F	48.99	48.56	48.11	48.81	47.89	48.60	44.32	48.96
M	49.91	50.32	51.00	49.76	50.57	50.32	40.73	48.64
No response	1.10	1.12	0.89	1.43	1.54	1.09	14.96	2.40
State								
AL	47.91	49.07	49.33	44.03	36.90	33.92	0.59	-
AR	-	-	-	-	-	-	0.36	0.17
AZ	-	0.19	-	-	-	0.25	-	-
CA	1.36	1.50	2.51	2.51	1.37	1.11	-	-
CO	2.87	2.36	2.00	1.85	1.93	1.92	1.51	1.17
CT	-	-	-	-	-	-	-	3.45
FL	0.28	0.35	0.22	0.16	0.14	0.24	-	-
GA	-	-	-	0.05	0.07	0.09	-	-
IA	0.17	0.18	0.14	0.15	0.28	1.17	0.89	0.55
IL	0.13	0.13	0.16	0.14	0.12	0.56	8.24	9.59
IN	-	-	-	0.13	0.11	0.20	-	-
KS	1.73	1.78	1.89	0.78	0.70	3.03	6.34	3.35
KY	0.04	0.05	0.04	0.22	0.76	0.49	2.69	0.09
LA	6.08	6.07	5.07	4.93	4.57	4.47	11.93	7.93
MI	0.41	0.35	0.37	0.52	6.79	10.17	14.75	13.06
MN	-	-	-	-	-	0.10	-	-
MO	-	-	-	-	0.54	0.06	0.08	2.16
MS	0.10	0.14	0.11	0.13	1.13	1.25	1.84	0.59
ND	-	-	-	-	-	0.21	-	0.58
NE	-	-	-	-	-	0.00	-	5.02
NJ	-	-	-	-	-	-	-	0.02
NV	0.16	0.19	0.18	0.18	0.25	0.19	-	-
OH	-	-	0.02	0.05	0.26	0.50	-	0.25
OK	0.29	0.26	0.28	0.29	0.27	0.25	-	-
OR	-	-	-	-	-	0.01	-	-
PA	-	-	-	-	-	-	-	3.10
SC	36.72	36.07	36.08	42.27	40.24	36.82	15.08	-
SD	0.03	-	0.02	-	0.02	-	-	-
TN	0.03	0.05	0.03	0.04	0.03	0.20	2.10	1.17
TX	0.57	0.58	0.48	0.73	0.87	0.75	1.78	0.27
UT	1.05	0.62	0.98	0.59	1.33	0.49	2.30	-
VA	-	-	-	-	-	-	0.03	-
WI	0.06	0.07	0.07	0.27	1.33	1.51	29.20	47.25
No response	-	-	-	-	-	0.05	0.29	0.26

Race/Ethnicity								
Asian	4.38	4.36	4.36	4.37	4.36	4.34	0.87	1.72
Black/African American	14.30	14.30	14.32	14.31	14.36	14.20	2.37	2.93
Hispanic/Latino	22.87	22.78	22.81	22.77	22.92	22.73	6.85	7.32
Native American	0.97	0.97	0.95	0.95	0.96	0.98	0.71	0.76
Other	0.90	0.81	0.86	0.67	0.49	0.37	1.42	1.61
White	47.90	47.53	47.55	47.68	48.30	47.88	48.33	69.42
Unknown	8.68	9.25	9.14	9.24	8.62	9.50	39.46	16.22

Note: "-" indicates no students tested.

Table 1.6. 2015 ACT Aspire Weighted Mathematics Norm Group Demographics

	Grade							
	3 (n = 176,117)	4 (n = 173,117)	5 (n = 172,635)	6 (n = 172,865)	7 (n = 179,967)	8 (n = 190,450)	9 (n = 4,149)	10 (n = 6,634)
Gender								
F	48.72	48.73	48.43	48.38	48.04	48.96	45.46	50.30
M	50.17	50.22	50.71	50.30	50.55	50.05	40.31	47.24
No response	1.11	1.05	0.86	1.32	1.41	0.99	14.24	2.46
State								
AL	66.56	66.84	67.00	64.51	61.19	58.80	1.63	-
AR	-	-	-	-	-	-	0.38	0.19
AZ	-	0.19	-	-	-	0.24	-	-
CA	1.34	1.48	2.43	2.56	1.46	1.19	-	-
CO	1.09	1.06	0.98	0.96	0.94	1.17	1.58	1.15
CT	-	-	-	-	-	-	-	3.27
FL	0.27	0.35	0.22	0.16	0.14	0.23	-	-
GA	-	-	-	0.05	0.07	0.09	-	-
IA	0.17	0.17	0.14	0.15	0.28	0.70	0.88	0.62
IL	0.09	0.09	0.10	0.10	0.10	0.48	7.30	9.80
IN	-	-	-	0.12	0.11	0.18	-	-
KS	0.54	0.59	0.55	0.51	0.46	2.27	6.20	3.07
KY	0.04	0.05	0.04	0.22	0.61	0.48	3.05	0.10
LA	5.98	6.00	5.05	4.89	4.62	4.40	11.69	8.47
MI	0.36	0.28	0.39	0.47	2.52	4.15	13.83	12.77
MN	-	-	-	-	-	0.09	-	-
MO	-	-	-	-	0.36	0.05	0.06	2.43
MS	0.08	0.12	0.10	0.12	0.51	0.77	1.48	0.53
ND	-	-	-	-	-	0.13	-	0.51
NE	-	-	-	-	-	0.00	-	4.69
NJ	-	-	-	-	-	-	-	0.02
NV	0.25	0.27	0.26	0.24	0.25	0.19	-	-
OH	-	-	0.02	0.04	0.24	0.34	-	0.26
OK	0.17	0.16	0.16	0.17	0.16	0.14	-	-
OR	-	-	-	-	-	0.01	-	-
PA	-	-	-	-	-	-	-	2.90
SC	21.58	21.30	21.18	23.45	22.68	21.42	14.30	0.01
SD	0.03	-	0.02	-	0.02	-	-	-
TN	0.03	0.05	0.03	0.04	0.03	0.20	1.80	1.18
TX	0.31	0.31	0.27	0.37	1.12	0.66	3.54	0.27
UT	1.04	0.62	0.98	0.60	1.33	0.49	2.09	-
VA	-	-	-	-	-	-	0.03	-
WI	0.06	0.07	0.07	0.26	0.81	1.08	29.86	47.51
No response	-	-	-	-	-	0.05	0.31	0.24

Race/Ethnicity								
Asian	4.38	4.36	4.37	4.37	4.36	4.34	1.00	1.60
Black/African American	14.30	14.30	14.32	14.31	14.34	14.19	2.88	2.99
Hispanic/Latino	22.87	22.78	22.81	22.77	22.92	22.73	6.61	7.02
Native American	0.97	0.97	0.97	0.98	0.98	0.99	0.74	0.80
Other	0.58	0.56	0.61	0.47	0.38	0.30	1.29	1.61
White	47.95	47.59	47.61	47.73	48.27	47.99	50.24	69.45
Unknown	8.95	9.44	9.31	9.37	8.75	9.46	37.24	16.52

Note: "-" indicates no students tested.

Table 1.7. 2015 ACT Aspire Weighted Reading Norm Group Demographics

	Grade							
	3 (n = 176,128)	4 (n = 173,383)	5 (n = 172,437)	6 (n = 172,723)	7 (n = 179,501)	8 (n = 190,086)	9 (n = 3,925)	10 (n = 6,600)
Gender								
F	48.74	48.76	48.49	48.39	48.10	49.00	47.15	51.04
M	50.20	50.25	50.71	50.32	50.60	50.00	38.87	46.54
No response	1.05	0.99	0.80	1.29	1.30	1.00	13.98	2.42
State								
AL	66.59	66.87	67.07	64.43	61.81	58.72	1.80	-
AR	-	-	-	-	-	-	0.40	0.18
AZ	-	0.19	-	-	-	0.25	-	-
CA	1.34	1.48	2.50	2.61	1.48	1.22	-	-
CO	1.10	1.07	0.97	0.99	0.95	1.20	1.58	1.05
CT	-	-	-	-	-	-	-	3.04
FL	0.28	0.35	0.22	0.16	0.14	0.24	-	-
GA	-	-	-	0.05	0.07	0.09	-	-
IA	0.17	0.17	0.14	0.15	0.28	0.72	1.02	0.61
IL	0.09	0.09	0.10	0.10	0.10	0.49	7.98	9.83
IN	-	-	-	0.12	0.11	0.18	-	-
KS	0.53	0.57	0.54	0.50	0.47	2.26	5.96	2.94
KY	0.04	0.05	0.04	0.22	0.60	0.49	0.20	0.10
LA	5.98	6.01	5.00	4.91	4.60	4.51	13.03	7.99
MI	0.37	0.35	0.39	0.47	2.56	4.13	14.06	12.62
MN	-	-	-	-	-	0.10	-	-
MO	-	-	-	-	0.36	0.05	0.08	2.37
MS	0.08	0.12	0.10	0.12	0.52	0.70	1.20	0.47
ND	-	-	-	-	-	0.13	-	0.59
NE	-	-	-	-	-	0.00	-	4.64
NJ	-	-	-	-	-	-	-	0.02
NV	0.25	0.27	0.26	0.25	0.25	0.19	-	-
OH	-	-	0.02	0.04	0.24	0.34	-	0.25
OK	0.18	0.16	0.16	0.18	-	0.14	-	-
OR	-	-	-	-	-	0.01	-	-
PA	-	-	-	-	-	-	-	3.09
SC	21.52	21.21	21.15	23.45	22.62	21.48	14.01	-
SD	0.03	-	0.02	-	0.02	-	-	-
TN	0.03	0.05	0.03	0.04	0.03	0.20	2.15	1.14
TX	0.33	0.31	0.25	0.43	0.64	0.53	2.02	0.29
UT	1.03	0.62	0.98	0.54	1.34	0.49	2.51	-
VA	-	-	-	-	-	-	0.02	-
WI	0.06	0.07	0.07	0.25	0.81	1.09	31.63	48.44

No response	-	-	-	-	-	0.05	0.36	0.34
Race/Ethnicity								
Asian	4.38	4.36	4.37	4.37	4.36	4.34	1.14	1.67
Black/African American	14.30	14.30	14.32	14.31	14.34	14.18	2.45	2.67
Hispanic/Latino	22.87	22.78	22.81	22.76	22.92	22.73	6.20	6.47
Native American	0.97	0.97	0.97	0.98	0.98	0.98	0.69	0.69
Other	0.58	0.57	0.62	0.48	0.38	0.30	1.24	1.58
White	47.94	47.60	47.59	47.69	48.28	47.87	49.42	70.76
Unknown	8.95	9.42	9.32	9.42	8.75	9.60	38.86	16.16

Note: "-" indicates no students tested.

Table 1.8. 2015 ACT Aspire Weighted Science Norm Group Demographics

	Grade							
	3 (n = 73,337)	4 (n = 74,618)	5 (n = 99,966)	6 (n = 72,081)	7 (n = 104,468)	8 (n = 89,559)	9 (n = 3,877)	10 (n = 6,172)
Gender								
F	49.39	48.00	48.34	48.89	48.01	48.63	45.46	50.29
M	49.44	50.87	50.76	49.71	50.45	50.21	39.81	47.14
No response	1.17	1.13	0.90	1.40	1.54	1.15	14.74	2.57
State								
AL	61.88	63.40	71.56	61.06	64.81	46.75	0.37	-
AR	-	-	-	-	-	-	0.39	0.18
AZ	-	0.19	-	-	-	0.25	-	-
CA	1.37	1.50	2.48	2.63	1.50	1.23	-	-
CO	1.65	1.59	1.37	1.53	1.39	1.59	1.47	1.05
CT	-	-	-	-	-	-	-	1.26
FL	0.28	0.35	0.22	0.16	0.14	0.24	-	-
GA	-	-	-	0.05	0.07	0.09	-	-
IA	0.17	0.18	0.14	0.15	0.28	1.06	0.89	0.65
IL	0.14	0.13	0.13	0.15	0.12	0.69	8.30	10.23
IN	-	-	-	0.14	0.12	0.20	-	-
KS	2.30	2.38	0.90	1.11	0.79	3.91	6.05	3.03
KY	0.04	0.05	0.04	0.23	0.67	0.48	3.30	0.10
LA	6.11	6.12	5.11	5.03	4.64	4.43	12.63	8.77
MI	0.42	0.26	0.42	0.44	3.78	8.91	12.30	11.75
MN	-	-	-	-	-	0.09	-	-
MO	-	-	-	-	0.65	0.07	0.08	2.51
MS	0.06	0.08	0.08	0.09	0.51	1.19	1.15	0.49
ND	-	-	-	-	-	0.34	-	0.60
NE	-	-	-	-	-	0.00	-	4.87
NJ	-	-	-	-	-	-	-	0.01
NV	0.17	0.19	0.18	0.18	0.25	0.19	-	-
OH	-	-	0.03	0.05	0.27	0.48	-	0.26
OK	0.22	0.22	0.22	0.23	0.24	0.21	-	-
OR	-	-	-	-	-	0.01	-	-
PA	-	-	-	-	-	-	-	3.32
SC	23.62	22.12	15.56	25.29	16.34	24.05	14.83	-
SD	0.03	-	0.03	-	0.02	-	-	-
TN	0.03	0.04	0.03	0.04	0.03	0.20	2.10	1.26
TX	0.40	0.49	0.43	0.54	0.77	0.76	3.81	0.28
UT	1.06	0.63	0.99	0.60	1.35	0.48	2.32	-
VA	-	-	-	-	-	-	0.03	-
WI	0.06	0.07	0.07	0.30	1.26	2.05	29.65	49.06

No response	-	-	-	-	-	0.05	0.34	0.31
Race/Ethnicity								
Asian	4.38	4.36	4.36	4.37	4.36	4.34	0.95	1.64
Black/African American	14.30	14.30	14.32	14.32	14.34	14.19	2.37	2.53
Hispanic/Latino	22.88	22.78	22.81	22.78	22.92	22.74	6.53	6.45
Native American	0.97	0.97	0.97	0.92	0.98	0.95	0.73	0.79
Other	0.50	0.49	0.49	0.40	0.26	0.26	1.24	1.66
White	47.90	47.54	47.55	47.72	48.30	47.99	48.77	69.80
Unknown	9.06	9.55	9.50	9.49	8.84	9.53	39.42	17.13

Note: "-" indicates no students tested.

Table 1.9. 2015 ACT Aspire Weighted Writing Norm Group Demographics

	Grade							
	3 (n = 89,557)	4 (n = 94,322)	5 (n = 93,023)	6 (n = 94,949)	7 (n = 99,005)	8 (n = 107,996)	9 (n = 3,364)	10 (n = 4,862)
gender								
F	50.31	49.46	47.92	49.12	47.84	49.00	46.84	53.53
M	48.87	49.76	51.33	49.82	50.92	49.91	37.50	45.15
No response	0.82	0.78	0.75	1.06	1.25	1.09	15.66	1.31
state								
AL	39.35	40.46	40.25	37.92	34.34	30.01	0.59	-
AR	-	-	-	-	-	-	0.44	0.28
AZ	-	0.19	-	-	-	0.31	-	-
CA	1.46	1.57	2.71	3.03	1.81	1.60	-	-
CO	2.63	2.10	2.16	2.20	2.49	2.25	1.84	1.23
FL	0.28	0.37	0.24	0.18	0.16	0.32	-	-
GA	-	-	-	0.06	0.08	0.12	-	-
IA	0.15	0.15	0.12	0.13	0.31	0.11	-	-
IL	0.25	0.23	0.24	0.17	0.14	0.50	10.02	9.43
IN	-	-	-	0.23	0.19	0.30	-	-
KS	8.10	9.34	8.11	0.74	0.68	2.94	6.37	3.97
KY	0.04	0.05	0.04	0.26	0.95	0.64	3.68	0.15
LA	6.05	6.07	4.83	5.32	4.64	3.94	9.73	8.50
MI	0.43	0.27	0.44	0.51	2.95	12.71	13.80	9.14
MN	-	-	-	-	-	0.12	-	-
MO	-	-	-	-	0.53	0.07	0.12	3.52
MS	0.02	0.01	0.04	0.03	0.01	0.70	-	0.60
ND	-	-	-	-	-	0.25	-	-
NE	-	-	-	-	-	-	-	0.30
NJ	-	-	-	-	-	-	-	0.03
NV	0.19	0.20	0.28	0.20	0.30	0.14	-	-
OH	-	-	0.24	-	0.30	0.16	-	0.35
OK	-	-	-	0.28	0.25	0.20	-	-
OR	-	-	-	-	-	0.01	-	-
PA	-	-	-	-	-	-	-	4.23
SC	39.37	37.71	38.64	47.14	45.66	39.26	15.85	-
SD	0.03	-	0.03	-	0.02	-	-	-
TN	0.03	0.05	0.03	0.05	0.03	0.03	1.54	0.71
TX	0.41	0.49	0.46	0.58	0.89	0.74	2.13	0.35
UT	1.12	0.65	1.06	0.68	1.58	0.63	2.50	-
VA	-	-	-	-	-	-	0.03	-
WI	0.07	0.08	0.09	0.31	1.69	1.89	31.20	56.89
No response	-	-	-	-	-	0.07	0.16	0.32

race								
Asian	3.41	4.36	3.38	3.68	3.66	3.39	0.92	1.38
Black/African American	14.48	14.29	14.46	15.20	15.15	13.97	2.43	3.01
Hispanic/Latino	23.19	22.79	23.06	24.01	24.12	23.08	7.32	5.57
Native American	0.96	0.95	0.96	1.04	1.05	1.01	0.60	0.88
Other	1.01	1.18	1.00	0.79	0.54	0.41	1.44	1.69
White	48.39	47.50	47.92	45.47	45.92	48.42	49.56	72.03
Unknown	8.55	8.93	9.21	9.81	9.56	9.73	37.72	15.43

Note: "-" indicates no students tested.

Table 1.10. 2015 ACT Aspire English Norms: Percent of Students at or below Each Scale Score

Scale Score	Grade							
	3	4	5	6	7	8	9	10
400	1	1	1	1	1	1	1	1
401	1	1	1	1	1	1	1	1
402	1	1	1	1	1	1	1	1
403	1	1	1	1	1	1	1	1
404	1	1	1	1	1	1	1	1
405	2	1	1	1	1	1	1	1
406	3	1	1	1	2	1	1	1
407	5	1	1	2	2	1	1	1
408	8	2	1	2	3	1	1	2
409	12	4	2	3	3	2	2	3
410	16	5	3	4	4	2	3	3
411	22	8	4	5	5	3	4	4
412	27	10	6	7	6	4	5	5
413	34	14	9	8	8	5	6	7
414	40	18	11	11	9	7	8	8
415	46	23	15	13	11	8	9	10
416	52	28	18	16	13	10	11	11
417	58	33	22	19	15	12	14	13
418	64	39	27	23	18	15	16	15
419	69	45	32	26	21	18	19	17
420	74	51	37	31	24	21	21	20
421	78	57	42	35	27	24	24	22
422	82	63	48	40	31	28	27	25
423	86	68	53	44	35	31	31	27
424	88	74	58	49	39	36	34	30
425	91	78	63	54	43	40	37	33
426	93	83	68	59	47	44	41	36
427	95	86	73	64	52	48	44	39
428	96	89	77	68	56	53	48	42
429	97	92	81	72	61	57	51	46
430	98	94	84	76	65	61	55	49
431	99	96	87	80	69	66	58	52
432	99	97	90	83	73	70	62	56
433	99	98	92	86	77	73	65	59
434	99	99	94	88	80	77	69	63
435	100	99	95	91	83	80	72	66
436		99	97	92	86	83	76	69
437		99	98	94	89	86	79	73
438		100	98	95	91	89	82	76
439			99	96	93	91	84	79
440			99	97	95	93	87	82
441			99	98	96	94	89	85
442			100	99	97	96	92	87
443				99	98	97	93	90
444				99	99	98	95	92
445				99	99	98	96	93
446				99	99	99	97	95

447	99	99	99	98	96
448	100	99	99	99	97
449		99	99	99	98
450		100	99	99	99
451			99	99	99
452			100	99	99
453				99	99
454				99	99
455				99	99
456				100	100

Table 1.11. 2015 ACT Aspire Mathematics Norms: Percent of Students at or below Each Scale Score

Scale Score	Grade							
	3	4	5	6	7	8	9	10
400	1	1	1	1	1	1	1	1
401	1	1	1	1	1	1	1	1
402	1	1	1	1	1	1	1	1
403	1	1	1	1	1	1	1	1
404	2	1	1	1	1	1	1	1
405	4	1	1	1	1	1	1	1
406	6	1	1	1	1	1	1	1
407	9	2	1	1	2	1	1	1
408	12	3	2	2	3	1	1	1
409	17	5	3	2	5	2	1	1
410	24	8	5	4	6	3	2	2
411	31	13	8	6	9	5	3	3
412	40	19	12	8	12	7	4	4
413	49	27	18	11	15	10	6	6
414	59	36	24	15	20	14	9	8
415	68	46	32	20	24	18	12	10
416	76	55	40	25	29	22	15	13
417	83	65	48	31	35	27	19	16
418	89	73	56	37	40	32	24	20
419	93	79	64	44	46	37	28	24
420	96	85	70	50	52	43	33	28
421	98	89	76	56	57	48	38	32
422	99	92	81	63	62	53	43	36
423	99	94	85	68	67	57	48	40
424	99	96	88	73	72	62	52	45
425	99	97	91	78	76	66	57	49
426	99	98	93	82	79	69	61	53
427	99	99	94	85	83	73	65	57
428	99	99	96	88	85	76	69	61
429	99	99	97	91	88	79	73	65
430	99	99	97	93	90	81	76	68
431	99	99	98	94	92	84	80	72
432	99	99	99	95	93	86	82	75
433	99	99	99	97	95	88	85	79
434	100	99	99	97	96	90	88	82
435		99	99	98	97	92	90	85
436		99	99	99	98	93	92	88
437		99	99	99	98	95	94	90
438		99	99	99	99	96	95	92
439		99	99	99	99	97	96	94
440		100	99	99	99	98	97	96
441			99	99	99	98	98	97
442			99	99	99	99	99	98
443			99	99	99	99	99	99
444			99	99	99	99	99	99
445			99	99	99	99	99	99
446			100	99	99	99	99	99

447	99	99	99	99	99
448	99	99	99	99	99
449	99	99	99	99	99
450	99	99	99	99	99
451	100	99	99	99	99
452		99	99	99	99
453		100	99	99	99
454			99	99	99
455			99	99	99
456			100	99	99
457				99	99
458				99	99
459				99	99
460				100	100

Table 1.13. 2015 ACT Aspire Science Norms: Percent of Students at or below Each Scale Score

Scale Score	Grade							
	3	4	5	6	7	8	9	10
400	1	1	1	1	1	1	1	1
401	1	1	1	1	1	1	1	1
402	1	1	1	1	1	1	1	1
403	1	1	1	1	1	1	1	1
404	3	1	1	1	1	1	1	1
405	5	2	1	1	1	1	1	1
406	8	4	2	1	1	1	1	1
407	12	6	3	2	2	1	1	1
408	17	8	4	3	3	2	1	1
409	22	11	6	5	5	3	2	2
410	27	15	8	6	7	4	3	3
411	33	18	10	8	9	6	4	4
412	38	23	13	11	12	7	5	5
413	43	28	16	14	15	9	7	6
414	49	33	20	17	19	12	8	8
415	54	38	24	20	22	15	11	10
416	59	43	28	24	26	18	13	12
417	64	49	33	28	30	21	16	15
418	69	55	38	33	34	24	19	17
419	74	60	44	37	38	28	22	20
420	79	66	50	42	42	32	26	23
421	83	71	56	47	46	36	29	26
422	87	76	62	53	50	40	33	30
423	91	81	69	58	54	45	37	33
424	94	85	75	64	59	50	42	36
425	96	89	80	69	63	54	46	40
426	98	92	85	74	67	59	50	43
427	99	94	89	79	71	64	54	47
428	99	96	92	83	75	68	59	51
429	99	97	94	87	79	72	63	55
430	99	98	96	90	83	77	67	59
431	99	99	98	93	87	81	71	63
432	99	99	98	95	90	84	75	67
433	100	99	99	97	93	87	79	71
434		99	99	98	95	90	82	74
435		99	99	99	97	92	85	78
436		100	99	99	98	94	88	82
437			99	99	99	96	91	85
438			100	99	99	97	93	88
439				99	99	98	95	91
440				100	99	99	97	93
441					99	99	98	95
442					99	99	99	97
443					100	99	99	98
444						99	99	99
445						99	99	99
446						100	99	99

447
448
449

99
99
100

99
99
100

Table 1.14. 2015 ACT Aspire Writing Norms: Percent of Students at or below Each Scale Score

Scale Score	Grade							
	3	4	5	6	7	8	9	10
408	1	1	1	1	1	1	1	1
409	1	1	1	1	1	1	1	1
410	2	1	2	2	2	2	2	1
411	3	1	3	2	3	2	3	1
412	4	1	4	3	4	3	3	2
413	6	2	5	4	6	4	5	3
414	9	2	7	5	8	6	6	4
415	12	4	9	7	10	7	8	5
416	16	6	12	9	13	10	10	6
417	21	8	15	11	16	13	12	8
418	27	12	20	14	20	16	15	10
419	33	17	25	17	25	20	18	12
420	40	24	30	21	30	26	21	14
421	48	31	36	26	36	32	25	17
422	55	40	43	32	42	38	29	19
423	62	49	50	37	49	45	33	22
424	69	58	57	44	56	52	38	25
425	75	66	63	50	62	60	43	28
426	81	74	70	56	69	67	48	32
427	85	80	75	62	74	73	54	37
428	89	85	80	68	79	78	60	42
429	92	90	84	73	84	83	66	48
430	94	93	87	78	87	87	73	56
431	96	95	90	82	90	90	80	64
432	97	96	92	85	93	93	86	73
433	98	98	93	88	95	95	91	83
434	99	98	95	91	96	96	95	90
435	99	99	96	93	97	97	98	96
436	99	99	97	94	98	98	99	99
437	99	99	98	96	99	98	99	99
438	99	99	98	97	99	99	99	99
439	99	99	99	97	99	99	99	99
440	100	100	100	98	99	99	99	99
441				98	99	99	99	99
442				99	99	99	99	99
443				99	99	99	99	99
444				99	99	99	99	99
445				99	99	99	99	99
446				99	99	99	99	99
447				99	99	99	99	99
448				100	100	100	100	100

Table 1.15. National Average Scale Scores Using Weighted Samples

Grade level	Subject area				
	English	Mathematics	Reading	Science	Writing
3	417	413	413	415	422
4	420	416	415	418	424
5	423	418	418	420	424
6	425	421	420	422	426
7	427	421	421	422	424
8	428	423	423	424	424
9	429	425	423	426	426
10	430	426	424	428	428