

Appendix 1: Confidence Intervals and Statistical Significance

Confidence Intervals and Statistical Significance

Many of the tables, figures, and footnotes in the report provide information about whether the difference between estimated percentages is statistically significant. Statistical significance signals whether this difference is likely to be due to chance. If it appears that the difference in estimated percentages is due to chance (i.e., the difference is not statistically significant), then we cannot say that districts are more likely to do one thing than another.

For example, we estimate that 83% of districts in Common Core-adopting states began teaching a CCSS-aligned curriculum in mathematics in school year 2013-14 or earlier, while 12% of districts will begin teaching such a curriculum in school year 2014-15 or later. The difference between 83 percent and 12 percent is statistically significant, which indicates that the difference is larger than is likely to be explained by chance alone. Therefore, we can say that a higher percentage of districts began teaching a CCSS-aligned curriculum in mathematics in 2013-14 or earlier than will begin teaching such a curriculum in school year 2014-15 or later.

One method of determining the statistical significance of the difference between two percentages is to compare the confidence intervals of the two percentages. Confidence intervals provide information about the accuracy of the estimated percentages. If the confidence intervals for two percentages do not overlap, then the difference is statistically significant. Exhibit 1 illustrates how ranges of estimated percentages (the confidence intervals) of districts implementing a CCSS-aligned curriculum in mathematics in 2013-14 or earlier versus districts implementing such a curriculum in 2014-15 or later are used to determine statistical significance.

Exhibit 1: Confidence intervals for Figure 1

School year when districts began or will begin teaching CCSS-aligned curricula

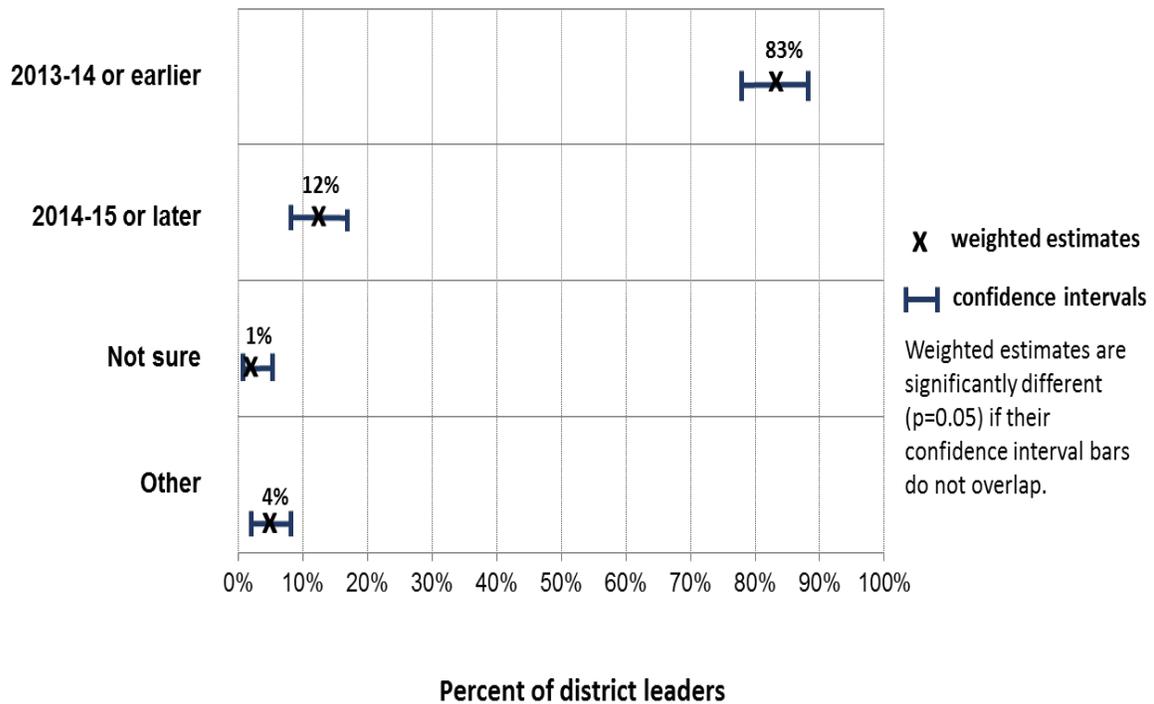


Exhibit reads: An estimated 83% of districts in Common Core-adopting states reported that they began teaching a CCSS-aligned curriculum in mathematics in school year 2013-14 or earlier, while 12% indicated that they will begin teaching such a curriculum in school year 2014-15 or later.

Note: The 95 percent confidence intervals for the estimates in the figure are as follows: 83 (77, 87); 12 (8, 18); 1 (1, 4); 4 (2, 8). This means, for example, we are 95 percent certain that the actual percentage of district leaders whose districts began teaching the CCSS-aligned curriculum in mathematics in school year 2013-14 or earlier is between 77 percent and 87 percent.

In this case, the bars depicting the confidence intervals for the estimated percentage of districts that reported that they began teaching a CCSS-aligned curriculum in mathematics in school year 2013-14 or earlier versus districts that reported that they will begin teaching a CCSS-aligned curriculum in mathematics in 2014-15 or later do not overlap, indicating that the difference between the two percentages is statistically significant. Conversely, the bars depicting the confidence interval for the estimated percentage of districts that were “not sure” or that had begun or will begin teaching the CCSS-aligned curriculum in mathematics at some “other” time do overlap, indicating that the difference between the percentages is not statistically significant.

Appendix 3 provides confidence intervals for all the figures and tables that are reported in the main body of the report.

Appendix 2: Study Methods

Study Methods

This appendix describes the sampling procedures used to select potential districts to participate in the *Center on Education Policy's District Survey, 2014*. Also described are the methods used to develop and administer the survey and the analytic process used to obtain population estimates from the survey responses. The survey was developed, administered, and analyzed with support from Policy Studies Associates, CEP's contractor for this project.

Survey Sample

We started with the publicly accessible dataset from the 2010-2011 Common Core of Data Local Education Agency Universe Survey conducted by the National Center of Education Statistics (NCES). We chose to use the 2010-2011 edition of the dataset because at the time we drew the sample, the 2011-2012 was in preliminary form. This dataset contains information on 18,478 elementary and secondary education agencies located in the 50 states and the District of Columbia; Puerto Rico, American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, and the U.S. Virgin Islands; the Department of Defense schools; and the Bureau of Indian Education.

From the dataset of 18,478 education agencies, we removed the 7,223 agencies that did not match our study population criteria, for a total of 11,255 districts in the sample frame. Specifically, we removed the agencies that were located outside of the 50 states and the District of Columbia as well as in the five states that had not adopted the Common Core State Standards (CCSS) as of winter 2014 (Alaska, Minnesota, Nebraska, Texas, and Virginia). We also removed agencies that were not operating or that were regional education service agencies, federally and state-operated agencies, charter agencies, or designated as "other education agencies."

The dataset also included agencies that were component(s) of a supervisory union, sharing a superintendent and administrative services with other local school districts. In these cases, we retained the agency defined as the "supervisory union" and removed the component agencies associated with the unions. We removed the local education agencies (LEAs) that did not directly educate students through the employment of teachers and the operation of school buildings; many of these agencies represented towns that sent their students to neighboring districts or cooperative districts. Finally, we also removed agencies that solely served special segments of the population, such as vocational centers or schools for special education students. Exhibit 2 summarizes the edits that we made to the dataset to arrive at our sample frame.

Exhibit 1: Variables Used to Build Sample Frame

Variable Name	Variable Description	Use*	LEAs Subtracted	Unduplicated Deletions**
FIPST	American National Standards Institute (ANSI) state code	Eliminated LEAs from locations outside of the 50 states and the District of Columbia AND states who have not adopted the CCSS (X>56, X=02, X=27, X=31, X=48, X=51; n=2,642)	2,642	2,642
BOUND	The boundary change indicator is a classification of changes in an education agency's boundaries since the last report to NCES	Eliminated LEAs that had closed (X=2; n=185) or were temporarily closed (X=6; n=28). Eliminated one LEA in which a new agency has since opened and includes it.	214	2,856
TYPE	Agency type code	Eliminated agencies defined as "regional education service agencies" (X=4; n=1,137), "state-operated agencies" (X=5; n=243), "federally operated agencies" (X=0), "charter agencies" (X=7; n=2,070), and "other education agencies" (X=8; n=130)	3,580	6,436
UNION	Indicator linking supervisory units and component agencies	Eliminated agencies that were represented in the dataset as component agencies of a "supervisory union." Eliminated LEAs from CA (n=12), IN (n=2), ME (n=66), NH (n=176), NYC (n=33), and VT (n=293); eliminated supervisory unions from MT (n=56).	638	7,074
SCH	Number of schools associated with the agency	Eliminated LEAs that did not directly educate students (n=102)	102	7,176
n/a	n/a	Eliminated LEAs that served special populations of students (n=47)	47	7,223

Exhibit reads: The FIPST variable eliminated LEAs that existed outside the 50 states and the District of Columbia and who have not adopted the CCSS; this variable netted 2,642 deletions, which brought the total number of unduplicated deletions to 2,642.

* The "X" stands for the variable name in each row.

** The unduplicated count is cumulative from top to bottom.

Survey Development

The challenge in developing the survey was to strike a reasonable balance between minimizing the response burden and collecting enough data to describe how LEAs are responding to local efforts to implement to Common Core State Standards (CCSS). The survey included 22 questions across a variety of topics including: district views on the Common Core, CCSS-aligned

curriculum, collaboration, teacher and principal CCSS-related professional development, SEA assistance, assessments, outreach efforts, and challenges.

As part of survey development, we sent a draft of the instrument to superintendents in eight LEAs. We asked the superintendents to review the instrument and provide feedback on the appropriateness and clarity of the wording and on the focus of the survey questions. We also asked them to estimate the amount of time required to complete the survey and to indicate who else in their districts might be involved in responding to individual items. The final version of the survey reflects the feedback that we received.

Survey Administration

In March 2014, CEP contacted the superintendents of the districts in the sample to explain the purpose of the survey and to provide background information on CEP and its previous reports and research on district-level implementation of the CCSS. A week later, we emailed the survey to the local superintendents. We sent a reminder email a few days after emailing the survey. Two weeks later we sent a reminder email to non-responding emails. We also followed up by phone to non-responding districts.

Districts returned surveys between the end of March and the middle of June 2014. We received completed responses from 211 of the 390 districts, 16 partial responses, and 27 refusals in our sample; this corresponds to a response rate of 65 percent. Given our previous work with school districts and our understanding of the current climate of data requests from districts, we anticipated a 50 percent response rate at the outset of the survey. If we assume that district non-response occurred at random, then the response rate does not affect the representativeness of the survey findings.

Data Analysis

To obtain the population estimates from the sample responses, we multiplied survey responses by one of two sets of weighting factors specific to the respondent's stratum. The first set of weighting factors were developed to adjust the achieved samples in each stratum to reflect the proportion of districts in states adopting the CCSS. The second set of weighting factors was also stratum-specific and used for analyses of responses to questions concerning districts in consortia-member states, including questions 14 through 19 and the second half of question 20. These weights adjusted the achieved sample to reflect the proportion of districts in the population of states participating in one of the two state consortia that are developing CCSS-aligned assessments. Exhibit 3 shows the resulting weights.

Exhibit 2. CCSS adopting and consortia-member state survey population, response rates, and weights

Location Type	Number (and percent) of districts in the sample frame	Number (and percent) of district responses	Population Weight
Questions for districts in states adopting the CCSS			
City	615 (5.5%)	12 (5.7%)	51.2500
Suburb	2541 (22.6%)	47 (22.3%)	54.0638
Town	2008 (17.8%)	44 (20.9%)	44.6222
Rural	6091 (54.1%)	108 (51.1%)	56.3981
<i>Totals</i>	<i>11,255 (100%)</i>	<i>211 (100%)</i>	<i>206.3342</i>
Questions for districts in consortia-member states (Questions 14-19, part of 20)			
City	567 (5.7%)	11 (5.8%)	51.5455
Suburb	2,475 (24.5%)	46 (24.6%)	53.8043
Town	1,779 (17.6%)	36 (19.3%)	49.4167
Rural	5,266 (55.2%)	94 (50.3%)	56.0213
<i>Totals</i>	<i>10,087 (100%)</i>	<i>187 (100%)</i>	<i>210.7877</i>

Exhibit reads: There are 615 city districts in the sample frame. Twelve city districts responded to the survey.

For survey findings presented in the report, we estimated both the standard error and confidence interval for each of the estimated response frequencies. The estimated standard error of a proportion provides information about the accuracy of the percentage estimate. The size of the standard error is influenced by the distribution of responses, the number of respondents, and the size of the population. Estimated standard errors are used to construct confidence intervals for the estimated percent. The confidence interval for a proportion indicates the degree of certainty that the true value for the population of all districts in the nation, or in a state that is a member of one of the two state consortia developing CCSS-aligned assessments, is included in a particular range. For proportions, the confidence interval is not symmetric relative to the estimated percent (except in the case where the estimated percent equals 50); this is because a proportion has a lower and upper bound (0 and 1, respectively), and the boundary affects the calculation of the interval. Additional information about the confidence intervals for specific responses is available in Appendix 3 accompanying the report.

Appendix 3: Confidence Intervals for Survey Responses

Exhibit 1: Confidence intervals for Figure 1

School year when districts began or will begin teaching CCSS-aligned curricula

	Math	ELA
Began teaching the CCSS-aligned curriculum in school year 2013-14 or earlier	82.6 [76.7, 87.2]	81.6 [75.7, 86.3]
Will begin teaching the CCSS-aligned curriculum in school year 2014-15 or later	12.2 [8.3, 17.5]	13.4 [9.3, 18.7]
Not sure	1.4 [0.5, 4.4]	1.4 [0.4, 4.3]
Other	3.8 [1.9, 7.5]	3.7 [1.8, 7.2]

Exhibit reads: An estimated 83% of districts in Common Core-adopting states reported that they began teaching a CCSS-aligned curriculum in mathematics in school year 2013-14 or earlier, while 12% indicated that they will begin teaching such a curriculum in school year 2014-15 or later.

Note: The 95 percent confidence intervals for the estimates in the exhibit mean that, for example, we are 95 percent certain that the actual percentage of district leaders whose districts began teaching the CCSS-aligned curriculum in math in school year 2013-14 or earlier is between 77 percent and 87 percent.

Exhibit 2: Confidence intervals for Figure 2

School year when districts expect to implement CCSS-aligned curricula in *all* schools

	School Year 2013-14 or before	School Year 2014-15	School Year 2015-16 or later	Not Sure
Implemented a CCSS-aligned curricula in math in all schools	37.3 [30.4, 44.7]	31.5 [25.0, 38.7]	26.9 [20.9, 33.9]	4.4 [2.2, 8.5]
Implemented a CCSS-aligned curricula in ELA in all schools	35.9 [29.1, 43.2]	35.8 [29.0, 43.2]	22.8 [17.2, 29.6]	5.5 [3.0, 10.1]

Exhibit reads: An estimated 37% of districts in Common Core-adopting states reported that they have already implemented a curriculum aligned to the CCSS in math in all of their schools. An estimated 32% of district leaders expect to implement a CCSS-aligned curricula in math in school year 2014-15, and an estimated 27% do not expect to do so until school year 2015-16 or later. An estimated 4% of districts were unsure when they would implement a CCSS-aligned curriculum in math in all of their schools.

Note: The 95 percent confidence intervals for the estimates in the exhibit mean that, for example, we are 95 percent certain that the actual percentage of district leaders that implemented a CCSS-aligned curriculum in all schools by 2013-14 or before is between 30 percent and 45 percent.

Exhibit 3: Confidence intervals for Table 1

District sources of CCSS-aligned curricular materials

	Math CCSS-aligned curricula	ELA CCSS-aligned curricula
Teachers in my district have developed/are developing CCSS-aligned curricular materials	65.6 [58.7, 72.0]	64.6 [57.7, 71.0]
My school district has developed/is developing its own CCSS-aligned curricular materials	50.7 [43.8, 57.7]	50.3 [43.3, 57.2]
We have worked/are working with other districts in the state to develop CCSS-aligned curricular materials	30.9 [24.8, 37.7]	27.1 [21.3, 33.7]
We will use/are using CCSS-aligned curricular materials developed by other districts in my state	17.8 [13.1, 23.8]	16.3 [11.8, 22.1]
We will use/are using CCSS-aligned curricular materials developed by districts in other states	10.6 [7.0, 15.7]	7.5 [4.5, 12.1]

Exhibit reads: An estimated 66% of districts in Common Core-adopting states reported that teachers in their district have developed or are developing CCSS-aligned curricular materials for mathematics, while 65% indicated that teachers have developed or are developing these types of materials for English language arts.

Note: The 95 percent confidence intervals for the estimates in the exhibit mean that, for example, we are 95 percent certain that the actual percentage of district leaders whose teachers have developed or are developing CCSS-aligned curricular materials for mathematics is between 59 percent and 72 percent.

Exhibit 4: Confidence intervals for Table 2

State sources of CCSS-aligned curricular materials

	Math CCSS-aligned curricula	ELA CCSS-aligned curricula
We will use/are using CCSS-aligned curricular materials developed by our SEA	42.7 [35.9, 49.7]	39.6 [33.0, 46.6]
We will use/are using CCSS-aligned curricular materials developed by SEAs in other states	13.3 [9.2, 18.8]	10.4 [6.9, 15.6]

Exhibit reads: An estimated 43% of districts in Common Core-adopting states reported that they will use or are using CCSS-aligned curricular materials developed by their SEA for mathematics, while 40% responded that they will use or are using such SEA- developed curricula for English language arts.

Note: The 95 percent confidence intervals for the estimates in the exhibit mean that, for example, we are 95 percent certain that the actual percentage of district leaders that will use or are using CCSS-aligned curricular materials developed by their SEA for mathematics is between 36 percent and 50 percent.

Exhibit 5: Confidence intervals for Table 3

CCSS-aligned curricular materials from for-profit and nonprofit organizations

	Math CCSS-aligned curricula	ELA CCSS-aligned curricula
We will use/are using CCSS-aligned curricular materials developed by for-profit entities	38.5 [32.0, 45.5]	34.9 [28.6, 41.9]
We will use/are using CCSS-aligned curricular materials developed by private, non-profit organizations	14.4 [10.1, 20.0]	13.4 [9.3, 18.9]

Exhibit reads: An estimated 39% of districts in Common Core-adopting states reported that they will use or are using CCSS-aligned curricula developed by for-profit entities for mathematics while 35% indicated that they are using such curricula developed by for-profit entities for English language arts.

Note: The 95 percent confidence intervals for the estimates in the exhibit mean that, for example, we are 95 percent certain that the actual percentage of district leaders that will use or are using CCSS-aligned curricula developed by for-profit entities for mathematics is between 32 and 46 percent.

Exhibit 6: Confidence intervals for Table 4

Collaborations to develop CCSS-aligned curriculum materials

	Other districts in the state	The SEA	Non-profit organizations	Institutions of higher education	Other districts in other states	Did not collaborate with any entity	Not sure
Entities with which district is collaborating to develop CCSS-aligned curriculum materials	48.8 [42.1, 55.7]	39.7 [33.2, 46.6]	15.8 [11.4, 21.5]	11.2 [7.6, 16.3]	6.6 [3.9, 10.8]	17.0 [12.4, 22.8]	6.5 [3.9, 10.8]

Exhibit reads: An estimated 40% of districts in Common Core-adopting states reported that they have collaborated with their state education agency on the development of CCSS-aligned curriculum materials.

Note: The 95 percent confidence intervals for the estimates in the exhibit mean that, for example, we are 95 percent certain that the actual percentage of district leaders that have collaborated with the state education agency on the development of CCSS-aligned curriculum materials is between 33 percent and 47 percent.

Exhibit 7: Confidence intervals for Figure 3

Challenges in identifying and/or developing CCSS-aligned curriculum materials necessary to implement the CCSS

	Major challenge	Minor challenge	Not a challenge	Too soon to tell
Identifying and/or developing the curriculum materials necessary to implement the CCSS	45.3 [38.5, 52.3]	45.0 [38.2, 52.0]	8.7 [5.4, 13.6]	1.1 [0.3, 4.1]

Exhibit reads: An estimated 45% of districts in Common Core-adopting states reported facing major challenges in identifying and/or developing curriculum aligned to the CCSS, and an additional 45% viewed this as a minor challenge. An estimated 9% did not consider CCSS-aligned curriculum a challenge, and 1% said it is too soon to tell.

Note: The 95 percent confidence intervals for the estimates in the exhibit mean that, for example, we are 95 percent certain that the actual percentage of district leaders facing major challenges in identifying and/or developing curriculum materials necessary to implement the CCSS is between 39 percent and 52 percent.

Exhibit 8: Confidence intervals for Figure 4

Districts' estimates of the percentage of math and ELA teachers and principals who had participated in at least some CCSS-related professional development as of school year 2013-14

Approximate percentage who have had at least some CCSS-related professional development	Math Teachers	ELA Teachers	Principals
90% to 100%	67.0 [60.1, 73.1]	67.4 [60.5, 73.5]	78.6 [72.4, 83.7]
76% to 89%	8.0 [5.0, 12.8]	9.2 [5.8, 14.1]	2.2 [0.9, 5.3]
51% to 75%	8.8 [5.6, 13.6]	6.9 [4.1, 11.4]	3.0 [1.3, 6.5]
50% or less	8.4 [5.3, 13.2]	7.8 [4.8, 12.5]	6.0 [3.4, 10.4]
Not sure/can't estimate	7.7 [4.8, 12.3]	8.8 [5.6, 13.6]	9.8 [6.4, 14.8]

Exhibit reads: An estimated 67% of districts in Common Core-adopting states reported that approximately 90% to 100% of their math teachers had participated in at least some CCSS-related professional development activities as of school year 2013-14.

Note: The 95 percent confidence intervals for the estimates in the exhibit mean that, for example, we are 95 percent certain that the actual percentage of district leaders reporting that approximately 90% to 100% of their math teachers had participated in at least some CCSS-related professional development activities as of school year 2013-14 is between 60 percent and 73 percent.

Exhibit 9: Confidence intervals for Figure 5

School year in which districts estimate that all of their math and ELA teachers and principals will be adequately prepared for the CCSS

	School Year 2013-14 or before	School Year 2014-15	School Year 2015-16 or later	Not Sure/can't estimate
Adequately prepared all <u>math teachers</u> to teach the CCSS	29.5 [23.3, 36.7]	33.5 [26.9, 40.8]	30.3 [24.0, 37.5]	6.7 [3.8, 11.4]
Adequately prepared all <u>ELA teachers</u> to teach the CCSS	32.5 [26.0, 39.8]	36.1 [29.4, 43.5]	24.2 [18.5, 31.1]	7.1 [4.1, 12.0]
Adequately prepared all <u>principals</u> to be instructional leaders around the CCSS	35.6 [28.9, 43.0]	33.8 [27.1, 41.1]	23.0 [17.4, 29.7]	7.7 [4.6, 12.6]

Exhibit reads: An estimated 30% of districts in Common Core-adopting states reported that all of their math teachers had been adequately prepared to teach the CCSS in SY 2013-14 or before.

Note: The 95 percent confidence intervals for the estimates in the exhibit mean that, for example, we are 95 percent certain that the actual percentage of district leaders reporting that all of their math teachers had been adequately prepared to teach the CCSS in school year 2013-14 or before is between 23 percent and 37 percent.

Exhibit 10: Confidence intervals for Table 5

Entities providing any type of CCSS-related professional development to teachers and principals in responding districts

	Provides CCSS-related PD to teachers/principals	Does <i>not</i> provide CCSS-related PD to teachers/principals
<i>Teacher professional development</i>		
My school district	91.8 [87.0, 94.9]	8.2 [5.1, 13.0]
State regional service agencies	83.4 [77.4, 88.1]	16.6 [11.9, 22.6]
The state education agency	72.8 [65.9, 78.7]	27.2 [21.3, 34.1]
Teachers are developing their own CCSS-aligned professional development activities	67.1 [59.8, 73.7]	32.9 [26.3, 40.2]
For profit-organizations	48.9 [41.0, 57.0]	51.1 [43.0, 59.0]
Other school districts in the state	38.7 [31.5, 46.6]	61.3 [53.4, 68.5]
Institutions of higher education	36.0 [28.8, 43.9]	64.0 [56.1, 71.2]
Non-profit organizations, such as state and national professional organizations	33.5 [26.3, 41.6]	66.5 [58.4, 73.7]
Teachers' unions	11.0 [6.8, 17.3]	89.0 [82.7, 93.2]
<i>Principal professional development</i>		
My school district	81.2 [75.0, 86.2]	18.8 [13.8, 25.0]
State regional service agencies	80.1 [73.8, 85.1]	19.9 [14.9, 26.2]
The state education agency	72.9 [66.1, 78.8]	27.1 [21.2, 33.9]
For profit-organizations	38.6 [31.1, 46.7]	61.4 [53.3, 68.9]
Principals are developing their own CCSS-aligned professional development activities	37.9 [30.7, 45.7]	62.1 [54.3, 69.3]
Other school districts in the state	34.5 [27.2, 42.6]	65.5 [57.4, 72.8]
Non-profit organizations, such as state and national professional organizations	34.6 [27.4, 42.7]	65.4 [57.3, 72.6]
Institutions of higher education	33.6 [26.6, 41.3]	66.4 [58.7, 73.4]

Exhibit reads: An estimated 92% of districts in Common Core-adopting states reported that they are providing CCSS-related professional development for teachers in their district while an estimated 8% indicated that they do not provide such services.

Note: The 95 percent confidence intervals for the estimates in the exhibit mean that, for example, we are 95 percent certain that the actual percentage of district leaders whose districts are providing CCSS-related professional development for teachers in their district is between 87 percent and 95 percent.

Exhibit 11: Confidence intervals for Table 6

Topics of CCSS-related professional development

	Percentage of districts reporting that teachers received PD on this topic	Percentage of districts reporting that principals received PD on this topic
CCSS content	93.4 [88.9, 96.1]	85.7 [80.1, 89.9]
CCSS-aligned instructional strategies	84.6 [78.9, 89.0]	82.3 [76.3, 87.0]
Use of data from CCSS-aligned assessments to inform instruction and improve student learning	74.8 [68.4, 80.4]	71.0 [64.4, 76.9]
Instructional leadership on CCSS implementation	NA	64.5 [57.7, 70.8]

Exhibit reads: An estimated 93% of districts in Common Core-adopting states reported that one or more entities provided professional development on the content of the CCSS to their teachers.

Note: The 95 percent confidence intervals for the estimates in the exhibit mean that, for example, we are 95 percent certain that the actual percentage of district leaders reporting that one or more entities provided professional development on the content of the CCSS to their teachers is between 89 percent and 96 percent.

Exhibit 12: Confidence intervals for Table 7

Districts as providers of CCSS-related professional development

Topic of professional development	Providers of professional development	
	The school district	Other districts in state
<i>Teacher professional development</i>		
CCSS content	80.3 [74.1, 85.3]	25.9 [20.3, 32.4]
CCSS-aligned instructional strategies	69.9 [63.2, 75.9]	20.0 [15.1, 26.2]
Use of data from CCSS-aligned assessments to inform instruction and improve student learning	62.8 [55.9, 69.2]	15.0 [10.7, 20.7]
Not sure	1.0 [0.3, 4.1]	20.6 [15.6, 26.8]
<i>Principal professional development</i>		
CCSS content	63.9 [57.0, 70.2]	18.6 [13.9, 24.6]
CCSS-aligned instructional strategies	63.6 [56.7, 70.0]	17.3 [12.7, 23.2]
Use of data from CCSS-aligned assessments to inform instruction and improve student learning	55.7 [48.8, 62.4]	12.6 [8.7, 17.9]
Instructional leadership on CCSS implementation	47.2 [40.4, 54.1]	9.6 [6.2, 14.5]
Not sure	4.8 [2.6, 8.7]	28.7 [22.9, 35.3]

Exhibit reads: An estimated 80% of districts in Common Core-adopting states reported that the district has provided professional development to its teachers on the content of the CCSS, while 26% indicated that other districts in the state have provided this type of professional development to their teachers.

Note: The 95 percent confidence intervals for the estimates in the exhibit mean that, for example, we are 95 percent certain that the actual percentage of district leaders reporting that the district has provided professional development to their teachers on the content of the CCSS is between 74 percent and 85 percent.

Exhibit 13: Confidence intervals for Table 8

Teachers and principals as providers of CCSS-related professional development

Topic of professional development	Providers of professional development	
	Teacher-provided	Principal-provided
CCSS content	44.5 [37.7, 51.4]	24.8 [19.4, 31.2]
CCSS-aligned instructional strategies	41.9 [35.2, 48.8]	23.0 [17.7, 29.3]
Use of data from CCSS-aligned assessments to inform instruction and improve student learning	32.9 [26.8, 39.7]	14.2 [10.1, 19.7]
Instructional leadership on CCSS implementation	NA	7.4 [4.6, 11.9]
Not sure	12.4 [8.6, 17.7]	21.5 [16.4, 27.6]

Exhibit reads: An estimated 45% of districts in Common Core-adopting states reported that teachers are providing their own professional development services, and 25% indicated that principals are providing professional development to principals.

Note: The 95 percent confidence intervals for the estimates in the exhibit mean that, for example, we are 95 percent certain that the actual percentage of district leaders reporting that teachers are providing their own professional development services on CCSS content is between 38 percent and 51 percent.

Exhibit 14: Confidence intervals for Table 9

State sources of CCSS-related professional development

Topic of professional development	Providers of professional development	
	State regional service agencies	State education agency
<i>Teacher professional development</i>		
CCSS content	68.5 [61.8, 74.6]	61.7 [54.8, 68.2]
CCSS-aligned instructional strategies	62.1 [55.1, 68.5]	44.0 [37.3, 51.0]
Use of data from CCSS-aligned assessments to inform instruction and improve student learning	48.6 [41.7, 55.5]	37.1 [30.7, 44.0]
Not sure	8.3 [5.2, 12.9]	7.3 [4.4, 11.8]
<i>Principal professional development</i>		
CCSS content	59.7 [52.8, 66.2]	57.6 [50.7, 64.2]
CCSS-aligned instructional strategies	55.1 [48.2, 61.8]	47.3 [40.5, 54.2]
Use of data from CCSS-aligned assessments to inform instruction and improve student learning	48.7 [41.9, 55.5]	40.0 [33.5, 46.9]
Instructional leadership on CCSS implementation	42.1 [35.5, 49.0]	35.3 [29.0, 42.1]
Not sure	5.8 [3.3, 10.0]	7.3 [4.4, 11.8]

Exhibit reads: An estimated 69% of districts in Common Core-adopting states reported that their state regional services agencies are providing their teachers with professional development on the content of the CCSS, while 62% said that state education agency is providing this type of professional development for teachers.

Note: The 95 percent confidence intervals for the estimates in the exhibit mean that, for example, we are 95 percent certain that the actual percentage of district leaders reporting that their state regional service agencies are providing their teachers with professional development on the content of the CCSS is between 62 percent and 75 percent.

Exhibit 15: Confidence intervals for Table 10

Other entities providing CCSS-related professional development

Topic of professional development	Providers of professional development			
	For-profit Organization	Institutions of higher education	Nonprofit organizations	Teachers' unions
<i>Teacher professional development</i>				
CCSS content	32.7 [26.5, 39.5]	20.8 [15.7, 27.0]	21.1 [15.9, 27.3]	4.8 [2.6, 8.7]
CCSS-aligned instructional strategies	27.6 [21.9, 34.2]	16.6 [12.1, 22.4]	17.5 [12.8, 23.5]	2.8 [1.3, 6.2]
Use of data from CCSS-aligned assessments to inform instruction and improve student learning	22.4 [17.2, 28.8]	10.5 [6.9, 15.6]	15.6 [11.1, 21.4]	2.8 [1.3, 6.2]
Not sure	25.8 [20.2, 32.3]	24.1 [18.7, 30.5]	26.5 [20.8, 33.0]	31.7 [25.6, 38.5]
<i>Principal professional development</i>				
CCSS content	24.5 [19.0, 30.9]	16.8 [12.3, 22.6]	21.1 [16.0, 27.2]	NA
CCSS-aligned instructional strategies	20.1 [15.9, 27.2]	14.1 [9.9, 19.6]	20.1 [15.1, 26.2]	NA
Use of data from CCSS-aligned assessments to inform instruction and improve student learning	16.8 [12.3, 22.7]	12.2 [8.3, 17.5]	17.0 [12.5, 22.9]	NA
Instructional leadership on CCSS implementation	14.1 [10.0, 19.6]	10.5 [7.0, 15.5]	17.0 [12.4, 22.8]	NA
Not sure	26.6 [21.0, 33.1]	22.3 [17.1, 28.5]	26.7 [21.1, 33.2]	NA

Exhibit reads: An estimated 33% of districts in Common Core-adopting states reported that for-profit organizations are providing their teachers with professional development on the content of the CCSS, while 21% indicated that institutions of higher education are providing this type of professional development.

Note: The 95 percent confidence intervals for the estimates in the exhibit mean that, for example, we are 95 percent certain that the actual percentage of district leaders reporting that for-profit organizations are providing their teachers with professional development on the content of the CCSS is between 27 percent and 40 percent.