

# Distance Education Courses for Public Elementary and Secondary School Students: 2009–10

First Look



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# Introduction

This report provides national estimates about student enrollment in distance education courses in public school districts. The estimates presented in this report are based on a district survey about distance education courses offered by the district or by any of the schools in the district during the 12-month 2009–10 school year. For this survey, distance education courses were defined as courses offered to elementary and secondary school students regularly enrolled in the district that meet all of the following criteria: (1) are credit granting; (2) are technology delivered; and (3) have the instructor in a different location than the students and/or have course content developed in, or delivered from, a different location than that of the students.

Specifically, the survey covered the following topics about distance education in public school districts during the 12-month 2009–10 school year:

#### **Extent of enrollment**

- Whether any of the elementary and secondary students regularly enrolled in the district were enrolled in distance education courses:
- The number of enrollments (which may include duplicated counts of students) in distance education courses of students regularly enrolled in the district, by instructional level of the enrollments;
- Whether the district could provide an unduplicated count<sup>1</sup> of the number of students enrolled in distance education courses;
- Whether the district delivered any distance education courses to students not regularly enrolled in the district:

#### Monitoring and accountability

- Whether the district distinguished distance education courses from other academic courses on student academic records;
- Whether the district tracked various types of course completions for distance education courses;
- Whether the district monitored student progress in distance education courses in various ways;
- Whether the district had written policies specifying various outcomes when a distance education course was not successfully completed;
- Whether students enrolled in regular high school programs were able to take a full course load in an academic term using only distance education courses, and whether they were able to fulfill all high school graduation requirements using only distance education courses;

# **Deliverers and developers**

- Entities that delivered the distance education courses in which students were enrolled;
- Extent to which distance education courses were developed by the district or by other entities;

### **Courses**

- Types of distance education courses taken by students in the district;
- Importance of various reasons for having distance education courses in the district;
- Whether the district plans to expand the number of distance education courses offered in the next 3 years;

## **Technologies**

• Extent to which various technologies were used for the instructional delivery of distance education courses, and the technology used to deliver the greatest number of distance education courses; and

<sup>&</sup>lt;sup>1</sup> Unduplicated counts are those in which each student is counted only once, regardless of the number of courses in which the student was enrolled.

• Whether students were enrolled in distance education courses delivered over the Internet, and the location where students accessed these internet-delivered distance education courses.

The National Center for Education Statistics (NCES) in the Institute of Education Sciences conducted this Fast Response Survey System (FRSS) survey in late fall and winter 2010–11. FRSS is a survey system designed to collect small amounts of issue-oriented data from a nationally representative sample of districts, schools, or teachers with minimal burden on respondents and within a relatively short period of time. The survey was mailed to approximately 2,310 public school districts in the 50 states and the District of Columbia. The unweighted survey response rate was 94 percent and the weighted response rate using the initial base weights was 95 percent. The survey weights were adjusted for questionnaire nonresponse and the data were then weighted to yield national estimates that represent all public school districts in the United States.

Because the purpose of this report is to introduce new NCES data from the survey through the presentation of tables containing descriptive information, only selected national findings are presented. These findings have been chosen to demonstrate the range of information available from the FRSS study rather than to discuss all of the data collected; they are not meant to emphasize any particular issue. Readers are cautioned not to make causal inferences about the data presented here. The findings are based on self-reported data from public school districts.

All specific statements of comparisons made in the bullets have been tested for statistical significance at the p < .05 level using Student's *t*-statistics from two-tailed tests to ensure that the differences are larger than those that might be expected due to sampling variation. No adjustments were made for multiple comparisons. Many of the variables examined are related to one another, and complex interactions and relationships have not been explored. Tables of standard error estimates are provided in appendix A. See the technical notes (appendix B) for detailed information about the survey methodology. The questionnaire is located in appendix C.

# **Selected Findings**

The findings presented here are based on self-reported data from public school districts for the 12-month 2009–10 school year.

- Fifty-five percent of public school districts reported having students enrolled in distance education courses in 2009–10 (table 1). Among those districts, 96 percent reported having students enrolled in distance education courses at the high school level, 19 percent at the middle or junior high school level, 6 percent at the elementary school level, and 4 percent in combined or ungraded schools.<sup>2</sup>
- Districts reported an estimated 1,816,400 enrollments in distance education courses for 2009–10<sup>3</sup> (table 2). Seventy-four percent of the distance education enrollments were in high schools, 9 percent were in middle or junior high schools, and 4 percent were in elementary schools.
- Seventy-nine percent of districts with students enrolled in distance education courses reported enrollments of 100 or fewer students, with 25 percent reporting 1 to 10 enrollments, 27 percent reporting 11 to 30 enrollments, and 27 percent reporting 31 to 100 enrollments (table 3).
- Eighty-seven percent of districts reported tracking all distance education courses that students completed with a passing grade, 79 percent reported tracking all distance education courses that students completed with a failing grade, and 65 percent reported tracking all distance education courses where students withdrew prior to completing the course (table 4).
- Ninety-eight percent of districts reported monitoring student progress in distance education courses using a final grade report (table 5). Districts also reported monitoring student progress by completion and submission of assignments (80 percent), interim course grades (75 percent), attendance reports (70 percent), log-on activity (56 percent), and time spent online (49 percent).
- Twelve percent of districts reported having written policies specifying that a student cannot enroll in another distance education course when a distance education course was not successfully completed, while 6 percent of districts reported having policies specifying that a student must wait a specified time before enrolling in another distance education course (table 6).
- Twenty-two percent of districts with students enrolled in distance education courses reported that students enrolled in regular high school programs could take a full course load in an academic term using only distance education courses, while 12 percent reported that students could fulfill all high school graduation requirements using only distance education courses (table 7).
- Fifty percent of districts reported that a postsecondary institution in the United States delivered distance education courses in which students in their district were enrolled (table 8). Other reported entities delivering distance education included independent vendors in the United States (47 percent) and a state virtual school in their state (33 percent). Seventy-five percent of districts reported that all distance education courses were developed by entities other than their district.
- Districts reported that the types of distance education courses in which students enrolled were credit recovery<sup>5</sup> (62 percent), dual enrollment<sup>6</sup> (47 percent), Advanced Placement (29 percent), career and technical education (27 percent), and other types of academic courses<sup>7</sup> (65 percent) (table 9).
- The majority of districts reported that providing courses not otherwise available at the school (64 percent) and providing opportunities for students to recover course credits from classes missed or failed (57 percent) were very important reasons for having distance education courses in their district (table 10). Reasons for having distance education that districts reported as not important included addressing school space limitations (82 percent), and generating more district revenues (82 percent).

<sup>&</sup>lt;sup>2</sup> Combined or ungraded schools are those in which the grades offered in the school span both elementary and secondary grades or that are not divided into grade levels. In survey questions that asked respondents to report by instructional level, the grade ranges were not defined for district respondents.

<sup>&</sup>lt;sup>3</sup> If a student was enrolled in multiple courses, districts were instructed to count the student for each course in which he or she was enrolled. Thus, course enrollments may include duplicated counts of students.

<sup>&</sup>lt;sup>4</sup> A state virtual school is one where state-centralized K-12 courses are available through the Internet or web-based methods.

<sup>&</sup>lt;sup>5</sup> Credit recovery courses include opportunities allowing students to recover course credits from classes they have missed or failed.

<sup>&</sup>lt;sup>6</sup> Dual enrollment courses are college-level courses for which students receive both high school and college credits.

<sup>&</sup>lt;sup>7</sup> Other types of academic courses include core courses and electives.

- Fifty-nine percent of districts reported having students enrolled in courses that used the Internet with asynchronous (not simultaneous) instruction to a large extent, with an additional 27 percent reporting having students enrolled in courses that used this technology to a small or moderate extent (table 11). This makes the Internet with asynchronous instruction the most widely used technology for the instructional delivery of distance education courses. In contrast, more than half of the districts indicated not using each of the other technologies at all to deliver distance education courses, with 73 percent reporting not using one-way prerecorded video, 65 percent not using computer-based technologies other than the Internet, 59 percent not using two-way interactive video, and 52 percent not using the Internet with synchronous (simultaneous) instruction.
- The technology most frequently cited by districts as the primary mode of instructional delivery for the greatest number of distance education courses was the Internet using asynchronous instruction (63 percent) (table 12).
- Ninety percent of districts with distance education enrollments reported having students enrolled in distance education courses delivered over the Internet (table 13). Among those districts, 92 percent reported that students accessed internet-delivered courses at school, 78 percent reported that students accessed these courses at home, and 15 percent reported that students accessed these courses at some other location (e.g., public library or community center).
- About three-quarters (74 percent) of the districts with distance education enrollments in 2009–10 indicated that they planned to expand the number of distance education courses offered in the next 3 years (table 14). Fourteen percent of the districts reported that they delivered distance education courses to students not regularly enrolled in the district (e.g., students from other districts, private school students, or homeschooled students).

# **Tables**

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Table 1. Percent of public school districts with any students enrolled in distance education courses, and the percent of those districts with students enrolled in distance education courses at various instructional levels, by district characteristics: School year 2009-10

	Districts with	Dis	tricts with students en	rolled in distance		
	any students	education courses at that instructional level <sup>2</sup>				
	enrolled in					
	distance		Middle or		Combined or	
	education	Elementary	junior high	High	ungraded	
District characteristic	courses <sup>1</sup>	schools	schools	schools	schools <sup>3</sup>	
All public school districts	55	6	19	96	4	
District enrollment size						
Less than 2,500	51	5	16	95	3	
2,500 to 9,999	66	8	26	98	5	
10,000 or more	74	11	34	98	5	
Community type						
City	37	7	22	98	3!	
Suburban	47	8	23	96	6	
Town	67	9	25	98	4!	
Rural	59	4	16	95	3	
Region						
Northeast	39	4!	22	97	‡	
Southeast	78	7	28	97	4	
Central	62	6	17	97	4	
West	51	7	17	94	5	
Poverty concentration						
Less than 10 percent	54	5	20	96	2!	
10 to 19 percent	56	6	20	96	5	
20 percent or more	56	7	18	96	4	

<sup>!</sup> Interpret data with caution; the coefficient of variation is greater than or equal to 30 percent.

NOTE: Data are for the 12-month 2009-10 school year. Poverty estimates for school districts were based on Title I data provided to the U.S. Department of Education by the U.S. Census Bureau.

<sup>‡</sup> Reporting standards not met. The coefficient of variation for this estimate is 50 percent or greater.

Based on all public school districts.

Based on all public school districts.

<sup>&</sup>lt;sup>2</sup> Based on the 55 percent of districts with students enrolled in distance education courses in the 12-month 2009–10 school year.

<sup>&</sup>lt;sup>3</sup> Combined or ungraded schools are those in which the grades offered in the school span both elementary and secondary grades or that are not divided into grade levels. In survey questions that asked respondents to report by instructional level, the grade ranges were not defined for district respondents.

Table 2. Number of enrollments in distance education courses of students regularly enrolled in public school districts, and the percentage distribution of those enrollments by instructional level of the distance education enrollments, by district characteristics: School year 2009-10

	Number of	Percent	age distribution of en	nrollments in dista	ance
	enrollments in	edı			
	distance		Middle or		Combined or
	education	Elementary	junior high	High	ungraded
District characteristic	courses1	schools	schools	schools	schools <sup>3</sup>
All public school districts with students					
enrolled in distance education courses	1,816,400	4	9	74	‡
District enrollment size					
Less than 2,500	509,000!	8!	10!	80	1!
2,500 to 9,999	579,200!	‡	‡	54!	‡
10,000 or more	728,100	2	11	86	1
Community type					
City	653,700!	‡	6!	62!	‡
Suburban	527,300	4!	12	82	1
Town	306,800!	‡	12!	80	‡
Rural	328,600	÷ ÷	5	80	8!
Region					
Northeast	77,700	‡	6	92	‡
Southeast	518,800	2	11	86	1!
Central	697,100!	5!	‡	60!	‡
West	522,800	‡	8	80	7!
Poverty concentration					
Less than 10 percent	287,700	‡	4	81	‡
10 to 19 percent		2!	10	68	* * *
20 percent or more	519,400	7!	9!	84	<u> </u>

<sup>!</sup> Interpret data with caution; the coefficient of variation is greater than or equal to 30 percent.

NOTE: Data are for the 12-month 2009-10 school year. Poverty estimates for school districts were based on Title I data provided to the U.S. Department of Education by the U.S. Census Bureau. Detail may not sum to totals because of rounding.

<sup>‡</sup> Reporting standards not met. The coefficient of variation for this estimate is 50 percent or greater.

If a student was enrolled in multiple courses, districts were instructed to count the student for each course in which he or she was enrolled. Thus, course enrollments may include duplicated counts of students.

<sup>&</sup>lt;sup>2</sup>Percentages are based on the estimated 1,816,400 enrollments in distance education courses in the 12-month 2009–10 school year.

<sup>&</sup>lt;sup>3</sup> Combined or ungraded schools are those in which the grades offered in the school span both elementary and secondary grades or that are not divided into grade levels. In survey questions that asked respondents to report by instructional level, the grade ranges were not defined for district respondents.

Table 3. Percentage distribution of public school districts with students enrolled in distance education courses, by the number of distance education enrollments and district characteristics: School year 2009-10

	Number of distance education enrollments <sup>1</sup>				ts <sup>1</sup>
					More
				101-	than
District characteristic	1-10	11–30	31–100	1,000	1,000
All public school districts with students enrolled in distance education courses	25	27	27	18	3
District enrollment size					
Less than 2,500	31	32	28	8	‡
2,500 to 9,999	15	17	28	39	2!
10,000 or more	5	9	12	50	24
Community type					
City	10!	16	24	36	14
Suburban	21	19	26	28	6
Town	22	24	29	24	‡
Rural	31	32	26	10	1!
Region					
Northeast	34	30	24	13	#
Southeast	16	19	26	34	6
Central	26	29	31	12	2!
West	25	27	21	23	4
Poverty concentration					
Less than 10 percent	29	26	25	18	3
10 to 19 percent	22	29	29	16	4
20 percent or more	27	26	24	21	2

<sup>#</sup> Rounds to zero.

NOTE: Percentages are based on the 55 percent of districts with students enrolled in distance education courses in the 12-month 2009–10 school year. Poverty estimates for school districts were based on Title I data provided to the U.S. Department of Education by the U.S. Census Bureau. Detail may not sum to totals because of rounding.

<sup>!</sup> Interpret data with caution; the coefficient of variation is greater than or equal to 30 percent.

<sup>‡</sup> Reporting standards not met. The coefficient of variation for this estimate is 50 percent or greater.

If a student was enrolled in multiple courses, districts were instructed to count the student for each course in which he or she was enrolled. Thus, course enrollments may include duplicated counts of students.

Table 4. Percentage distribution of public school districts with students enrolled in distance education courses indicating whether they tracked various types of course completions for distance education courses, by district characteristics: School year 2009–10

	Cours	e completion	with	Cours	e completion	n with	Wit	hdrawal prior to	0
	F	assing grade	;	1	ailing grade	;	cou	irse completion	l
	Yes, for	Yes, for		Yes, for	Yes, for		Yes, for	Yes, for	
	all	some		all	some		all	some	
District characteristic	courses	courses	No	courses	courses	No	courses	courses	No
All public school districts with students enrolled in distance education courses	87	6	7	79	6	16	65	8	27
District enrollment size									
Less than 2,500	89	5	6	81	4	15	66	7	27
2,500 to 9,999	85	7	7	77	8	16	67	10	23
10,000 or more	77	12	11	68	14	18	54	14	32
Community type									
City	82	12!	6	73	9	18	59	11!	30
Suburban	89	4	6	77	7	16	65	8	27
Town	82	8	11	75	8	18	66	10	25
Rural	90	5	5	82	4	14	66	7	27
Region									
Northeast	91	4!	4!	81	5	14	72	8	20
Southeast	82	8	10	74	8	19	62	10	28
Central	88	5	7	80	4	16	66	6	28
West	86	8	6	78	8	14	62	11	27
Poverty concentration									
Less than 10 percent	90	5	5	82	5	13	70	7	22
10 to 19 percent	88	5	7	78	5	17	64	8	28
20 percent or more	85	7	8	77	7	16	63	9	28

<sup>!</sup> Interpret data with caution; the coefficient of variation is greater than or equal to 30 percent.

NOTE: Percentages are based on the 55 percent of districts with students enrolled in distance education courses in the 12-month 2009–10 school year. Poverty estimates for school districts were based on Title I data provided to the U.S. Department of Education by the U.S. Census Bureau. Detail may not sum to totals because of rounding.

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Table 5. Percent of public school districts with students enrolled in distance education courses indicating that they monitored students' progress in various ways, by district characteristics: School year 2009–10

				Completion		
				and		
	Attendance	Log-on	Time spent	submission of	Interim	Final grade
District characteristic	report	activity	online	assignments	course grades	report
All public school districts with students enrolled in distance education courses	70	56	49	80	75	98
District enrollment size						
Less than 2,500	70	51	44	79	77	98
2,500 to 9,999	69	68	58	83	71	98
10,000 or more	65	68	62	79	68	95
Community type						
City	68	73	68	84	63	98
Suburban	64	65	58	82	70	96
Town	64	64	53	79	72	97
Rural	74	47	41	79	80	99
Region						
Northeast	62	59	49	80	83	98
Southeast	70	65	56	82	78	97
Central	71	54	45	80	72	98
West	72	53	49	78	73	97
Poverty concentration						
Less than 10 percent	57	53	46	78	73	97
10 to 19 percent	73	56	45	80	76	98
20 percent or more	75	59	55	81	75	98

NOTE: Percentages are based on the 55 percent of districts with students enrolled in distance education courses in the 12-month 2009–10 school year. Poverty estimates for school districts were based on Title I data provided to the U.S. Department of Education by the U.S. Census Bureau.

Table 6. Percent of public school districts with students enrolled in distance education courses reporting that they have written policies specifying various outcomes when a distance education course was not successfully completed, by district characteristics: School year 2009–10

	Student cannot enroll in another distance	Student must wait a specified time before enrolling in another
District characteristic	education course	distance education course
All public school districts with students enrolled in distance education courses	12	6
District enrollment size		
Less than 2,500	13	7
2,500 to 9,999	8	5
10,000 or more	9	$\epsilon$
Community type		
City	11!	4
Suburban	7	3
Town	12	9
Rural	13	7
Region		
Northeast	7	2
Southeast	11	9
Central	11	$\epsilon$
West	15	8
Poverty concentration		
Less than 10 percent	8	4
10 to 19 percent	12	5
20 percent or more	14	Ģ

! Interpret data with caution; the coefficient of variation is greater than or equal to 30 percent.

NOTE: Percentages are based on the 55 percent of districts with students enrolled in distance education courses in the 12-month 2009–10 school year. Poverty estimates for school districts were based on Title I data provided to the U.S. Department of Education by the U.S. Census Bureau. SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System (FRSS), "Distance Education Courses for Public Elementary and Secondary School Students: 2009–10," FRSS 98, 2010.

Table 7. Percent of public school districts with students enrolled in distance education courses indicating that students who were enrolled in regular high school programs were able to take a full course load in an academic term using only distance education courses, and the percent indicating that students can fulfill all high school graduation requirements using only distance education courses, by district characteristics: School year 2009–10

		Students can fulfill
	Students can take a	all high school
	full course load using	graduation requirements
	only distance	using only distance
District characteristic	education courses	education courses
All public school districts with students enrolled in distance education courses	22	12
District enrollment size		
Less than 2,500	20	12
2,500 to 9,999	28	15
10,000 or more	24	13
Community type		
City	32	20
Suburban	25	15
Town	29	18
Rural	17	8
Region		
Northeast	22	11
Southeast	22	9
Central	24	15
West	21	11
Poverty concentration		
Less than 10 percent	23	13
10 to 19 percent	25	14
20 percent or more		9

NOTE: Percentages are based on districts with students enrolled in distance education courses and with high schools. Of the 55 percent of public school districts with students enrolled in distance education courses in the 12-month 2009–10 school year, 98 percent had high schools. Poverty estimates for school districts were based on Title I data provided to the U.S. Department of Education by the U.S. Census Bureau. SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System (FRSS), "Distance Education Courses for Public Elementary and Secondary School Students: 2009–10," FRSS 98, 2010.

Table 8. Percent of public school districts indicating that various entities delivered the distance education courses in which students in their district were enrolled, and the percent of public school districts indicating that all courses were developed by entities other than the district, by district characteristics: School year 2009–10

				Types	of entities del	ivering distanc	e education co	urses <sup>1</sup>				Districts
						Another						reporting
			Online			local						that all
			charter	Other		school						courses
			school	schools		district, or	Education		State		Non-U.S	were
	Post-		admini-	admini-		schools in	service	State	virtual		based	developed
	secondary	Indepen-	stered by	stered by		another	agencies	virtual	school in	Districts or	public or	by entities
	institution	dent vendor	their	their	Their	district, in	within	school in	another	schools in	private	other than
District characteristic	in the U.S.	in the U.S.	district	district	district	their state	their state	their state <sup>2</sup>	state	other states	entity	the district
All public school districts												
with students enrolled												
in distance education												
courses	50	47	4	6	18	21	16	33	6	3	1	75
District enrollment size												
Less than 2,500	56	41	4	4	16	25	17	29	5	3	‡	78
2,500 to 9,999	39	61	3	7	22	13	14	41	7	2	2	72
10,000 or more	35	59	5	16	33	14	9	49	10	3	2	63
Community type												
City	30	57	10!	6	35	8	5	35	4	1!	2!	61
Suburban	37	65	4!	4	20	10	17	30	8	3!	1!	75
Town	44	53	5!	7	19	17	14	35	8	4!	1!	79
Rural	61	37	3!	5	15	29	17	34	5	2!	1!	76
Region												
Northeast	30	57	‡	6	19	8	26	16	9	3!	‡	74
Southeast	44	41	<b>‡</b>	8	18	15	14	77	9	3!	‡	74
Central	52	47	4	5	20	31	17	34	5	2!	2!	74
West	62	46	5	5	16	18	9	19	4	3!	1!	79
Poverty concentration												
Less than 10 percent	50	53	2!	5	18	19	21	24	9	4!	1!	77
10 to 19 percent		45	6	6	21	25	15	34	5	2!	2!	72
20 percent or more	51	46	2!	6	16	18	12	39	5	2!	‡	79

<sup>!</sup> Interpret data with caution; the coefficient of variation is greater than or equal to 30 percent.

<sup>‡</sup> Reporting standards not met. The coefficient of variation for this estimate is 50 percent or greater.

Response options in the questionnaire were "yes," "no," and "don't know." Only the "yes" responses are shown in the table.

<sup>&</sup>lt;sup>2</sup> State virtual school may include schools where state-centralized K-12 courses are available through the Internet or web-based methods.

NOTE: Percents sum to more than 100 because districts could report more than one type of entity delivering distance education courses. Percentages are based on the 55 percent of public school districts with students enrolled in distance education courses in the 12-month 2009–10 school year. Poverty estimates for school districts were based on Title I data provided to the U.S. Department of Education by the U.S. Census Bureau.

Table 9. Percent of public school districts indicating the types of distance education courses taken by students regularly enrolled in their district, by district characteristics: School year 2009–10

				Career and	Other types
	Advanced	Dual	Credit	technical	of academic
District characteristic	Placement	enrollment <sup>1</sup>	recovery <sup>2</sup>	education	courses <sup>3</sup>
All public school districts with students enrolled in					
distance education courses	29	47	62	27	65
District enrollment size					
Less than 2,500	25	53	55	27	63
2,500 to 9,999	35	35	78	24	69
10,000 or more	42	33	83	37	72
Community type					
City	24	29	84	26	54
Suburban	35	27	70	22	69
Town	31	45	70	25	66
Rural	26	58	53	30	65
Region					
Northeast	37	26	52	14	73
Southeast	53	43	71	31	74
Central	26	50	65	32	67
West	16	56	59	25	54
Poverty concentration					
Less than 10 percent	34	40	64	28	72
10 to 19 percent	29	49	61	30	65
20 percent or more	25	50	62	23	59

Dual enrollment courses are college-level courses for which students receive both high school and college credits.

NOTE: Percentages are based on the 55 percent of public school districts with students enrolled in distance education courses in the 12-month 2009–10 school year. Poverty estimates for school districts were based on Title I data provided to the U.S. Department of Education by the U.S. Census Bureau.

<sup>&</sup>lt;sup>2</sup>Credit recovery courses include opportunities allowing students to recover course credits from classes they have missed or failed.

<sup>&</sup>lt;sup>3</sup>Other types of academic courses include core courses and electives.

Table 10. Percent of public school districts with students enrolled in distance education courses indicating how important various reasons were for having distance education courses in their district, by district characteristics: School year 2009–10

	Providing courses not			Offering	Offering Advanced Placement			Reducing scheduling			Providing opportunities for students to recover course		
	otherwis	se available at	school	or co	or college-level courses			conflicts for students			credits from classes missed or failed		
	Not	Somewhat	Very	Not	Somewhat	Very	Not	Somewhat	Very	Not	Somewhat	Very	
District characteristic	important	important	important	important	important	important	important	important	important	important	important	important	
All public school districts with students enrolled in distance education													
courses	18	17	64	35	20	41	30	38	30	24	15	57	
District enrollment size													
Less than 2,500	15	14	69	33	18	45	31	39	28	29	18	49	
2,500 to 9,999	24	22	53	41	23	33	30	37	31	15	11	72	
10,000 or more	25	27	47	40	30	29	21	31	47	7	10	81	
Community type													
City	31	30	37	52	22	23	40	27	30	7	6	81	
Suburban	27	19	52	42	25	30	31	31	36	21	12	66	
Town	22	16	60	38	19	40	32	42	26	20	15	60	
Rural	11	15	73	29	19	48	28	41	30	30	18	49	
Region													
Northeast	13	11	75	36	22	39	31	32	36	34	17	46	
Southeast	7	18	74	25	23	51	22	35	42	16	15	65	
Central	20	17	61	41	16	38	33	38	27	24	14	59	
West	23	20	56	32	23	42	31	43	26	24	17	56	
Poverty concentration													
Less than 10 percent	19	15	64	40	21	36	30	37	31	28	11	60	
10 to 19 percent	18	18	62	34	18	43	29	40	29	24	16	55	
20 percent or more	16	17	65	33	22	42	32	36	31	22	18	57	

See notes at end of table.

Table 10. Percent of public school districts with students enrolled in distance education courses indicating how important various reasons were for having distance education courses in their district, by district characteristics: School year 2009–10—Continued

					Providing opportunities									
				for students who are homebound or			Addressing school			Generating more				
	accumulat	ion for early	graduation	ha	have special needs		space limitations			district revenues				
	Not	Somewhat	Very	Not	Somewhat	Very	Not	Somewhat	Very	Not	Somewhat	Very		
District characteristic	important	important	important	important	important	important	important	important	important	important	important	important		
All public school districts with students														
enrolled in distance education courses .	55	27	15	40	30	25	82	11	5	82	8	5		
District enrollment size														
Less than 2,500	58	26	12	46	27	22	84	10	4	82	7	5		
2,500 to 9,999	50	26	20	29	36	30	80	11	6	82	9	4		
10,000 or more	36	36	25	18	37	41	69	22	7	73	15	8		
Community type														
City	41	23	29	18	35	41	69	15!	12!	69	12	11!		
Suburban	54	26	19	30	32	35	79	13	6	84	10	3!		
Town	55	25	18	35	31	30	83	11	3	78	10	5!		
Rural	57	29	11	49	29	17	84	9	4	84	6	5		
Region														
Northeast	61	26	11	47	26	24	78	15	5!	87	4!	4!		
Southeast	50	27	18	35	35	25	71	17	8	85	5	2!		
Central	62	23	11	39	30	26	88	6	3	82	10	4!		
West	44	33	22	41	30	25	81	12	6!	76	10	9		
Poverty concentration														
Less than 10 percent	59	24	15	44	27	24	82	11	4	86	8	3!		
10 to 19 percent	53	30	14	38	32	26	83	10	4	80	9	5		
20 percent or more	54	24	18	41	30	24	79	12	6	81	7	7		

<sup>!</sup> Interpret data with caution; the coefficient of variation is greater than or equal to 30 percent.

NOTE: Response options in the questionnaire were "not important," "somewhat important," and "don't know." The "don't know." The "don't know" responses are not shown in the table. Percentages are based on the 55 percent of public school districts with students enrolled in distance education courses in the 12-month 2009–10 school year. Poverty estimates for school districts were based on Title I data provided to the U.S. Department of Education by the U.S. Census Bureau.

Table 11. Percentage distribution of public school districts with students enrolled in distance education courses reporting the extent to which various technologies were used for the instructional delivery of distance education courses in which students in their district were enrolled, by district characteristics: School year 2009–10

		net courses	Č		net courses		-	r-based tech	_		Two-way			One-way		
	synchr	onous instru	uction1	asynch	ronous inst	ruction <sup>2</sup>	other	than the Int	ernet <sup>3</sup>	inte	eractive vid	eo <sup>4</sup>	prerecorded video <sup>5</sup>			
		Small			Small			Small			Small			Small		
		or mod-			or mod-			or mod-			or mod-			or mod-		
	Not	erate	Large	Not	erate	Large	Not	erate	Large	Not	erate	Large	Not	erate	Large	
District characteristic	at all	extent	extent	at all	extent	extent	at all	extent	extent	at all	extent	extent	at all	extent	extent	
All public school districts																
with students enrolled in																
distance education																
courses	52	33	15	14	27	59	65	26	9	59	22	20	73	23	4	
District enrollment size																
Less than 2,500	53	31	16	17	28	55	66	26	9	54	21	25	75	20	5	
2,500 to 9,999	51	34	15	9	25	66	64	27	8	70	21	9	69	26	4	
10,000 or more	46	44	10	6	22	71	64	27	9	66	28	6	64	33	3	
Community type																
City	47	37	16	6	20	74	60	32	8	80	18	2!	62	36	2!	
Suburban	52	38	10	8	23	70	67	24	10	74	21	5	68	25	7	
Town	55	31	15	11	21	68	66	25	9	67	19	14	76	20	5!	
Rural	51	32	17	19	31	49	65	26	8	47	24	30	75	21	4	
Region																
Northeast	59	31	9	16	20	64	71	22	7	70	19	11	72	25	3!	
Southeast	41	37	22	14	26	60	60	28	13	56	24	20	69	25	5	
Central	52	34	14	15	30	55	67	24	8	57	20	22	75	20	5	
West	53	31	16	12	26	62	62	30	8	56	24	20	73	23	4!	
Poverty concentration																
Less than 10 percent	54	35	12	16	22	62	68	24	8	66	18	16	72	25	3!	
10 to 19 percent	53	36	12	13	27	60	65	28	7	55	25	20	72	23	5	
20 percent or more		28	23	14	30	56	63	25	11	58	20	22	74	21	4	

<sup>!</sup> Interpret data with caution; the coefficient of variation is greater than or equal to 30 percent.

NOTE: Response options in the questionnaire were "not at all," "small extent," "moderate extent," and "large extent." Responses for "small extent" and "moderate extent" are combined in the table. Percentages are based on the 55 percent of public school districts with students enrolled in distance education courses in the 12-month 2009–10 school year. Poverty estimates for school districts were based on Title I data provided to the U.S. Department of Education by the U.S. Census Bureau. Detail may not sum to totals because of rounding.

<sup>&</sup>lt;sup>1</sup> Synchronous refers to simultaneous or "real time" instruction.

<sup>&</sup>lt;sup>2</sup> Asynchronous is defined as not simultaneous or not occurring in real time.

<sup>&</sup>lt;sup>3</sup> Computer-based technologies other than the Internet include district network or CD-ROM.

<sup>&</sup>lt;sup>4</sup> Two-way interactive video refers to two-way video with two-way audio.

<sup>&</sup>lt;sup>5</sup> One-way prerecorded video includes prerecorded videos provided to students, and television broadcast and cable transmission using prerecorded video.

Table 12. Percentage distribution of public school districts with students enrolled in distance education courses reporting that various technologies were used as the primary mode of instructional delivery for the greatest number of distance education courses taken by students regularly enrolled in their district, by district characteristics: School year 2009-10

	Internet courses	Internet courses	Computer-based	Two-way	One-way
	using synchronous	using asynchro-	technologies other	interactive	prerecorded
District characteristic	instruction1	nous instruction <sup>2</sup>	than the Internet <sup>3</sup>	video <sup>4</sup>	video <sup>5</sup>
All public school districts					
with students enrolled					
in distance education					
courses	14	63	5	17	2
District enrollment size					
Less than 2,500	15	58	5	21	1!
2,500 to 9,999	11	73	7	7	2
10,000 or more	9	79	6	5	1!
Community type					
City	14!	76	8!	3	#
Suburban	10	77	7	3	3!
Town	13	70	6	10	‡
Rural	15	54	4	26	2!
Region					
Northeast	11	74	4!	10	‡
Southeast	19	60	5	13	‡
Central	12	58	7	21	2!
West	14	65	4!	16	‡
Poverty concentration					
Less than 10 percent	13	69	3	13	‡
10 to 19 percent	11	62	6	19	2!
20 percent or more	18	60	5	15	‡

<sup>#</sup> Rounds to zero.

NOTE: Percentages are based on the 55 percent of public school districts with students enrolled in distance education courses in the 12-month 2009-10 school year. Poverty estimates for school districts were based on Title I data provided to the U.S. Department of Education by the U.S. Census Bureau. Detail may not sum to totals because of rounding.

<sup>!</sup> Interpret data with caution; the coefficient of variation is greater than or equal to 30 percent.

<sup>‡</sup> Reporting standards not met. The coefficient of variation for this estimate is 50 percent or greater. Synchronous refers to simultaneous or "real time" instruction.

<sup>&</sup>lt;sup>2</sup> Asynchronous is defined as not simultaneous or not occurring in real time.

<sup>&</sup>lt;sup>3</sup> Computer-based technologies other than the Internet include district network or CD-ROM.

<sup>&</sup>lt;sup>4</sup> Two-way interactive video refers to two-way video with two-way audio.

<sup>&</sup>lt;sup>5</sup> One-way prerecorded video includes prerecorded videos provided to students, and television broadcast and cable transmission using prerecorded

Table 13. Percent of public school districts with students enrolled in distance education courses delivered over the Internet, and the percent of those districts indicating the location where students accessed the internet-delivered courses, by district characteristics: School year 2009–10

	Districts with students	Access location for	internet-delivered co	ourses <sup>2</sup>
	enrolled in internet-			
	delivered distance			
District characteristic	education courses <sup>1</sup>	School	Home	Other location <sup>3</sup>
All public school districts with				
students enrolled in distance				
education courses	90	92	78	15
District enrollment size				
Less than 2,500	88	92	75	11
2,500 to 9,999	95	92	81	20
10,000 or more	97	93	86	27
Community type				
City	96	86	84	22
Suburban	95	89	83	20
Town	93	90	76	18
Rural	87	95	75	10
Region				
Northeast	90	92	83	12
Southeast	95	98	71	14
Central	89	91	77	15
West	90	92	79	16
Poverty concentration				
Less than 10 percent	88	91	83	16
10 to 19 percent	91	91	78	15
20 percent or more	91	94	73	14

<sup>&</sup>lt;sup>T</sup>Based on the 55 percent of districts with students enrolled in distance education courses in the 12-month 2009–10 school year.

NOTE: Poverty estimates for school districts were based on Title I data provided to the U.S. Department of Education by the U.S. Census Bureau.

<sup>&</sup>lt;sup>2</sup> Based on the districts with students enrolled in internet-delivered distance education courses.

<sup>&</sup>lt;sup>3</sup> Other location examples include public library and community centers.

Table 14. Percent of public school districts with students enrolled in distance education courses that were planning to expand the number of distance education courses offered in the next 3 years, and the percent reporting that they delivered distance education courses to students who were not regularly enrolled in their district, by district characteristics:

School year 2009–10

District characteristic	Plan to expand number of distance education courses in next 3 years	Delivered courses to students not regularly enrolled in district <sup>1</sup>
All public school districts with students enrolled in distance education courses	74	14
District enrollment size		
Less than 2,500	71	13
2,500 to 9,999	77	16
10,000 or more	88	20
Community type		
City	87	13
Suburban	78	15
Town	77	14
Rural	69	14
Region		
Northeast	77	11
Southeast	76	10
Central	69	18
West	79	13
Poverty concentration		
Less than 10 percent	76	14
10 to 19 percent	74	17
20 percent or more	73	11

Students not regularly enrolled in the district includes students from other districts, private school students, or homeschooled students.

NOTE: Percentages are based on the 55 percent of districts with students enrolled in distance education courses in the 12-month 2009–10 school year. Poverty estimates for school districts were based on Title I data provided to the U.S. Department of Education by the U.S. Census Bureau. SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System (FRSS), "Distance Education Courses for Public Elementary and Secondary School Students: 2009–10," FRSS 98, 2010.

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# Appendix A Standard Error Tables

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Table 1a. Standard errors for the percent of public school districts with any students enrolled in distance education courses, and standard errors for the percent of those districts with students enrolled in distance education courses at various instructional levels, by district characteristics: School year 2009-10

	Districts with	Districts with students enrolled in distance							
	any students	edı	acation courses at that	instructional lev	el				
	enrolled in								
	distance		Middle or						
	education	Elementary	junior high	High	Combined or				
District characteristic	courses	schools	schools	schools	ungraded schools				
All public school districts	1.4	0.6	1.3	0.6	0.6				
District enrollment size									
Less than 2,500	1.8	0.9	1.8	0.9	0.8				
2,500 to 9,999	1.5	1.1	1.4	0.6	1.0				
10,000 or more	0.8	1.0	1.5	0.4	0.8				
Community type									
City	4.0	1.9	3.9	0.9	1.0				
Suburban	2.6	2.0	3.1	1.5	1.4				
Town	2.7	2.0	2.4	1.4	1.2				
Rural	2.5	0.9	1.6	1.0	0.9				
Region									
Northeast	3.3	1.4	3.1	1.6	†				
Southeast	3.7	1.1	2.7	1.3	1.0				
Central	2.2	1.4	2.4	1.2	1.1				
West	2.4	1.4	2.4	1.6	1.3				
Poverty concentration									
Less than 10 percent	2.5	1.1	2.8	1.5	0.6				
10 to 19 percent	2.1	1.1	1.9	1.2	1.1				
20 percent or more	2.4	1.4	2.2	1.2	1.0				

Table 2a. Standard errors for the number of enrollments in distance education courses of students regularly enrolled in public school districts, and the standard errors for the percentage distribution of those enrollments by instructional level of the distance education enrollments, by district characteristics: School year 2009-10

	Number of									
	enrollments in	ed	ucation courses by in	structional level						
	distance		Middle or		Combined or					
	education	Elementary	junior high	High	ungraded					
District characteristic	courses	schools	schools	schools	schools					
All public school districts with students										
enrolled in distance education courses	251,050	1.3	1.3	7.4	†					
District enrollment size										
Less than 2,500	167,570	3.1	3.4	4.3	0.6					
2,500 to 9,999	185,240	†	†	22.1	†					
10,000 or more	27,100	0.2	0.5	0.7	0.4					
Community type										
City	201,670	†	2.8	21.7	†					
Suburban	34,190	2.1	1.0	2.2	0.4					
Town	145,000	†	5.5	6.0	†					
Rural	36,230	†	0.9	6.1	4.0					
Region										
Northeast	7,360	†	1.1	1.4	†					
Southeast	63,190	0.6	0.8	1.2	0.4					
Central	235,100	2.7	†	19.5	†					
West	42,670	†	0.9	3.9	2.6					
Poverty concentration										
Less than 10 percent	34,580	†	1.0	6.3	†					
10 to 19 percent	193,650	1.1	2.1	13.5	†					
20 percent or more	146,510	3.0	3.7	4.5	†					

Table 3a. Standard errors for the percentage distribution of public school districts with students enrolled in distance education courses, by the number of distance education enrollments and district characteristics: School year 2009-10

	Nun	ber of dista	nce educatio	n enrollmen	ts
District characteristic	1–10	11–30	31–100	101- 1,000	More than 1,000
All public school districts with students enrolled in distance education courses	1.6	1.7	1.5	0.9	0.4
District enrollment size					
Less than 2,500	2.3	2.4	2.1	1.0	†
2,500 to 9,999	1.5	1.4	1.8	1.6	0.7
10,000 or more	0.8	1.1	1.2	1.4	1.3
Community type					
City	3.7	4.8	5.3	5.9	2.3
Suburban	2.6	2.3	2.6	2.5	1.6
Town	3.2	3.1	2.7	2.3	†
Rural	2.3	2.7	2.6	1.0	0.4
Region					
Northeast	3.6	3.9	2.8	2.2	†
Southeast	2.6	3.2	2.4	2.8	0.8
Central	2.7	2.4	2.5	1.5	0.7
West	3.6	3.5	3.1	2.3	1.0
Poverty concentration					
Less than 10 percent	3.4	2.9	2.7	2.1	0.9
10 to 19 percent	3.0	2.9	2.5	1.3	0.8
20 percent or more	2.7	3.2	2.7	2.2	0.5

Table 4a. Standard errors for the percentage distribution of public school districts with students enrolled in distance education courses indicating whether they tracked various types of course completions for distance education courses, by district characteristics: School year 2009–10

	Course	e completion	with	Cours	e completion	n with	Wit	hdrawal prior	to	
	p	assing grade	1	1	failing grade	;	cou	course completion		
	Yes, for	Yes, for		Yes, for	Yes, for		Yes, for	Yes, for		
	all	some		all	some		all	some		
District characteristic	courses	courses	No	courses	courses	No	courses	courses	No	
All public school districts with students enrolled in distance education courses	1.0	0.8	0.8	1.2	0.7	1.0	1.7	0.9	1.6	
District enrollment size										
Less than 2,500	1.4	1.0	1.2	1.5	1.0	1.4	2.4	1.3	2.2	
2,500 to 9,999	1.4	1.0	1.0	1.7	1.0	1.5	1.6	1.2	1.6	
10,000 or more	1.3	0.7	1.1	1.5	0.9	1.4	1.7	1.0	1.8	
Community type										
City	4.0	3.7	1.5	5.0	1.6	4.9	5.8	3.6	5.4	
Suburban	1.6	1.1	1.3	2.9	1.3	2.6	2.9	1.4	2.8	
Town	2.5	1.4	2.2	2.9	1.5	2.5	3.1	1.6	2.8	
Rural	1.4	1.2	1.2	1.9	1.1	1.6	2.3	1.4	2.3	
Region										
Northeast	1.7	1.4	1.3	2.9	1.4	2.7	3.4	1.9	3.0	
Southeast	2.7	1.6	2.3	3.3	1.5	3.0	3.6	1.9	3.3	
Central	1.7	1.3	1.5	2.1	0.9	1.8	2.7	1.2	2.7	
West	2.0	1.6	1.4	2.1	1.5	1.9	2.9	1.8	2.8	
Poverty concentration										
Less than 10 percent	1.7	1.2	1.4	2.2	1.0	2.0	2.7	1.3	2.6	
10 to 19 percent	1.5	1.1	1.1	2.0	1.0	1.8	2.6	1.3	2.5	
20 percent or more	2.0	1.5	1.6	2.4	1.5	2.2	3.2	1.9	2.8	

Table 5a. Standard errors for the percent of public school districts with students enrolled in distance education courses indicating that they monitored students' progress in various ways, by district characteristics: School year 2009–10

				Completion		
	A 1		70.	and	*	F: 1 1
	Attendance	Log-on	Time spent		Interim	Final grade
District characteristic	report	activity	online	assignments	course grades	report
All public school districts with students enrolled in distance education courses	1.6	1.7	1.7	1.5	1.4	0.4
District enrollment size						
Less than 2,500	2.2	2.4	2.4	2.1	2.0	0.6
2,500 to 9,999	1.6	1.8	2.0	1.4	1.7	0.5
10,000 or more	1.3	1.7	1.5	1.3	1.4	0.8
Community type						
City	5.0	4.5	4.5	3.5	6.0	0.7
Suburban	3.2	2.9	3.0	2.4	2.6	1.4
Town	3.6	3.6	3.4	2.5	2.8	1.2
Rural	1.7	2.7	2.7	2.2	1.9	0.5
Region						
Northeast	4.4	3.4	3.3	3.6	2.5	1.0
Southeast	3.3	3.5	3.3	2.4	2.9	0.8
Central	2.5	3.2	3.3	2.2	2.5	0.7
West	3.1	3.9	3.2	2.9	2.8	1.0
Poverty concentration						
Less than 10 percent	3.3	3.3	3.0	3.0	3.1	1.1
10 to 19 percent	2.6	2.6	2.8	2.0	2.1	0.5
20 percent or more	2.7	3.3	2.7	2.4	2.7	0.9

Table 6a. Standard errors for the percent of public school districts with students enrolled in distance education courses reporting that they have written policies specifying various outcomes when a distance education course was not successfully completed, by district characteristics: School year 2009–10

District characteristic	Student cannot enroll in another distance education course	Student must wait a specified time before enrolling in another distance education course
All public school districts with students enrolled in distance education courses	1.1	0.8
District enrollment size		
Less than 2,500	1.6	1.1
2,500 to 9,999	0.9	0.7
10,000 or more	0.8	0.8
Community type		
City	3.5	1.3
Suburban	1.9	0.8
Town	2.6	2.4
Rural	1.8	1.3
Region		
Northeast	1.9	1.1
Southeast	2.5	2.4
Central	1.8	1.4
West	2.9	1.8
Poverty concentration		
Less than 10 percent	1.7	1.3
10 to 19 percent	2.1	1.2
20 percent or more	2.8	2.2

Table 7a. Standard errors for the percent of public school districts with students enrolled in distance education courses indicating that students who were enrolled in regular high school programs were able to take a full course load in an academic term using only distance education courses, and standard errors for the percent indicating that students can fulfill all high school graduation requirements using only distance education courses, by district characteristics: School year 2009–10

		Students can fulfill
	Students can take a	all high school
	full course load using	graduation requirements
	only distance	using only distance
District characteristic	education courses	education courses
All public school districts with students enrolled in distance education courses	1.3	1.1
District enrollment size		
Less than 2,500	1.8	1.5
2,500 to 9,999	1.5	1.4
10,000 or more	1.1	0.7
Community type		
City	5.6	5.5
Suburban	2.8	2.5
Town	2.9	2.2
Rural	2.3	1.6
Region		
Northeast	3.2	2.2
Southeast	2.4	1.5
Central	2.5	2.3
West	3.0	2.0
Poverty concentration		
Less than 10 percent	2.7	2.1
10 to 19 percent	2.3	1.9
20 percent or more	2.3	1.6

Table 8a. Standard errors for the percent of public school districts indicating that various entities delivered the distance education courses in which students in their district were enrolled, and standard errors for the percent of public school districts indicating that all courses were developed by entities other than the district, by district characteristics: School year 2009–10

				Types	of entities del	ivering distanc	e education co	urses				Districts
						Another						reporting
			Online			local						that all
			charter	Other		school						courses
			school	schools		district, or	Education		State		Non-U.S	were
	Post-		admini-	admini-		schools in	service	State	virtual		based	developed
	secondary	Indepen-	stered by	stered by		another	agencies	virtual	school in	Districts or	public or	by entities
minute de la contrata	institution	dent vendor	their	their	Their	district, in	within	school in	another	schools in	private	other than
District characteristic	in the U.S.	in the U.S.	district	district	district	their state	their state	their state	state	other states	entity	the district
All public school districts												
with students enrolled in distance education												
	1.4	1.7	0.7	0.6	1.2	1.3	1.0	1.7	0.9	0.5	0.3	1.5
courses	1.4	1./	0.7	0.0	1.2	1.3	1.0	1./	0.9	0.3	0.3	1.3
District enrollment size												
Less than 2,500	2.0	2.4	0.9	0.9	1.6	1.8	1.4	2.4	1.2	0.7	†	2.2
2,500 to 9,999	1.8	2.1	0.8	0.9	1.9	1.6	1.6	1.9	1.1	0.6	0.6	1.9
10,000 or more	1.5	2.0	0.6	0.7	1.5	0.9	0.9	1.7	0.9	0.7	0.5	1.9
Community type												
City	5.8	5.5	3.7	1.0	6.4	1.5	1.1	5.5	1.0	0.5	0.8	6.0
Suburban	2.8	3.3	1.7	0.8	2.1	1.8	2.4	2.5	1.7	1.0	0.4	2.7
Town	3.9	3.8	1.5	1.6	2.8	1.9	2.1	3.1	2.0	1.4	0.4	2.4
Rural	2.2	2.4	0.9	0.9	1.8	2.4	1.9	2.8	1.0	0.8	0.6	2.4
Region												
Northeast	3.5	4.3	†	1.9	3.0	1.7	3.5	2.9	2.5	1.5	†	3.6
Southeast	2.8	2.8	†	1.4	2.3	2.3	2.5	2.8	1.5	1.2	†	2.7
Central	2.8	3.6	1.3	1.1	2.1	2.8	1.9	2.8	1.5	0.8	0.7	2.9
West	3.0	3.3	1.5	1.3	2.1	2.6	1.8	2.6	1.2	1.1	0.3	2.5
Poverty concentration												
Less than 10 percent	3.2	3.3	1.0	1.2	2.0	3.0	3.0	2.7	1.9	1.4	0.3	2.2
10 to 19 percent	2.2	2.7	1.4	1.0	2.2	2.6	1.9	2.7	1.4	0.7	0.7	2.8
20 percent or more	2.7	3.0	0.9	1.3	2.5	2.7	1.7	3.1	0.9	0.9	†	2.5

<sup>†</sup> Not applicable.

Table 9a. Standard errors for the percent of public school districts indicating the types of distance education courses taken by students regularly enrolled in their district, by district characteristics: School year 2009–10

				Career and	Other types
	Advanced	Dual	Credit	technical	of academic
District characteristic	Placement	enrollment	recovery	education	courses
All public school districts with students enrolled in					
distance education courses	1.3	1.7	1.9	1.2	1.6
District enrollment size					
Less than 2,500	1.9	2.3	2.6	1.7	2.2
2,500 to 9,999	1.7	2.1	1.9	1.4	1.8
10,000 or more	1.6	1.3	1.6	1.6	1.8
Community type					
City	3.9	5.6	5.0	5.2	6.4
Suburban	3.3	2.7	3.0	2.3	2.5
Town	2.7	3.1	4.2	3.0	2.7
Rural	2.2	2.5	3.1	1.8	2.4
Region					
Northeast	3.9	3.2	3.8	2.4	3.5
Southeast	3.0	3.1	3.2	3.0	3.2
Central	2.3	2.9	3.2	2.6	2.8
West	2.1	3.3	3.8	3.3	3.0
Poverty concentration					
Less than 10 percent	2.9	3.0	3.2	2.9	3.1
10 to 19 percent	2.2	2.5	2.5	2.3	2.4
20 percent or more	3.0	3.1	3.1	2.3	3.0

Table 10a. Standard errors for the percent of public school districts with students enrolled in distance education courses indicating how important various reasons were for having distance education courses in their district, by district characteristics: School year 2009–10

										Provid	ing opportuni	ties for	
	Prov	viding courses	not	Offering	Advanced Pl	acement	Red	lucing schedu	ling	studen	its to recover	course	
	otherwi	se available a	t school	or co	llege-level co	urses	con	flicts for stud	ents	credits fron	credits from classes missed or failed		
	Not	Somewhat	Very	Not	Somewhat	Very	Not	Somewhat	Very	Not	Somewhat	Very	
District characteristic	important	important	important	important	important	important	important	important	important	important	important	important	
All public school districts with students													
enrolled in distance education													
courses	1.2	1.4	1.6	1.7	1.2	1.7	1.7	1.8	1.7	1.7	1.3	1.7	
District enrollment size													
Less than 2,500	1.6	1.9	2.1	2.3	1.6	2.4	2.3	2.5	2.4	2.4	1.8	2.3	
2,500 to 9,999	1.6	1.3	1.8	2.3	2.2	2.1	1.9	1.8	1.9	1.8	1.1	1.6	
10,000 or more	1.5	1.3	1.6	1.4	1.3	1.4	1.5	1.5	1.7	0.9	0.9	1.3	
Community type													
City	5.5	5.7	5.7	6.0	3.7	4.8	6.0	5.6	4.9	2.0	1.2	5.0	
Suburban	2.9	2.7	3.1	3.0	3.5	2.7	2.9	2.5	3.2	2.8	2.3	2.8	
Town	3.0	2.4	3.6	3.7	2.7	3.3	3.8	4.0	3.0	3.2	3.3	4.4	
Rural	1.7	2.1	2.4	2.3	1.9	2.7	2.2	2.6	2.6	2.7	1.8	2.8	
Region													
Northeast	2.4	2.0	3.3	3.7	3.3	3.2	4.0	4.8	4.5	4.3	2.7	3.7	
Southeast	1.6	3.1	3.1	3.2	2.6	3.4	3.2	3.4	3.5	2.2	2.8	3.6	
Central	2.1	1.9	2.8	2.7	2.1	3.1	2.3	2.4	2.6	2.9	2.0	3.0	
West	2.7	2.5	3.5	3.3	2.9	3.5	3.7	3.3	3.1	3.4	3.0	3.6	
Poverty concentration													
Less than 10 percent	2.1	2.0	2.8	3.1	2.6	3.1	3.1	3.5	2.8	3.2	2.1	3.1	
10 to 19 percent	2.1	2.3	2.7	2.7	2.1	2.6	3.1	2.6	3.0	2.1	2.3	2.7	
20 percent or more	2.1	2.3	3.0	3.0	2.4	2.8	3.3	3.2	3.3	3.1	2.3	3.0	
See notes at end of table		·											

See notes at end of table.

Table 10a. Standard errors for the percent of public school districts with students enrolled in distance education courses indicating how important various reasons were for having distance education courses in their district, by district characteristics: School year 2009–10—Continued

	Provi	ding opportu	nities	Provi	ding opportui	nities						
		for students to accelerate credit			G	Generating more						
	accumulat	ion for early	graduation	hav	ve special nee	ds	sŗ	ace limitation	ns	district revenues		
	Not	Somewhat	Very	Not	Somewhat	Very	Not	Somewhat	Very	Not	Somewhat	Very
District characteristic	important	important	important	important	important	important	important	important	important	important	important	important
All public school districts with students												
enrolled in distance education courses .	1.6	1.6	1.2	1.6	1.6	1.5	1.3	1.1	0.6	1.6	0.9	0.9
District enrollment size												
Less than 2,500	2.2	2.3	1.6	2.2	2.2	2.1	1.8	1.5	0.9	2.3	1.3	1.3
2,500 to 9,999	2.2	1.9	1.6	1.8	2.2	1.9	1.7	1.4	0.9	1.4	1.2	0.7
10,000 or more	1.6	1.4	1.5	1.3	1.4	1.7	1.5	1.2	0.8	1.3	1.0	0.9
Community type												
City	6.2	3.0	6.4	4.1	5.5	6.4	5.5	4.7	4.6	5.5	3.6	4.6
Suburban	2.7	2.4	2.7	2.8	2.7	3.2	2.7	2.2	1.6	2.7	2.1	1.4
Town	3.4	3.2	2.5	3.6	3.4	3.5	2.1	1.8	0.9	2.9	1.9	1.6
Rural	2.3	2.6	1.5	2.5	2.3	2.0	1.8	1.5	1.0	2.0	1.3	1.3
Region												
Northeast	3.1	3.2	2.5	3.6	3.8	3.1	4.0	2.9	1.9	2.7	1.7	1.6
Southeast	3.2	2.5	2.3	3.4	2.8	2.7	2.9	2.3	1.6	2.5	0.8	0.8
Central	2.5	2.4	1.7	2.7	2.4	2.5	1.9	1.5	0.8	2.1	1.8	1.2
West	3.5	4.0	3.0	3.7	3.4	3.2	2.5	1.7	1.7	3.2	1.7	2.1
Poverty concentration												
Less than 10 percent	3.1	2.9	2.1	3.5	3.1	2.7	2.3	1.9	1.1	2.4	1.9	1.3
10 to 19 percent	2.4	2.7	1.7	2.5	2.1	2.1	1.9	1.4	0.8	2.4	1.6	1.2
20 percent or more	3.1	2.9	2.4	3.2	3.3	2.8	2.3	1.6	1.5	2.9	1.2	2.1

Table 11a. Standard errors for the percentage distribution of public school districts with students enrolled in distance education courses reporting the extent to which various technologies were used for the instructional delivery of distance education courses in which students in their district were enrolled, by district characteristics: School year 2009–10

	Interr	net courses u	sing	Interr	net courses	using	Compute	r-based tech	nnologies		Two-way			One-way	
	synchi	ronous instru	iction	asynch	ronous inst	ruction	other	than the Int	ternet	int	eractive vid	eo	pre	recorded vid	leo
		Small			Small			Small			Small			Small	
		or mod-			or mod-			or mod-			or mod-			or mod-	
	Not	erate	Large	Not	erate	Large	Not	erate	Large	Not	erate	Large	Not	erate	Large
District characteristic	at all	extent	extent	at all	extent	extent	at all	extent	extent	at all	extent	extent	at all	extent	extent
All public school districts															
with students enrolled in															
distance education															
courses	2.0	1.8	1.3	1.2	1.6	1.8	1.6	1.4	1.0	1.7	1.4	1.6	1.6	1.5	0.8
District enrollment size															
Less than 2,500	2.8	2.6	1.8	1.7	2.3	2.4	2.3	2.0	1.3	2.3	2.0	2.2	2.2	2.1	1.2
2,500 to 9,999	1.6	1.6	1.5	1.2	1.7	2.1	2.1	1.8	1.2	2.0	1.7	1.1	1.9	1.7	0.8
10,000 or more	1.3	1.4	1.1	0.8	1.0	1.4	1.5	1.4	0.7	1.5	1.2	0.9	1.7	1.6	0.5
Community type															
City	6.3	5.5	4.7	1.5	4.9	4.9	6.0	5.7	1.8	3.0	2.9	0.8	5.8	5.7	0.9
Suburban	3.2	3.3	1.6	1.5	2.4	2.7	3.0	2.5	2.0	2.9	2.9	1.1	3.0	2.3	2.0
Town	2.7	3.2	2.5	2.5	2.7	3.6	3.0	2.9	2.3	3.4	2.9	2.7	3.4	3.3	1.6
Rural	3.4	3.0	2.3	2.2	2.7	2.4	2.2	1.9	1.4	2.6	2.3	2.4	2.3	2.2	1.2
Region															
Northeast	4.8	4.3	1.9	2.8	3.2	4.3	3.2	3.0	2.0	3.9	4.0	2.4	3.8	3.6	1.0
Southeast	2.8	2.9	2.7	2.6	3.3	3.9	3.3	2.7	2.4	3.2	2.5	3.0	3.4	3.0	1.4
Central	2.7	2.3	2.2	2.3	2.8	3.1	2.7	2.6	1.6	2.9	2.2	3.1	2.6	2.4	1.4
West	4.0	3.4	3.0	2.4	3.3	3.3	3.7	3.3	1.9	3.1	2.7	2.3	3.4	2.8	1.8
Poverty concentration															
Less than 10 percent	3.3	3.2	2.0	2.6	2.8	3.5	3.0	2.8	1.7	3.1	2.5	2.6	3.0	2.8	1.0
10 to 19 percent	3.0	2.8	1.8	1.6	2.8	2.6	2.5	2.4	1.4	2.5	2.4	2.4	2.8	2.7	1.5
20 percent or more	3.1	2.6	2.8	2.2	2.9	3.7	3.2	3.1	1.9	3.4	2.5	2.9	2.5	2.5	1.3

Table 12a. Standard errors for the percentage distribution of public school districts with students enrolled in distance education courses reporting that various technologies were used as the primary mode of instructional delivery for the greatest number of distance education courses taken by students regularly enrolled in their district, by district characteristics: School year 2009-10

	Internet courses	Internet courses	Computer-based	Two-way	One-way
	using synchronous	using asynchro-	technologies other	interactive	prerecorded
District characteristic	instruction	nous instruction	than the Internet	video	video
All public school districts					
with students enrolled					
in distance education					
courses	1.4	1.6	0.8	1.4	0.4
District enrollment size					
Less than 2,500	2.0	2.1	1.2	2.0	0.6
2,500 to 9,999	1.4	2.1	1.2	1.3	0.5
10,000 or more	1.1	1.4	0.8	1.0	0.2
Community type					
City	4.7	5.2	3.6	0.9	†
Suburban	1.8	2.5	1.4	0.9	1.0
Town	2.6	3.8	1.3	2.5	†
Rural	2.4	2.6	1.0	2.3	0.7
Region					
Northeast	2.7	3.5	1.3	2.4	†
Southeast	2.6	3.2	1.2	2.8	†
Central	2.0	3.1	1.5	2.4	0.9
West	3.0	2.7	1.2	2.6	†
Poverty concentration					
Less than 10 percent	2.4	3.4	0.8	2.5	†
10 to 19 percent	1.7	2.3	1.4	1.9	0.6
20 percent or more	2.6	3.1	1.0	2.6	†

Table 13a. Standard errors for the percent of public school districts with students enrolled in distance education courses delivered over the Internet, and standard errors for the percent of those districts indicating the location where students accessed the internet-delivered courses, by district characteristics: School year 2009–10

	Districts with students	Access location fo	r internet-delivered co	urses
	enrolled in internet-			
	delivered distance			
District characteristic	education courses	School	Home	Other location
All public school districts with students enrolled in distance				
education courses	1.0	1.1	1.5	1.1
District enrollment size				
Less than 2,500	1.4	1.6	2.2	1.6
2,500 to 9,999	0.8	1.1	1.6	1.8
10,000 or more	0.6	0.9	1.1	1.0
Community type				
City	1.4	4.9	4.2	5.0
Suburban	1.4	2.5	2.4	2.7
Town	2.0	2.6	3.0	3.1
Rural	1.8	1.5	2.4	1.5
Region				
Northeast	2.1	2.1	3.2	2.8
Southeast	1.7	0.9	3.2	2.2
Central	2.0	2.0	2.5	1.8
West	2.1	1.9	3.1	2.6
Poverty concentration				
Less than 10 percent	2.1	1.7	2.7	2.3
10 to 19 percent	1.5	2.1	2.1	1.6
20 percent or more	1.7	1.7	3.1	2.2

Table 14a. Standard errors for the percent of public school districts with students enrolled in distance education courses that were planning to expand the number of distance education courses offered in the next 3 years, and standard errors for the percent reporting that they delivered distance education courses to students who were not regularly enrolled in their district, by district characteristics: School year 2009–10

	Plan to expand	
	number of distance	Delivered courses to
	education courses in	students not regularly
District characteristic	next 3 years	enrolled in district
All public school districts with students enrolled in distance education courses	1.6	1.1
District enrollment size		
Less than 2,500	2.3	1.6
2,500 to 9,999	1.5	1.7
10,000 or more	1.1	1.0
Community type		
City	3.9	2.4
Suburban	2.3	2.2
Town	3.6	2.1
Rural	2.6	1.9
Region		
Northeast	3.4	2.2
Southeast	3.3	1.5
Central	2.8	1.9
West	3.1	2.1
Poverty concentration		
Less than 10 percent	2.6	2.2
10 to 19 percent	2.3	2.1
20 percent or more	2.7	1.9

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# Appendix B Technical Notes

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## **Technical Notes**

## **Fast Response Survey System**

The Fast Response Survey System (FRSS) was established in 1975 by the National Center for Education Statistics (NCES), U.S. Department of Education. FRSS is designed to collect issue-oriented data within a relatively short time frame. FRSS collects data from state education agencies, local education agencies, public and private elementary and secondary schools, public school teachers, and public libraries. To ensure minimal burden on respondents, the surveys are generally limited to three pages of questions, with a response burden of about 30 minutes per respondent. Sample sizes are relatively small (usually about 1,200 to 1,800 respondents per survey) so that data collection can be completed quickly. Data are weighted to produce national estimates of the sampled education sector. The sample size permits limited breakouts by analysis variables. However, as the number of categories within any single analysis variable increases, the sample size within categories decreases, which results in larger sampling errors for the breakouts by analysis variables.

## Sample Design

The sample for the FRSS survey of *Distance Education Courses for Public Elementary and Secondary School Students: 2009–10* consisted of approximately 2,310 public school districts in the 50 states and the District of Columbia. The nationally representative sample was selected from the 2008–09 NCES Common Core of Data (CCD) Local Education Agency (School District) Universe file, which was the most current file available at the time of selection. The sampling frame included 13,563 regular districts and 2,191 charter school districts. For purposes of this study, "regular" school districts included any local school district that was not a component of a supervisory union (i.e., Education Agency type 1 on the CCD) or was a local school district component of a supervisory union sharing a superintendent and administrative services with other local school districts (i.e., Education Agency type 2 on the CCD). A district is a "charter agency" if all schools associated with the agency are charter schools (i.e., Education Agency type 7 on the CCD) or if the district is an "other education agency" (i.e., Education Agency type 8 on the CCD) and the district has at least one charter school when matched against the corresponding 2008-09 CCD school file. Excluded from the sampling frame were districts in the outlying U.S. territories and regular districts with no enrollments or missing enrollments. <sup>1</sup>

The school district sampling frame was stratified by district type (regular vs. charter), district enrollment size (six categories for regular districts and four categories for charter districts), and poverty status (five categories for regular districts only)<sup>2</sup> to create 30 primary strata. Within each of the two categories of district type created by this cross-classification (regular vs. charter), the sample was allocated to size strata in rough proportion to the aggregate square root of the enrollment of the districts in the stratum. Districts in the sampling frame were then sorted by community type<sup>3</sup> and region to induce additional implicit stratification. Within each primary stratum, districts were selected systematically and with equal probabilities.

# **Data Collection and Response Rates**

Questionnaires and cover letters were mailed to the superintendent of each sampled school district in November 2010. The letter stated the purpose of the study and asked that the definition of distance education

<sup>&</sup>lt;sup>1</sup> Charter school districts were included even if enrollment data were missing.

<sup>&</sup>lt;sup>2</sup> Poverty status was based on district-wide estimates of the percent of children 5-17 years of age in families living below the poverty level, discussed further in the Definitions of Analysis Variables section of this report.

<sup>&</sup>lt;sup>3</sup> The community type variable is based on the urban-centric district locale variable from the 2008-09 CCD (ULOCAL08), discussed further in the Definitions of Analysis Variables section of this report.

be reviewed to determine who in the district would be best suited to provide the requested information. Respondents were offered the option of completing the survey via the Web. Telephone follow-up for survey nonresponse and data clarification was initiated in late November 2010 and completed in March 2011.

Of the approximately 2,310 districts in the sample, approximately 10 districts were found to be ineligible for the survey because they were closed, were an administrative entity that did not operate any schools, or served only adult or special education students. This left a total of about 2,290 eligible districts in the sample. Completed questionnaires were received from approximately 2,150 districts, or 94 percent of the eligible districts (table B-1). Of the districts that completed the survey, 68 percent completed it via the Web, 18 percent completed it by mail, 8 percent completed it by telephone, and 6 percent completed it by fax or e-mail. The corresponding weighted response rate using the initial base weights was 95 percent. The final weighted count of the respondent sample after nonresponse adjustment was 15,400.

Table B-1. Number and percent of responding public school districts in the study sample, and estimated number and percent of public school districts the sample represents, by district characteristics: School year 2009–10

	Respondent samp	le (unweighted)	National estima	te (weighted) <sup>1</sup>
District characteristic	Number	Percent	Number	Percent
All public school districts	2,150	100	15,400	100
District enrollment size				
Less than 2,500	880	41	11,500	75
2,500 to 9,999	740	34	3,000	20
10,000 or more	530	25	900	6
Community type				
City	350	16	1,900	12
Suburban	660	31	3,200	21
Town	410	19	2,700	18
Rural	730	34	7,600	49
Region				
Northeast	450	21	3,300	21
Southeast	380	18	1,700	11
Central	660	31	5,600	36
West	660	31	4,900	32
Poverty concentration				
Less than 10 percent.	620	29	3,800	25
10 to 19 percent	900	42	6,600	43
20 percent or more	630	29	5,000	32

Weighted count of responding districts using the final nonresponse-adjusted weights. The weighted count is an estimate of the number of eligible districts in the study universe (see text for definition of the types of districts included in the study).

# **Imputation for Item Nonresponse**

Although item nonresponse was very low (less than 1 percent for any item), missing data were imputed for the 21 items with a response rate of less than 100 percent. The missing items included both numerical data such as enrollment in distance education courses, as well as categorical data, such as the reasons for having distance

-

NOTE: Poverty estimates for school districts were based on Title I data provided to the U.S. Department of Education by the U.S. Census Bureau. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System (FRSS), "Distance Education Courses for Public Elementary and Secondary School Students: 2009–10," FRSS 98, 2010.

<sup>&</sup>lt;sup>4</sup> For more details about the development of survey weights, see the section of this report on sampling errors.

<sup>&</sup>lt;sup>5</sup> Per NCES standards, all missing questionnaire data are imputed.

education in a district. The missing categorical data were imputed using a "hot-deck" approach to obtain a "donor" district from which the imputed values were derived. Under the hot-deck approach, a donor district that matched selected characteristics of the district with missing data (the recipient district) was identified. The matching characteristics included district type (regular or charter), community type, geographic region, district enrollment size, poverty concentration, and whether a district had students enrolled in distance education courses in the 12-month 2009–10 school year. In addition, other relevant questionnaire items were used to form appropriate imputation groupings. Once a donor was found, it was used to derive the imputed values for the district with missing data. For categorical items, the imputed value was simply the corresponding value from the donor district. For the total number of enrollments in distance education courses (a numerical item), the imputed value was calculated by taking the donor's response for that item and dividing that number by the total number of students enrolled in the donor district. This ratio was then multiplied by the total number of students enrolled in the recipient district to provide an imputed value. For the number of distance education enrollments by instructional level, the same approach was used, but the ratio was derived using the total number of distance education enrollments in place of the total number of students enrolled in the district.

## **Data Reliability**

Although the district survey on distance education courses for elementary and secondary school students was designed to account for sampling error and to minimize nonsampling error, estimates produced from the data collected are subject to both types of error. Sampling error occurs because the data are collected from a sample rather than a census of the population, and nonsampling errors are errors made during the collection and processing of the data.

### **Sampling Errors**

The responses were weighted to produce national estimates (table B-1). The weights were designed to reflect the variable probabilities of selection of the sampled districts and were adjusted for differential unit (questionnaire) nonresponse. The nonresponse weighting adjustments were made within classes defined by variables used in sampling and expected to be correlated with response propensity: district type (i.e., regular or charter), district enrollment size, poverty status, community type, and region. Within the final weighting classes, the base weights (i.e., the reciprocal of districts' probabilities of selection) of the responding districts were inflated by the inverse of the weighted response rate for the class. The findings in this report are estimates based on the sample selected and, consequently, are subject to sampling variability. Jackknife replication was used to estimate the sampling variability of the estimates and to test for statistically significant differences between estimates.

The standard error is a measure of the variability of an estimate due to sampling. It indicates the variability of a sample estimate that would be obtained from all possible samples of a given design and size. Standard errors are used as a measure of the precision expected from a particular sample. If all possible samples were surveyed under similar conditions, intervals of 1.96 standard errors below to 1.96 standard errors above a particular statistic would include the true population parameter being estimated in about 95 percent of the samples. This is a 95 percent confidence interval. For example, the estimated percent of districts with any students enrolled in distance education courses is 55 percent, and the standard error is 1.4 percent (tables 1 and 1a). The 95 percent confidence interval for the statistic extends from  $[55 - (1.4 \times 1.96)]$  to  $[55 + (1.4 \times 1.96)]$ , or from 52.3 to 57.7 percent. The 1.96 is the appropriate percentile from a standard normal distribution corresponding to a two-sided statistical test at the p < .05 significance level (where .05 indicates the 5 percent of all possible samples that would be outside the range of the confidence interval).

Because the data from the FRSS district survey on distance education courses were collected using a complex sampling design, the variances of the estimates from this survey (e.g., estimates of proportions) are typically different from what would be expected from data collected with a simple random sample. Not taking the

complex sample design into account can lead to an under- or overestimation of the standard errors associated with such estimates. To generate accurate standard errors for the estimates in this report, standard errors were computed using a technique known as jackknife replication. As with any replication method, jackknife replication involves constructing a number of subsamples (replicates) from the full sample and computing the statistic of interest for each replicate. The mean square error of the replicate estimates around the full sample estimate provides an estimate of the variance of the statistic. To construct the replications, 100 stratified subsamples of the full sample were created and then dropped one at a time to define 100 jackknife replicates. A computer program (WesVar) was used to calculate the estimates of standard errors.

All specific statements of comparisons made in this report have been tested for statistical significance at the p < .05 level using Student's *t*-statistic to ensure that the differences are larger than those that might be expected due to sampling variation. No adjustments were made for multiple comparisons. Student's *t* values were computed to test the difference between estimates with the following formula:

$$t = \frac{E_1 - E_2}{\sqrt{se_1^2 + se_2^2}}$$

where  $E_1$  and  $E_2$  are the estimates to be compared and  $se_1$  and  $se_2$  are their corresponding standard errors. Many of the variables examined are related to one another, and complex interactions and relationships have not been explored.

## **Nonsampling Errors**

Nonsampling error is the term used to describe variations in the estimates that may be caused by population coverage limitations and data collection, processing, and reporting procedures. The sources of nonsampling errors are typically problems like unit and item nonresponse, differences in respondents' interpretations of the meaning of questions, response differences related to the particular time the survey was conducted, and mistakes made during data preparation. It is difficult to identify and estimate either the amount of nonsampling error or the bias caused by this error. To minimize the potential for nonsampling error, this study used a variety of procedures, including a pretest of the questionnaire with school district respondents. The pretest provided the opportunity to check for consistency of interpretation of questions and definitions and to eliminate ambiguous items. The questionnaire and instructions were also extensively reviewed by NCES and the data requester at the Office of Educational Technology (OET), U.S. Department of Education. In addition, manual and machine editing of the questionnaire responses were conducted to check the data for accuracy and consistency. Cases with missing or inconsistent items were recontacted by telephone to resolve problems. Data were keyed with 100 percent verification for surveys received by mail, fax, or telephone.

# **Definitions of Analysis Variables**

Many of the district characteristics, described below, may be related to each other. For example, district enrollment size and community type are related, with city districts typically being larger than rural districts. Other relationships between these analysis variables may exist. However, this *First Look* report focuses on national estimates and bivariate relationships between the analysis variables and questionnaire variables rather than more complex analyses.

**District Enrollment Size** – This variable indicates the total number of students enrolled in the district based on data from the 2008–09 CCD Local Education Agency Universe file. The variable was collapsed into the following three categories:

Less than 2,500 students 2,500 to 9,999 students 10,000 or more students

**Community Type** – A created variable collapsed from the 12-category urban-centric district locale code (ULOCALE) that was assigned using the 2000 Decennial Census data. Data were obtained from the 2008–09 CCD Local Education Agency Universe file. The data were collapsed into four categories:

City—Includes large, midsize, and small principal cities

Suburban—Includes large, midsize, and small urbanized territories outside principal cities

Town—Includes fringe, distant, and remote territories that are inside an urban cluster

**Rural**—Includes fringe, distant, and remote territories that are outside of urbanized areas and urban clusters

**Region** – This variable classifies districts into one of the four geographic regions used by the Bureau of Economic Analysis of the U.S. Department of Commerce. Data were obtained from the 2008–09 CCD Local Education Agency Universe file. The geographic regions are as follows:

**Northeast** – Connecticut, Delaware, District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont

**Southeast** – Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia

**Central** – Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin

**West** – Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oklahoma, Oregon, Texas, Utah, Washington, and Wyoming

**Poverty Concentration** – This variable indicates the percentage of children in the district ages 5–17 in families living below the poverty level, based on the Title I data provided to the U.S. Department of Education by the U.S. Census Bureau, "Small Area Income and Poverty Estimates." For detailed information on the methodology used to create these estimates, please refer to <a href="http://www.census.gov/did/www/saipe/index.html">http://www.census.gov/did/www/saipe/index.html</a>.

The variable was collapsed into the following three categories:

Less than 10 percent 10 to 19 percent 20 percent or more

# **Contact Information**

For more information about the survey, contact Jared Coopersmith, Early Childhood, International, and Crosscutting Studies Division, National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education, 1990 K Street NW, Washington, DC 20006; e-mail: <a href="mailto:jared.Coopersmith@ed.gov">jared.Coopersmith@ed.gov</a>; telephone: (202) 219-7106.

# Appendix C Questionnaire

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# U.S. DEPARTMENT OF EDUCATION NATIONAL CENTER FOR EDUCATION STATISTICS

WASHINGTON, D.C. 20006-5651

#### DISTANCE EDUCATION COURSES FOR PUBLIC ELEMENTARY AND **SECONDARY SCHOOL STUDENTS: 2009-10**

FAST RESPONSE SURVEY SYSTEM

FORM APPROVED O.M.B. No.: 1850-0733 **EXPIRATION DATE: 06/2012** 

This survey is authorized by law (Education Sciences Reform Act of 2002, 20 U.S.C. 9543). While participation in this survey is voluntary, your cooperation is critical to make the results of this survey comprehensive, accurate, and timely. Your answers may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose unless otherwise compelled by law (Education Sciences Reform Act of 2002. 20 U.S.C. 9573).

#### **DEFINITION OF DISTANCE EDUCATION**

Distance education courses are courses offered to elementary and secondary school students regularly enrolled in your district that must meet all of the following criteria:

- be credit-granting; and
- be technology-delivered via audio, video (live or prerecorded), the Internet, or other computer-based technology (e.g., via district network); and
- have either (a) the instructor in a different location than the students and/or (b) the course content developed in, or delivered from, a different location than that of the students.

ion

For the purposes of this survey, do not include information about supplemental course materials, virtual field trips, online homework, technology-assisted courses that are primarily taught by a classroom-based instructor, test preparation courses that are not credit-granting, courses conducted mainly via written correspondence, or staff professional development.

IF ABOVE INFORMATION IS INCORRECT, PLEASE MAKE CORRECTIONS DIRI	ECTLY ON LABEL.
Name of person completing form:	Telephone:
Title/position:	E-mail:
Best days and times to reach you (in case of questions):	

#### THANK YOU. PLEASE KEEP A COPY OF THIS SURVEY FOR YOUR RECORDS.

#### PLEASE RETURN COMPLETED FORM TO:

Mail: Barbara Queen (8599.03.04.03) Barbara Queen at Westat

Westat

800-937-8281, Ext. 4476 or 301-294-4476 E-mail: DistanceEducationSurvey@westat.com

IF YOU HAVE ANY QUESTIONS, CONTACT:

1600 Research Boulevard Rockville, Maryland 20850-3195

Fax: 800-254-0984

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 1850-0733. The time required to complete this information collection is estimated to average 30 minutes per response, including the time to review instructions, search existing data resources, gather the data needed, and complete and review the information collection. If you have any comments concerning the accuracy of the time estimate or suggestions for improving this form, please write to: U.S. Department of Education, Washington, DC 20202-4651. If you have any comments or concerns regarding the status of

your individual submission of this form, write directly to: National Center for Education Statistics, 1990 K Street, NW, Washington, DC 20006.

FRSS Form No. 98 10/2010

#### **INSTRUCTIONS**

- **1.** Please report information for all schools administered by your district (e.g., regular schools, charter schools, magnet schools, alternative schools, special education schools, etc.).
- **2.** For all questions except question 19, report information only for students regularly enrolled in your district. Do <u>not</u> report information for students enrolled in schools that are <u>not</u> administered by your district (e.g., students from other districts, private school students, or homeschooled students).
- 3. Please provide the most complete information available, taking into account any distance education courses taken by students regularly enrolled in your district, regardless of where the courses originated. However, distance education courses that students take independently or that are provided by entities outside the control of the district should not be included unless the district has access to enrollment and monitoring information for those courses.
- **4.** The time frame for this survey is the 12-month 2009–10 school year. This includes distance education courses during the summer of 2009 or the summer of 2010, depending on how records are kept at your district. References to "2009–10" in the survey questions refer to this 12-month school year.
- **5.** The following definition applies to all questions on the survey.

#### **DEFINITION OF DISTANCE EDUCATION**

Distance education courses are courses offered to elementary and secondary school students regularly enrolled in your district that <u>must</u> meet <u>all</u> of the following criteria:

- be credit-granting (for elementary schools, "credit-granting" refers to any course that results in a letter grade or a pass/fail designation and is required of a student to complete a program of study or move to the next grade level); and
- **be technology-delivered** via audio, video (live or prerecorded), the Internet, or other computer-based technology (e.g., via district network); **and**
- have either (a) the instructor in a different location than the students and/or (b) the course content developed in, or delivered from, a different location than that of the students.

#### For the purposes of this survey, exclude:

- supplemental course materials, virtual field trips, online homework, or technology-assisted courses that are primarily taught by a classroom-based instructor.
- test preparation courses that are not credit granting.
- courses conducted mainly via written correspondence.
- staff professional development.

### For the purposes of this survey, include any of the following if they meet the distance education criteria above:

- courses that have a teacher or assistant in the room who monitors but gives little or no instruction to the students (e.g., course taken entirely on computer in a lab supervised by a teacher who does not provide instruction).
- courses that include occasional face-to-face interactions between the course instructor and the students. For
  example, a teacher teaching a course at several schools via computer technology may rotate between schools, or
  the instructor and students may be in the same location for orientation or occasional lab work or tests.
- courses that originate from your district or from other entities (e.g., a state virtual school or a postsecondary institution).
- courses with synchronous (i.e., simultaneous or "real time") and/or asynchronous (i.e., not simultaneous) instruction.
- courses taken by students in school, at home, or in some other location.
- courses taken by students to continue coursework while temporarily unable to attend school (e.g., while on home or hospital instruction, or on extended travel for personal or family reasons).
- courses taken for credit or grade recovery.
- courses taken for Advanced Placement credit or for college-level or dual credit. Dual credit college-level courses
  are courses for which students receive both high school and college credits.

## Before you answer the questions, please carefully read the definition and instructions.

1.	courses in 2009–10? (Refer to definition on previous page.)
	Yes 1 (Continue with question 2.) No 2 (Stop. Complete respondent section on front and return questionnaire.
2.	For the 12-month 2009–10 school year, report the number of <b>enrollments</b> in distance education courses of students regularly enrolled in your district.
	<ul> <li>Only include enrollments in credit-granting courses. Do not include information for supplemental course materials, virtual field trips, online homework, technology-assisted courses, or courses conducted mainly via written correspondence.</li> <li>The number of enrollments may include duplicated counts of students; i.e., a student should be counted for each course in which he/she was enrolled.</li> <li>Count each enrollment at only one instructional level. Enter "0" if there were no students in your district enrolled in distance education courses at an instructional level in 2009–10.</li> <li>The sum of b through e should equal the total in item a.</li> <li>a. Total number of enrollments in distance education courses</li> </ul>
	b. Number of enrollments in distance education courses in <b>elementary schools</b>
	c. Number of enrollments in distance education courses in <b>middle or junior high schools</b>
	d. Number of enrollments in distance education courses in high schools
	e. Number of enrollments in distance education courses in <b>combined or ungraded schools</b>
3.	Can your district provide the <b>number of students</b> enrolled in distance education courses (i.e., an unduplicated count in which each student is counted only once, regardless of the number of courses in which he/she was enrolled)?  Yes
4.	In 2009–10, did student academic records kept by the district distinguish distance education courses from other academic courses?  Yes
5.	In 2009–10, did your district track the following types of course completions for distance education courses? Report about distance education courses for which the district has access to tracking information. ( <i>Circle one on each line</i> .)
	Yes, for all courses Yes, for some courses No
	a. Course completion with a passing grade
	<ul><li>b. Course completion with a failing grade</li></ul>
	c. Withdrawai phor to course dompletion
6.	In 2009–10, did your district monitor students' progress in any distance education courses in the following ways? Report about distance education courses for which the district has access to monitoring information. ( <i>Circle one on each line</i> .)
	Yes No
	a. Attendance report
	b. Log-on activity 1 2
	c. Time spent online
	d. Completion and submission of assignments
	e. Interim course grades
7.	In 2009–10, did your district have <b>written policies</b> specifying the following when a distance education course was not successfully completed? ( <i>Circle one on each line</i> .)
	Yes No

2

2

a. Student cannot enroll in another distance education course ......

b. Student must wait a specified time before enrolling in another distance education course.....

Questions 8 and 9 are about students enrolled in regular high school programs in your district. Do not include students enrolled in other types of programs, such as alternative education, credit recovery, home or hospital teaching, or other specialized programs.

іт у	our district does not have any high schools, check here 🔛 and skip to Q10.
8.	In 2009–10, were students enrolled in regular high school programs in your district able to take a full course load in an academic term (e.g., semester) using only distance education courses? (Circle one.)
	Yes
9.	In 2009–10, were students enrolled in regular high school programs in your district able to fulfill all high school graduation requirements using only distance education courses? (Circle one.)
	Yes 1 No 2
10.	. In Part 1, indicate which of the following entities delivered any of the distance education courses in which students in

n your district were enrolled in 2009–10. (Indicate yes, no, or don't know for each entity.)

In Part 2, rank up to 5 entities in the order in which they most frequently delivered distance education courses, with 1 indicating the entity that delivered the most courses, 2 indicating the next largest number of courses, etc.

	Entity	1. Circle one on each line			2. Rank up
	Entity		No	Don't know	to 5 entities
a.	Postsecondary institution in the United States	1	2	3	
b.	Independent vendor in the United States	1	2	3	
C.	Online charter school administered by your district	1	2	3	
d.	Other schools administered by your district	1	2	3	
e.	Your district (i.e., delivered centrally from the district)	1	2	3	
f.	Another local school district, or schools in another district, in your state	1	2	3	
g.	Education service agencies within your state (e.g., Board of Cooperative Educational Services - BOCES, Intermediate Units), not including the state education agency or local school districts	1	2	3	
h.	State virtual school in your state (i.e., state-centralized K-12 courses available				
	through Internet- or web-based methods)	1	2	3	
<u>i.</u>	State virtual school in another state	1	2	3	
j.	Districts or schools in other states (other than state virtual schools)	1	2	3	
k.	Non-U.Sbased public or private entity (e.g., school, university, private vendor)	1	2	3	
Ī.	Other (specify)	1	2	3	

11. In 2009-10, to what extent were the distance education courses developed by your district or by other entities (e.g., other local school district, state virtual school in your state, postsecondary institution, independent vendor, etc.)? Report only for distance education courses taken by students regularly enrolled in your district in 2009–10. (Circle one number that best indicates where distance education courses were developed.)

All courses developed by your district		Courses developed about equally by your district and other entities		All courses developed by other entities
1	2	3	4	5

12. In 2009–10, what types of distance education courses did students regularly enrolled in your district take? (Circle one on each line.)

		Yes	No
a.	Advanced Placement (AP)	1	2
	Dual enrollment (college-level courses for which students receive both high school and		
	college credits)	1	2
C.	Credit recovery.	1	2
d.	Career and technical education (e.g., business courses)	1	2
e.	Other types of academic courses.	1	2

	Reason	Not important	Somewhat important	-	Don't know
a.	Providing courses not otherwise available at the school	. 1	2	3	4
b.	Offering Advanced Placement or college-level courses	. 1	2	3	4
C.	Reducing scheduling conflicts for students	. 1	2	3	4
d.	Providing opportunities for students to recover course credits from classes they missed or failed	. 1	2	3.	4
e.	<b>5</b> 11			XO.	
f.	accumulation for early graduation  Providing opportunities for students who are homebound or have		2	3	4
	special needs to take courses		2	• 3	4
g.	Addressing school space limitations			3	4
h. i.	Generating more district revenues  Other (specify)	. 1	2	3 3	4 4
	2009–10, to what <b>extent were the following technologies us</b> ucation courses taken by students regularly enrolled in your district? (	Circle one	on each line	.)	
	Technology	Not at all	Small extent	Moderate extent	Large extent
	Internet courses using synchronous (i.e., simultaneous or "real time") instruction	1	2	3	4
b.	Internet courses using asynchronous (i.e., not simultaneous) instruction	. 1	2	3	4
C.	1	4	0	0	4
٨	network or CD-ROM) Two-way interactive video (i.e., two-way video with two-way audio)		2	3	4
d. e.	One-way prerecorded video (including prerecorded videos	. 1	2	3	4
С.	provided to students, and television broadcast and cable				
		. 1	2	3	4
f.	transmission using prerecorded videos) Other (specify)	1	2	3	4
fo	2009–10, which one of the technologies listed in question 14 was us rethe greatest number of distance education courses taken by stude letter corresponding to the technology listed in question 14.) (Circle a b c d e f	ents regulai	•		
	2009–10, were any of the distance education courses taken by stude er the Internet (i.e., question 14a or 14b is answered small, moderate				t deliver
Υe	s	question 1	8.)		
	2009–10, where did students access distance education courses that	t were deliv	ered over th	e Internet?	(Circle o
	each line.)				
	each line.)			Yes	No
on	At school			Yes 1	<b>No</b> 2
a.					
a. b.	At school				2
a. b. c.	At school			1 1 1	2 2
a. b. c.	At school  At home  At some other location (specify)			1 1 1	2 2
a. b. c. Do	At school	ses offered	in the next	1 1 1 3 years?	2 2 2 courses