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FRSS
Fast Response Survey System

Internet Access in U.S. Public Schools and Classrooms: 1994–2005

Highlights

U.S. Department of Education
NCES 2007-020

Internet Access in U.S. Public Schools and Classrooms: 1994–2005

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NCES 2007-020

November 2006

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Summary

Background

The National Center for Education Statistics (NCES) has employed its Fast Response Survey System (FRSS) to track access to information technology in schools and classrooms since 1994. FRSS is designed to administer short, focused, issue-oriented surveys that place minimal burden on respondents and have a quick turnaround from data collection to reporting. Each year, with the exception of 2004, NCES has conducted a new nationally representative survey of public schools to gauge the changes in computer and Internet availability, based on measures such as student-to-computer ratio and the percentage of schools and classrooms with Internet connections. As computers and the Internet became increasingly available in schools, the FRSS surveys were modified to address new issues, such as the use of new types of Internet connections to enhance connectivity. Recent FRSS surveys on Internet access have been expanded to address other emerging issues. The 2002 survey, for instance, included items on the use of technologies or procedures to prevent student access to inappropriate material on the Internet and the availability of teacher professional development on technology use in the classroom. The 2005 survey included items on the use of Internet access to provide various opportunities and information for teaching and learning.

This report presents key findings from the 2005 FRSS survey on Internet access in U.S. public schools and selected comparisons with data from previous FRSS Internet surveys. The 2005 survey, designed to update data on the issues addressed in 2003 and ask about a few new issues, covered the following topics:

- school connectivity, including school and classroom access to the Internet, and types of connections;
- student access to computers and the Internet, including student-to-computer ratio, the provision of hand-held computers to teachers and students, and laptop computers available for loan to students;
- technologies and procedures to prevent student access to inappropriate material on the Internet;
- teacher professional development on how to integrate the use of the Internet into the curriculum; and

- use of Internet access to provide various opportunities and information for teaching and learning.

Questionnaires for the survey "Internet Access in U.S. Public Schools, Fall 2005" were mailed to a representative sample of 1,205 public schools in the 50 states and the District of Columbia. The sample was selected from the 2003–04 NCES Common Core of Data (CCD) Public Elementary/Secondary School Universe File, the most current available at the time of selection. The sampling frame includes about 85,000 regular elementary and secondary/combined schools (a combined school is one that encompasses instruction at both the elementary and secondary levels). The number of schools in the survey universe decreased to an estimated 83,000 after some of the schools were determined during data collection to have been closed or merged with other schools. Data have been weighted to yield national estimates. The unweighted and weighted response rates were both 86 percent. Detailed information about the survey methodology is provided in appendix A, and the questionnaire can be found in appendix B. The focus of this report is twofold: the national estimates for 2005, and statistically significant findings over time. Selected survey findings are presented by the following school characteristics:

- instructional level (elementary, secondary);
- school size (enrollment of less than 300, 300 to 999, 1,000 or more, referred to as small, medium, and large throughout the report);
- locale (city, urban fringe, town, rural);
- percent minority enrollment (less than 6 percent, 6 to 20 percent, 21 to 49 percent, 50 percent or more); and
- percent of students eligible for free or reduced-price lunch (less than 35 percent, 35 to 49 percent, 50 to 74 percent, 75 percent or more), which is used as a measure of poverty concentration at the school. For the remainder of this report, we will refer to the percent of free or reduced-priced lunch as poverty concentration.

In general, comparisons by these school characteristics are presented only where measurable differences were detected and followed meaningful patterns. It is important to note that many of the school characteristics may also be related to each other, and complex interactions and relationships have not been explored here. For example, enrollment size and instructional level of schools are related, with secondary schools typically being larger than elementary schools. Similarly, poverty concentration and minority enrollment are related, with schools with a higher minority enrollment also more likely to have a higher concentration of poverty. This report is purely descriptive in nature, and readers are cautioned not to draw causal inferences based solely on the bivariate results presented in this report. The selected

findings are examples of comparisons that can be made using the data and are not designed to emphasize any particular issue.

All specific statements of comparison made in this report have been tested for statistical significance through *t*-tests adjusted for multiple comparisons using the Bonferroni adjustment,[1] and are significant at the 95 percent confidence level or better. However, only selected findings are presented for each topic in the report. Throughout this report, differences that appear large (particularly those by school characteristics) may not be statistically significant. This absence of statistical significance is due in part to the relatively large standard errors surrounding the estimates and the use of the Bonferroni adjustment to control for multiple comparisons. A detailed description of the statistical tests supporting the survey findings can be found in appendix A.

Selected Findings

The findings are organized to address the following issues: school connectivity, student access to computers and the Internet, technologies and procedures to prevent student access to inappropriate material on the Internet, teacher professional development on how to integrate the use of the Internet into the curriculum, and use of the Internet to provide opportunities and information for teaching and learning.

School Connectivity

The FRSS surveys on Internet access collected information on several key measures of school connectivity. Schools were asked whether they had access to the Internet. Schools with Internet access were also asked about the number of instructional rooms that had at least one computer with Internet access and the types of Internet connections used. Information on the number of instructional rooms with Internet access was combined with information on the total number of instructional rooms in the school to calculate the percentage of instructional rooms with Internet access.[2]

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[1] The Bonferroni adjustment was also used for previous FRSS Internet reports and is used here for continuity of reporting.

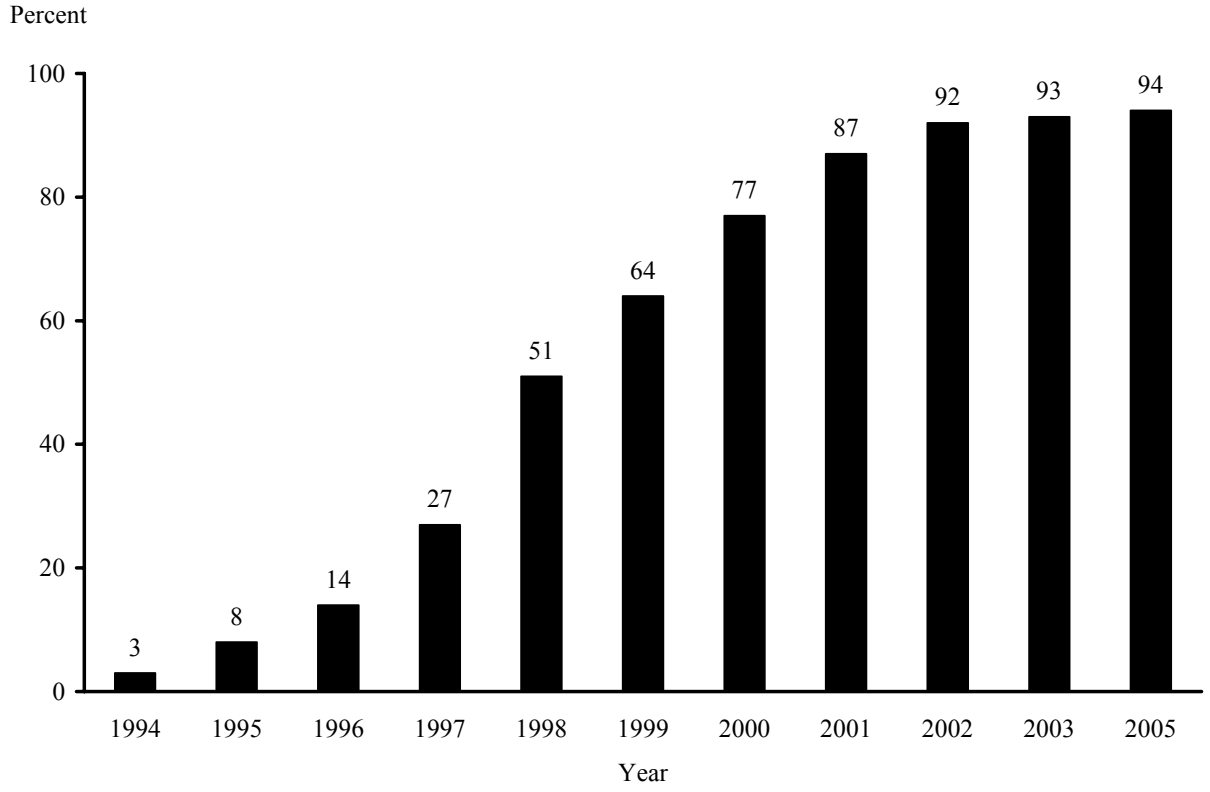
[2] Instructional rooms include classrooms, computer and other labs, library/media centers, and any other rooms used for instructional purposes.

School and Instructional Room Access

- In fall 2005, nearly 100 percent of public schools in the United States had access to the Internet, compared with 35 percent in 1994 (table 1). In 2005, no differences in school Internet access were observed by any school characteristics, which is consistent with data reported previously. There have been virtually no differences in school access to the Internet by school characteristics since 1999 (Parsad and Jones 2005).

- Public schools have made consistent progress in expanding Internet access in instructional rooms. In 2005, 94 percent of public school instructional rooms had Internet access, compared with 3 percent in 1994 (figure 1 and table 2). Across school characteristics, the proportion of instructional rooms with Internet access ranged from 88 to 98 percent.

Figure 1. Percentage of public school instructional rooms with Internet access: Various years, 1994–2005



NOTE: Percentages are based on all public schools. Information on the number of instructional rooms with Internet access was combined with information on the total number of instructional rooms in the school to calculate the percentage of instructional rooms with Internet access. All of the estimates in this report were recalculated from raw data files using the same computational algorithms. Consequently, some estimates presented here may differ trivially (i.e., 1 percent) from results published prior to 2001. See table 2 for detailed data.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Survey on Advanced Telecommunications in U.S. Public Schools, K–12," FRSS 51, 1994; "Survey on Advanced Telecommunications in U.S. Public Schools, K–12," FRSS 57, 1995; "Advanced Telecommunications in U.S. Public Schools, Fall 1996," FRSS 61, 1996; "Internet Access in U.S. Public Schools, Fall 1997," FRSS 64, 1997; "Internet Access in U.S. Public Schools, Fall 1998," FRSS 69, 1998; "Internet Access in U.S. Public Schools, Fall 1999," FRSS 75, 1999; "Internet Access in U.S. Public Schools, Fall 2000," FRSS 79, 2000; "Internet Access in U.S. Public Schools, Fall 2001," FRSS 82, 2001; "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002; "Internet Access in U.S. Public Schools, Fall 2003," FRSS 86, 2003; and "Internet Access in U.S. Public Schools, Fall 2005," FRSS 90, 2005.

Type of Connection

The types of Internet connections used by public schools and the speed at which computers are connected to the Internet have changed over the years. In 1996, dial-up Internet connections (a type of narrowband connection) were used by about three-fourths (74 percent) of public schools having Internet access (Heaviside, Riggins, and Farris 1997). In 2001, 5 percent of public schools used dial-up connections, while the majority of public schools (55 percent) reported using T1/DS1 lines (a type of broadband connection), a continuous and much faster type of Internet connection than dial-up (Kleiner and Farris 2002). Because of the increasing complexity of detailed information on types of connections, the 2002, 2003, and 2005 surveys directly asked whether schools used broadband and narrowband connections.[3] Schools also reported whether they used wireless connections to the Internet, the types of wireless connections used, and the number of instructional rooms with wireless connections.

- In 2005, 97 percent of public schools with Internet access used broadband connections to access the Internet (table 3). In 2001 and 2000, 85 percent and 80 percent of the schools, respectively, were using broadband connections.

- In 2005, as in previous years (Parsad and Jones 2005), large schools were more likely than small schools to use broadband connections. Ninety-four percent of small schools reported using broadband connections, compared with nearly 100 percent of large schools (table 3).

- Forty-five percent of public schools with Internet access used wireless connections in 2005, an increase from 32 percent in 2003 (table 4).[4]

- Of the schools using wireless Internet connections in 2005, 97 percent indicated that they used broadband wireless Internet connections, an increase from 92 percent in 2003 (table 4). Across all school characteristics, the percentage of public schools with wireless connections using broadband wireless Internet connections ranged from 92 percent to 99 percent.

- In 2005, 15 percent of all public school instructional rooms had wireless Internet connections (table 5).

---

[3] In 2000 and 2001, respondents were instructed to circle as many types of connections as there were in the school. The 2002, 2003, and 2005 questionnaires directly asked whether the schools used broadband and narrowband connections. See the questionnaire in appendix B for definitions of broadband and narrowband connections. These percentages include schools using only broadband connections, as well as schools using both broadband and narrowband connections. They do not include schools using narrowband connections exclusively. In 2001, 2002, 2003, and 2005, they also included DSL connections, which had not been an option on the 2000 questionnaire.

[4] A school could use both wireless and wired Internet connections. Wireless Internet connections can be broadband or narrowband.

Student Access to Computers and the Internet

The FRSS surveys on Internet access obtained information on various measures of student access to computers and the Internet. Schools reported the number of instructional computers with Internet access; this information was then combined with enrollment data to compute the ratio of students to instructional computers with Internet access. Schools were also asked about the provision of hand-held computers to students and teachers and laptop computer loans to students.

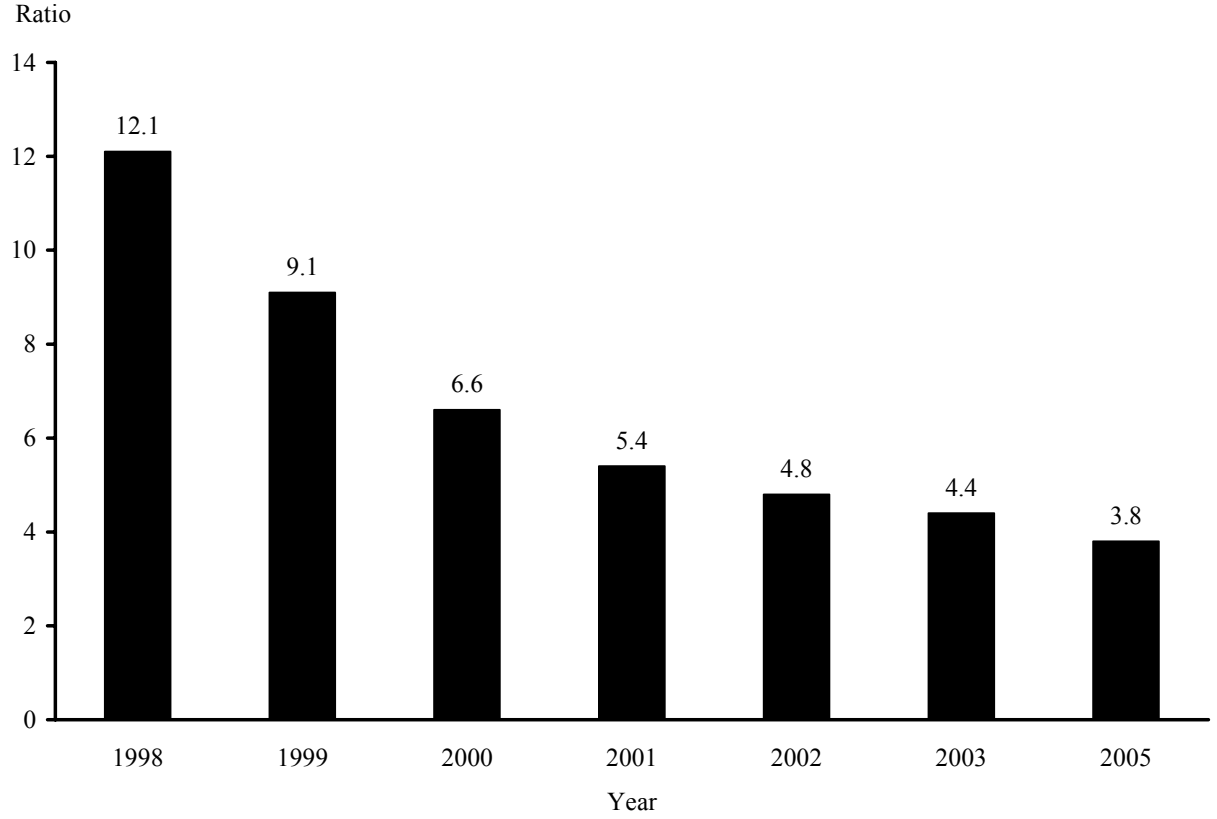
Students Per Instructional Computer With Internet Access

- The ratio of students to instructional computers with Internet access was computed by dividing the total number of students in all public schools by the total number of instructional computers with Internet access in all public schools (including schools with no Internet access).[5] In 2005, the ratio of students to instructional computers with Internet access in public schools was 3.8 to 1, a decrease from the 12.1 to 1 ratio in 1998, when it was first measured (figure 2 and table 6). The 2005 ratio of 3.8 to 1 also represents a decrease from 2003, when the ratio of students to instructional computers was 4.4 to 1.

- The ratio of students to instructional computers showed some differences by all school characteristics in 2005 with the exception of poverty level (table 6). For example, small schools had fewer students per computer than did medium-sized and large schools (2.4 to 1 compared with 3.9 to 1 and 4.0 to 1, respectively). In addition, schools with the lowest level of minority enrollment had fewer students per computer than did schools with higher minority enrollments.

[5] This is one method of calculating students per computer. Another method involves calculating the number of students in each school divided by the number of instructional computers with Internet access in each school and then taking the mean of this ratio across all schools. When "students per computer" was first calculated for this NCES series in 1998, a decision was made to use the first method; this method continues to be used for comparison purposes. A couple of factors influenced the choice of that particular method. There was (and continues to be) considerable skewness in the distribution of students per computer per school. In addition, in 1998, 11 percent of public schools had no instructional computers with Internet access.

Figure 2. Ratio of public school students to instructional computers with Internet access: Various years, 1998–2005



NOTE: The ratio of students to instructional computers with Internet access was computed by dividing the total number of students in all public schools by the total number of instructional computers with Internet access in all public schools (including schools with no Internet access). All of the estimates in this report were recalculated from raw data files using the same computational algorithms. Consequently, some estimates presented here may differ trivially (i.e., 1 percent) from results published prior to 2001. See table 6 for detailed data.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 1998," FRSS 69, 1998; "Internet Access in U.S. Public Schools, Fall 1999," FRSS 75, 1999; "Internet Access in U.S. Public Schools, Fall 2000," FRSS 79, 2000; "Internet Access in U.S. Public Schools, Fall 2001," FRSS 82, 2001; "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002; "Internet Access in U.S. Public Schools, Fall 2003," FRSS 86, 2003; and "Internet Access in U.S. Public Schools, Fall 2005," FRSS 90, 2005.

Provision of Hand-Held Computers

The FRSS surveys collected information on the provision of hand-held computers to students and teachers. Hand-held computers are defined as computers, or personal digital assistants, small enough to be held in one hand. Examples are Palm Pilots or Pocket PCs.

- In 2005, 19 percent of public schools provided hand-held computers to students or teachers for instructional purposes, an increase from 10 percent in 2003 (table 7).[6]

[6] In 2002 and 2003, schools were asked one question about whether they provided hand-held computers to students or teachers. In 2005, schools were asked separate questions about students and teachers. The responses were combined for 2005 to allow comparisons with previous years.

- In 2005, public schools were more likely to provide hand-held computers to teachers than to students. Seventeen percent of schools reported providing hand-held computers to teachers, compared with 8 percent of schools that reported having provided hand-held computers to students (table 8).

Laptop Computer Loans

Public schools reported whether they lent laptop computers to students and the maximum length of time for which they could be borrowed. Schools that did not lend laptop computers to students were asked about their future plans for such loans; for example, in 2005, schools were asked whether they planned to lend laptop computers to students in the 2006–07 school year.

- In 2005, 10 percent of public schools lent laptop computers to students (table 9).
- Forty-seven percent of schools lending laptop computers reported that students could borrow them for less than 1 week, 17 percent reported that students could borrow them for a period of 1 week to less than 1 month, 16 percent reported lending laptops for the entire school year, and 5 percent reported lending laptops for some other maximum length of time (table 10).
- Of the 90 percent of schools without laptop computers available for loan to students in 2005 (calculated from table 9), 3 percent were planning to make laptops available for students to borrow during the next school year (table 11).

Technologies and Procedures to Prevent Student Access to Inappropriate Material on the Internet

Given the diversity of the information carried on the Internet, student access to inappropriate material is a major concern of many parents and teachers. Moreover, under the Children's Internet Protection Act (CIPA), no school may receive E-rate[7] discounts unless it certifies that it is enforcing a policy of Internet safety that includes the use of filtering or blocking technology.[8] Beginning in 2001, the FRSS surveys on Internet access asked whether public schools used any technologies or procedures to prevent student access to inappropriate material on the Internet, the types of technologies or procedures used, and whether such technologies were used on all computers with Internet access used by students.

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[7] The Education rate (E-rate) program was established in 1996 to make telecommunications services, Internet access, and internal connections available to schools and libraries at discounted rates based upon the income level of the students in their community and whether their location is urban or rural.

[8] More information about CIPA (Public Law 106–554) can be found at the website of the Schools and Libraries Division, Universal Service Administrative Company (http://www.sl.universalservice.org/reference/CIPA.asp). The law is effective for funding year 4 (July 1, 2001, to June 30, 2002) and for all future years. Schools and libraries receiving only telecommunications services are excluded from the requirements of CIPA.

The 2002, 2003, and 2005 surveys also asked about the methods used to disseminate information about the technologies or procedures to students and parents. (More information on the specific types of technologies and procedures is listed in appendix A.)

- In 2005, nearly 100 percent of public schools with Internet access used various technologies or procedures to control student access to inappropriate material on the Internet (table 12). Across all school characteristics, between 99 and 100 percent of schools reported using these technologies or procedures. In addition, 98 percent of these schools used at least one of these technologies or procedures on all Internet-connected computers used by students.

- Among schools using technologies or procedures to prevent student access to inappropriate material on the Internet in 2005, 99 percent used blocking or filtering software (table 13). Ninety-six percent of schools reported that teachers or other staff members monitored student Internet access, 79 percent had a written contract that parents have to sign, 76 percent had a contract that students have to sign, 67 percent used monitoring software, 53 percent had honor codes, and 46 percent allowed access only to their intranet.[9]

- Ninety-five percent of public schools using technologies or procedures to prevent student access to inappropriate material on the Internet indicated that they disseminated the information about these technologies or other procedures via their school policies or rules distributed to students and parents (table 14). Sixty-seven percent did so with a special notice to parents, 57 percent used their newsletters to disseminate this information, 40 percent posted a message on the school website or web page, 28 percent had a notice on a bulletin board at the school, 28 percent had a pop-up message at computer or Internet log on, and 4 percent used a method other than the ones listed above.

Teacher Professional Development on How to Integrate the Use of the Internet Into the Curriculum

Approximately one-half of public school teachers in 1999 reported that they used computers or the Internet for instruction during class time and/or that they assigned their students work that involved research using the Internet (Smerdon et al. 2000). One-third of teachers reported feeling well or very well prepared to use computers and the Internet for instruction. The 2002, 2003, and 2005 FRSS surveys on Internet access asked public schools whether they or their districts provided teacher professional development on how to integrate the use of the Internet into the curriculum in the 12 months prior to the surveys, and the percentage of teachers who attended such professional development.

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[9] An intranet is a controlled computer network similar to the Internet but accessible only to those who have permission to use it. For example, school administrators can restrict student access to only their school's intranet, which may include information from the Internet chosen by school officials, rather than full Internet access. See appendix A for definitions of technologies and procedures.

- In 2005, nationwide, 83 percent of public schools with Internet access indicated that their school or school district had offered professional development to teachers in their school on how to integrate the use of the Internet into the curriculum in the 12 months prior to the fall survey (table 15).

- Thirty-four percent of the schools that offered professional development in 2005 had 1 to 25 percent of their teachers attending such professional development in the 12 months preceding the survey (table 15). Sixteen percent of the schools had 26 to 50 percent of their teachers, 13 percent of the schools had 51 to 75 percent of their teachers, and 36 percent of the schools had 76 percent or more of their teachers attending professional development on how to integrate the use of the Internet into the curriculum in the 12 months preceding the survey. Less than 1 percent of schools reported not having any teachers attending such professional development during this time frame.

Use of the Internet to Provide Opportunities and Information for Teaching and Learning

Public schools reported the various ways in which they used the Internet to provide opportunities and information for teaching and learning.

- Eighty-nine percent of public schools indicated they use the Internet to provide data to inform instructional planning at the school level (table 16). Eighty-seven percent of public schools reported using the Internet to provide assessment results and data for teachers to use to individualize instruction, and 87 percent also reported providing high quality digital content (i.e., learning materials brought in from the Web, such as digital libraries and museums, or any text, images, sounds, and video that have been digitized). Additional uses of the Internet included providing online professional development courses to teachers (51 percent) and providing access for students to online distance learning for courses that are otherwise unavailable at the school, reported by 32 percent.

- There were some differences in the use of the Internet by school characteristics (table 16). For example, secondary schools were more likely than elementary schools to use the Internet for providing teacher professional development through online courses (59 vs. 49 percent). Secondary schools were more likely to provide access for students to online distance learning (57 vs. 24 percent). Rural schools also were more likely to provide access for students to online distance learning than schools in cities and urban fringe areas (43 vs. 25 and 24 percent, respectively). In addition, schools with the lowest level of minority enrollment were less likely than schools with the highest level of minority enrollment to use the Internet to provide assessment results and data for teachers to use to individualize instruction (81 vs. 92 percent).

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Tables of Estimates and Standard Errors

Table 1. Percentage of public schools with Internet access, by school characteristics: Various years, 1994–2005

School characteristic	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2005
All public schools	35	50	65	78	89	95	98	99	99	100[2]	100[2]
Instructional level[1]											
Elementary	30	46	61	75	88	94	97	99	99	100[2]	100[2]
Secondary	49	65	77	89	94	98	100[2]	100[2]	100[2]	100	100
School size											
Less than 300	30	39	57	75	87	96	96	99	96	100	100
300 to 999	35	52	66	78	89	94	98	99	100[2]	100[2]	99
1,000 or more	58	69	80	89	95	96	99	100	100	100	100
Locale											
City	40	47	64	74	92	93	96	97	99	100	99
Urban fringe	38	59	75	78	85	96	98	99	100	100[2]	99
Town	29	47	61	84	90	94	98	100	98	100	100
Rural	35	48	60	79	92	96	99	100[2]	98	100	100
Percent minority enrollment[3]											
Less than 6 percent	38	52	65	84	91	95	98	99	97	100	99
6 to 20 percent	38	58	72	87	93	97	100	100	100	100	100
21 to 49 percent	38	55	65	73	91	96	98	100	99	99	100
50 percent or more	27	39	56	63	82	92	96	98	99	100	100[2]
Percent of students eligible for free or reduced-price lunch[4]											
Less than 35 percent	39	60	74	86	92	95	99	99	98	100	99
35 to 49 percent	35	48	59	81	93	98	99	100	100	100	100
50 to 74 percent	32	41	53	71	88	96	97	99	100	100	100
75 percent or more	18	31	53	62	79	89	94	97	99	99	99

[1]Data for combined schools are included in the totals and in analyses by other school characteristics but are not shown separately.

[2]Estimate is rounded to 100 percent for presentation in table.

[3]Percent minority enrollment was not available for some schools. In 1994, this information was missing for 100 schools. In subsequent years, the missing information ranged from 0 schools to 46 schools. In 2005, this information was missing for 20 schools.

[4]Percent of students eligible for free or reduced-price lunch was not available for some schools. In the 1994 survey, free and reduced-price lunch data came from the Common Core of Data (CCD) only and were missing for 430 schools (percentages presented in this table are based on cases for which data were available). In reports prior to 1998, free and reduced-price lunch data were not reported for 1994. In 1998, a decision was made to include the data for 1994 for comparison purposes. In subsequent years, free and reduced-price lunch information was obtained on the questionnaire, supplemented, if necessary, with CCD data. Missing data ranged from 0 schools (2002, 2003, and 2005) to 10 schools (1999).

NOTE: All of the estimates in this report were recalculated from raw data files using the same computational algorithms. Consequently, some estimates presented here may differ trivially (i.e., 1 percent) from results published prior to 2001. For estimates that are 100 percent, the event defined could have been reported by fewer schools had a different sample been drawn.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Survey on Advanced Telecommunications in U.S. Public Schools, K–12," FRSS 51, 1994; "Survey on Advanced Telecommunications in U.S. Public Schools, K–12," FRSS 57, 1995; "Advanced Telecommunications in U.S. Public Schools, Fall 1996," FRSS 61, 1996; "Internet Access in U.S. Public Schools, Fall 1997," FRSS 64, 1997; "Internet Access in U.S. Public Schools, Fall 1998," FRSS 69, 1998; "Internet Access in U.S. Public Schools, Fall 1999," FRSS 75, 1999; "Internet Access in U.S. Public Schools, Fall 2000," FRSS 79, 2000; "Internet Access in U.S. Public Schools, Fall 2001," FRSS 82, 2001; "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002; "Internet Access in U.S. Public Schools, Fall 2003," FRSS 86, 2003; and "Internet Access in U.S. Public Schools, Fall 2005," FRSS 90, 2005.

Table 1-A. Standard errors of the percentage of public schools with Internet access, by school characteristics: Various years, 1994–2005

School characteristic	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2005
All public schools	1.5	1.8	1.8	1.5	1.3	0.8	0.5	0.3	0.5	†	†
Instructional level											
Elementary	1.9	2.4	2.1	2.0	1.6	1.0	0.7	0.4	0.6	†	†
Secondary	2.4	2.7	1.8	1.7	2.1	0.8	†	†	†	†	†
School size											
Less than 300	3.4	3.9	4.4	3.8	3.4	1.5	1.7	1.0	1.7	†	†
300 to 999	2.0	2.2	2.0	2.0	1.4	1.0	0.5	0.4	†	†	0.4
1,000 or more	3.0	4.1	3.4	2.5	2.4	1.7	0.6	†	†	†	†
Locale											
City	3.1	4.3	4.5	3.8	2.1	1.5	1.1	1.4	0.7	†	0.6
Urban fringe	2.9	3.8	3.3	2.8	2.8	1.2	1.2	0.5	†	†	0.6
Town	2.3	3.7	4.0	4.6	3.2	2.5	1.2	†	2.2	†	†
Rural	2.7	3.8	3.3	3.2	3.4	1.4	0.9	†	1.0	†	†
Percent minority enrollment											
Less than 6 percent	2.4	3.2	3.4	2.7	2.9	1.5	1.2	0.9	1.6	†	0.9
6 to 20 percent	3.3	4.7	3.0	2.7	2.5	1.2	†	†	†	†	†
21 to 49 percent	3.2	4.1	3.2	4.1	2.5	1.8	1.2	†	0.7	0.7	†
50 percent or more	2.9	3.8	4.6	4.7	2.9	1.9	1.2	0.9	0.5	†	†
Percent of students eligible for free or reduced-price lunch											
Less than 35 percent	2.3	2.4	2.2	1.8	2.0	1.1	0.7	0.6	1.0	†	0.5
35 to 49 percent	4.6	3.9	4.8	3.9	2.2	0.9	0.7	†	†	†	†
50 to 74 percent	5.0	4.6	5.1	4.0	3.0	1.7	1.3	0.5	†	†	†
75 percent or more	4.6	4.4	5.4	5.3	3.7	3.1	1.7	1.1	0.9	0.8	0.7

†Not applicable; estimate of standard error is not presented because it is based on an estimate of 100 percent.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Survey on Advanced Telecommunications in U.S. Public Schools, K–12," FRSS 51, 1994; "Survey on Advanced Telecommunications in U.S. Public Schools, K–12," FRSS 57, 1995; "Advanced Telecommunications in U.S. Public Schools, Fall 1996," FRSS 61, 1996; "Internet Access in U.S. Public Schools, Fall 1997," FRSS 64, 1997; "Internet Access in U.S. Public Schools, Fall 1998," FRSS 69, 1998; "Internet Access in U.S. Public Schools, Fall 1999," FRSS 75, 1999; "Internet Access in U.S. Public Schools, Fall 2000," FRSS 79, 2000; "Internet Access in U.S. Public Schools, Fall 2001," FRSS 82, 2001; "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002; "Internet Access in U.S. Public Schools, Fall 2003," FRSS 86, 2003; and "Internet Access in U.S. Public Schools, Fall 2005," FRSS 90, 2005.

Table 2. Percentage of public school instructional rooms with Internet access, by school characteristics: Various years, 1994–2005

School characteristic	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2005
All public schools	3	8	14	27	51	64	77	87	92	93	94
Instructional level[1]											
Elementary	3	8	13	24	51	62	76	86	92	93	93
Secondary	4	8	16	32	52	67	79	88	91	94	95
School size											
Less than 300	3	9	15	27	54	71	83	87	91	93	92
300 to 999	3	8	13	28	53	64	78	87	93	93	94
1,000 or more	3	4	16	25	45	58	70	86	89	94	94
Locale											
City	4	6	12	20	47	52	66	82	88	90	88
Urban fringe	4	8	16	29	50	67	78	87	92	94	96
Town	3	8	14	34	55	72	87	91	96	97	98
Rural	3	8	14	30	57	71	85	89	93	94	95
Percent minority enrollment[2]											
Less than 6 percent	4	9	18	37	57	74	85	88	93	93	96
6 to 20 percent	4	10	18	35	59	78	83	90	94	95	97
21 to 49 percent	4	9	12	22	52	64	79	89	91	95	91
50 percent or more	2	3	5	13	37	43	64	81	89	92	92
Percent of students eligible for free or reduced-price lunch[3]											
Less than 35 percent	3	10	17	33	57	73	82	90	93	95	96
35 to 49 percent	2	6	12	33	60	69	81	89	90	93	88
50 to 74 percent	4	6	11	20	41	61	77	87	91	94	96
75 percent or more	2	3	5	14	38	38	60	79	89	90	91

[1]Data for combined schools are included in the totals and in analyses by other school characteristics but are not shown separately.

[2]Percent minority enrollment was not available for some schools. In 1994, this information was missing for 100 schools. In subsequent years, the missing information ranged from 0 schools to 46 schools. In 2005, this information was missing for 20 schools.

[3]Percent of students eligible for free or reduced-price lunch was not available for some schools. In the 1994 survey, free and reduced-price lunch data came from the Common Core of Data (CCD) only and were missing for 430 schools (percentages presented in this table are based on cases for which data were available). In reports prior to 1998, free and reduced-price lunch data were not reported for 1994. In 1998, a decision was made to include the data for 1994 for comparison purposes. In subsequent years, free and reduced-price lunch information was obtained on the questionnaire, supplemented, if necessary, with CCD data. Missing data ranged from 0 schools (2002, 2003, and 2005) to 10 schools (1999).

NOTE: Percentages are based on all public schools. Information on the number of instructional rooms with Internet access was combined with information on the total number of instructional rooms in the school to calculate the percentage of instructional rooms with Internet access. All of the estimates in this report were recalculated from raw data files using the same computational algorithms. Consequently, some estimates presented here may differ trivially (i.e., 1 percent) from results published prior to 2001.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Survey on Advanced Telecommunications in U.S. Public Schools, K–12," FRSS 51, 1994; "Survey on Advanced Telecommunications in U.S. Public Schools, K–12," FRSS 57, 1995; "Advanced Telecommunications in U.S. Public Schools, Fall 1996," FRSS 61, 1996; "Internet Access in U.S. Public Schools, Fall 1997," FRSS 64, 1997; "Internet Access in U.S. Public Schools, Fall 1998," FRSS 69, 1998; "Internet Access in U.S. Public Schools, Fall 1999," FRSS 75, 1999; "Internet Access in U.S. Public Schools, Fall 2000," FRSS 79, 2000; "Internet Access in U.S. Public Schools, Fall 2001," FRSS 82, 2001; "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002; "Internet Access in U.S. Public Schools, Fall 2003," FRSS 86, 2003; and "Internet Access in U.S. Public Schools, Fall 2005," FRSS 90, 2005.

Table 2-A. Standard errors of the percentage of public school instructional rooms with Internet access, by school characteristics: Various years, 1994–2005

School characteristic	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2005
All public schools	0.3	0.7	1.0	1.6	1.8	1.6	1.1	0.9	0.6	0.5	1.3
Instructional level											
Elementary	0.4	1.0	1.5	1.9	2.3	1.8	1.5	1.1	0.8	0.7	1.9
Secondary	0.6	1.0	1.5	1.9	2.1	2.6	1.6	1.2	1.0	0.9	0.9
School size											
Less than 300	0.7	1.6	2.9	4.3	3.7	3.2	2.8	2.1	1.9	1.6	1.9
300 to 999	0.5	1.0	1.2	2.0	2.2	1.9	1.5	1.1	0.7	0.7	1.9
1,000 or more	0.6	1.0	2.1	2.4	3.9	3.0	2.2	1.7	1.7	1.1	1.5
Locale											
City	0.8	1.3	1.6	2.2	3.2	2.6	2.2	2.1	1.6	1.0	3.7
Urban fringe	0.8	1.4	2.2	2.9	2.9	2.5	2.0	1.3	0.9	0.9	0.8
Town	0.6	2.0	1.9	3.9	4.0	3.4	2.6	2.2	1.1	0.9	0.7
Rural	0.4	1.5	2.2	3.6	3.6	3.0	1.7	1.3	1.0	1.2	1.8
Percent minority enrollment											
Less than 6 percent	0.7	1.4	2.4	3.5	2.7	2.3	1.9	1.5	1.4	1.9	1.1
6 to 20 percent	0.8	1.5	1.7	3.0	3.3	3.1	2.1	1.6	1.0	0.7	0.7
21 to 49 percent	1.0	2.1	2.5	2.8	3.7	3.1	2.3	2.0	1.2	1.1	3.4
50 percent or more	0.3	1.0	1.8	1.8	3.2	2.8	2.4	2.0	1.4	1.1	2.2
Percent of students eligible for free or reduced-price lunch											
Less than 35 percent	0.5	1.2	1.6	2.0	2.4	2.3	1.5	1.2	0.8	1.0	0.8
35 to 49 percent	0.4	1.4	2.2	4.3	5.1	3.4	2.9	2.2	2.1	1.4	4.3
50 to 74 percent	1.8	1.9	2.8	3.7	3.9	3.1	2.8	2.4	1.4	1.1	0.8
75 percent or more	0.9	1.0	1.8	2.4	4.3	4.4	3.3	2.4	1.9	1.5	2.5

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Survey on Advanced Telecommunications in U.S. Public Schools, K–12," FRSS 51, 1994; "Survey on Advanced Telecommunications in U.S. Public Schools, K–12," FRSS 57, 1995; "Advanced Telecommunications in U.S. Public Schools, Fall 1996," FRSS 61, 1996; "Internet Access in U.S. Public Schools, Fall 1997," FRSS 64, 1997; "Internet Access in U.S. Public Schools, Fall 1998," FRSS 69, 1998; "Internet Access in U.S. Public Schools, Fall 1999," FRSS 75, 1999; "Internet Access in U.S. Public Schools, Fall 2000," FRSS 79, 2000; "Internet Access in U.S. Public Schools, Fall 2001," FRSS 82, 2001; "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002; "Internet Access in U.S. Public Schools, Fall 2003," FRSS 86, 2003; and "Internet Access in U.S. Public Schools, Fall 2005," FRSS 90, 2005.

Table 3. Percentage of public schools with Internet access using broadband connections, by school characteristics: Various years, 2000–2005

School characteristic	2000[1]	2001[1]	2002[2]	2003[2]	2005[2]
All public schools	80	85	94	95	97
Instructional level[3]					
Elementary	77	83	93	94	97
Secondary	89	94	98	97	99
School size					
Less than 300	67	72	90	90	94
300 to 999	83	89	94	96	98
1,000 or more	90	96	100	100[4]	100[4]
Locale					
City	80	88	97	97	98
Urban fringe	85	88	92	97	98
Town	79	83	97	98	98
Rural	75	82	91	90	96
Percent minority enrollment[5]					
Less than 6 percent	76	81	92	90	96
6 to 20 percent	82	85	91	96	97
21 to 49 percent	84	85	96	98	98
50 percent or more	81	93	95	97	97
Percent of students eligible for free or reduced-price lunch[6]					
Less than 35 percent	81	84	93	95	98
35 to 49 percent	82	86	96	96	95
50 to 74 percent	79	84	93	96	97
75 percent or more	75	90	95	93	98

[1]Respondents were instructed to circle as many types of connections as there were in the school. The data were then combined to show the percentage of schools using broadband connections. Percentages include schools using only broadband connections, as well as schools using both broadband and narrowband connections. They do not include schools using narrowband connections exclusively. Broadband connections include T3/DS3, fractional T3, T1/DS1, fractional T1, and cable modem connections. In 2001, they also included DSL connections, which had not been on the 2000 questionnaire.

[2]The 2002, 2003, and 2005 questionnaires directly asked whether the schools used broadband and narrowband connections. Broadband connections include T3/DS3, fractional T3, T1/DS1, fractional T1, cable modem, and DSL connections.

[3]Data for combined schools are included in the totals and in analyses by other school characteristics but are not shown separately.

[4]Estimate is rounded to 100 percent for presentation in table.

[5]Percent minority enrollment was not available for 9 schools in 2000, 31 schools in 2001, 15 schools in 2002, 28 schools in 2003, and 20 schools in 2005.

[6]Percent of students eligible for free or reduced-price lunch was not available for two schools in 2000 and 2001. This information was available for all schools in 2002, 2003, and 2005.

NOTE: Percentages are based on the percent of public schools with Internet access: 98 percent in 2000, 99 percent in 2001 and 2002, 99.8 percent in 2003, and 99.6 percent in 2005. For estimates that are 100 percent, the event defined could have been reported by fewer schools had a different sample been drawn.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2000," FRSS 79, 2000; "Internet Access in U.S. Public Schools, Fall 2001," FRSS 82, 2001; "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002; "Internet Access in U.S. Public Schools, Fall 2003," FRSS 86, 2003; and "Internet Access in U.S. Public Schools, Fall 2005," FRSS 90, 2005.

Table 3-A. Standard errors of the percentage of public schools with Internet access using broadband connections, by school characteristics: Various years, 2000–2005

School characteristic	2000	2001	2002	2003	2005
All public schools	1.5	1.6	1.0	0.8	0.8
Instructional level					
Elementary	1.9	2.0	1.2	1.1	1.0
Secondary	2.0	1.2	0.9	1.0	0.7
School size					
Less than 300	4.4	4.3	2.6	2.7	2.1
300 to 999	1.8	1.4	1.2	0.9	0.6
1,000 or more	2.4	1.4	†	†	†
Locale					
City	3.0	2.4	1.1	1.5	1.0
Urban fringe	2.6	2.1	1.9	0.9	1.0
Town	4.9	4.6	1.8	1.0	2.2
Rural	3.5	3.0	2.0	2.2	1.6
Percent minority enrollment					
Less than 6 percent	3.2	3.6	2.4	2.4	1.8
6 to 20 percent	2.9	3.0	2.3	1.9	1.3
21 to 49 percent	2.6	2.7	1.5	1.0	1.0
50 percent or more	2.6	1.8	1.5	1.2	1.1
Percent of students eligible for free or reduced-price lunch					
Less than 35 percent	2.3	2.6	1.7	1.4	1.0
35 to 49 percent	4.0	2.8	2.0	2.1	2.2
50 to 74 percent	3.8	3.8	2.0	1.7	1.5
75 percent or more	3.6	2.7	1.7	2.2	1.0

†Not applicable; estimate of standard error is not presented because it is based on an estimate of 100 percent.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2000," FRSS 79, 2000; "Internet Access in U.S. Public Schools, Fall 2001," FRSS 82, 2001; "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002; "Internet Access in U.S. Public Schools, Fall 2003," FRSS 86, 2003; and "Internet Access in U.S. Public Schools, Fall 2005," FRSS 90, 2005.

Table 4. Percentage of public schools using any type of wireless Internet connection, and of those schools, percentage using broadband wireless Internet connection, by school characteristics: 2002, 2003, and 2005

School characteristic	Use any type of wireless Internet connection[1]			Use broadband wireless Internet connection in schools with wireless Internet connection[2]		
	2002	2003	2005	2002	2003	2005
All public schools	23	32	45	88	92	97
Instructional level[3]						
Elementary	20	29	45	87	93	97
Secondary	33	42	48	91	89	97
School size						
Less than 300	17	28	40	‡	92	92
300 to 999	23	30	46	91	92	98
1,000 or more	37	51	56	95	92	99
Locale						
City	25	32	50	100	96	98
Urban fringe	23	35	48	93	90	99
Town	23	37	47	82	91	92
Rural	22	26	39	76	90	95
Percent minority enrollment[4]						
Less than 6 percent	21	31	37	84	90	93
6 to 20 percent	23	36	51	82	88	99
21 to 49 percent	25	35	45	96	92	98
50 percent or more	23	28	46	92	95	96
Percent of students eligible for free or reduced-price lunch						
Less than 35 percent	24	36	46	87	92	97
35 to 49 percent	25	33	45	88	88	97
50 to 74 percent	23	28	47	87	92	97
75 percent or more	20	25	44	93	96	95

‡Reporting standards not met.

[1]Percentages are based on the 99 percent of public schools with Internet access in 2002, 99.8 percent in 2003, and 99.6 percent in 2005. Percentages include schools using wireless Internet connections (both broadband and narrowband) only, as well as schools using both wireless and wired connections.

[2]Percentages are based on 23 percent of public schools (99 percent with Internet access times 23 percent using wireless Internet connections) in 2002, 32 percent of public schools (99.8 percent with Internet access times 32 percent using wireless Internet connections) in 2003, and 45 percent of public schools (99.6 percent with Internet access times 45 percent using wireless Internet connections) in 2005.

[3]Data for combined schools are included in the totals and in analyses by other school characteristics but are not shown separately.

[4]Percent minority enrollment was not available for 15 schools in 2002, 28 schools in 2003, and 20 schools in 2005.

NOTE: For estimates that are 100 percent, the event defined could have been reported by fewer schools had a different sample been drawn.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002; "Internet Access in U.S. Public Schools, Fall 2003," FRSS 86, 2003; and "Internet Access in U.S. Public Schools, Fall 2005," FRSS 90, 2005.

Table 4-A. Standard errors of the percentage of public schools using any type of wireless Internet connection, and of those schools, standard errors of the percentage using broadband wireless Internet connection, by school characteristics: 2002, 2003, and 2005

School characteristic	Use any type of wireless Internet connection			Use broadband wireless Internet connection in schools with wireless Internet connection		
	2002	2003	2005	2002	2003	2005
All public schools	1.5	1.7	2.3	2.9	2.0	0.9
Instructional level						
Elementary	1.7	2.0	2.7	4.3	2.6	1.1
Secondary	1.9	2.3	2.9	2.6	2.7	1.3
School size						
Less than 300	3.5	4.1	4.3	†	5.3	3.4
300 to 999	1.8	2.0	2.9	2.4	2.4	0.8
1,000 or more	3.4	3.3	3.6	1.9	3.1	0.8
Locale						
City	2.8	3.3	4.2	†	2.8	1.4
Urban fringe	2.3	2.7	3.4	3.1	3.2	0.8
Town	3.6	5.8	6.6	9.7	4.4	5.6
Rural	3.1	3.2	3.9	6.8	4.6	2.3
Percent minority enrollment						
Less than 6 percent	2.6	3.5	4.6	6.8	3.6	4.0
6 to 20 percent	3.2	3.5	3.8	6.3	5.1	0.7
21 to 49 percent	3.6	3.4	4.9	2.6	3.5	1.1
50 percent or more	2.3	2.9	3.5	3.8	1.9	1.9
Percent of students eligible for free or reduced-price lunch						
Less than 35 percent	2.7	2.7	3.5	5.3	3.3	1.5
35 to 49 percent	4.4	3.7	4.3	5.3	4.6	2.6
50 to 74 percent	2.8	3.6	4.1	5.0	3.3	1.9
75 percent or more	3.0	3.1	3.1	4.9	2.5	2.3

†Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002; "Internet Access in U.S. Public Schools, Fall 2003," FRSS 86, 2003; and "Internet Access in U.S. Public Schools, Fall 2005," FRSS 90, 2005.

Table 5. Percentage of public school instructional rooms with wireless Internet connections, by school characteristics: 2002, 2003, and 2005

School characteristic	2002	2003	2005
All public schools	15	11	15
Instructional level[1]			
Elementary	13	11	16
Secondary	19	11	14
School size			
Less than 300	12	15	14
300 to 999	14	10	16
1,000 or more	19	11	12
Locale			
City	14	9	17
Urban fringe	16	12	14
Town	14	11	16
Rural	15	12	14
Percent minority enrollment[2]			
Less than 6 percent	14	14	14
6 to 20 percent	13	12	19
21 to 49 percent	15	10	11
50 percent or more	16	9	16
Percent of students eligible for free or reduced-price lunch			
Less than 35 percent	15	13	16
35 to 49 percent	15	12	16
50 to 74 percent	17	9	12
75 percent or more	11	9	16

[1]Data for combined schools are included in the totals and in analyses by other school characteristics but are not shown separately.

[2]Percent minority enrollment was not available for 15 schools in 2002, 28 schools in 2003, and 20 schools in 2005.

NOTE: Percentages are based on all public schools.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002; "Internet Access in U.S. Public Schools, Fall 2003," FRSS 86, 2003; and "Internet Access in U.S. Public Schools, Fall 2005," FRSS 90, 2005.

Table 5-A. Standard errors of the percentage of public school instructional rooms with wireless Internet connections, by school characteristics: 2002, 2003, and 2005

School characteristic	2002	2003	2005
All public schools	1.1	1.1	1.1
Instructional level			
Elementary	1.3	1.5	1.7
Secondary	1.6	1.2	1.3
School size			
Less than 300	2.8	3.7	2.2
300 to 999	1.4	1.3	1.7
1,000 or more	2.6	1.8	1.6
Locale			
City	2.0	1.7	2.3
Urban fringe	2.0	1.7	1.9
Town	2.7	3.1	3.9
Rural	2.2	1.9	1.7
Percent minority enrollment			
Less than 6 percent	2.2	2.8	2.1
6 to 20 percent	2.1	2.2	2.3
21 to 49 percent	3.1	1.9	2.1
50 percent or more	1.9	1.6	1.9
Percent of students eligible for free or reduced-price lunch			
Less than 35 percent	1.6	1.7	1.7
35 to 49 percent	3.1	2.8	2.5
50 to 74 percent	2.5	2.0	2.1
75 percent or more	2.1	2.0	2.4

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002; "Internet Access in U.S. Public Schools, Fall 2003," FRSS 86, 2003; and "Internet Access in U.S. Public Schools, Fall 2005," FRSS 90, 2005.

Table 6. Ratio of public school students to instructional computers with Internet access, by school characteristics: Various years, 1998–2005

School characteristic	1998	1999	2000	2001	2002	2003	2005
All public schools	12.1	9.1	6.6	5.4	4.8	4.4	3.8
Instructional level[1]							
Elementary	13.6	10.6	7.8	6.1	5.2	4.9	4.1
Secondary	9.9	7.0	5.2	4.3	4.1	3.8	3.3
School size							
Less than 300	9.1	5.7	3.9	4.1	3.1	3.2	2.4
300 to 999	12.3	9.4	7.0	5.6	5.0	4.7	3.9
1,000 or more	13.0	10.0	7.2	5.4	5.1	4.3	4.0
Locale							
City	14.1	11.4	8.2	5.9	5.5	5.0	4.2
Urban fringe	12.4	9.1	6.6	5.7	4.9	4.6	4.1
Town	12.2	8.2	6.2	5.0	4.4	4.1	3.4
Rural	8.6	6.6	5.0	4.6	4.0	3.8	3.0
Percent minority enrollment[2]							
Less than 6 percent	10.1	7.0	5.7	4.7	4.0	4.1	3.0
6 to 20 percent	10.4	7.8	5.9	4.9	4.6	4.1	3.9
21 to 49 percent	12.1	9.5	7.2	5.5	5.2	4.1	4.0
50 percent or more	17.2	13.3	8.1	6.4	5.1	5.1	4.1
Percent of students eligible for free or reduced-price lunch[3]							
Less than 35 percent	10.6	7.6	6.0	4.9	4.6	4.2	3.8
35 to 49 percent	10.9	9.0	6.3	5.2	4.5	4.4	3.4
50 to 74 percent	15.8	10.0	7.2	5.6	4.7	4.4	3.6
75 percent or more	16.8	16.8	9.1	6.8	5.5	5.1	4.0

[1]Data for combined schools are included in the totals and in analyses by other school characteristics but are not shown separately.

[2]Percent minority enrollment was not available for some schools. Over the years, the missing information ranged from 0 schools (1999) to 31 schools (2001). In 2005, this information was missing for 20 schools.

[3]Percent of students eligible for free or reduced-price lunch was not available for some schools. Over the years, the missing information ranged from 0 schools (2002, 2003, and 2005) to 10 schools (1999).

NOTE: The ratio of students to instructional computers with Internet access was computed by dividing the total number of students in all public schools by the total number of instructional computers with Internet access in all public schools (including schools with no Internet access). All of the estimates in this report were recalculated from raw data files using the same computational algorithms. Consequently, some estimates presented here may differ trivially (i.e., 1 percent) from results published prior to 2001.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 1998," FRSS 69, 1998; "Internet Access in U.S. Public Schools, Fall 1999," FRSS 75, 1999; "Internet Access in U.S. Public Schools, Fall 2000," FRSS 79, 2000; "Internet Access in U.S. Public Schools, Fall 2001," FRSS 82, 2001; "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002; "Internet Access in U.S. Public Schools, Fall 2003," FRSS 86, 2003; and "Internet Access in U.S. Public Schools, Fall 2005," FRSS 90, 2005.

Table 6-A. Standard errors of the ratio of public school students to instructional computers with Internet access, by school characteristics: Various years, 1998–2005

School characteristic	1998	1999	2000	2001	2002	2003	2005
All public schools	0.6	0.3	0.1	0.1	0.1	0.1	0.1
Instructional level							
Elementary	0.9	0.4	0.2	0.2	0.2	0.2	0.1
Secondary	0.4	0.3	0.2	0.1	0.1	0.1	0.1
School size							
Less than 300	0.7	0.4	0.3	0.3	0.2	0.2	0.1
300 to 999	0.7	0.4	0.2	0.1	0.2	0.1	0.1
1,000 or more	1.0	0.6	0.3	0.2	0.2	0.2	0.1
Locale							
City	1.2	0.8	0.4	0.2	0.2	0.2	0.2
Urban fringe	0.9	0.4	0.2	0.2	0.2	0.2	0.1
Town	1.2	0.6	0.3	0.3	0.4	0.2	0.2
Rural	0.8	0.4	0.3	0.1	0.2	0.2	0.1
Percent minority enrollment							
Less than 6 percent	0.6	0.3	0.2	0.2	0.2	0.2	0.2
6 to 20 percent	1.1	0.5	0.2	0.2	0.2	0.2	0.2
21 to 49 percent	1.1	0.7	0.3	0.2	0.2	0.2	0.2
50 percent or more	1.7	1.1	0.4	0.2	0.2	0.2	0.1
Percent of students eligible for free or reduced-price lunch							
Less than 35 percent	0.6	0.3	0.2	0.2	0.1	0.1	0.1
35 to 49 percent	1.2	0.4	0.4	0.2	0.3	0.3	0.2
50 to 74 percent	1.4	0.8	0.4	0.3	0.2	0.2	0.2
75 percent or more	2.5	2.2	0.7	0.3	0.3	0.2	0.2

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 1998," FRSS 69, 1998; "Internet Access in U.S. Public Schools, Fall 1999," FRSS 75, 1999; "Internet Access in U.S. Public Schools, Fall 2000," FRSS 79, 2000; "Internet Access in U.S. Public Schools, Fall 2001," FRSS 82, 2001; "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002; "Internet Access in U.S. Public Schools, Fall 2003," FRSS 86, 2003; and "Internet Access in U.S. Public Schools, Fall 2005," FRSS 90, 2005.

Table 7. Percentage of public schools providing hand-held computers to students or teachers for instructional purposes, by school characteristics: 2002, 2003, and 2005

School characteristic	2002	2003	2005
All public schools	7	10	19
Instructional level[1]			
Elementary	6	9	19
Secondary	10	14	17
School size			
Less than 300	8	5	17
300 to 999	6	11	20
1,000 or more	12	21	15
Locale			
City	5	11	22
Urban fringe	6	9	17
Town	6	10	15
Rural	10	10	20
Percent minority enrollment[2]			
Less than 6 percent	9	9	21
6 to 20 percent	7	10	16
21 to 49 percent	5	10	16
50 percent or more	7	12	23
Percent of students eligible for free or reduced-price lunch			
Less than 35 percent	9	10	16
35 to 49 percent	5	10	18
50 to 74 percent	7	9	23
75 percent or more	5	11	21

[1]Data for combined schools are included in the totals and in analyses by other school characteristics but are not shown separately.

[2]Percent minority enrollment was not available for 15 schools in 2002, 28 schools in 2003, and 20 schools in 2005.

NOTE: Percentages are based on all public schools.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002; "Internet Access in U.S. Public Schools, Fall 2003," FRSS 86, 2003; and "Internet Access in U.S. Public Schools, Fall 2005," FRSS 90, 2005.

Table 7-A. Standard errors of the percentage of public schools providing hand-held computers to students or teachers for instructional purposes, by school characteristics: 2002, 2003, and 2005

School characteristic	2002	2003	2005
All public schools	0.8	1.2	1.7
Instructional level			
Elementary	1.1	1.4	2.1
Secondary	1.5	1.6	1.9
School size			
Less than 300	2.4	1.9	3.0
300 to 999	1.0	1.5	2.1
1,000 or more	2.4	3.3	2.4
Locale			
City	1.5	2.2	3.2
Urban fringe	1.3	1.7	2.3
Town	1.8	2.9	3.7
Rural	2.1	1.9	2.6
Percent minority enrollment			
Less than 6 percent	2.2	2.0	3.3
6 to 20 percent	1.5	1.7	3.1
21 to 49 percent	1.4	2.7	3.1
50 percent or more	1.7	2.6	2.5
Percent of students eligible for free or reduced-price lunch			
Less than 35 percent	1.4	1.4	2.3
35 to 49 percent	2.0	3.0	3.5
50 to 74 percent	1.9	2.3	3.5
75 percent or more	1.9	2.4	2.8

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002; "Internet Access in U.S. Public Schools, Fall 2003," FRSS 86, 2003; and "Internet Access in U.S. Public Schools, Fall 2005," FRSS 90, 2005.

Table 8. Percentage of public schools providing hand-held computers to teachers and students for instructional purposes, by school characteristics: 2005

School characteristic	Teachers	Students
All public schools	17	8
Instructional level[1]		
Elementary	18	8
Secondary	15	9
School size		
Less than 300	16	6
300 to 999	19	9
1,000 or more	12	8
Locale		
City	19	9
Urban fringe	15	10
Town	15	6
Rural	19	7
Percent minority enrollment[2]		
Less than 6 percent	20	9
6 to 20 percent	14	8
21 to 49 percent	12	11
50 percent or more	22	6
Percent of students eligible for free or reduced-price lunch		
Less than 35 percent	14	9
35 to 49 percent	17	8
50 to 74 percent	22	8
75 percent or more	19	6

[1]Data for combined schools are included in the totals and in analyses by other school characteristics but are not shown separately.

[2]Percent minority enrollment was not available for 20 schools in 2005.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2005," FRSS 90, 2005.

Table 8-A. Standard errors of the percentage of public schools providing hand-held computers to teachers and students for instructional purposes, by school characteristics: 2005

School characteristic	Teachers	Students
All public schools	1.5	1.0
Instructional level		
Elementary	2.0	1.2
Secondary	1.9	1.6
School size		
Less than 300	3.1	1.8
300 to 999	2.0	1.4
1,000 or more	2.3	1.7
Locale		
City	3.0	2.1
Urban fringe	2.1	2.1
Town	3.8	2.8
Rural	2.7	1.7
Percent minority enrollment		
Less than 6 percent	3.4	2.4
6 to 20 percent	3.1	2.0
21 to 49 percent	2.3	2.7
50 percent or more	2.6	1.2
Percent of students eligible for free or reduced-price lunch		
Less than 35 percent	2.3	1.9
35 to 49 percent	3.6	2.3
50 to 74 percent	3.5	2.2
75 percent or more	2.8	1.6

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2005," FRSS 90, 2005.

Table 9. Percentage of public schools lending laptop computers to students, by school characteristics: Various years, 2001–05

School characteristic	2001	2002	2003	2005
All public schools	10	8	8	10
Instructional level[1]				
Elementary	7	5	5	7
Secondary	18	18	19	18
School size				
Less than 300	15	9	14	11
300 to 999	7	7	6	9
1,000 or more	13	11	10	11
Locale				
City	6	6	5	7
Urban fringe	7	6	7	9
Town	13	11	9	13
Rural	14	11	12	12
Percent minority enrollment[2]				
Less than 6 percent	11	12	11	15
6 to 20 percent	9	8	8	13
21 to 49 percent	10	7	9	7
50 percent or more	9	5	6	7
Percent of students eligible for free or reduced-price lunch[3]				
Less than 35 percent	10	10	9	11
35 to 49 percent	9	10	9	15
50 to 74 percent	10	7	9	7
75 percent or more	10	3	7	6

[1]Data for combined schools are included in the totals and in analyses by other school characteristics but are not shown separately.

[2]Percent minority enrollment was not available for 31 schools in 2001, 15 schools in 2002, 28 schools in 2003, and 20 schools in 2005.

[3]Percent of students eligible for free or reduced-price lunch was not available for two schools in 2001.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2001," FRSS 82, 2001; "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002; "Internet Access in U.S. Public Schools, Fall 2003," FRSS 86, 2003; and "Internet Access in U.S. Public Schools, Fall 2005," FRSS 90, 2005.

Table 9-A. Standard errors of the percentage of public schools lending laptop computers to students, by school characteristics: Various years, 2001–05

School characteristic	2001	2002	2003	2005
All public schools	1.0	1.0	1.0	1.0
Instructional level				
Elementary	1.1	1.0	1.1	1.5
Secondary	1.9	2.1	2.2	2.1
School size				
Less than 300	3.2	2.1	2.7	2.6
300 to 999	1.1	1.0	0.9	1.3
1,000 or more	1.9	2.3	1.5	1.8
Locale				
City	1.3	1.7	1.3	1.4
Urban fringe	1.4	1.5	1.5	1.7
Town	3.1	2.9	2.4	4.7
Rural	2.2	1.8	2.1	2.2
Percent minority enrollment				
Less than 6 percent	2.1	2.3	2.0	2.5
6 to 20 percent	2.4	1.6	2.1	2.7
21 to 49 percent	2.7	1.7	2.1	2.0
50 percent or more	1.8	1.1	1.7	1.2
Percent of students eligible for free or reduced-price lunch				
Less than 35 percent	1.4	1.7	1.5	1.8
35 to 49 percent	2.6	2.5	2.5	3.0
50 to 74 percent	2.7	1.8	2.3	1.6
75 percent or more	2.5	1.0	2.4	1.6

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2001," FRSS 82, 2001; "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002; "Internet Access in U.S. Public Schools, Fall 2003," FRSS 86, 2003; and "Internet Access in U.S. Public Schools, Fall 2005," FRSS 90, 2005.

Table 10. Percentage of public schools lending laptop computers to students for various maximum lengths of time: 2002, 2003, and 2005

Maximum length of time of loan	2002	2003	2005
Less than 1 week	59	57	47
1 week to less than 1 month	19	17	17
1 month to less than 3 months	‡	2!	5
3 months to less than 6 months	‡	‡	5
6 months to less than the entire school year	‡	#	5
The entire school year	16	15	16
Other[1]	2!	8	5

#Rounds to zero.

!Interpret data with caution; the coefficient of variation is greater than 50 percent.

‡Reporting standards not met.

[1]For example, more than 1 school year.

NOTE: Percentages are based on the 8 percent of public schools lending laptop computers to students in 2002 and 2003, and 10 percent of public schools in 2005. Detail may not sum to totals because of rounding and not reporting where there are too few cases for a reliable estimate.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002; "Internet Access in U.S. Public Schools, Fall 2003," FRSS 86, 2003; and "Internet Access in U.S. Public Schools, Fall 2005," FRSS 90, 2005.

Table 10-A. Standard errors of the percentage of public schools lending laptop computers to students for various maximum lengths of time: 2002, 2003, and 2005

Maximum length of time of loan	2002	2003	2005
Less than 1 week	4.4	4.7	5.6
1 week to less than 1 month	3.7	4.1	4.5
1 month to less than 3 months	†	1.3	1.9
3 months to less than 6 months	†	†	2.2
6 months to less than the entire school year	†	†	1.9
The entire school year	3.4	3.4	4.4
Other	1.2	2.6	1.7

†Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002; "Internet Access in U.S. Public Schools, Fall 2003," FRSS 86, 2003; and "Internet Access in U.S. Public Schools, Fall 2005," FRSS 90, 2005.

Table 11. Percentage of public schools without laptop computers available for loan in the current school year planning to make laptop computers available for students to borrow during the next school year: 2002, 2003, and 2005

School characteristic	2002	2003	2005
All public schools	7	6	3
Instructional level[1]			
Elementary	7	5	3
Secondary	8	6	4
School size			
Less than 300	12	6	4
300 to 999	6	5	3
1,000 or more	6	6	2
Locale			
City	5	5	2
Urban fringe	6	5	1
Town	6	6	2!
Rural	11	7	5
Percent minority enrollment[2]			
Less than 6 percent	12	5	4
6 to 20 percent	5	7	1!
21 to 49 percent	4	3	2!
50 percent or more	7	7	4
Percent of students eligible for free or reduced-price lunch			
Less than 35 percent	6	3	2
35 to 49 percent	9	7	6
50 to 74 percent	6	7	#
75 percent or more	10	8	6

#Rounds to zero.

!Interpret data with caution; the coefficient of variation is greater than 50 percent.

[1]Data for combined schools are included in the totals and in analyses by other school characteristics but are not shown separately.

[2]Percent minority enrollment was not available for 15 schools in 2002, 28 schools in 2003, and 20 schools in 2005.

NOTE: Percentages are based on the 92 percent of public schools without laptops available for loan in 2002 and 2003, and the 90 percent of public schools without laptops available for loan in 2005.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002; "Internet Access in U.S. Public Schools, Fall 2003," FRSS 86, 2003; and "Internet Access in U.S. Public Schools, Fall 2005," FRSS 90, 2005.

Table 11-A. Standard errors of the percentage of public schools without laptop computers available for loan in the current school year planning to make laptop computers available for students to borrow during the next school year: 2002, 2003, and 2005

School characteristic	2002	2003	2005
All public schools	1.1	0.9	0.6
Instructional level			
Elementary	1.3	1.1	0.7
Secondary	1.6	1.4	1.1
School size			
Less than 300	3.0	2.2	1.5
300 to 999	1.0	1.0	0.7
1,000 or more	1.7	1.7	0.8
Locale			
City	1.5	1.7	1.1
Urban fringe	1.6	1.3	0.4
Town	2.4	2.9	1.0
Rural	2.4	1.7	1.5
Percent minority enrollment			
Less than 6 percent	3.2	1.6	1.7
6 to 20 percent	2.1	2.6	1.0
21 to 49 percent	1.7	1.4	1.1
50 percent or more	1.6	1.5	1.2
Percent of students eligible for free or reduced-price lunch			
Less than 35 percent	1.8	0.9	0.6
35 to 49 percent	3.4	2.6	2.6
50 to 74 percent	1.9	2.7	†
75 percent or more	2.7	1.9	1.7

†Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002; "Internet Access in U.S. Public Schools, Fall 2003," FRSS 86, 2003; and "Internet Access in U.S. Public Schools, Fall 2005," FRSS 90, 2005.

Table 12. Percentage of public schools using technologies or procedures to prevent student access to inappropriate material on the Internet, and of those schools, percentage using these measures on all computers with Internet access used by students, by school characteristics: Various years, 2001–05

School characteristic	Use technologies/procedures to prevent student access to inappropriate material on the Internet[1]				Use these measures on all computers with Internet access used by students[2]			
	2001	2002	2003	2005	2001	2002	2003	2005
All public schools	96	99	97	100[4]	98	99	99	98
Instructional level[3]								
Elementary	96	99	97	100[4]	98	99	99	99
Secondary	97	100[4]	99	99	98	99	99	98
School size								
Less than 300	94	99	96	99	96	100[4]	100[4]	96
300 to 999	97	100[4]	98	100[4]	99	99	99	99
1,000 or more	98	99	98	100	98	99	99	98
Locale								
City	93	99	98	99	98	99	99	98
Urban fringe	98	99	98	100[4]	98	98	99	98
Town	96	100	100	100	100[4]	99	99	100
Rural	97	100[4]	96	99	98	100[4]	99	98
Percent minority enrollment[5]								
Less than 6 percent	96	99	97	100[4]	97	100[4]	99	98
6 to 20 percent	98	99	98	100[4]	100[4]	100[4]	99	98
21 to 49 percent	97	100	97	100	99	98	100[4]	99
50 percent or more	95	99	99	99	98	98	99	97
Percent of students eligible for free or reduced-price lunch[6]								
Less than 35 percent	99	100[4]	98	100[4]	99	99	99	99
35 to 49 percent	93	100[4]	98	99	97	100[4]	99	98
50 to 74 percent	98	99	97	100	97	98	99	97
75 percent or more	92	98	96	99	98	99	99	98

[1]Percentages are based on the 99 percent of public schools with Internet access in 2001 and 2002, 99.8 percent in 2003, and 99.6 percent in 2005.

[2]Percentages are based on 95 percent of public schools (99 percent with Internet access times 96 percent of public schools using technologies or procedures to prevent student access to inappropriate material on the Internet) in 2001, on 98 percent of public schools (99 percent with Internet access times 99 percent using technologies or procedures to prevent student access to inappropriate material on the Internet) in 2002, on 97 percent of public schools (99.8 percent with Internet access times 97 percent using technologies or procedures to prevent student access to inappropriate material on the Internet) in 2003, and on 100 percent of public schools (99.6 percent with Internet access times 99.6 percent using technologies or procedures to prevent student access to inappropriate materials on the Internet) in 2005.

[3]Data for combined schools are included in the totals and in analyses by other school characteristics but are not shown separately.

[4]Estimate is rounded to 100 percent for presentation in table.

[5]Percent minority enrollment was not available for 31 schools in 2001, 15 schools in 2002, 28 schools in 2003, and 20 schools in 2005.

[6]Percent of students eligible for free or reduced-price lunch was not available for two schools in 2001.

NOTE: For estimates that are 100 percent, the event defined could have been reported by fewer schools had a different sample been drawn.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2001," FRSS 82, 2001; "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002; "Internet Access in U.S. Public Schools, Fall 2003," FRSS 86, 2003; and "Internet Access in U.S. Public Schools, Fall 2005," FRSS 90, 2005.

Table 12-A. Standard errors of the percentage of public schools using technologies or procedures to prevent student access to inappropriate material on the Internet, and of those schools, standard errors of the percentage using these measures on all computers with Internet access used by students, by school characteristics: Various years, 2001–05

School characteristic	Use technologies/procedures to prevent student access to inappropriate material on the Internet				Use these measures on all computers with Internet access used by students			
	2001	2002	2003	2005	2001	2002	2003	2005
All public schools	0.6	0.3	0.7	†	0.5	0.3	0.2	0.5
Instructional level								
Elementary	0.7	0.4	0.9	†	0.7	0.4	0.2	0.7
Secondary	0.9	†	0.6	0.6	0.6	0.5	0.5	0.7
School size								
Less than 300	2.1	0.9	1.8	0.7	1.8	†	†	1.6
300 to 999	0.6	†	0.7	†	0.4	0.5	0.3	0.5
1,000 or more	0.9	0.8	1.0	†	0.7	0.4	0.7	0.7
Locale								
City	1.5	0.5	1.2	0.5	0.8	0.7	0.5	1.1
Urban fringe	1.0	0.6	0.8	†	1.0	0.9	0.4	1.0
Town	2.4	†	†	†	†	0.6	0.9	†
Rural	1.1	†	1.9	0.4	1.1	†	0.4	0.7
Percent minority enrollment								
Less than 6 percent	1.6	0.7	1.9	†	1.6	†	0.4	0.8
6 to 20 percent	1.4	0.6	1.3	†	†	†	0.5	1.1
21 to 49 percent	1.5	†	1.3	†	0.7	1.1	†	0.8
50 percent or more	1.1	0.5	0.8	0.4	0.9	0.7	0.6	1.1
Percent of students eligible for free or reduced-price lunch								
Less than 35 percent	0.7	†	0.9	†	0.6	0.5	0.3	0.6
35 to 49 percent	2.4	†	1.0	0.6	1.8	†	0.3	1.3
50 to 74 percent	1.1	0.7	1.4	†	1.5	0.8	0.7	1.4
75 percent or more	1.8	1.1	2.1	0.6	1.0	0.8	0.7	1.2

†Not applicable; estimate of standard error is not presented because it is based on an estimate of 100 percent.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2001," FRSS 82, 2001; "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002; "Internet Access in U.S. Public Schools, Fall 2003," FRSS 86, 2003; and "Internet Access in U.S. Public Schools, Fall 2005," FRSS 90, 2005.

Table 13. Percentage of public schools with Internet access using various technologies or procedures to prevent student access to inappropriate material on the Internet, by school characteristics: Various years, 2001–05

School characteristic	Monitoring by teachers or other staff				Blocking/ filtering software			
	2001	2002	2003	2005	2001	2002	2003	2005
All public schools	91	91	93	96	87	96	96	99
Instructional level[1]								
Elementary	90	91	93	96	85	95	96	99
Secondary	93	92	92	95	93	98	98	98
School size								
Less than 300	88	90	92	97	81	97	96	99
300 to 999	92	91	93	96	88	95	97	99
1,000 or more	93	95	93	96	93	99	96	99
Locale								
City	90	88	92	98	83	91	96	99
Urban fringe	91	92	93	95	88	96	96	99
Town	84	93	94	90	87	99	98	100[2]
Rural	95	91	92	97	87	98	97	99
Percent minority enrollment[3]								
Less than 6 percent	92	92	93	98	86	96	97	100[2]
6 to 20 percent	93	92	96	94	86	96	99	98
21 to 49 percent	91	94	95	98	86	96	97	100[2]
50 percent or more	88	87	89	95	87	95	93	98
Percent of students eligible for free or reduced-price lunch[4]								
Less than 35 percent	92	95	94	95	87	95	96	99
35 to 49 percent	94	89	95	98	86	98	98	97
50 to 74 percent	90	90	94	96	86	97	97	100
75 percent or more	87	86	89	96	86	95	95	99

See notes at end of table.

Table 13. Percentage of public schools with Internet access using various technologies or procedures to prevent student access to inappropriate material on the Internet, by school characteristics: Various years, 2001–05—Continued

School characteristic	Written contract that parents have to sign				Written contract that students have to sign			
	2001	2002	2003	2005	2001	2002	2003	2005
All public schools	80	82	83	79	75	77	76	76
Instructional level[1]								
Elementary	78	82	82	78	72	74	72	72
Secondary	87	82	84	84	87	84	87	88
School size								
Less than 300	73	82	85	74	69	78	81	75
300 to 999	82	82	82	81	76	75	73	76
1,000 or more	86	81	82	82	84	81	82	80
Locale								
City	78	78	78	76	72	74	70	72
Urban fringe	80	79	85	79	76	69	75	71
Town	79	84	86	80	76	85	84	79
Rural	82	87	83	83	78	83	78	82
Percent minority enrollment[3]								
Less than 6 percent	82	83	84	77	77	81	79	76
6 to 20 percent	80	82	85	77	75	73	79	74
21 to 49 percent	79	83	82	81	77	77	72	75
50 percent or more	78	80	80	81	72	75	74	78
Percent of students eligible for free or reduced-price lunch[4]								
Less than 35 percent	82	82	84	75	77	75	74	72
35 to 49 percent	83	86	82	79	78	80	83	77
50 to 74 percent	81	83	84	84	79	81	75	79
75 percent or more	73	76	80	83	64	71	72	78

See notes at end of table.

Table 13. Percentage of public schools with Internet access using various technologies or procedures to prevent student access to inappropriate material on the Internet, by school characteristics: Various years, 2001–05—Continued

School characteristic	Monitoring software				Honor code for students				Intranet			
	2001	2002	2003	2005	2001	2002	2003	2005	2001	2002	2003	2005
All public schools	46	52	57	67	44	41	45	53	26	32	39	46
Instructional level[1]												
Elementary	43	51	56	66	44	41	45	52	24	34	40	46
Secondary	52	57	60	72	45	43	46	53	33	28	34	45
School size												
Less than 300	42	51	56	64	38	40	43	48	17	19	26	34
300 to 999	47	52	56	67	46	42	46	54	29	37	43	49
1,000 or more	48	59	62	73	46	43	48	54	32	33	44	56
Locale												
City	49	45	51	72	51	38	47	58	29	38	39	57
Urban fringe	44	53	58	65	43	44	43	56	29	37	47	46
Town	37	65	62	67	39	40	36	44	19	24	35	43
Rural	49	51	57	65	42	42	50	48	24	26	32	39
Percent minority enrollment[3]												
Less than 6 percent	47	51	57	68	41	39	46	46	21	20	35	43
6 to 20 percent	44	57	64	65	45	41	50	54	30	37	41	43
21 to 49 percent	46	53	55	69	46	50	42	57	29	41	44	40
50 percent or more	45	48	54	69	44	39	43	53	27	35	38	54
Percent of students eligible for free or reduced-price lunch[4]												
Less than 35 percent	45	54	63	65	48	44	45	51	29	34	43	45
35 to 49 percent	40	47	55	63	38	42	40	57	23	28	39	42
50 to 74 percent	51	53	49	71	40	40	47	51	22	30	33	44
75 percent or more	46	52	56	69	45	37	48	53	28	35	38	52

[1]Data for combined schools are included in the totals and in analyses by other school characteristics but are not shown separately.

[2]Estimate is rounded to 100 percent for presentation in table.

[3]Percent minority enrollment was not available for 31 schools in 2001, 15 schools in 2002, 28 schools in 2003, and 20 schools in 2005.

[4]Percent of students eligible for free or reduced-price lunch was not available for two schools in 2001.

NOTE: Percentages are based on 95 percent of public schools (99 percent with Internet access times 96 percent using technologies or procedures to prevent student access to inappropriate material on the Internet) in 2001, on 98 percent of public schools (99 percent with Internet access times 99 percent using technologies or procedures to prevent student access to inappropriate material on the Internet) in 2002, on 97 percent of public schools (99.8 percent with Internet access times 97 percent using technologies or procedures to prevent student access to inappropriate material on the Internet) in 2003, and on 100 percent (99.6 percent with Internet access times 99.6 percent using technologies or procedures to prevent student access to inappropriate material on the Internet) in 2005.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2001," FRSS 82, 2001; "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002; "Internet Access in U.S. Public Schools, Fall 2003," FRSS 86, 2003; and "Internet Access in U.S. Public Schools, Fall 2005," FRSS 90, 2005.

Table 13-A. Standard errors of the percentage of public schools with Internet access using various technologies or procedures to prevent student access to inappropriate material on the Internet, by school characteristics: Various years, 2001–05

School characteristic	Monitoring by teachers or other staff				Blocking/ filtering software			
	2001	2002	2003	2005	2001	2002	2003	2005
All public schools	1.1	1.2	0.8	0.7	1.4	0.7	0.7	0.4
Instructional level								
Elementary	1.4	1.5	1.1	0.8	1.8	0.9	0.9	0.5
Secondary	1.3	1.4	1.2	1.1	1.4	0.6	0.8	0.6
School size								
Less than 300	3.2	2.9	2.2	1.4	3.7	1.8	1.8	0.7
300 to 999	1.2	1.2	1.0	0.9	1.5	0.8	0.8	0.5
1,000 or more	1.5	1.7	1.7	1.3	1.9	0.5	1.4	0.8
Locale								
City	2.6	2.2	1.6	0.8	3.3	2.6	1.5	0.9
Urban fringe	1.9	1.7	1.5	1.3	2.4	1.2	1.4	0.7
Town	4.4	2.1	2.6	3.4	3.6	0.6	1.0	†
Rural	1.8	2.2	1.9	1.0	3.0	1.0	1.4	0.7
Percent minority enrollment								
Less than 6 percent	2.2	2.7	2.0	1.1	2.6	1.7	1.5	†
6 to 20 percent	2.1	1.9	1.6	1.8	2.8	1.3	0.7	1.1
21 to 49 percent	2.5	2.0	1.4	1.2	3.2	1.8	1.7	†
50 percent or more	2.2	2.0	1.9	1.1	2.4	1.3	1.7	0.9
Percent of students eligible for free or reduced-price lunch								
Less than 35 percent	1.7	1.3	1.3	1.3	2.2	1.4	1.3	0.6
35 to 49 percent	2.4	2.9	2.4	1.2	2.9	1.3	0.9	1.6
50 to 74 percent	2.6	2.3	1.7	1.4	3.1	1.6	1.4	†
75 percent or more	2.9	3.0	2.4	1.2	2.9	1.7	0.6	0.6

See notes at end of table.

Table 13-A. Standard errors of the percentage of public schools with Internet access using various technologies or procedures to prevent student access to inappropriate material on the Internet, by school characteristics: Various years, 2001–05—Continued

School characteristic	Written contract that parents have to sign				Written contract that students have to sign			
	2001	2002	2003	2005	2001	2002	2003	2005
All public schools	1.4	1.3	1.4	1.5	1.4	1.5	1.6	1.6
Instructional level								
Elementary	1.8	1.7	1.6	1.9	1.7	1.9	2.0	2.0
Secondary	1.7	1.8	1.6	2.0	1.6	1.8	1.4	1.7
School size								
Less than 300	4.0	3.6	2.8	3.0	4.0	3.9	3.6	3.0
300 to 999	1.7	1.5	1.6	1.8	1.7	1.7	2.0	2.1
1,000 or more	2.5	3.1	3.1	3.2	2.7	2.9	2.9	3.1
Locale								
City	3.1	3.0	2.8	3.3	3.1	2.7	2.7	3.5
Urban fringe	3.0	2.6	2.5	2.9	2.7	3.0	3.1	3.3
Town	4.4	3.7	3.8	4.2	4.7	3.3	4.3	4.3
Rural	2.7	2.4	2.7	2.4	3.0	2.9	2.8	2.7
Percent minority enrollment								
Less than 6 percent	3.1	3.1	2.9	3.5	3.5	3.1	3.3	3.6
6 to 20 percent	3.1	2.5	2.9	3.2	3.5	3.0	3.3	3.5
21 to 49 percent	4.0	3.4	3.8	2.8	4.1	3.1	3.5	3.7
50 percent or more	2.6	2.5	2.3	2.6	2.9	2.8	2.7	2.4
Percent of students eligible for free or reduced-price lunch								
Less than 35 percent	2.3	2.0	1.9	2.5	2.4	2.4	2.5	2.6
35 to 49 percent	3.7	3.7	3.6	4.1	4.0	4.3	3.4	4.1
50 to 74 percent	3.6	3.2	2.8	2.7	3.9	3.3	3.9	2.3
75 percent or more	3.9	3.0	2.7	2.7	4.5	3.5	3.4	2.9

See notes at end of table.

Table 13-A. Standard errors of the percentage of public schools with Internet access using various technologies or procedures to prevent student access to inappropriate material on the Internet, by school characteristics: Various years, 2001–05—Continued

School characteristic	Monitoring software				Honor code for students				Intranet			
	2001	2002	2003	2005	2001	2002	2003	2005	2001	2002	2003	2005
All public schools	1.9	1.8	1.7	1.8	1.8	1.8	2.0	1.8	1.6	1.9	1.5	1.6
Instructional level												
Elementary	2.4	2.0	2.1	2.5	2.3	2.1	2.4	2.3	1.9	2.4	2.0	1.9
Secondary	2.6	2.7	2.2	1.9	2.6	2.8	2.6	2.4	2.9	1.6	2.3	2.4
School size												
Less than 300	4.4	4.8	4.7	4.0	4.2	4.6	4.9	4.2	3.7	3.6	4.0	3.5
300 to 999	2.2	2.0	2.0	2.4	2.0	1.8	2.1	2.1	1.9	2.1	1.9	2.3
1,000 or more	3.4	3.5	3.2	3.8	3.3	3.7	3.3	3.8	3.3	3.4	3.3	3.5
Locale												
City	3.9	3.7	4.6	3.9	3.8	2.9	3.8	4.0	3.2	4.3	3.9	3.7
Urban fringe	3.2	3.1	3.0	3.4	3.3	3.0	3.3	3.1	3.0	2.8	3.1	3.4
Town	5.1	4.4	4.8	6.5	5.0	5.1	5.8	5.1	4.0	4.5	4.6	6.4
Rural	3.3	3.6	3.8	2.6	3.5	3.6	3.9	3.0	2.8	3.4	3.0	3.0
Percent minority enrollment												
Less than 6 percent	3.8	3.9	3.7	3.4	3.7	4.2	4.2	3.9	3.6	3.3	3.3	3.5
6 to 20 percent	4.0	3.2	4.0	3.8	3.5	3.7	4.1	3.9	3.0	3.3	3.8	3.7
21 to 49 percent	4.5	3.7	4.0	4.1	3.9	3.7	4.1	4.1	3.6	3.9	3.6	4.1
50 percent or more	3.4	3.0	3.6	3.2	4.0	2.8	3.4	3.1	3.2	2.9	2.8	2.9
Percent of students eligible for free or reduced-price lunch												
Less than 35 percent	2.9	2.7	2.5	3.5	2.8	2.9	3.2	3.3	2.9	2.8	3.3	2.8
35 to 49 percent	4.2	4.5	4.6	3.8	3.9	4.4	4.6	5.3	3.5	3.8	3.9	4.0
50 to 74 percent	4.3	3.7	4.1	3.3	4.1	3.5	4.8	3.7	3.4	3.3	3.2	3.6
75 percent or more	3.9	3.4	4.2	3.8	4.5	3.6	4.1	3.3	4.1	3.4	3.4	3.2

†Not applicable; estimate of standard error is not presented because it is based on an estimate of 100 percent.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2001," FRSS 82, 2001; "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002; "Internet Access in U.S. Public Schools, Fall 2003," FRSS 86, 2003; and "Internet Access in U.S. Public Schools, Fall 2005," FRSS 90, 2005.

Table 14. Percentage of public schools with Internet access using various methods to disseminate information to students and parents about the technologies or other procedures used to prevent student access to inappropriate material on the Internet at the school, by school characteristics: 2002, 2003, and 2005

School characteristic	Part of school policy/rules distributed to students and parents			Special notice to parents			Newsletters		
	2002	2003	2005	2002	2003	2005	2002	2003	2005
All public schools	90	95	95	64	66	67	57	58	57
Instructional level[2]									
Elementary	89	95	96	65	67	68	58	57	58
Secondary	93	98	95	60	63	62	57	62	57
School size									
Less than 300	91	96	92	64	69	72	59	58	59
300 to 999	90	95	97	65	65	66	57	57	57
1,000 or more	93	98	94	64	66	58	59	64	57
Locale									
City	87	89	94	68	63	66	56	58	56
Urban fringe	87	97	96	60	71	66	59	62	57
Town	91	97	98	65	58	70	58	53	54
Rural	95	97	95	66	68	67	56	56	59
Percent minority enrollment[3]									
Less than 6 percent	91	97	97	59	70	67	62	62	66
6 to 20 percent	94	96	96	68	68	65	58	60	59
21 to 49 percent	91	98	94	65	65	59	58	62	47
50 percent or more	85	91	94	66	64	74	53	52	54
Percent of students eligible for free or reduced-price lunch									
Less than 35 percent	91	96	96	64	69	63	61	65	62
35 to 49 percent	90	98	94	63	60	55	61	52	48
50 to 74 percent	93	97	95	69	69	74	52	58	57
75 percent or more	85	89	94	60	64	76	52	49	56

See notes at end of table.

Table 14. Percentage of public schools with Internet access using various methods to disseminate information to students and parents about the technologies or other procedures used to prevent student access to inappropriate material on the Internet at the school, by school characteristics: 2002, 2003, and 2005—Continued

School characteristic	Posted message on the school website or web page			Notice on bulletin board at school			Pop-up message at computer or Internet log on			Other[1]		
	2002	2003	2005	2002	2003	2005	2002	2003	2005	2002	2003	2005
All public schools	32	31	40	24	25	28	15	17	28	5	5	4
Instructional level[2]												
Elementary	32	30	38	23	22	28	13	17	26	5	5	3
Secondary	32	36	45	30	33	30	19	20	30	8	6	7
School size												
Less than 300	24	23	32	26	25	27	8	14	23	8	5	2
300 to 999	33	32	41	22	23	28	17	17	29	4	5	4
1,000 or more	39	46	51	28	33	32	19	26	31	7	8	8
Locale												
City	29	24	41	25	22	31	16	18	38	8	7	5
Urban fringe	38	35	41	24	24	26	16	17	29	4	6	2
Town	32	36	48	26	23	32	11	22	23	3!	6	5
Rural	27	31	35	23	28	27	14	15	21	6	3	4
Percent minority enrollment[3]												
Less than 6 percent	31	33	43	26	25	24	11	18	18	3	3	4
6 to 20 percent	33	39	41	21	27	30	14	19	28	7	7	5
21 to 49 percent	32	28	36	23	23	23	12	16	29	7	5	4
50 percent or more	29	27	40	25	24	33	21	17	35	5	6	2
Percent of students eligible for free or reduced-price lunch												
Less than 35 percent	36	36	41	24	24	26	14	19	28	6	6	5
35 to 49 percent	32	27	37	21	23	19	9	20	23	6	4	3
50 to 74 percent	29	31	41	24	24	30	14	14	27	3	4	3
75 percent or more	24	26	39	28	28	38	23	15	31	6	7	3

!Interpret data with caution; the coefficient of variation is greater than 50 percent.

[1]Respondents could provide their own response.

[2]Data for combined schools are included in the totals and in analyses by other school characteristics but are not shown separately.

[3]Percent minority enrollment was not available for 15 schools in 2002, 28 schools in 2003, and 20 schools in 2005.

NOTE: Percentages are based on 98 percent of public schools (99 percent with Internet access times 99 percent using technologies or procedures to prevent student access to inappropriate material on the Internet) in 2002, on 97 percent of public schools (99.8 percent with Internet access times 97 percent using technologies or procedures to prevent student access to inappropriate material on the Internet) in 2003, and on 100 percent of public schools (99.6 percent with Internet access times 99.6 percent using technologies or procedures to prevent student access to inappropriate material on the Internet) in 2005.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002; "Internet Access in U.S. Public Schools, Fall 2003," FRSS 86, 2003; and "Internet Access in U.S. Public Schools, Fall 2005," FRSS 90, 2005.

Table 14-A. Standard errors of the percentage of public schools with Internet access using various methods to disseminate information to students and parents about the technologies or other procedures used to prevent student access to inappropriate material on the Internet at the school, by school characteristics: 2002, 2003, and 2005

School characteristic	Part of school policy/rules distributed to students and parents			Special notice to parents			Newsletters		
	2002	2003	2005	2002	2003	2005	2002	2003	2005
All public schools	1.3	0.8	0.8	1.9	1.8	1.6	2.1	1.8	1.9
Instructional level									
Elementary	1.6	1.0	1.0	2.2	2.3	2.1	2.5	2.3	2.2
Secondary	1.8	0.7	1.1	2.7	2.2	2.3	2.4	2.8	2.7
School size									
Less than 300	3.0	1.6	1.9	5.0	3.9	3.1	4.0	4.1	3.8
300 to 999	1.6	1.0	0.8	1.9	2.1	2.4	2.2	2.3	2.2
1,000 or more	2.0	0.8	2.1	3.1	3.0	3.9	3.4	3.4	3.7
Locale									
City	2.5	2.3	1.9	3.2	3.5	3.8	4.0	3.2	3.4
Urban fringe	2.2	1.0	1.2	2.8	3.3	3.1	3.5	3.5	4.0
Town	3.4	1.9	1.0	4.6	5.4	5.2	5.0	5.2	5.0
Rural	1.2	1.2	1.7	3.5	3.2	2.7	3.4	3.2	3.8
Percent minority enrollment									
Less than 6 percent	2.6	1.4	1.3	4.3	2.9	3.8	4.1	3.8	4.7
6 to 20 percent	1.8	1.5	1.5	3.5	4.0	2.6	4.0	3.9	4.3
21 to 49 percent	2.4	1.3	1.9	3.7	3.6	4.6	4.3	3.6	4.0
50 percent or more	2.5	2.0	1.5	2.8	3.3	2.3	3.0	3.4	3.3
Percent of students eligible for free or reduced-price lunch									
Less than 35 percent	1.7	1.3	1.1	3.1	2.8	2.8	3.4	3.0	3.4
35 to 49 percent	3.8	0.9	2.1	4.7	4.9	4.7	4.7	5.0	4.6
50 to 74 percent	1.9	1.1	1.5	3.7	3.8	3.0	4.3	4.1	3.9
75 percent or more	3.4	2.8	1.8	3.2	3.9	2.7	3.4	3.2	3.6

See notes at end of table.

Table 14-A. Standard errors of the percentage of public schools with Internet access using various methods to disseminate information to students and parents about the technologies or other procedures used to prevent student access to inappropriate material on the Internet at the school, by school characteristics: 2002, 2003, and 2005—Continued

School characteristic	Posted message on the school website or web page			Notice on bulletin board at school			Pop-up message at computer or Internet log on			Other		
	2002	2003	2005	2002	2003	2005	2002	2003	2005	2002	2003	2005
All public schools	1.7	1.7	1.9	1.8	1.3	1.6	1.3	1.4	1.5	0.8	0.7	0.6
Instructional level												
Elementary	2.3	2.1	2.5	2.1	1.6	2.2	1.6	1.6	1.9	1.0	0.9	0.8
Secondary	2.0	2.3	2.2	2.4	2.5	1.7	1.7	1.9	2.4	1.4	1.2	1.1
School size												
Less than 300	4.2	3.9	3.7	4.3	3.5	3.0	2.4	3.0	2.8	2.2	1.8	1.1
300 to 999	1.7	2.2	2.6	1.9	1.4	2.3	1.5	1.7	2.2	0.9	0.9	0.9
1,000 or more	3.9	3.5	3.2	3.2	3.2	2.9	2.7	3.2	4.3	1.9	1.8	2.2
Locale												
City	3.3	3.1	3.6	3.1	2.4	3.3	2.8	2.9	3.3	1.8	1.6	1.6
Urban fringe	3.0	3.3	3.1	3.2	2.7	3.2	1.9	1.8	2.9	1.3	1.4	0.9
Town	5.6	5.1	5.8	4.7	3.9	4.6	2.5	4.5	5.3	1.8	2.2	2.4
Rural	3.4	3.3	3.5	2.7	3.1	3.0	2.4	2.2	2.3	1.7	1.1	1.2
Percent minority enrollment												
Less than 6 percent	3.7	4.0	4.5	3.1	4.1	3.7	2.7	2.6	3.0	1.2	1.0	1.4
6 to 20 percent	3.6	4.0	3.6	3.1	3.7	3.5	2.2	3.1	3.4	2.1	2.1	1.6
21 to 49 percent	3.6	3.9	3.7	3.7	2.7	3.1	2.5	2.6	3.5	1.9	1.7	1.5
50 percent or more	2.6	2.7	3.2	2.7	2.1	2.9	2.5	2.5	2.9	1.2	1.3	0.7
Percent of students eligible for free or reduced-price lunch												
Less than 35 percent	2.5	3.1	2.8	2.7	2.8	3.0	1.8	2.1	2.6	1.5	1.3	1.4
35 to 49 percent	3.9	3.5	3.9	3.8	3.9	3.9	2.8	3.8	3.8	2.3	1.9	1.4
50 to 74 percent	3.3	3.2	4.4	3.1	2.8	3.4	2.5	2.4	3.9	1.1	1.3	1.0
75 percent or more	2.8	2.9	3.9	3.0	3.0	3.7	3.0	2.8	3.4	1.7	1.9	1.0

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002; "Internet Access in U.S. Public Schools, Fall 2003," FRSS 86, 2003; and "Internet Access in U.S. Public Schools, Fall 2005," FRSS 90, 2005.

Table 15. Professional development for use of the Internet in the classroom in public schools, by availability, participation, and selected school characteristics: 2002, 2003, and 2005

School characteristic	School or district has offered professional development[1]			Percent of teachers who have attended professional development[2]														
				0 percent			1 to 25 percent			26 to 50 percent			51 to 75 percent			76 to 100 percent		
	2002	2003	2005	2002	2003	2005	2002	2003	2005	2002	2003	2005	2002	2003	2005	2002	2003	2005
	[percentage distribution of schools]																	
All public schools	87	82	83	1	1	#	42	38	34	17	18	16	11	13	13	30	30	36
Instructional level[3]																		
Elementary	87	80	84	1	2	#	43	39	35	15	17	15	10	13	12	31	30	38
Secondary	86	86	84	#	1!	#	42	38	34	20	20	18	12	13	16	26	28	32
School size																		
Less than 300	82	76	72	#	3!	1!	29	31	33	14	22	14	9	11	12	47	33	40
300 to 999	88	82	87	1	1!	#	45	41	34	17	17	16	11	12	13	25	29	36
1,000 or more	93	91	89	‡	#	#	51	41	38	19	14	20	8	19	11	21	25	30
Locale																		
City	90	84	88	1!	2!	1!	53	42	33	14	18	13	7	11	15	25	27	38
Urban fringe	90	82	83	‡	‡	#	40	39	39	18	15	15	11	15	12	30	31	34
Town	82	78	86	‡	‡	#	36	34	25	21	20	21	14	11	16	28	33	37
Rural	84	80	80	‡	‡	#	38	37	34	15	20	18	12	12	11	34	29	37
Percent minority enrollment[4]																		
Less than 6 percent	86	80	83	‡	3!	#	30	31	32	16	21	16	13	12	14	40	33	38
6 to 20 percent	85	82	81	‡	‡	#	43	44	35	18	17	20	12	11	15	26	26	30
21 to 49 percent	88	81	85	‡	#	#	46	41	41	17	18	14	9	16	11	27	25	34
50 percent or more	89	83	84	2!	2!	1!	49	39	31	16	15	14	7	12	12	27	32	42
Percent of students eligible for free or reduced-price lunch																		
Less than 35 percent	90	82	86	‡	1!	#	43	38	40	15	19	15	12	13	13	29	29	32
35 to 49 percent	82	77	79	‡	‡	#	30	37	39	20	18	15	14	11	16	34	34	30
50 to 74 percent	85	82	83	‡	‡	#	42	37	25	21	17	17	7	14	10	30	30	47
75 percent or more	88	84	83	‡	‡	1!	51	43	31	11	17	16	9	13	13	27	26	39

#Rounds to zero.

!Interpret data with caution; the coefficient of variation is greater than 50 percent.

‡Reporting standards not met.

[1]Percentages are based on the 99 percent of public schools with Internet access in 2002, 99.8 percent in 2003, and 99.6 percent in 2005.

[2]Percentages are based on 86 percent of public schools (99 percent with Internet access times 87 percent reporting that they or their district offered professional development to teachers in the school on how to integrate the Internet into the curriculum in the past 12 months) in 2002, on 82 percent of public schools (99.8 percent with Internet access times 82 percent reporting that they or their district offered professional development to teachers in the school on how to integrate the Internet into the curriculum in the past 12 months) in 2003, and on 83 percent of public schools (99.6 percent with Internet access times 83 percent reporting that they or their district offered professional development to teachers in the school on how to integrate the Internet into the curriculum in the past 12 months) in 2005.

[3]Data for combined schools are included in the totals and in analyses by other school characteristics but are not shown separately.

[4]Percent minority enrollment was not available for 15 schools in 2002, 28 schools in 2003, and 20 schools in 2005.

NOTE: Detail may not sum to totals because of rounding and not reporting where there are too few cases for a reliable estimate.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002; "Internet Access in U.S. Public Schools, Fall 2003," FRSS 86, 2003; and "Internet Access in U.S. Public Schools, Fall 2005," FRSS 90, 2005.

Table 15-A. Standard errors for professional development for use of the Internet in the classroom in public schools, by availability, participation, and selected school characteristics: 2002, 2003, and 2005

School characteristic	School or district has offered professional development			Percent of teachers who have attended professional development														
				0 percent			1 to 25 percent			26 to 50 percent			51 to 75 percent			76 to 100 percent		
	2002	2003	2005	2002	2003	2005	2002	2003	2005	2002	2003	2005	2002	2003	2005	2002	2003	2005
All public schools	1.4	1.3	1.5	0.4	0.6	†	1.5	2.2	2.1	1.4	1.7	1.5	1.1	1.2	1.3	1.7	2.0	2.1
Instructional level																		
Elementary	1.6	1.5	1.8	0.5	0.7	†	1.9	2.8	2.7	1.8	2.2	2.0	1.5	1.7	1.6	2.2	2.6	2.7
Secondary	1.9	1.7	2.1	†	0.7	†	2.1	2.5	2.6	2.1	2.4	1.9	1.7	1.5	1.9	1.8	2.6	2.1
School size																		
Less than 300	4.3	4.0	3.3	†	1.9	0.6	4.1	4.8	4.1	3.8	4.5	3.4	2.7	3.2	2.4	4.3	4.4	4.9
300 to 999	1.2	1.8	1.7	0.6	0.5	†	1.7	2.8	2.6	1.7	1.9	2.1	1.5	1.5	1.6	1.8	2.2	2.4
1,000 or more	2.1	2.1	2.2	†	†	†	3.3	3.6	4.1	3.1	2.7	2.3	1.6	2.8	3.0	2.5	3.1	3.9
Locale																		
City	2.2	2.7	2.1	0.9	1.3	0.8	3.6	3.6	3.6	2.8	3.0	2.6	1.4	2.7	2.8	3.4	3.4	4.2
Urban fringe	1.9	2.5	2.3	†	†	†	3.4	3.4	3.2	2.4	2.5	2.4	2.0	2.5	2.7	3.0	3.7	2.8
Town	3.8	4.6	4.5	†	†	†	4.5	5.5	6.0	4.8	4.2	6.1	4.5	2.7	5.0	6.1	5.0	6.8
Rural	2.8	2.7	2.8	†	†	†	4.0	4.1	3.9	2.5	2.8	2.2	2.5	2.5	2.1	4.0	3.7	3.3
Percent minority enrollment																		
Less than 6 percent	2.8	3.8	2.9	†	1.5	†	4.0	3.7	4.4	3.2	3.5	2.7	2.9	2.3	3.2	4.6	4.6	4.1
6 to 20 percent	2.6	3.4	3.3	†	†	†	3.5	4.8	4.4	2.7	3.3	3.2	2.6	2.7	3.3	3.1	4.1	3.7
21 to 49 percent	3.2	3.4	2.9	†	†	†	4.8	3.6	4.5	3.0	2.9	3.3	2.5	2.9	2.7	3.3	3.7	4.0
50 percent or more	2.0	2.5	2.3	0.8	1.0	0.7	3.8	3.4	3.4	2.5	2.7	2.2	1.3	1.9	2.2	3.3	3.4	4.2
Percent of students eligible for free or reduced-price lunch																		
Less than 35 percent	1.8	2.1	2.0	†	0.8	†	3.0	3.3	3.1	2.3	2.4	2.4	1.9	2.1	2.5	2.8	3.6	2.7
35 to 49 percent	4.2	3.8	3.4	†	†	†	4.9	4.1	5.4	4.2	3.8	3.6	3.7	3.0	3.8	5.7	4.5	5.2
50 to 74 percent	2.5	3.4	2.6	†	†	†	3.8	5.0	3.5	3.2	3.4	3.1	2.0	3.1	2.4	4.4	3.8	4.4
75 percent or more	2.4	2.8	2.5	†	†	1.0	3.9	3.7	3.4	2.4	3.5	2.6	2.3	2.5	2.6	3.8	3.7	4.5

†Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002; "Internet Access in U.S. Public Schools, Fall 2003," FRSS 86, 2003, and "Internet Access in U.S. Public Schools, Fall 2005," FRSS 90, 2005.

Table 16. Percentage of public schools using their Internet access to provide various opportunities and information for teaching and learning, by school characteristics: 2005

School characteristic	Data to inform instructional planning at the school level	Assessment results and data for teachers to use to individualize instruction	High quality digital content	Teacher professional development through online courses taken at the school	Access for students to online distance learning for courses that are otherwise unavailable at the school
All public schools	89	87	87	51	32
Instructional level[1]					
Elementary	90	88	86	49	24
Secondary	86	85	91	59	57
School size					
Less than 300	84	85	83	49	37
300 to 999	90	88	87	51	28
1,000 or more	92	89	96	55	43
Locale					
City	89	92	88	53	25
Urban fringe	88	85	88	46	24
Town	92	92	85	52	37
Rural	88	84	85	55	43
Percent minority enrollment[2]					
Less than 6 percent	88	81	88	53	37
6 to 20 percent	87	87	88	52	33
21 to 49 percent	90	87	83	51	27
50 percent or more	90	92	87	50	31
Percent of students eligible for free or reduced-price lunch					
Less than 35 percent	90	85	89	51	31
35 to 49 percent	83	82	85	52	31
50 to 74 percent	91	92	87	51	34
75 percent or more	89	90	85	50	31

[1]Data for combined schools are included in the totals and in analyses by other school characteristics but are not shown separately.

[2]Percent minority enrollment was not available for 20 schools in 2005.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2005," FRSS 90, 2005.

Table 16-A. Standard errors of the percentage of public schools using their Internet access to provide various opportunities and information for teaching and learning, by school characteristics: 2005

School characteristic	Data to inform instructional planning at the school level	Assessment results and data for teachers to use to individualize instruction	High quality digital content	Teacher professional development through online courses taken at the school	Access for students to online distance learning for courses that are otherwise unavailable at the school
All public schools	1.3	1.5	1.3	1.9	1.6
Instructional level					
Elementary	1.6	2.0	1.7	2.4	2.1
Secondary	1.6	1.8	1.4	2.8	2.1
School size					
Less than 300	3.4	2.8	2.6	4.0	3.4
300 to 999	1.3	1.8	1.6	2.4	2.1
1,000 or more	2.0	1.7	1.4	3.9	3.7
Locale					
City	2.5	2.2	2.4	3.8	2.7
Urban fringe	2.3	2.8	2.0	3.2	2.5
Town	2.4	2.8	4.2	7.4	5.9
Rural	2.5	2.5	2.2	3.1	2.6
Percent minority enrollment					
Less than 6 percent	3.1	3.5	3.0	4.4	3.4
6 to 20 percent	2.7	2.8	2.7	4.7	3.7
21 to 49 percent	2.1	3.3	3.7	4.1	3.9
50 percent or more	1.8	1.7	2.2	3.0	2.6
Percent of students eligible for free or reduced-price lunch					
Less than 35 percent	2.0	2.5	2.2	3.1	2.7
35 to 49 percent	3.2	3.8	3.4	4.5	3.3
50 to 74 percent	2.1	2.3	2.7	3.8	3.5
75 percent or more	2.3	2.2	2.9	4.1	3.2

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2005," FRSS 90, 2005.

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Appendix A

Technical Notes

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Technical Notes

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 small amounts of issue-oriented data with minimal burden on respondents and with a quick turnaround from data collection to reporting.

Sample Selection

The sample of elementary and secondary schools for the "Internet Access in U.S. Public Schools, Fall 2005" was selected from the 2003–04 NCES Common Core of Data (CCD) Public Elementary/Secondary School Universe File, the most up-to-date file available at the time the sample was drawn. Over 98,000 schools are contained in the 2003–04 CCD Public Elementary/Secondary School Universe File. For this survey, regular elementary and secondary/combined schools were selected. Special education, vocational education, and alternative schools were excluded from the sampling frame, along with schools with a highest grade below first grade and those outside the 50 states and the District of Columbia. With these exclusions, the final sampling frame consisted of about 85,000 schools, of which about 63,000 were classified as elementary schools and about 21,000 as secondary/combined schools.[1]

A sample of 1,205 schools was selected from the public school frame. To select the sample, the frame of schools was stratified by instructional level (elementary, secondary/combined schools), enrollment size (less than 300 students, 300 to 499, 500 to 999, 1,000 to 1,499, 1,500 or more), and percentage of students eligible for free or reduced-price lunch (less than 35 percent, 35 to 49 percent, 50 to 74 percent, 75 percent or more). Schools in the highest poverty category (schools with 75 percent or more students eligible for free or reduced-price lunch) were oversampled to permit analyses for that category.

[1] During data collection, a number of sampled schools were found to be outside the scope of the survey, usually because they were closed or merged. This reduced the number of schools in the sampling frame to an estimated 82,482.

Respondents and Response Rates

The three-page survey instrument was designed by Westat and NCES to address most of the issues examined in the 2003 survey on Internet access. These issues included access to the Internet in instructional rooms, the types of Internet connections used, laptop loans, hand-held computers for students and teachers, teacher professional development on how to integrate the use of the Internet into the curriculum, technologies and procedures used to prevent student access to inappropriate material on the Internet, and use of the Internet to provide opportunities and information for teaching and learning.

Questionnaires and cover letters were mailed to the principals of the 1,205 sampled schools in early October 2005. The letter introduced the study and requested that the questionnaire be completed by the technology coordinator or person most knowledgeable about Internet access at the school. Respondents were offered the option of completing the survey via the Web or by mail. Telephone follow-up for survey nonresponse and data clarification was initiated in November 2005, and data collection was completed in March 2006. Thirty-four schools were outside the scope of the survey because they had closed or merged with other schools, and 1,012 schools completed the survey. Of the schools that completed the survey, 65 percent completed it by Web, 24 percent completed it by mail, 10 percent completed it by fax, and less than 1 percent completed it by telephone. The unweighted and weighted response rates were both 86 percent.

Imputation for Item Nonresponse

The weighted item nonresponse for questionnaire items was less than 1 percent. The nonresponse rate for a particular item was calculated using the number of responses as the numerator and the estimated number of eligible cases that should have responded to the item as the denominator. Although item nonresponse for key items was very low, missing data were imputed for the 14 items listed in table A-1. No imputation was done for school characteristic variables (e.g., percent minority enrollment) that were created from CCD data. The missing items included both numerical data such as counts of instructional rooms and computers, as well as categorical data such as the provision of hand-held computers to students. The missing data were imputed using a "hot-deck" approach to obtain a "donor" school from which the imputed values were derived. Under the hot-deck approach, a donor school that matched selected characteristics of the school with missing data was identified. The matching characteristics included level, enrollment size class, type of locale, and total number of computers in the school. Once a donor was found, it was used to derive the imputed values for the school with missing

Table A-1. Number of cases with imputed data in the study sample, and number of cases with imputed data the sample represents, by questionnaire items: 2005

Questionnaire item		Respondent sample (unweighted)	National estimate (weighted)
3.	Number of computers used for instructional purposes	1	45
11.	Number of instructional rooms with wireless Internet connections	2	213
12a.	Use of the Internet to provide access for students to online distance learning for courses that are otherwise unavailable at the school	1	54
12b.	Use of the Internet to provide assessment results and data for teachers to use to individualize instruction	1	54
12c.	Use of the Internet to provide data to inform instructional planning at the school level	1	54
12d.	Use of the Internet to provide teacher professional development through online courses taken at the school	1	54
12e.	Use of the Internet to provide high quality digital content	2	49
13.	Use of technologies or procedures to prevent student access to inappropriate material on the Internet	3	133
14e.	Use of written contract that parents have to sign to prevent student access to inappropriate material on the Internet	3	133
14f.	Use of written contract that students have to sign to prevent student access to inappropriate material on the Internet	2	154
14g.	Use of an honor code for students to prevent student access to inappropriate material on the Internet	3	95
18.	Percentage of teachers who attended professional development on how to integrate the use of the Internet into the curriculum	3	95
21.	Plans to make laptops available for students to borrow during the 2006-2007 school year	4	180
23.	Provision of hand-held computers to students for instructional purposes	1	25

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2005," FRSS 90, 2005.

data. For categorical items, the imputed value was simply the corresponding value from the donor school. For numerical items, an appropriate ratio (e.g., the proportion of instructional rooms with wireless Internet connections) was calculated for the donor school, and this ratio was applied to available data (e.g., reported number of instructional rooms) for the recipient school to obtain the corresponding imputed value. All missing items for a given school were imputed from the same donor.

Sampling and Nonsampling Errors

The survey responses were weighted to produce national estimates (table A-2). The weights were designed to adjust for the variable probabilities of selection and differential nonresponse. The findings in this report are based on the sample of schools selected and, consequently, are subject to sampling variability. The standard error is the measure of the variability of estimates 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 percentage of instructional rooms with Internet access in 2005 is 94 percent, and the estimated standard error is 1.3 percent. The 95 percent confidence interval for the statistic extends from 94 – (1.3 x 1.96) to 94 + (1.3 x 1.96), or from 91 to 97 percent. The coefficient of variation ("c.v.," also referred to as the "relative standard error") expresses the standard error as a percentage of the quantity being estimated. The c.v. of an estimate (y) is defined as c.v. = (s.e./y) x 100. Throughout this report, for any coefficient of variation higher than 50 percent, the data are flagged with the note that they should be interpreted with caution, as the value of the estimate may be unstable.

Table A-2. Number and percentage of responding public schools in the study sample, and estimated number and percentage of public schools the sample represents, by school characteristics: 2005

School characteristic	Respondent sample (unweighted)		National estimate (weighted)	
	Number	Percent	Number	Percent
All public schools	1,012	100	82,482	100
Instructional level				
Elementary	489	48	61,923	75
Secondary	489	48	18,912	23
School size				
Less than 300	187	18	20,959	25
300 to 999	575	57	53,423	65
1,000 or more	250	25	8,100	10
Locale				
City	257	25	19,325	23
Urban fringe	339	34	27,637	34
Town	101	10	7,920	10
Rural	315	31	27,600	33
Percent minority enrollment				
Less than 6 percent	204	21	18,575	23
6 to 20 percent	245	25	21,043	26
21 to 49 percent	203	20	16,702	21
50 percent or more	340	34	24,192	30
Percent of students eligible for free or reduced-price lunch				
Less than 35 percent	395	39	32,281	39
35 to 49 percent	166	16	14,348	17
50 to 74 percent	217	21	18,289	22
75 percent or more	234	23	17,565	21

NOTE: Percent minority enrollment was not available for 20 schools. Thirty-four schools were combined schools and therefore are missing in the instructional level counts used here, but those cases were included in the totals and in analyses by other school characteristics. Detail may not sum to totals because of rounding or missing data.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2005," FRSS 90, 2005.

Differences between two estimates can be examined by comparing the confidence intervals around the two estimates. If the confidence intervals overlap, then differences in the estimates are likely due to sampling variability rather than any real differences in values. In instances where a survey estimate is 100 percent, there is no measured variability around the estimate, and therefore no standard error or confidence interval can be computed. However, for these estimates of 100 percent, the event (e.g., whether the school has access to the Internet) could have been reported by fewer schools had a different sample been selected. When comparing the estimate of 100 percent to another estimate, a confidence interval around the other estimate that includes the 100 percent indicates that the difference in the two estimates is likely due to sampling variability.

For example, the percentage of public schools with access to the Internet located in cities (see tables 1 and 1a) was estimated to be 100 percent in 2003 (with no standard error), and 99.4 percent (which rounds to 99 percent for presentation in the table) in 2005 (with a standard error of 0.6). The 95 percent confidence interval around the 2005 estimate of 99 percent extends from 98.2 percent to greater than 100 percent. Thus, the confidence intervals for the 2003 estimate of 100 percent and the 2005 estimate of 99 percent overlap, and the decrease from 2003 to 2005 can be attributed with a high level of confidence to sampling variability.

Because the data from this survey were collected using a complex sampling design, the sampling errors of the estimates from this survey (e.g., estimates of proportions) are typically larger than would be expected based on a simple random sample. Not taking the complex sample design into account can lead to an underestimation 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, 50 stratified subsamples of the full sample were created and then dropped one at a time to define 50 jackknife replicates. A computer program (WesVar) was used to calculate the estimates of standard errors. WesVar is a stand-alone Windows application that computes sampling errors from complex samples for a wide variety of statistics (totals, percents, ratios, log-odds ratios, general functions of estimates in tables, linear regression parameters, and logistic regression parameters).

The test statistics used in the analysis were calculated using the jackknife variances and thus appropriately reflect the complex nature of the sample design. In particular, Bonferroni adjustments were made to control for multiple comparisons where appropriate. For example, for an "experiment-wise"

comparison involving *g* pairwise comparisons, each difference was tested at the 0.05/*g* significance level to control for the fact that *g* differences were simultaneously tested. The Bonferroni adjustment was also used for previous FRSS Internet reports and is used here to maintain continuity with prior reporting. The Bonferroni adjustment results in a more conservative critical value for judging statistical significance. This means that comparisons that would have been significant with a critical value of 1.96 may not be significant with the more conservative critical value. For example, the critical value for comparisons between any two of the four categories of poverty concentration is 2.64 rather than 1.96.

The survey estimates are also subject to nonsampling errors that can arise because of nonobservation (nonresponse or noncoverage) errors, errors of reporting, and errors made in collection of the data. These errors can sometimes bias the data. Nonsampling errors may include such problems as the difference in the respondents' interpretation of the meaning of the question; memory effects; misrecording of responses; incorrect editing, coding, or data entry; differences related to the particular time the survey was conducted; or errors in data preparation. While general sampling theory can be used in part to determine how to estimate the sampling variability of a statistic, nonsampling errors are not easy to measure and, for measurement purposes, usually require that an experiment be conducted as part of the data collection procedures or that data external to the study be used. To minimize the potential for nonsampling errors, the questionnaire on Internet access in public schools was pretested in 1994, and again each time it was substantially modified. The full questionnaire was last pretested for the fall 2001 survey, since a few new topics were introduced in the survey. Several items added to or modified in the 2005 survey were also pretested. The pretesting was done with public school technology coordinators and other knowledgeable respondents like those who would complete the survey. During the design of the survey, an effort was made to check for consistency of interpretation of questions and to eliminate ambiguous items. The questionnaire and instructions were intensively reviewed by NCES.

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 Terms Used in the Questionnaire

Types of Internet connections

T3/DS3—Dedicated digital transmission of data and voice at the speed of 45 MB per second; composed of 672 channels.

Fractional T3—One or more channels of a T3/DS3 line. Used for data and voice transmission at the speed of less than 45 MB per second.

T1/DS1—Dedicated digital transmission of data and voice at the speed of 1.5 MB per second; composed of 24 channels.

Fractional T1—One or more channels of a T1/DS1 line. Used for data and voice transmission at the speed of less than 1.5 MB per second.

Cable modem—Dedicated transmission of data through cable TV wires at a speed of up to 2 MB per second.

DSL (Digital Subscriber Line)—Refers collectively to ADSL, SDSL, HDSL, and SDSL. DSLs have a dedicated digital transmission speed of up to 32 MB per second.

ISDN (Integrated Services Digital Network)—Sends voice and data over digital telephone lines or normal telephone wires at the speed of up to 128 KB per second.

56 KB—Dedicated digital transmission of data at the speed of 56 KB per second.

Dial-up connection—Data transmission through a normal telephone line upon command, at the maximum speed of 56 KB per second (for example, AOL or Earthlink).

Types of technologies to prevent student access to inappropriate material on the Internet

Blocking software—Uses a list of websites that are considered inappropriate and prevents access to those sites.

Filtering software—Blocks access to sites containing keywords, alone or in context with other keywords.

Monitoring software—Records e-mails, instant messages, chats, and the websites visited.

Intranet—Controlled computer network similar to the Internet, but accessible only to those who have permission to use it. Intranet system managers can limit user access to Internet material.

Definitions of Analysis Variables

Instructional level—Schools were classified according to their grade span in the 2003–04 Common Core of Data (CCD) Public Elementary/Secondary School Universe File. Data for combined schools are included in the totals and in analyses by other school characteristics, but are not shown separately. Thus, data are reported for the following categories:

Elementary school—Had grade 6 or lower and no grade higher than grade 8.

Secondary school—Had no grade lower than grade 7 and had grade 7 or higher.

School size—This variable indicates the total enrollment of students based on data from the 2003–04 CCD Public Elementary/Secondary School Universe File. For sampling purposes, schools were grouped into five enrollment size classes—less than 300 students, 300 to 499, 500 to 999, 1,000 to 1,499, 1,500 or more. Use of the more detailed size categories ensures greater diversity of schools in the sample with respect to size, and permits a more nearly optimal allocation of the sample for estimating school-level characteristics that are correlated with enrollment. Because of the relatively small sample size and large standard errors associated with small cell sizes, the following three combined categories were used for analysis purposes:

Less than 300 students
300 to 999 students
1,000 or more students

Locale—This variable indicates the type of community in which the school is located, as defined in the 2003–04 CCD Public Elementary/Secondary School Universe File (which uses definitions based on U.S. Census Bureau classifications). The variable was based on the eight-category locale variable from CCD and collapsed into the following four categories for this report.

City—A central city of a Consolidated Metropolitan Statistical Area (CMSA) or Metropolitan Statistical Area (MSA).

Urban fringe—Any incorporated place, Census-designated place, or non-place territory within a CMSA or MSA of a large or mid-size city and defined as urban by the Census Bureau.

Town—An incorporated place or Census-designated place with a population greater than or equal to 2,500 and located outside a CMSA or MSA.

Rural—Any incorporated place, Census-designated place, or non-place territory designated as rural by the Census Bureau.

Percent minority enrollment—This variable indicates the percent of students enrolled in the school whose race or ethnicity is classified as one of the following: American Indian or Alaskan Native; Asian or Pacific Islander; Black, non-Hispanic; or Hispanic, based on data in the 2003–04 CCD Public Elementary/Secondary School Universe File. The categories are:

Less than 6 percent
6 to 20 percent
21 to 49 percent
50 percent or more

Percent of students eligible for free or reduced-price lunch—This variable was based on responses to question 25 on the survey questionnaire; if it was missing from the questionnaire (2.0 percent of all cases), it was obtained from the 2003–04 CCD Public Elementary/Secondary School Universe File. This item served as a measurement of the concentration of poverty at the school. The categories are:

Less than 35 percent
35 to 49 percent
50 to 74 percent
75 percent or more

It is important to note that many of the school characteristics used for independent analysis may also be related to each other. For example, school size and locale are related, with city schools typically being larger than rural schools. Similarly, poverty concentration and minority enrollment are related, with schools with a higher minority enrollment also more likely to have a higher concentration of poverty. Other relationships between analysis variables may exist. However, this report focuses on bivariate relationships between the analysis variables and questionnaire variables rather than more complex analyses.

For more information about the survey, contact Bernie Greene, 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: Bernard.Greene@ed.gov; telephone: (202) 502-7348.

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Appendix B

Questionnaire

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U.S. DEPARTMENT OF EDUCATION NATIONAL CENTER FOR EDUCATION STATISTICS WASHINGTON, D.C. 20006-5651 **INTERNET ACCESS IN U.S. PUBLIC SCHOOLS, FALL 2005** FAST RESPONSE SURVEY SYSTEM	FORM APPROVED O.M.B. NO.: 1850-0733 EXPIRATION DATE: 09/2006

This survey is authorized by law (P.L. 103-382). While you are not required to respond, your cooperation is needed to make the results of this survey comprehensive, accurate, and timely.

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IF ABOVE INFORMATION IS INCORRECT, PLEASE MAKE CORRECTIONS DIRECTLY ON LABEL.

Name of person completing form:_____ Telephone: _____

Title/position: _____

Best days and times to reach you (in case of questions): _____

E-mail:_____

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

PLEASE RETURN COMPLETED FORM TO:	IF YOU HAVE ANY QUESTIONS, CONTACT:
WESTAT Attention: 8096.06.03 – John Wells 1650 Research Boulevard Rockville, Maryland 20850	John Wells 800-937-8281, ext. 2663 Fax: 800-254-0984 E-mail: johnwells@westat.com

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 is 1850-0733. The time required to complete this information collection is estimated to average 20 minutes per response, including the time to review instructions, search existing data resources, gather the data needed, and complete and review the information collected. If you have any comments concerning the accuracy of the time estimate(s) or suggestions for improving this form, please write to: U.S. Department of Education, Washington, D.C. 20202-4651. If you have comments or concerns regarding the status of your individual submission of this form, write directly to: National Center for Education Statistics, 1990 K Street, N.W., Washington, D.C. 20006

FRSS Form No. 90, 10/2005

1. What is the total number of **instructional rooms** in your school? *(Include all rooms used for any instructional purposes: classrooms, computer labs and other labs, library/media centers, art rooms, rooms used for vocational or special education, etc.)* _____ instructional rooms

2. How many **computers** are there in your school? *(Do **not** include laptop computers available for loan. Count **all** other computers, including those used by administrators, teachers, and students. If none, please enter "0" and skip to question 19.)* _____ computers

3. How many of the **computers** indicated in question 2 are used for **instructional** purposes? (*Do **not** include computers used only for administrative purposes. If none, please enter "0.")* _____ instructional computers

4. Does your school have access to the Internet?

   Yes..... 1 *(Continue with question 5.)* No..... 2 *(Skip to question 19.)*

5. How many **computers** in your school currently have **Internet** access? (*Do **not** include laptop computers available for loan. Include all other instructional and noninstructional computers. This number should not exceed the number reported in question 2. If none, please enter "0" and skip to question 19.)* _____ computers

6. How many of the **computers** with **Internet** access indicated in question 5 are used for **instructional** purposes? *(This number should not exceed the number reported in question 5. If none, please enter "0.")*
   _____ instructional computers

7. What type(s) of connections does your school use when connecting to the Internet*? (See **definition box** below. Circle one on each line.)*

	Yes	No
a. Broadband connections (e.g.,T3/DS3, fractional T3, T1/DS1, fractional T1, cable modem, and/or DSL).....	1	2
b. Narrowband connections (e.g., ISDN, 56KB, and/or dial-up connection)	1	2

Definitions for question 7 and question 10

T3/DS3 – dedicated digital transmission of data and voice at the speed of 45 MB per second; composed of 672 channels.

Fractional T3 – one or more channels of a T3/DS3 line; used for data and voice transmission at the speed of less than 45 MB per second.

T1/DS1 – dedicated digital transmission of data and voice at the speed of 1.5 MB per second; composed of 24 channels.

Fractional T1 – one or more channels of a T1/DS1 line; used for data and voice transmission at the speed of less than 1.5 MB per second.

Cable modem – dedicated transmission of data through cable TV wires at a speed of up to 2 MB per second.

DSL (Digital Subscriber Line) – refers collectively to ADSL, SDSL, HDSL, and VDSL. DSLs have a dedicated digital transmission speed of up to 32 MB per second.

ISDN (Integrated Services Digital Network) – sends voice and data over digital telephone lines or normal telephone wires at the speed of up to 128 KB per second.

56 KB – dedicated digital transmission of data at the speed of 56 KB per second.

Dial-up connection – data transmission through a normal telephone line upon command, at the maximum speed of 56 KB per second (for example, AOL or Earthlink).

8. How many **instructional rooms** have a computer with **Internet** access? *(This number should not exceed the number reported in question 1. If none, please enter "0.")* _____ instructional rooms

9. Does your school use wireless connections when connecting to the Internet?

   Yes..... 1 (*Continue with question 10.)* No..... 2 (*Skip to question 12.*)

10. What type(s) of wireless connections does your school use when connecting to the Internet? *(Circle one on each line.)*

	Yes	No
a. Broadband connections (e.g.,T3/DS3, fractional T3, T1/DS1, fractional T1, cable modem, and/or DSL).....	1	2
b. Narrowband connections (e.g., ISDN, 56KB, and/or dial-up connection)	1	2

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11. How many **instructional rooms** use **wireless connections** when connecting to the Internet? *(This number should not exceed the number reported in question 1. If none, please enter "0.")* _____ instructional rooms

12. Does your school use its **Internet access** to provide the following for teaching and learning? *(Circle one on each line.)*

	Yes	No
a. Access for students to online distance learning for courses that are otherwise unavailable at the school	1	2
b. Assessment results and data for teachers to use to individualize instruction	1	2
c. Data to inform instructional planning at the school level	1	2
d. Teacher professional development through online courses taken at the school	1	2
e. High quality digital content (i.e., learning materials brought in from the web, such as digital libraries and museums, or any text, images, sounds, and video that have been digitized)	1	2

13. Does your school use any **technology** or other **procedure** to prevent student access to inappropriate material on the Internet?

Yes..... 1 *(Continue with question 14.)* No..... 2 *(Skip to question 17.)*

14. What **technologies** or **procedures** does your school use to prevent student access to inappropriate material on the Internet? *(See **definition box** below. Circle one on each line.)*

	Yes	No
a. Blocking/filtering software	1	2
b. Monitoring software	1	2
c. Intranet	1	2
d. Monitoring by teachers or other staff	1	2
e. Written contract that parents have to sign	1	2
f. Written contract that students have to sign	1	2
g. Honor code for students	1	2
h. Other (*specify*) _____	1	2

Definitions for question 14

Blocking software – uses a list of Web sites that are considered inappropriate and prevents access to those sites.

Filtering software – blocks access to sites containing keywords, alone or in context with other keywords.

Monitoring software – records e-mails, instant messages, chats, and Web sites visited.

Intranet – controlled computer network similar to the Internet, but accessible only to those who have permission to use it. Intranet system managers can limit user access to Internet material.

15. Does your school use these technologies or other procedures to prevent student access to inappropriate material on **all** computers with **Internet** access used by students?

Yes..... 1 No..... 2

16. What method(s) does your school use to disseminate information to students and parents about the technologies or other procedures used to prevent student access to inappropriate material on the Internet at your school? *(Circle one on each line.)*

	Yes	No
a. Notice on bulletin board at school	1	2
b. Newsletters	1	2
c. Special notice to parents	1	2
d. Part of school policy/rules distributed to students and parents	1	2
e. Pop-up message at computer or Internet log on	1	2
f. Posted message on the school Web site or Web page	1	2
g. Other (*specify*) _____	1	2

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17. In the past 12 months, has your school or district offered professional development for teachers in your school on how to integrate the use of the Internet into the curriculum?

Yes..... 1 *(Continue with question 18.)* No..... 2 *(Skip to question 19.)*

18. In the past 12 months, what percentage of teachers in your school attended professional development on how to integrate the use of the Internet into the curriculum? *(Circle only one.)*

0 percent..... 1
1 to 25 percent..... 2
26 to 50 percent..... 3
51 to 75 percent..... 4
76 to 100 percent..... 5

19. Does your school lend laptop computers to students?

Yes..... 1 (*Continue with question 20.*) No..... 2 (*Skip to question 21.*)

20. What is the longest time for which a student may borrow a laptop? *(Circle only one.)*

Less than 1 week..... 1
1 week to less than 1 month..... 2
1 month to less than 3 months..... 3
3 months to less than 6 months..... 4
6 months to less than the entire school year..... 5
The entire school year..... 6
Other *(specify)* _____ 7

21. Does your school plan to make laptops available for students to borrow during the 2006–07 school year?

Yes..... 1 No..... 2

22. Does your school provide any **hand-held** computers to teachers for **instructional** purposes? *(Examples of hand-held computers are personal digital assistants such as Palm Pilots or Pocket PCs. Include all hand-held computers provided for instructional purposes, including those available for loan. Do **not** include laptop computers.)*

Yes..... 1 No..... 2

23. Does your school provide any hand-held computers to **students** for instructional purposes? *(Examples of hand-held computers are personal digital assistants such as Palm Pilots or Pocket PCs. Include all hand-held computers provided for instructional purposes, including those available for loan. Do **not** include laptop computers.)*

Yes..... 1 No..... 2

24. Which of the following grades are taught at your school? *(Circle all that apply.)*

PK K 1 2 3 4 5 6 7 8 9 10 11 12 Ungraded

25. What percent of the students in your school are eligible for the federally funded free or reduced-price lunch program? _____% *(If none, enter "0".)*

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

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