



StaySafeOnline.org
National Cyber Security Alliance

**The State of K-12
Cyberethics, Cybersafety and
Cybersecurity
Curriculum in the United States**

**National Cyber Security Alliance
Microsoft Corporation
Zogby/463**

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Methodology

Zogby/463 surveyed a statistically relevant sample of administrators (principals and superintendents), teachers and technology coordinators at K-12 private and public schools across the United States.

The National Cyber Security Alliance has tested the attitudes of K-12 schools on digital safety, security and ethics since 2008. *The State of Cyberethics, Cybersafety and Cybersecurity Curriculum in the U.S. Survey* is now in its third year of publication.

As an annual study, we ask each year a set of core questions to the survey population to measure changes in perceptions and attitudes as well as practices in schools and classrooms. Year over year results are provided for comparison purposes and should not be relied upon as trending data since each year some of the questions are expanded or modified to address topics relevant to national current events.

For the study, Zogby/463 surveyed 1,012 teachers, 200 technology coordinators, and 402 school administrators (325 principals and 77 superintendents) in January and February 2011, using a research design of online surveys and telephone interviews.

The teachers group subsample had a margin of error of +/- 3.1 percentage points, technology coordinators subsample a margin of error of +/- 7.1 percentage points, and school administrators subsample had a margin of error of +/- 5.0 percentage points.

Narrative Summary

**Note: Due to rounding, the percentages may not total 100.*

Questions 1-7 are asked of all respondents.

- 1) Level of agreement - Cyberethics, Cybersafety, and Cybersecurity curriculum should be taught in schools.

| | Agree | | | Disagree | | | Not sure |
|--------------------------------|--------------|----------|----------------|-----------------|----------|----------------|----------|
| | Strongly | Somewhat | Overall | Somewhat | Strongly | Overall | |
| Teachers | 55% | 36% | 91% | 4% | 1% | 5% | 4% |
| Administrators | 82% | 15% | 97% | 1% | 1% | 2% | 2% |
| Technology Coordinators | 85% | 14% | 99% | 1% | 0% | 1% | 1% |

- 2) Level of agreement - My school/school district does an adequate job of preparing students regarding Cyberethics, online safety, and computer security issues.

| | Agree | | | Disagree | | | Not sure |
|--------------------------------|--------------|----------|----------------|-----------------|----------|----------------|----------|
| | Strongly | Somewhat | Overall | Somewhat | Strongly | Overall | |
| Teachers | 11% | 40% | 51% | 25% | 16% | 41% | 9% |
| Administrators | 38% | 43% | 81% | 12% | 4% | 16% | 3% |
| Technology Coordinators | 36% | 45% | 81% | 10% | 6% | 16% | 4% |

- 3) Level of agreement - My school/school district requires cyberethics curriculum be taught in the classroom setting.

| | Agree | | | Disagree | | | Not sure |
|--------------------------------|--------------|----------|----------------|-----------------|----------|----------------|----------|
| | Strongly | Somewhat | Overall | Somewhat | Strongly | Overall | |
| Teachers | 9% | 20% | 29% | 23% | 29% | 52% | 19% |
| Administrators | 42% | 26% | 68% | 17% | 11% | 28% | 5% |
| Technology Coordinators | 31% | 28% | 59% | 15% | 17% | 32% | 10% |

4) Level of agreement - My school/school district requires cybersafety curriculum be taught in the classroom setting.

| | Agree | | | Disagree | | | Not sure |
|--------------------------------|----------|----------|------------|----------|----------|------------|----------|
| | Strongly | Somewhat | Overall | Somewhat | Strongly | Overall | |
| Teachers | 11% | 22% | 33% | 21% | 28% | 49% | 17% |
| Administrators | 43% | 26% | 69% | 14% | 13% | 27% | 5% |
| Technology Coordinators | 37% | 27% | 64% | 15% | 16% | 31% | 6% |

5) Level of agreement - My school/school district requires cybersecurity curriculum be taught in the classroom setting.

| | Agree | | | Disagree | | | Not sure |
|--------------------------------|----------|----------|------------|----------|----------|------------|----------|
| | Strongly | Somewhat | Overall | Somewhat | Strongly | Overall | |
| Teachers | 10% | 20% | 30% | 22% | 30% | 52% | 18% |
| Administrators | 41% | 29% | 70% | 13% | 13% | 26% | 4% |
| Technology Coordinators | 29% | 29% | 58% | 16% | 17% | 33% | 10% |

6) Which of the following describes the policies and/or procedures your school/school district uses to ensure appropriate use of technology and the Internet? (*Choose all that apply*)

| | Teachers | Administrators | Technology Coordinators |
|---|----------|----------------|-------------------------|
| Students must sign a 'contract' agreeing to use computers responsibly and for appropriate purposes | 75% | 86% | 95% |
| Teachers and librarians/media specialists are required to use classroom management techniques to monitor use and instruct students on responsible and appropriate use | 74% | 86% | 83% |
| Filters (i.e., a mechanism to limit Internet access to certain forms of information) are installed on computers | 87% | 92% | 92% |
| Social networking sites are blocked | 82% | 89% | 86% |
| Students and parents are required to read the school's/school district's Acceptable Use Policy and Student Code of Conduct | 75% | 84% | 92% |

| | | | |
|---|-----|-----|-----|
| Students are not allowed to use mobile devices in schools | 57% | 50% | 73% |
| Students have limited use of mobile devices | 37% | 25% | 33% |
| Other | 3% | <1% | 2% |
| Not sure | 3% | <1% | 0% |

7) Which of the following way describes how your school/school district informs student and educators about technology and online policies? (*Choose all that apply*)

| | Teachers | Administrators | Technology Coordinators |
|--|----------|----------------|-------------------------|
| Group Assemblies | 31% | 53% | 50% |
| Faculty Meetings | 63% | 73% | 84% |
| Dedicated classroom time specifically for that purpose | 30% | 56% | 62% |
| Policies delineated in handbooks | 73% | 74% | 90% |
| Modeling good behavior | 39% | 60% | 84% |
| PTA Meetings | 20% | 38% | 43% |
| Signage in break rooms | 9% | 28% | 35% |
| Signage in classrooms | 25% | 36% | 58% |
| Newsletters | 30% | 46% | 63% |
| Structured training | 25% | 45% | 65% |
| Other | 6% | 3% | 5% |
| Not sure | 6% | 2% | <1% |

Questions 8-13 are asked of teachers and administrators.

8) Please tell me how prepared you are to talk about the following - Strategies to protect personal information in online environments

| | Not Prepared | | | 3 | Prepared | | | Not sure |
|-----------------------|--------------|-----|---------------|-----|----------|----------------------|---------------|----------|
| | 1 Not at all | 2 | Overall (1+2) | | 4 | 5 Very well prepared | Overall (4+5) | |
| Teachers | 6% | 12% | 18% | 24% | 30% | 24% | 54% | 3% |
| Administrators | 5% | 7% | 12% | 23% | 26% | 37% | 63% | 2% |

9) Please tell me how prepared you are to talk about the following – Cyberbullying

| | Not Prepared | | | 3 | Prepared | | | Not sure |
|--|--------------|---|---------------|---|----------|----------------------|---------------|----------|
| | 1 Not at all | 2 | Overall (1+2) | | 4 | 5 Very well prepared | Overall (4+5) | |
| | | | | | | | | |

| | | | | | | | | |
|-----------------------|----|-----|------------|-----|-----|-----|------------|----|
| Teachers | 6% | 11% | 17% | 24% | 34% | 23% | 57% | 2% |
| Administrators | 4% | 6% | 10% | 20% | 27% | 40% | 67% | 3% |

10) Please tell me how prepared you are to talk about the following - Online posts that include 'hate speech'

| | Not Prepared | | | | Prepared | | | |
|-----------------------|---------------------|-----|----------------------|-----|-----------------|----------------------|----------------------|----------|
| | 1 Not at all | 2 | Overall (1+2) | 3 | 4 | 5 Very well prepared | Overall (4+5) | Not sure |
| Teachers | 6% | 12% | 18% | 22% | 32% | 23% | 55% | 4% |
| Administrators | 4% | 9% | 13% | 19% | 30% | 35% | 65% | 4% |

11) Please tell me how prepared you are to talk about the following - Sexting or sending sexually explicit messages or photos

| | Not Prepared | | | | Prepared | | | |
|-----------------------|---------------------|-----|----------------------|-----|-----------------|----------------------|----------------------|----------|
| | 1 Not at all | 2 | Overall (1+2) | 3 | 4 | 5 Very well prepared | Overall (4+5) | Not sure |
| Teachers | 8% | 12% | 20% | 18% | 30% | 28% | 58% | 3% |
| Administrators | 7% | 6% | 13% | 16% | 22% | 47% | 69% | 3% |

12) Please tell me how prepared you are to talk about the following - Basic computer security such as the need for security software, passwords and backing up data

| | Not Prepared | | | | Prepared | | | |
|-----------------------|---------------------|----|----------------------|-----|-----------------|----------------------|----------------------|----------|
| | 1 Not at all | 2 | Overall (1+2) | 3 | 4 | 5 Very well prepared | Overall (4+5) | Not sure |
| Teachers | 4% | 9% | 13% | 19% | 34% | 33% | 67% | 2% |
| Administrators | 4% | 3% | 7% | 10% | 20% | 61% | 81% | 2% |

13) Which of the following best describes whom you deem to be primarily responsible for conveying information to students about the ethical, safe, secure, responsible and acceptable use of technology? (*Choose only ONE*)

| | Not Prepared | | | 3 | Prepared | | | Not sure |
|-----------------------|--------------|----|---------------|-----|----------|----------------------|---------------|----------|
| | 1 Not at all | 2 | Overall (1+2) | | 4 | 5 Very well prepared | Overall (4+5) | |
| Teachers | 38% | 4% | 42% | 12% | 26% | 6% | 32% | 14% |
| Administrators | 48% | 3% | 51% | 14% | 22% | 12% | 34% | 2% |

Questions 14-19 are asked of teachers only.

14) Which of the following topics have you taught in the last 12 months related to cyberethics? (*Choose all that apply*)

| | Teachers |
|---|-----------------|
| Dealing with posts, videos, or other web content that scares you | 18% |
| How to send an email | 20% |
| Respecting the privacy of others | 33% |
| Exercising proper 'netiquette,' or knowing how to conduct one's self while online that is appropriate and courteous to others | 28% |
| Hacking, or gaining access to a computer file or network without authorization | 8% |
| Plagiarism | 47% |
| Downloading (legally or illegally) music and video files | 21% |
| Dealing with posts, videos or other Web content that contain 'hate speech' | 15% |
| Other | 4% |
| None | 32% |
| Not sure | 2% |

15) Which, if any, of the following topics related to cybersafety have you taught in the last 12 months? (*Choose all that apply*)

| | Teachers |
|--|-----------------|
| Warning signs to let your parents know about | 17% |
| The risks tied to social networking sites | 33% |
| How to make decisions about sharing personal information on the Internet | 34% |
| Watching out for online predators | 27% |
| What to do if you or someone you know receives inappropriate or harassing messages | 25% |
| What to do if someone posts unwanted or inappropriate material (i.e., within a social networking site) | 19% |

| | |
|--|-----|
| The value of privacy and personal information and your responsibility for protecting the information and reputations of friends, family, and others online | 30% |
| Scams, fraud, and social engineering | 18% |
| The safe use of geo-location services | 6% |
| Sexting or the inappropriate sharing of sexually suggestive images | 17% |
| Other | 2% |
| None | 41% |
| Not sure | 2% |

16) Which of the following topics related to cybersecurity have you taught in the last 12 months?
(Choose all that apply)

| | Teachers |
|---|----------|
| Using strong passwords | 23% |
| Changing passwords often | 19% |
| Knowing when it is safe to download a file | 20% |
| Risks associated with peer-to-peer networks | 19% |
| How to identify a secure Web site | 18% |
| Identity theft | 17% |
| Protecting computers from malicious software | 15% |
| The role of a more secure Internet in our economy | 7% |
| The role of a more secure Internet in our national security | 6% |
| Protecting a mobile device | 6% |
| Careers in cybersecurity | 4% |
| Other | 1% |
| None | 50% |
| Not sure | 2% |

17) On a scale of 1 to 4, with 1 being low priority and 4 being high priority, how much of a priority do you think Cyberethics, Cybersafety, and Cybersecurity training is to your personal career development needs?

| | Teachers |
|------------------------------------|------------|
| 1 Low Priority | 14% |
| 2 | 22% |
| Overall low priority (1+2) | 36% |
| 3 | 36% |
| 4 High Priority | 26% |
| Overall high priority (3+4) | 62% |
| Not sure | 3% |

18) Within the last 12 months, about how much total time have you spent on Cyberethics, Cybersafety, and Cybersecurity training provided by your school/school district?

| | Teachers |
|--------------------|-----------------|
| 0 hours | 36% |
| 1-3 hours | 40% |
| 4-6 hours | 10% |
| 6-15 hours | 5% |
| 16-35 hours | 2% |
| More than 35 hours | 1% |
| Other/Not sure | 5% |

19) Within the last 12 months, about how much time have you spent on training and/or continuing education for Cyberethics, Cybersafety, and Cybersecurity either on your own time, including attendance at professional meetings, workshops, and conferences, or college courses?

| | Teachers |
|--------------------|-----------------|
| 0 hours | 44% |
| 1-3 hours | 32% |
| 4-6 hours | 10% |
| 6-15 hours | 5% |
| 16-35 hours | 3% |
| More than 35 hours | 1% |
| Other/Not sure | 5% |

Question 20 is asked of technology coordinators only.

20) What type of professional development training would you like to provide teachers over the next 12 months:

| | Technology Coordinators |
|--|--------------------------------|
| Online training that could be completed via computer at any time | 30% |
| In-School/School District Workshops | 21% |
| All of the above | 45% |
| Not sure | 5% |

Questions 21-23 are asked of all respondents.

21) Level of interest in training in or receiving materials about the following - Cyber ethical issues (e.g., promoting academic integrity, combating and detecting plagiarism, rules for respecting copyright and downloading, helping students evaluate online)

| | Interested | | | Not Interested | | | Not sure |
|--------------------------------|------------|----------|------------|----------------|------------|------------|----------|
| | Very | Somewhat | Overall | Not very | Not at all | Overall | |
| Teachers | 28% | 45% | 73% | 14% | 11% | 25% | 3% |
| Administrators | 25% | 38% | 63% | 11% | 26% | 37% | <1% |
| Technology Coordinators | 32% | 38% | 70% | 8% | 22% | 30% | <1% |

22) Level of interest in training in or receiving materials about the following - Cybersafety issues (e.g., safer and best practices for social networking sites, dealing with inappropriate content, the telltale signs of possible suicide, reporting suspect)

| | Interested | | | Not Interested | | | Not sure |
|--------------------------------|------------|----------|------------|----------------|------------|------------|----------|
| | Very | Somewhat | Overall | Not very | Not at all | Overall | |
| Teachers | 33% | 45% | 78% | 13% | 8% | 21% | 2% |
| Administrators | 32% | 36% | 68% | 8% | 24% | 32% | 1% |
| Technology Coordinators | 45% | 30% | 75% | 7% | 18% | 25% | 2% |

23) Level of interest in training in or receiving materials about the following - Cybersecurity issues (e.g., Phishing, hacking, malware, identity theft, strategies to secure your computer, etc.)

| | Interested | | | Not Interested | | | Not sure |
|--------------------------------|------------|----------|------------|----------------|------------|------------|----------|
| | Very | Somewhat | Overall | Not very | Not at all | Overall | |
| Teachers | 35% | 43% | 78% | 13% | 8% | 21% | 2% |
| Administrators | 29% | 34% | 63% | 11% | 25% | 36% | 2% |
| Technology Coordinators | 41% | 32% | 73% | 7% | 20% | 27% | 1% |

Question 24 is asked of administrators and technology coordinators.

24) In which of the following ways do most educators within your school/school district learn about Cyberethics, Cybersafety, and Cybersecurity issues? (Choose up to TWO)

| | Administrators | Technology Coordinators |
|--|-----------------------|--------------------------------|
| School/school district sponsored workshops or seminars | 49% | 45% |
| Mandatory professional development days dedicated to such issues | 33% | 41% |
| One-to-one or group trainings dedicated to such issues with technology coordinators or aides | 25% | 28% |
| Flyers, newsletters, or Web sites | 23% | 22% |
| Mentioned within other professional development activities | 12% | 20% |
| Workshops, seminars, and/or courses paid for by participants | 14% | 10% |
| Other | 3% | 11% |
| Not Sure | 4% | 3% |

Question 25 is asked of all respondents.

25) Who do you primarily deem responsible for teaching children to use computers safely and securely? (Choose only ONE)

| | Teachers | School Administrators | Technology Coordinators |
|------------------|-----------------|------------------------------|--------------------------------|
| Parents | 79% | 60% | 45% |
| Teachers/schools | 18% | 34% | 52% |
| Government | <1% | <1% | 0% |
| Law enforcement | <1% | 0% | <1% |
| Other | <1% | 4% | 3% |
| Not sure | 2% | 1% | <1% |

Questions 26-27 are asked of administrators and technology coordinators.

26) Which of the following is the primary provider of Internet safety course work/curriculum that your school/school district uses? *(Choose only ONE)*

| | Administrators | Technology Coordinators |
|--|-----------------------|--------------------------------|
| A sole external source | 6% | 9% |
| A combination of two or more external sources | 5% | 6% |
| A combination of external sources and in-house materials | 38% | 46% |
| Internal, in-house course work/curriculum only | 40% | 30% |
| Other | 2% | 2% |
| Not sure | 8% | 9% |

27) Which of the following is the primary external Internet safety course work/curriculum your school/school district uses? *(Choose only ONE)*

| | Administrators | Technology Coordinators |
|--------------------|-----------------------|--------------------------------|
| CyberSmart! | 7% | 6% |
| iKeepSafe | 1% | 2% |
| i-SAFE | 10% | 12% |
| NetSmartz | 8% | 11% |
| Common Sense Media | 3% | 5% |
| Other | 32% | 37% |
| Not sure | 38% | 30% |

Question 28 is asked of technology coordinators only.

28) About how much total time have you spent providing in-service education for Cyberethics, Cybersafety, and Cybersecurity issues for your school/school district?

| | Technology Coordinators |
|--------------------|--------------------------------|
| None | 17% |
| 1-3 hours | 40% |
| 4- 6 hours | 21% |
| 6-15 hours | 10% |
| 16-35 hours | 3% |
| More than 35 hours | 4% |
| Other/Not sure | 7% |

Questions 29-31 are asked of teachers only.

29) I give assignments that require students to use the Internet at home. . . ?

| | Teachers |
|-----------|-----------------|
| Daily | 5% |
| Weekly | 22% |
| Monthly | 17% |
| Quarterly | 11% |
| Never | 41% |
| Not sure | 4% |

30) Our school has a dedicated computer lab.

| | Teachers |
|----------|-----------------|
| Yes | 89% |
| No | 9% |
| Not Sure | 1% |

31) Approximately, how often do your students use computers during the school day?

| | Teachers |
|--------------------|-----------------|
| Daily | 32% |
| 2-4 times per week | 26% |
| Weekly | 22% |
| Monthly | 7% |
| Quarterly | 3% |
| Never | 4% |
| Not sure | 5% |

Questions 32-35 are asked of administrators only.

32) Level of agreement - Schools should have curriculum throughout k-12 that prepares young people for careers in cybersecurity.

| | Agree | | | Disagree | | | Not sure |
|-----------------------|--------------|----------|----------------|-----------------|----------|----------------|----------|
| | Strongly | Somewhat | Overall | Somewhat | Strongly | Overall | |
| Administrators | 48% | 34% | 82% | 14% | 4% | 18% | 1% |

33) Level of agreement - My school/school district does an adequate job of preparing students to pursue college level (2 or 4 year) education in cybersecurity.

| | Agree | | | Disagree | | | Not sure |
|-----------------------|--------------|----------|----------------|-----------------|----------|----------------|----------|
| | Strongly | Somewhat | Overall | Somewhat | Strongly | Overall | |
| Administrators | 35% | 33% | 68% | 18% | 10% | 28% | 4% |

34) Level of agreement - Schools should have curriculum throughout k-12 that prepares young people to enter the workforce as 'cyber capable' employees, meaning they are able to use basic technology in a safer and more secure way).

| | Agree | | | Disagree | | | Not sure |
|-----------------------|--------------|----------|----------------|-----------------|----------|----------------|----------|
| | Strongly | Somewhat | Overall | Somewhat | Strongly | Overall | |
| Administrators | 74% | 23% | 97% | 2% | 1% | 3% | 1% |

35) Level of agreement - My school/school district does an adequate job of preparing as 'cyber capable' employees.

| | Agree | | | Disagree | | | Not sure |
|-----------------------|--------------|----------|----------------|-----------------|----------|----------------|----------|
| | Strongly | Somewhat | Overall | Somewhat | Strongly | Overall | |
| Administrators | 47% | 37% | 84% | 9% | 5% | 14% | 2% |

Questions 36-37 are asked of all respondents.

36) What type of school are you involved in or employed by? (*Choose all that apply*)

| | Teachers | Administrators | Technology Coordinators |
|------------------|-----------------|-----------------------|--------------------------------|
| Pre-Kindergarten | 8% | 19% | 30% |
| K-5th grade | 39% | 45% | 69% |
| 6th-8th grade | 30% | 41% | 64% |
| 9th-12th grade | 43% | 43% | 46% |
| Other/Not sure | 6% | 22% | 3% |

37) Which of the following best describes your location? (*Choose only ONE*)

| | Teachers | Administrators | Technology Coordinators |
|----------------------------|-----------------|-----------------------|--------------------------------|
| Rural or farming community | 15% | 23% | 35% |
| Small town | 19% | 23% | 21% |
| Large town | 9% | 6% | 9% |
| Mid-size city | 17% | 18% | 11% |
| Suburb of a mid-size city | 13% | 7% | 3% |
| Large city | 13% | 16% | 13% |
| Suburb of a large city | 13% | 7% | 9% |
| Other/Not sure | <1% | <1% | 0% |

Question 38 is asked of teachers only.

38) Which of the following titles best describes you?

| | Teachers |
|--------------------|-----------------|
| Content teacher | 68% |
| Technology teacher | 4% |
| Media specialist | 2% |
| Other | 25% |
| Not sure | 1% |