



## CSTA NATIONAL SECONDARY SCHOOL COMPUTER SCIENCE SURVEY (2013)

### Methodology:

This survey instrument was developed by CSTA's Research Committee and was administered in spring 2013 to 12,510 high school teachers who defined themselves as computer science, computer programming, or AP computer science teachers. Survey invitations, which directed respondents to a Survey Monkey online survey, were mailed to teachers across the United States using contact information provided by a market data company. In addition, CSTA's home page featured a request with a link to the survey. A total of 1286 people responded to the survey (a response rate of 10.3%). Of these responses, 1246 were usable, the remainder having been eliminated because they were incomplete (contained no actual data). The results below represent the percentages and averages for those who answered each question.

### Results:

**1. Does your school offer any introductory (or pre-AP) Computer Science (CS) courses?**

Yes	73.6%
No	26.4%

**2. What type of credit is earned by the course(s)? (Check all that apply.)**

Technology	46.1%
Computing Credit	40.3%
Business Credit	23.1%
Math Credit	22.1%
Science Credit	3.8%

**3. Are students required to take introductory CS?**

Yes	22.7%
No	77.3%

**4. How many students are enrolled in introductory CS?**

1-10	8.5%
11-25	25.3%
26-50	24.5%
51-100	21.3%
101+	20.4%

**5. What percentage of students enrolled in introductory CS is female? (Skip if your school is single-sex.)**

0% females	3.6%
1-20% females	52.8%
21-40% females	20.1%
41-60% females	21.4%
61-80% females	1.0%
81-99% females	0.3%
100% females	0.7%

**6. What percentage of students enrolled in introductory CS are members of an ethnic minority?**

0% minority	7.3%
1-20% minority	52.3%
21-40% minority	17.9%
41-60% minority	9.2%
61-80% minority	6.0%
81-99% minority	5.1%
100% minority	2.3%

**7. What content is covered in introductory CS?**

Programming	81.2%
Problem solving	77.8%
Ethics and social issues	54.6%
Hardware	46.5%
Graphics	45.3%
Web Development	33.3%
Computer Security	33.0%
Game programming	41.7%
Productivity software	23.4%
Databases	23.2%
Networks	19.4%
Logic	17.7%
Other	10.3%

**8. What programming languages/software tools are used in introductory CS?**

Java	49.0%
Scratch	34.0%
Alice	30.2%
Visual Basic	29.7%
JavaScript	15.4%
C++ or C#	18.1%
Python	13.9%
AppInventor	12.6%
Greenfoot	5.9%
HTML	4.2%
Game Maker	2.5%
Jeroo	2.3%

**9. Are you planning to offer the AP Computer Science Principles course?**

Not aware of course	38.2%
Currently offering it	4.3%
Plan to offer 2013-14 school year	4.8%
Plan to offer 2014-15 school year	6.2%
Plan to offer when official AP course	22.7%
Not planning to offer	23.8%

**10. Does your school offer AP Computer Science A?**

Yes	46.6%
No	53.4%

**11. How many students take AP CS?**

1-10 students	34.2%
11-25 students	40.3%
26-50 students	15.9%
51-100 students	7.1%
101+ students	2.5%

**12. What percentage of students enrolled in AP CS are female? (Skip if your school is single-sex.)**

0% females	23.1%
1-20% females	54.8%
21-40% females	15.8%
41-60% females	4.8%
61-80% females	1.1%
81-99% females	0.0%
100% females	0.5%

**13. What percentage of students enrolled in AP CS are members of an ethnic minority?**

0% minority	14.5%
1-20% minority	47.9%
21-40% minority	15.9%
41-60% minority	10.5%
61-80% minority	5.2%
81-99% minority	3.0%
100% minority	2.5%

**14. Does your school offer computing courses other than introductory and AP Computer Science?**

Yes	81.6%
No	18.4%

**15. What kinds of courses?**

Web design	65.6%
Computer graphics	49.2%
Programming	47.3%
Computing communications/media	32.6%
Game development	27.1%
Networking	17.3%
Other	32.7%

**16. Do the CS courses offered in your school have prerequisites?**

Yes	53.3%
No	46.7%

**17. How have CS enrollments changed in your school over the past three (3) years?**

Increased	36.7%
Decreased	21.6%
Stayed about the same	41.7%

**18. In your judgment, do you think there are students who should be taking or would like to take the CS course(s) your school offers but who are not?**

Yes	86.7%
No	13.3%

**19. Why? Please rank each reason below:**

	Very common	Uncommon	Rating average
No room in schedule	74.6%	5.0%	1.30
Elective courses are less important	51.3%	13.3%	1.62
Greater interest in other subjects	37.6%	7.5	1.70
Subject matter too difficult	32.4%	17.5%	1.85
CS is perceived to be 'geeky'	21.7%	29.6%	2.08
Perceived as male-dominated	21.2%	29.2%	2.70
Perception of limited job opportunities	5.1%	74.6%	2.08

**20. What has been the impact of the No Child Left Behind (NCLB) legislation on your CS program?**

No impact	65.4%
Negative impact	32.5%
Positive impact	2.1%

**21. Under what department(s) is CS offered in your school?**

Business	34.4%
Technology	33.8%
Math	27.9%
Computing	19.6%
Science	3.2%

**22. Does your district or state require you to teach a specific computer science course curriculum that includes specific content and outcomes?**

Yes 30.7%  
No 69.3%

**23. (if Yes) Are these requirements enforced?**

Yes 58.8%  
No 41.2%

**24. Do you use all or part of the standard curriculum as outlined in the CSTA K-12 Computer Science Standards?**

Yes 42.4%  
No 57.6%

**25. What do you perceive as the greatest challenges in teaching CS? Please rank each challenge below:**

	<b>Great challenge</b>	<b>Least challenge</b>	<b>Rating average</b>
Lack of student interest/enrollment	34.5%	16.7%	1.82
Lack of support / interest by school staff	40.0%	23.2%	1.83
Rapidly changing technology	30.5%	24.1%	1.94
Difficult subject matter	23.6%	21.0%	1.97
Lack of student subject knowledge	22.4%	25.9%	2.03
Lack of curriculum resources	23.5%	33.9%	2.10
Lack of hardware / software resources	22.2%	42.3%	2.20
Lack of teacher subject knowledge	19.6%	42.8%	2.23

**26. What do you perceive as the greatest professional development needs? Please rank each need below:**

	<b>Great need</b>	<b>Minor/no need</b>	<b>Rating average</b>
Time for training	63.3%	4.8%	1.41
Training cost (and lack of reimbursement)	58.4%	11.7%	1.53
Sufficient training opportunities	53.2%	9.9%	1.57
Training facilities and resources	41.4%	16.8%	1.75

**27. What do you believe to be the most effective methods for delivering professional development to CS teachers? Please rank each method below:**

	<b>Most effective</b>	<b>Least effective</b>	<b>Rating average</b>
Workshops / seminars	67.3%	3.6%	1.36
Networking with others	48.9%	6.9%	1.58
Online resources	43.9%	5.9%	1.62
Professional conferences	44.9%	13.4%	1.68
Computer-based tutorials	33.6%	10.4%	1.77
College courses	27.1%	19.5%	1.92

**28. How many students attend your school?**

1-100 students	1.1%
101-250 students	5.6%
251-500 students	17.1%
501-1000 students	22.4%
1001-2000 students	37.1%
2001+ students	16.7%

**29. Is your school public or private?**

Public	84.4%
Private	15.6%

**30. Is your school a single gender or mixed-gender school?**

Single gender	4.7%
Mixed-gender	95.3%

**31. What grade levels?**

Ninth	94.2%
Tenth	97.3%
Eleventh	98.7%
Twelfth	98.6%

**32. What percentage of students at your school speak a language at home other than English?**

0% of students	5.4%
1-20% of students	61.6%
21-40% of students	18.2%
41-60% of students	6.8%
61-80% of students	4.8%
81-100% of students	3.2%

**33. Which of the following best describes your school's location?**

Suburban	49.6%
Rural	25.8%
Urban	24.5%
Online	0.3%

**34. How many years have you been teaching?**

1-3 years	5.5%
4-7 years	14.9%
8-14 years	30.8%
15+ years	48.8%

**35. How many years have you been teaching CS?**

0 years	3.6%
1-3 years	19.3%
4-7 years	20.1%
8-14 years	29.1%
15+ years	28.0%

**36. What percentage of the courses you teach are CS courses?**

0-25%	27.2%
25-50%	16.1%
50-75%	14.0%
75-100%	42.8%

**37. How do you identify yourself? Please check all that apply:**

Caucasian / White	89.1%
Hispanic	4.2%
African-American / Black	3.1%
Asian-American / Asian	2.7%
Other	2.1%
Native American / Indigenous	1.4%

**38. What is your gender?**

Female	46.6%
Male	53.4%

**39. What is your age?**

22-30 years	4.9%
31-40 years	18.8%
41-50 years	32.9%
51-60 years	32.4%
61+ years	11.0%

**40. Are you a CSTA member?**

Yes	75.8%
No	24.2%

**41. If you are not a CSTA member, would you like to join CSTA?**

Yes	68.5%
No	31.5%