

School Technology Survey

U.S. School Libraries 2017

Methodology:

A survey invite was emailed to *SLJ* print and newsletter subscribers on October 14, 2016 with a reminder on October 24. The survey link was also shared on social media. A drawing for a \$300 Apple store gift card was offered as incentive to reply.

The survey closed in November 14 with 1,037 U.S. respondents. Data represented in total was weighted to reflect the National Center for Education Statistics (NCES) breakdown for elementary, middle and high schools nationwide.

The survey and data tabulation was performed in-house by *SLJ* research.

Summary:

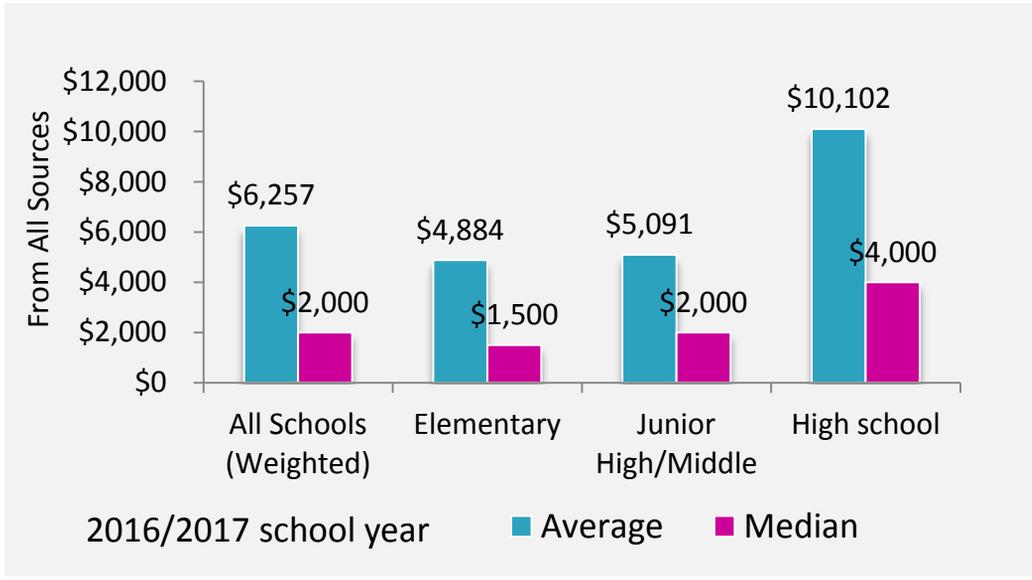
- The average amount that will be spent on technology for the 2016/17 school library rose to \$6,257, up from \$3,633 in 2014/15 (a 75% increase). The question in this year's survey was more specific, asking about money *from all sources* and reminding them to include \$ for digital resources/subscriptions, software & equipment.
- Only 35% of the library's technology spending comes directly out of the library budget. A bigger portion, 45%, originates from the school/district technology budget, with grants, donations, and fundraising accounting for another 19%.
- In 2015, only 20% of respondents said they were responsible for purchasing software & apps. That percentage rose to 46% this year.
- 41% feel that their school/district technology coordinator is "very supportive" of the library's role in integrating technology into the school. Only 3% say they are "not at all supportive."
- To help forge a positive relationship with the school/district technology coordinator, respondents suggest collaborating together to demonstrate how the library shares their vision for the students with regard to technology.
- Many school librarians are reducing their purchase of print nonfiction and relying on digital resources to make more class space in the library. But there are still librarians who complain that devices are too few and that their students haven't warmed to ebooks.
- Learning management systems, free web-based resources, and video hardware/software are the tech tools used most often with students. In an open-ended question about the most recommended tech tools for project-based learning, Google Classroom was suggested most often.
- The two types of hardware that over half of school libraries offer for student use are printers and desktop PCs (true for all library types). iPads, white boards and Chromebooks are the next most popular.
- Just over half of all school libraries (51%) do not offer any tech-related maker activities in the library. Of those that do, coding, circuit kits, and video making are the most popular. In fact, 41% of elementary school libraries offer coding for students.
- Are student-owned mobile devices sometimes allowed to be used during class? Yes in 81% of high schools, 59% of middle schools, and 26% of elementary schools. Over half of high school librarians (54%) have noticed that HS teachers' attitudes toward the use of student devices have relaxed over the last two years. Personal devices are most commonly used by students to read and for the calculator function (both 62%), and to access apps/web pages (59%).
- 68% of all school librarians feel their school has adequate bandwidth. This is up from 63% in 2015, but down from 82% in 2013.
- 55% of school librarians feel there are websites that are restricted by the school that are needed for instruction. This rises to 62% in High Schools. Social media sites, YouTube, and streaming sites are most commonly cited.

Summary:

- Nearly one-quarter of schools require students to receive computer science instruction (even at the elementary level). At the same time, no computer classes are offered at 40% of elementary schools, 29% of middle schools, and 12% of high schools.
- A third of school librarians expect to play a role in expanding the school's computer science offerings. Of those, one-in-five expects to take part in the "hour of code." Another 18% schedule coding activities during the school day and 17% offer coding clubs either before or after school.
- School librarians report that 60% of administrators, 68% of teachers, and 70% of students view them as technology leaders.
- Librarians' technology responsibilities include tech usage in the library (70%), and collaborating with teachers to create tech-integrated lessons (45%). Nearly half provide technology instruction, either at the classroom level (45%) or in the library (44%). 41% also lead professional development activities and 27% co-teach technology-rich lessons with partner teachers.

Dollars Spent on Technology for the Library

- On average, U.S. school libraries will spend an average of \$6,257 on technology in the 2016/2017 school year.
- Eighteen percent of schools plan to spend \$0 on technology.



Q. Please estimate the amount that will be spent on technology for your library during the 2016/2017 school year *from all sources*?

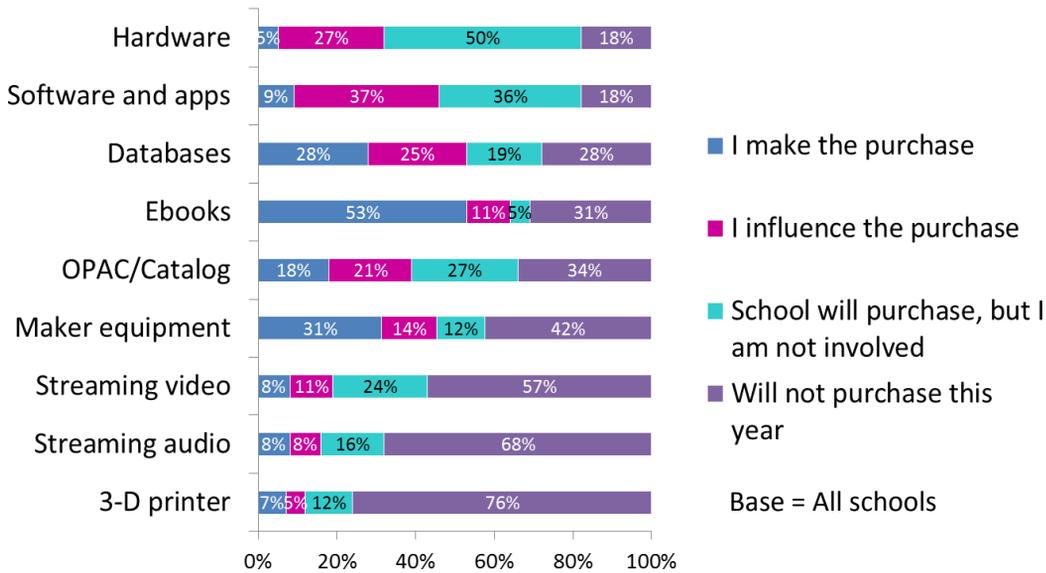
Funding Sources

- The onus to fund tech spending with the library budget money is highest at the high school level.
- Nearly 20% of technology spending is made possible through grants or donations.

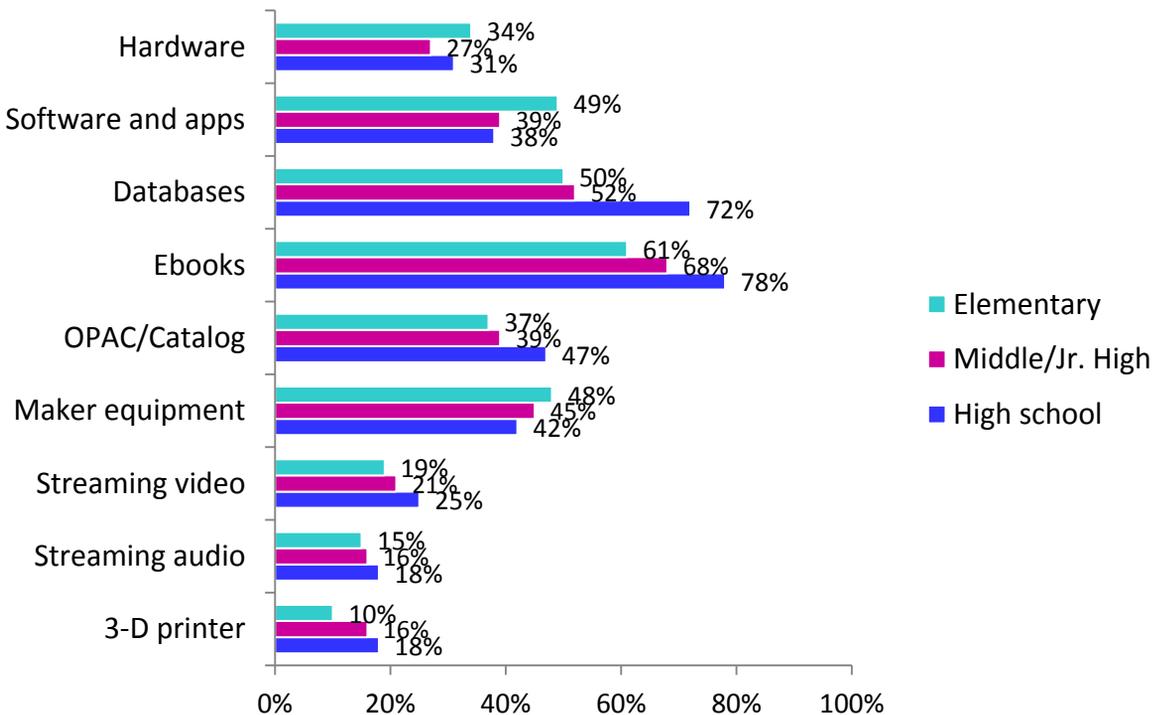
	All schools	Elementary	Middle/Jr. High	High School
School or district tech budget	45%	49%	49%	37%
Library budget	35%	29%	38%	54%
Donations/ Fundraising	13%	14%	7%	3%
Grant(s)	6%	7%	4%	4%
Other	1%	1%	2%	2%

Q. Approximately what percent of your technology spending will come from each of the following funding sources?

School Librarians' Influence on Tech Purchasing

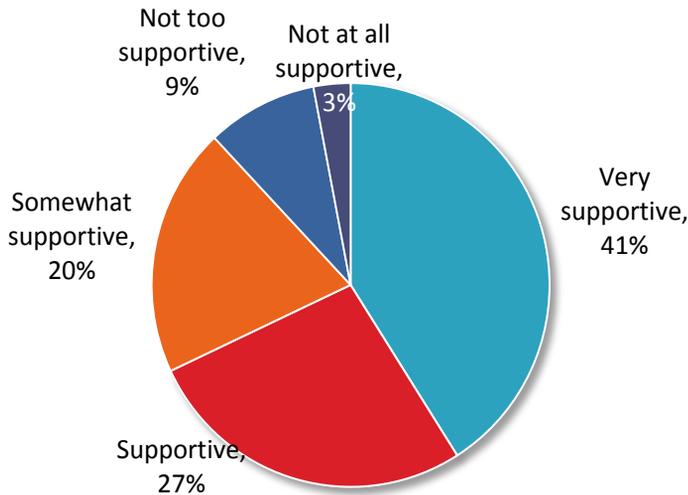


% of Librarians Involved in Tech Purchasing by Library Type



Q. What technology will your school library purchase this year, and what is your involvement?

Support from School/District technology Coordinator



- 68% of respondents say their tech coordinator is either very supportive or supportive.
- 12% feel he/she is either not too or not at all supportive.
- The numbers do not vary much by type of library.

Q. How supportive is your school/district technology coordinator of the library's role in integrating technology into the school?

Comments About Forging a Positive, Collaborative Relationship

I've recognized that "change is the new normal". I do my best to learn about and implement any new technology and work closely with our Tech Department to insure I know how to fix any problem that might arise.

I invite our district tech coordinator to visit the library often to see how students and teachers use our technology and also to talk about how we can integrate new ideas and technology. Then in decision-making meetings he has direct knowledge of our current status and our vision for the future.

You have to communicate and share a common vision for what the school wants students to be able to do.

I [] go out of my way to advocate for the fact that technology (be it our printer or chromebooks or databases) serves the district's entire curriculum and is not just a library or English department function.

I think the most important thing is selecting a time to collaborate together.

Get on the right committees! We now have a Library representative on our District's Technology Committee. It has made a huge difference for our Librarians.

Q. If you have suggestions about forging a positive, collaborative relationship with the school or district technology coordinator, please elaborate.

Transition of Nonfiction from Print to Digital Resources: Where Does Your School Stand?

We would like to do more, but the infrastructure isn't there yet -- not enough devices -- and, honestly, the students are not warming up to eBooks. They still want "real" books. They do use the online databases though, just not the eBooks.

We switched buildings and our libraries suffered. I went from 77 shelves for books to 30 so I had to get rid of lots of books. So the majority of my book budget goes to eBooks. My principal likes to use the library as a place for meetings...

At this time, about 95% of our collection is print. We will begin a gradual transition from print to digital this year.

I have just begun to heavily weed my print reference section, as it is not used. I hope to make room for more class space and slowly build up the ebook collection in nonfiction.

Definitely relying more on databases. Most nonfiction purchases are narrative or direct curriculum ties. No print reference materials purchased

Zero. budget is too small and too few students have access to electronic resources at home.

District has asked us to build a plan to transition to 75% digital resources. We currently have approximately 5% of our fiction/nonfiction collection in ebooks, but we have almost all of our reference material in databases (EBSCO, Britannica, etc.) rather than print resources.

Q. Some schools are transitioning a portion of the print nonfiction to digital resources. Briefly tell us where your school stands with regard to this transition.

Technology Tools: Usage and Desire for More Info

- Learning management systems are the most used tech tool by all types of school libraries. Free web-based resources and video hardware/software round out the top three.
- Digital publishing tools, circuitry/robotics kits, virtual reality/360 degree video, and OER resources are the tech tools librarians would most like to learn more about.

	Use with Students				Want to Learn More			
	Total	Elem	MS	HS	Total	Elem	MS	HS
Total	100%	100%	100%	100%	100%	100%	100%	100%
Learning Management Systems (e.g., Google Classroom, Edmodo, Schoology)	72	67	82	84	23	27	16	15
Free web-based resources (e.g., EasyBib, Powtoon)	65	59	76	83	29	33	18	16
Video hardware and software	53	55	55	50	28	27	29	27
Audio hardware and software	49	50	51	50	25	25	26	22
Coding/programming tools (e.g., Scratch)	45	53	42	20	43	39	47	57
Photography hardware and software	37	37	35	40	32	32	38	29
Circuitry/Robotic kits	26	27	29	19	53	53	55	50
Digital publishing tools	23	22	23	26	58	59	60	52
Social applications (e.g., Instagram, Snapchat)	21	15	26	42	31	30	37	32
Open education resources (e.g., OER Commons)	16	15	17	25	48	47	53	46
Virtual reality or 360 degree video	12	12	12	14	49	46	55	56
None of the above	8	9	5	4	3	3	2	1

Q. Which of the following tech tools do you use with students? Which tools would you like to learn more about?

Recommended Tools for Project-Based Learning

- Google Classroom received by far the most mentions

iPads and Chrome books. We are using them for most all projects done in the library.

Google Classroom is our main use because of its ability to put everything we need in one spot. It serves as a home base for projects and students can access resources through it and continue onward.

Google Apps! We do not have Google Classroom available but we do use the apps and this is a fantastic way for students to collaborate, create and present.

This is too broad of a question to answer, but I can say that your lesson objective drives your decision for how the tool is used in the learning. There are various elements that need to be considered, before determining the tool, (e.g. Guided, facilitated, individual, cooperative/collaborative, gradual release, etc.); not to mention the student's background knowledge on the tool and the subject at hand.

NoodleTools is a wonderful multi-purpose tech tool that we use a lot in our middle school for all kinds of projects, including our project-based learning curriculum.

Q. What tech tools do you particularly recommend for project-based learning and how are you using them?

Hardware Available in School Library

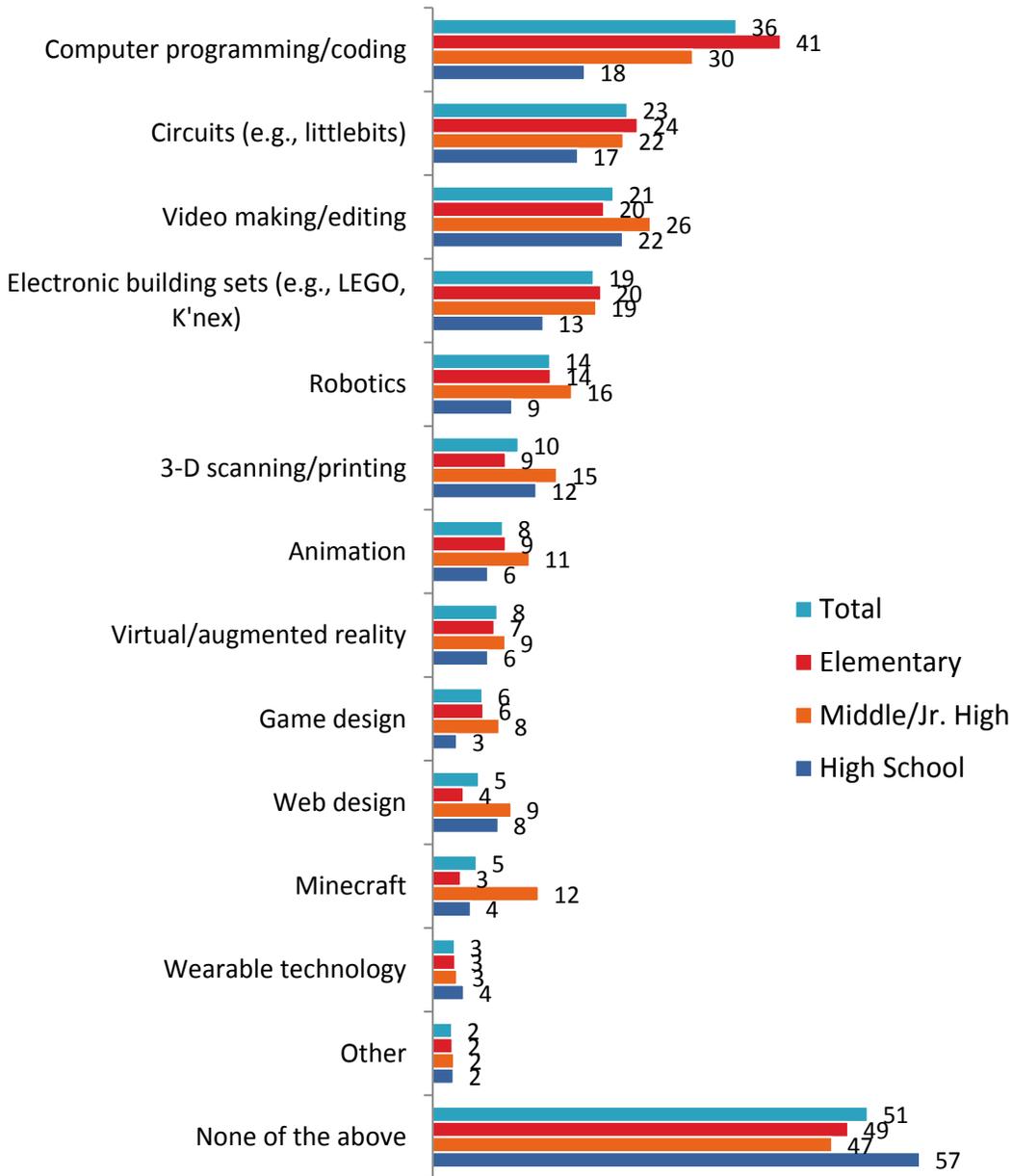
- The two types of hardware that over half of school libraries offer are printers and desktop PCs.

	Total	Elem	MS	HS
Total	100%	100%	100%	100%
Printer	69	60	88	93
PC desktops	63	57	71	81
iPads	46	49	42	35
Whiteboard	46	48	46	37
Chromebooks	38	35	49	42
PC laptops	34	33	35	36
Mac desktops	18	17	16	22
Mac laptops	13	14	12	11
3-D printer	10	8	15	13
Assistive devices for special education	9	9	10	8
Other tablets	7	8	8	6
Other (includes ereaders, TV, scanners, projectors, headphones, etc.)	14	13	16	18

Q. What type of hardware is available for student use in the school library?

Tech-Related Maker Activities in Library

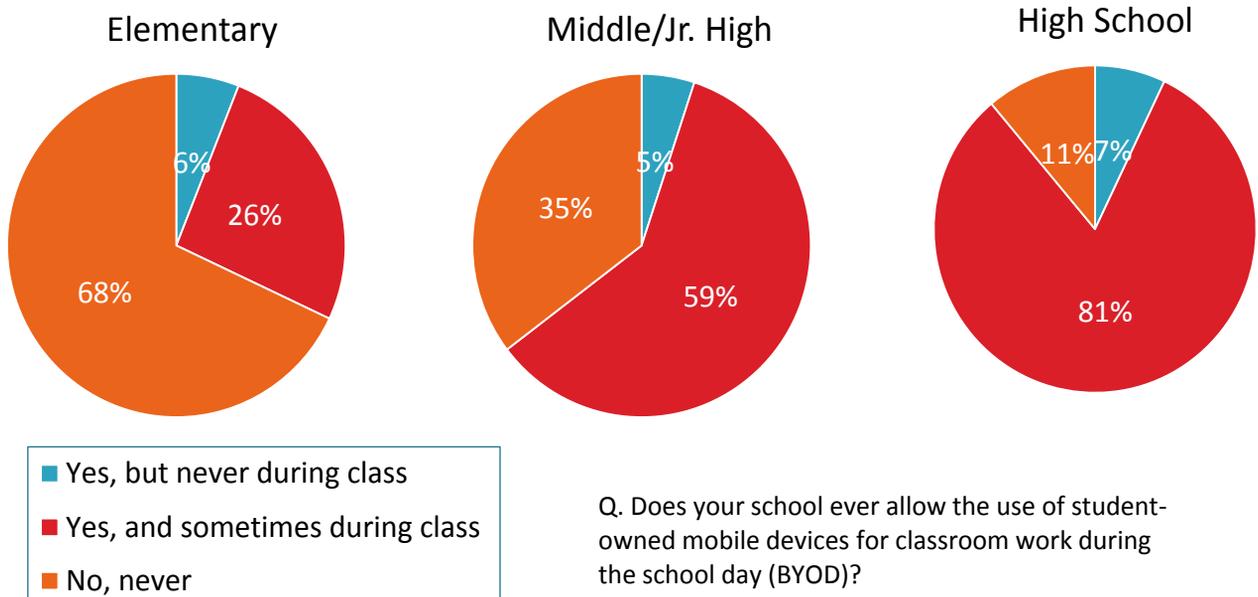
- Just over half of all libraries (51%) do not offer any tech-related maker activities.
- 41% of elementary school libraries offer coding for students



Q. What tech-related maker activities does your library offer to students?

Student-Owned Mobile Devices Allowed?

- 81% of high schools sometimes allow the use of student-owned devices for schoolwork during class.



Attitudes Toward BYOD Changing

- 54% of high school librarians have noticed that attitudes are relaxing

	Total	Elem	MS	HS
Total	100%	100%	100%	100%
Attitudes are getting stricter	5	4	13	7
Attitudes remain strict	41	47	32	18
Attitudes remain relaxed	7	6	9	16
Attitudes are relaxing	34	27	40	54
Don't know	13	15	7	5

Q. Over the last two years in your school, have you noticed a change in teachers' attitudes regarding students' use of personal mobile devices for classroom work?

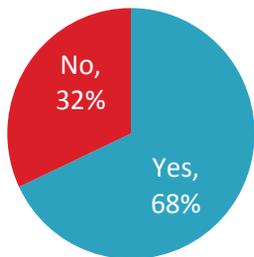
Personal Devices used to Aid Learning

- Reading is the number one answer for elementary students.
- Reading comes in third for middle & high school students behind calculator and apps/web pages.

	Total	Elem	MS	HS
Total	100%	100%	100%	100%
Read	62	57	61	64
Calculator	62	39	77	83
Apps/web pages	59	40	62	78
Class polls/Notifications systems (e.g., ClassDojo)	45	30	50	64
Conduct research	45	34	42	60
Learning management systems (e.g., Google Classroom, Edmodo)	40	21	46	61
Project creation (audio, video, photography)	40	29	40	52
Keep organized/Access calendar	34	16	31	56
Note taking	30	21	24	48
Text teachers	19	7	15	39
Take AR tests	7	12	2	3
Other	10	5	14	13
Don't know	1	1	0	1
None of the above	9	18	7	0

Q. In which ways do students use their own personal mobile devices to aid learning during school?

Adequate Bandwidth?



- 68% of all school librarians feel their school has adequate bandwidth.
- The percentage falls to 66% among high school librarians .

Q. Would you say your school has adequate bandwidth to support current needs?

Restricted Sites

- 55% of school librarians feel there are websites that are restricted by the school that are needed for instruction. This rises to 62% in High Schools.
- Social media sites, YouTube , and streaming sites are most commonly cited.

	Total	Elem	MS	HS
Total	100%	100%	100%	100%
Social media (e.g., Twitter, Facebook, Pinterest)	32	30	40	38
YouTube	26	25	30	30
Streaming (e.g., Pandora, Netflix)	25	23	27	28
Gaming sites	20	17	29	27
Blogs	15	13	23	22
Coding sites	6	6	5	7
Other	6	6	5	9
None that are essential	45	47	41	38

Q. Are any sites restricted by Internet filtering in your school that you feel are needed for instruction?

Computer Science As Part of School Curriculum

- Nearly one-quarter of schools require students to receive computer science instruction (even at elementary level).
- Zero computer classes are offered at 40% of elementary schools, 29% of Middle Schools, and 12% of High Schools.

	Total	Elem	MS	HS
Total	100%	100%	100%	100%
All students are required to receive computer science instruction	24	24	25	22
Some students are required to receive computer science instruction	8	8	9	6
Students may elect to take computer science classes	18	6	31	55
No computer science classes are offered	34	40	29	12
Other	16	21	6	4

Q. How is computer science part of the curriculum in your school?

Librarians' Role in Providing Computer Science Offerings

- A third of respondents gave a definitive "Yes" and another 27% answered "Maybe."
- The percentage of librarians planning to offer computer science instruction is highest in elementary schools: 39% Yes/29% Maybe.

	Total	Elem	MS	HS
Total	100%	100%	100%	100%
Yes	33	39	28	14
No	39	32	47	63
Maybe	27	29	25	24

Q. In the 2016/2017 school year, do you expect to play a role in expanding your school's computer science offerings, by helping students learn to code, for example?

Computer Science Offerings Librarians Expect to Offer

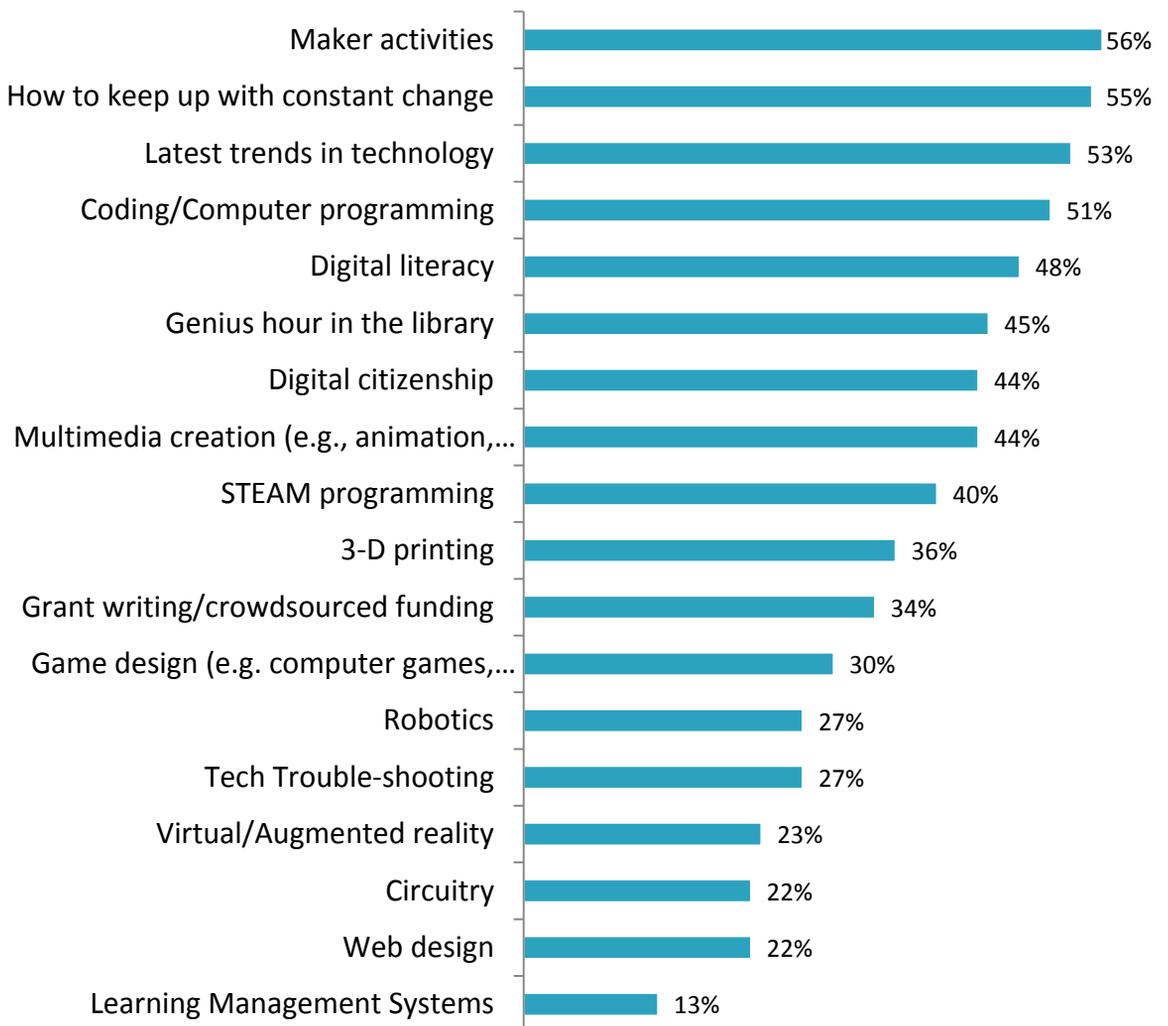
- One-in-five respondents expects to participate in “hour of code”
- 18% will provide coding activities during school time and 17% will encourage coding either before or after school in a club setting.

	Total	Elem	MS	HS
Total	100	100	100	100
Participate in "hour of code"	21	22	22	15
Coding activities during school day/library time	18	21	9	9
After/before school activities/Coding club	17	17	20	18
Maker space	12	11	17	12
Code.org	10	12	1	6
Teach Computer Science	8	9	4	6
Collaborate with teachers	7	6	12	6
Robotics activities	5	5	4	0
Planning to teach coding soon	3	4	3	0
Scratch	2	2	3	3
Day of Code	2	2	4	3
Digital literacy/Citizenship	1	1	4	0
Currently learning to code	1	1	0	0
On school's tech team	0	1	1	3
Other	15	13	18	30

Q. If yes, please elaborate how you plan to play a role in expanding your school’s science offerings.

Sought After Tech Skills

Top 3 for Elementary	Top 3 for Middle School	Top 3 for High School
Maker activities, 55%	Maker activities, 60%	How to keep up with constant change, 57%
How to keep up with constant change, 54%	How to keep up with constant change, 53%	Latest trends in technology, 56%
Coding/Computer programming, 54%	Genius hour in the library, 53%	Digital literacy & Maker activities, tied at 51%

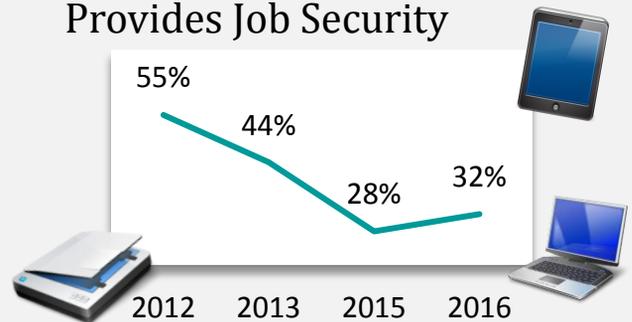


Q. What tech-related skills are you interested in learning more about for your job? Base = All schools.

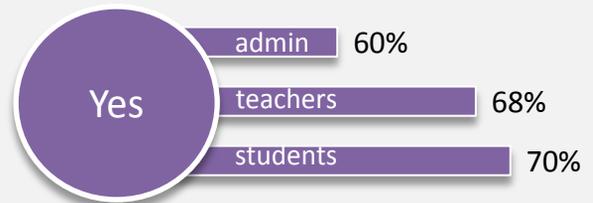
Technology Leadership of School Librarians

- The percentage saying tech knowledge provides them with job security rose to 32% this year.
- School librarians report that 60% of administrators, 68% of teachers, and 70% of students view them as technology leaders.
- 70% are responsible for tech usage in the library, and 45% collaborate with teachers to create tech-integrated lessons .
- Nearly half introduce technology at the classroom level or introduce students and teachers to new technologies in the library.
- 41% lead professional development activities and 27% co-teach technology-rich lessons with partner teachers.

Tech Knowledge Definitely Provides Job Security

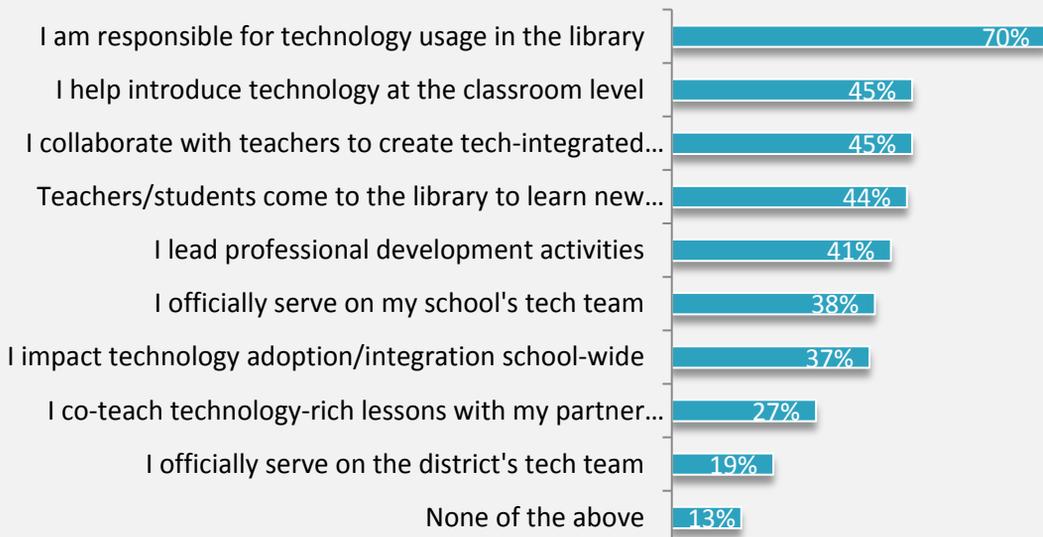


Q. Do you feel your technology skill set affords you with increased job security?



Q. Are you viewed as a technology leader in your school by...?

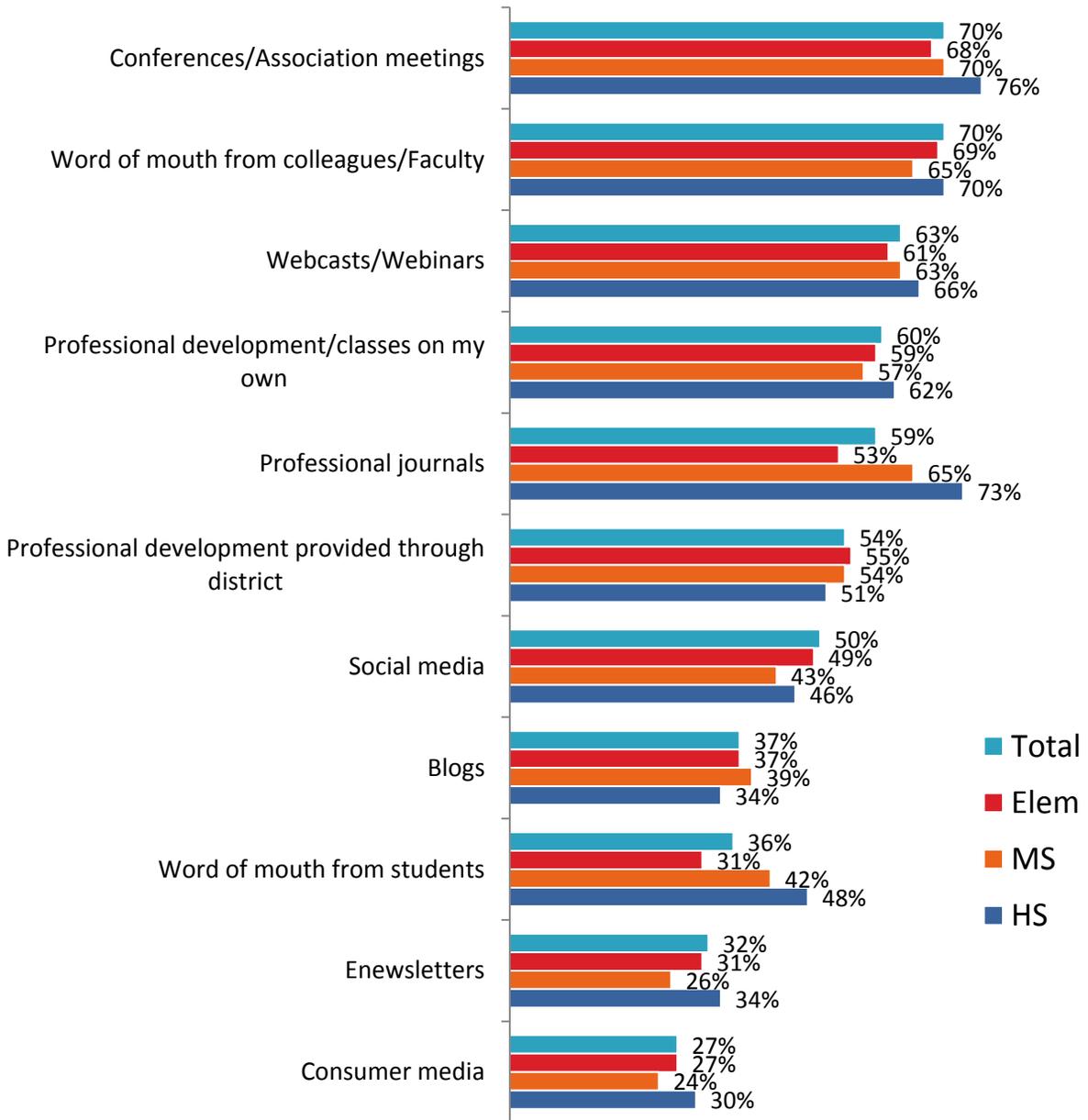
Technology Responsibilities



Q. Which of the following statements describe your involvement in technology usage at your school?

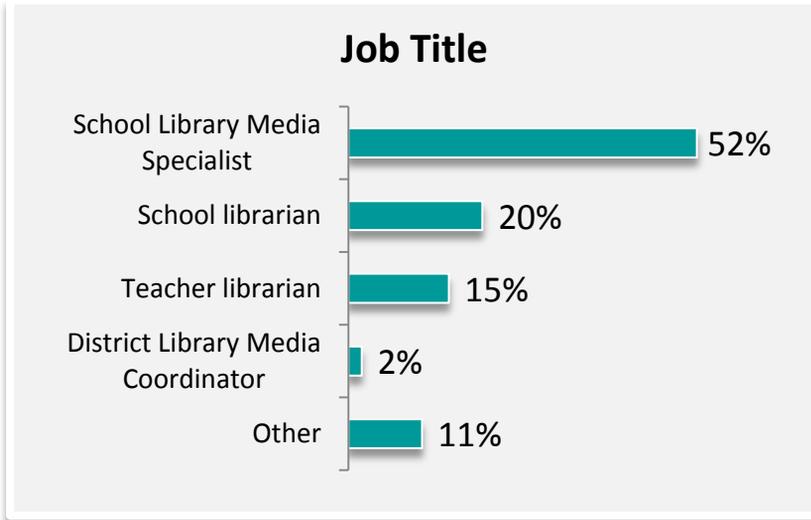
Staying Informed About New Tools & Ideas for Integrating Technology

- Conferences/Association meetings and word of mouth from colleagues/faculty are the top methods school librarians use to stay up on new ideas for tech.
- Professional journals are used most widely by high school librarians.



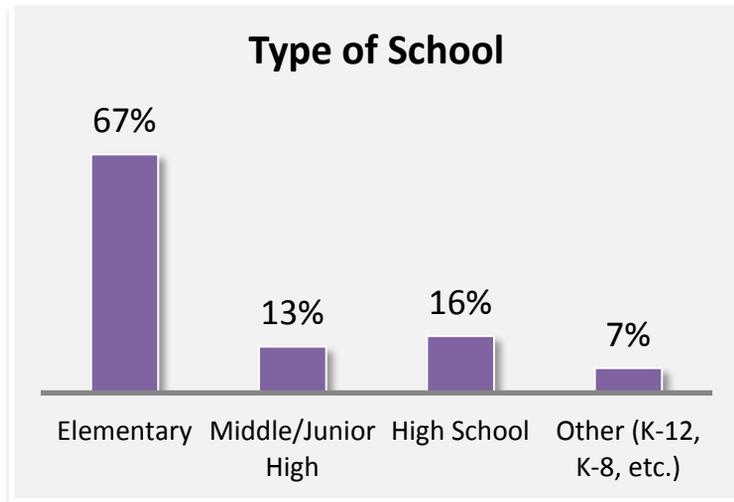
Q. How do you stay informed about new tools and ideas for integrating technology into the school?

Respondent Profile



- 12% work in two or more schools.

School Profile



- Average school enrollment = 685 students
- Average LMC '16/'17 budget = \$7,100 (8% had no budget)
- 92% are public schools
- 50% of schools classified as Title 1

