

Background

In SY 2019-20, WCSD began work to develop a Technology Strategic Plan to help ensure all students and staff have access to the technology and technology skills they need to be successful. To inform this plan, WCSD sought input from staff, families, and community members through an online survey about the barriers to using technology at home and in classrooms, and recommendations for improving student technology use in the future.

Of the 25,312 staff and families who received the survey directly, 2,731 families, staff, and community members completed the survey. Survey respondents were asked to indicate their role. Response rates for each role type were as follows:

- 10.8% overall (n = 2,731)
- 15.8% of staff (n = 1,689)
 - 1,138 Teacher/Certified
 - 145 Administrators
 - 308 Education Support Professionals
 - 98 Central Office Staff
- 8.9% of families (n = 1,267)
 - n = 53 families completed in Spanish
- n = 56 community members
- 242 school staff were also parents/guardians

A total of 51.3% of school staff worked at an elementary school, 17.2% worked at a middle school, and 24.2% worked at a high school. An additional 7.2% worked at another school configuration. One-third (31.1%) of staff respondents worked at a Title I School.

Nearly 40% (39.8%) of families had children in grades K-2, 37.2% in grades 3-5, 44.7% in grades 6-8, 38.3% in grades 9-12, and 6.8% in Other grades (pre-K or post-12th).

SURVEY METHOD

All district staff (N = 10,688) received an email from the Chief Information and Innovation Officer on January 21, 2020 inviting them to respond to the survey. One additional reminder was sent on February 6th, and the survey closed on February 12th. A random sample of 14,624 families comprising one-third of all district families with email addresses also received an email invitation and reminder to complete the survey via BlackBoard Connect during that same period. The technology committee opted to use a random sample of families to reduce survey burden and ConnectEd calls to families as three other district-sponsored surveys were in the field within the same two months. The survey was also available to the public via a link on the main WCSD home page and advertised via the Interim Superintendent weekly message.

Results

All Respondents (N = 2,731)

All respondents, including administrators, teachers, education support professionals, families, and community members, received four identical questions, before branching into role-specific questions. The first two questions asked about the importance of technology in the classroom (Figure 1) and the importance of technology skills for students' college and career readiness (Figure 2). The vast majority of respondents felt technology skills were extremely or very important to college and career readiness (80.6%), and 75.7% believed technology in the classroom was essential.

Figure 1. All survey respondents' attitudes towards the question "I feel technology in the classroom is..." (N = 2,715)

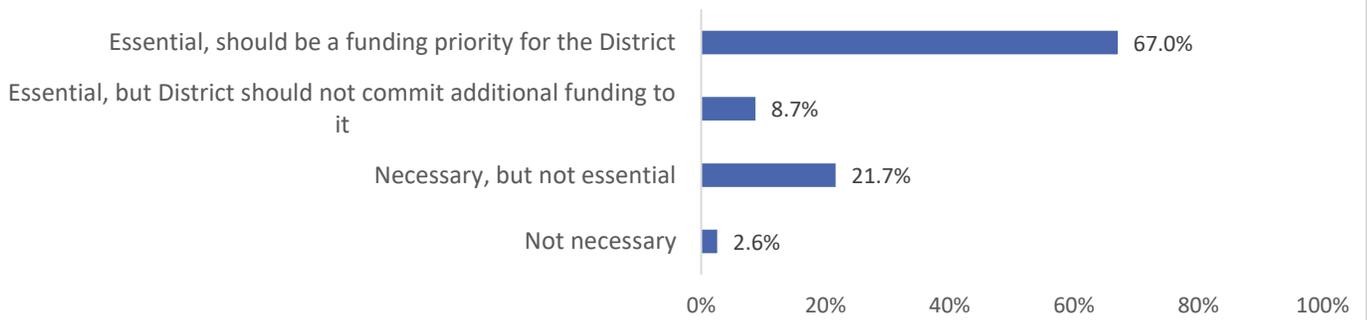
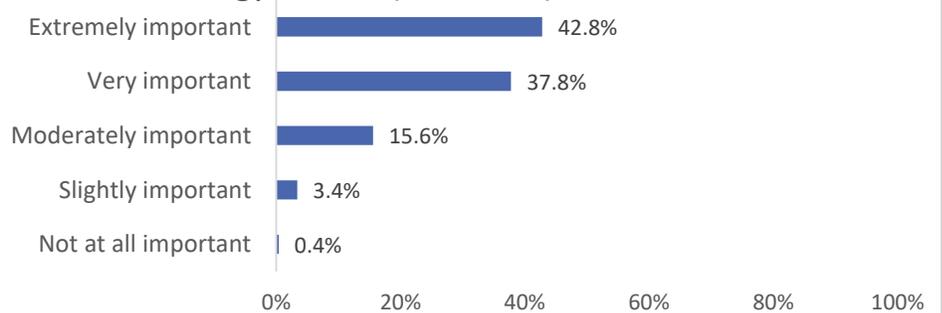


Figure 2: All survey respondents' attitudes towards the question "Among all the skills students need to be ready for college or a career, how important are technology skills?" (N = 2,724)



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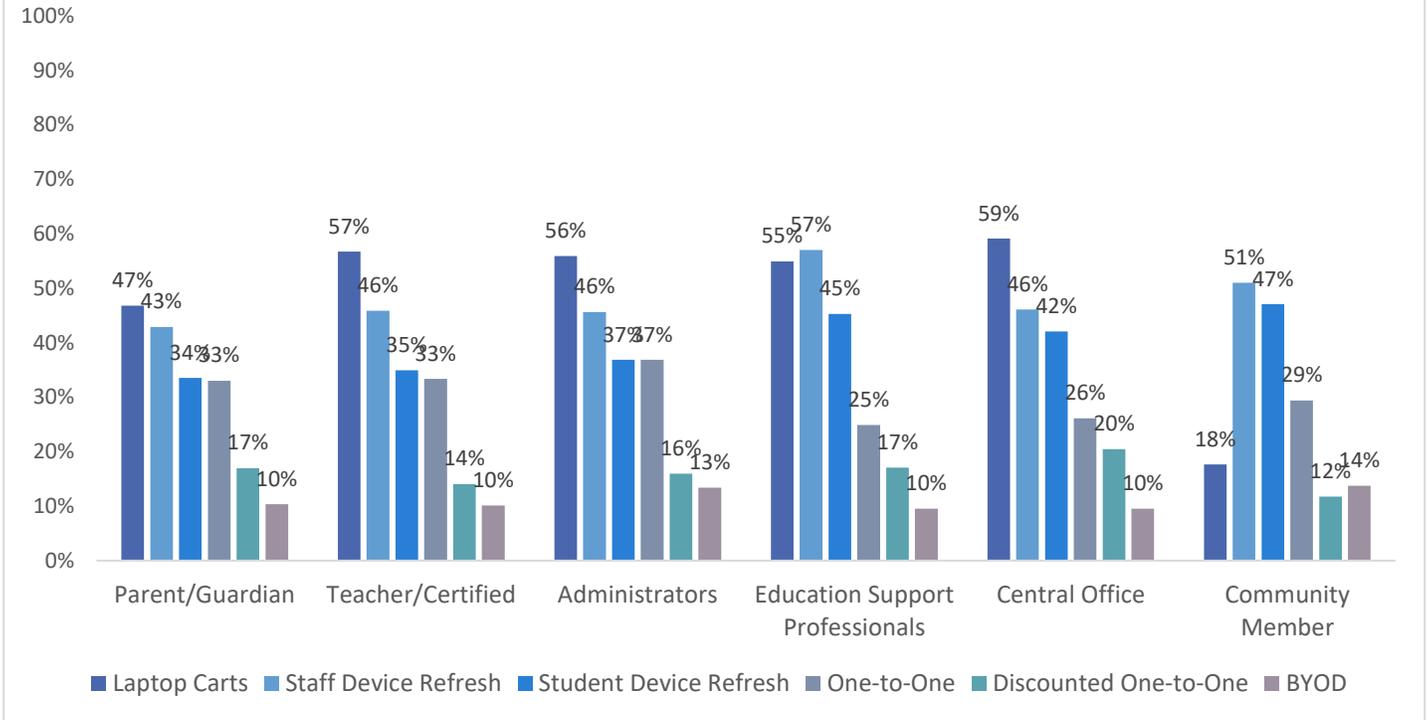
All survey respondents were also asked to respond to a series of proposals for future technology funding in the district. Table 1 reports the results of these questions. A total of 84.3% of respondents listed having more accessible laptop or iPad carts in their top three choices for technology funding, followed by refreshing staff devices (71.9%), and refreshing student devices (70.1%). Funding a Bring Your Own Device (BYOD) initiative was least supported, with nearly a third of respondents (29.8%) indicating they did not support that option at all.

Table 1.
Respondents' preferences for technology funding (N = 2,393).

	1= Most likely to support	2	3	4	5	6 = Least likely to support	Do not support this option at all
All students having regular access to a device at school to use in the classroom ("More Accessible Laptop or iPad Carts").	52.1%	19.7%	12.5%	6.8%	3.2%	3.1%	2.5%
Refreshing existing outdated computers, laptops, or tablets for staff ("Staff Device Refresh").	45.9%	14.9%	11.0%	7.5%	6.6%	8.0%	6.1%
Refreshing existing outdated laptops, computers, or tablets for students ("Student Device Refresh").	36.1%	18.6%	15.3%	11.5%	7.1%	6.2%	5.1%
All students receiving a district-issued laptop or tablet for use in the classroom and at home ("One-to-One").	32.1%	13.1%	12.6%	11.8%	8.9%	9.0%	12.5%
All students receive a discounted laptop or tablet for use in the classroom and at home ("Discounted One-to-One").	15.9%	13.4%	16.2%	15.5%	12.0%	12.4%	14.5%
All students being allowed to bring their own laptop or tablet to school for use in the classroom ("Bring Your Own Device").	10.6%	8.8%	9.6%	10.4%	9.1%	21.6%	29.8%

As Figure 3 indicates, these findings largely hold across role types, with families, teachers, administrators, and Central Office Staff all selecting laptop carts and staff and student device refreshes as their number one preferred use of spending for technology.

Figure 3. All survey respondents' top preference for technology funding, by role



All respondents were asked one final question about whether they had any additional comments about technology in WCSD. A total of 846 survey-takers (31% of all respondents) provided an open-ended comment. The following summary describes the primary themes that emerged from an analysis of these open-ended comments. Themes are listed in order of the frequency with which they appeared.

Negative Comments about Technology in WCSD

1. Concerns about use of technology in school

- Concerns about health of students having too much screen time/addiction (especially elementary students)
- Students misuse technology in the classroom and are often distracted by it
- Using/overusing technology harms instruction
- Fears about students losing writing skills, social skills, organizational skills etc. if required to use too much technology
- Students can easily access inappropriate content at school

2. **Concerns about Bring Your Own Device or One-to-One Initiatives**
 - District needs to better research how to roll out these initiatives effectively
 - Initiatives do or may enhance inequities between schools and students
 - Concerns about whether students are responsible enough to care for devices
 - Monitoring students' technology use at schools is/would be challenging for staff
3. **Concerns about technology inequities across schools**
 - Title I and new schools have access to better technology than non-Title I, older schools
 - Parent fundraising groups responsible for funding technology
4. **Staff and student devices are very outdated**
 - Staff report that their devices are very old and not effective for classroom use
 - Staff report that student devices are too slow or ineffective for classroom use
5. **Frustration that many applications, devices, or software are blocked by IT/ district-endorsed products are not effective**
 - Microsoft Teams/Office 365 is not an effective product
 - Google products were effective and staff are frustrated they are no longer supported
 - Apple products are not well supported
 - Many other applications are not supported by district
 - The approval process for applications is slow or not effective
6. **Need more/faster IT support at schools**
 - Insufficient IT support at schools
 - District IT support is not efficient or effective
7. **Cost concerns about technology**
 - Spending money on technology is not a good use of district funds given other budgetary needs

Positive Comments about Technology in WCSD

1. **Technology skills are important and should be better supported/funded by district**
 - Students need strong instruction in technology to be college and career ready
 - It is critically important for students to have equitable access to technology
 - Students should receive a device from the district

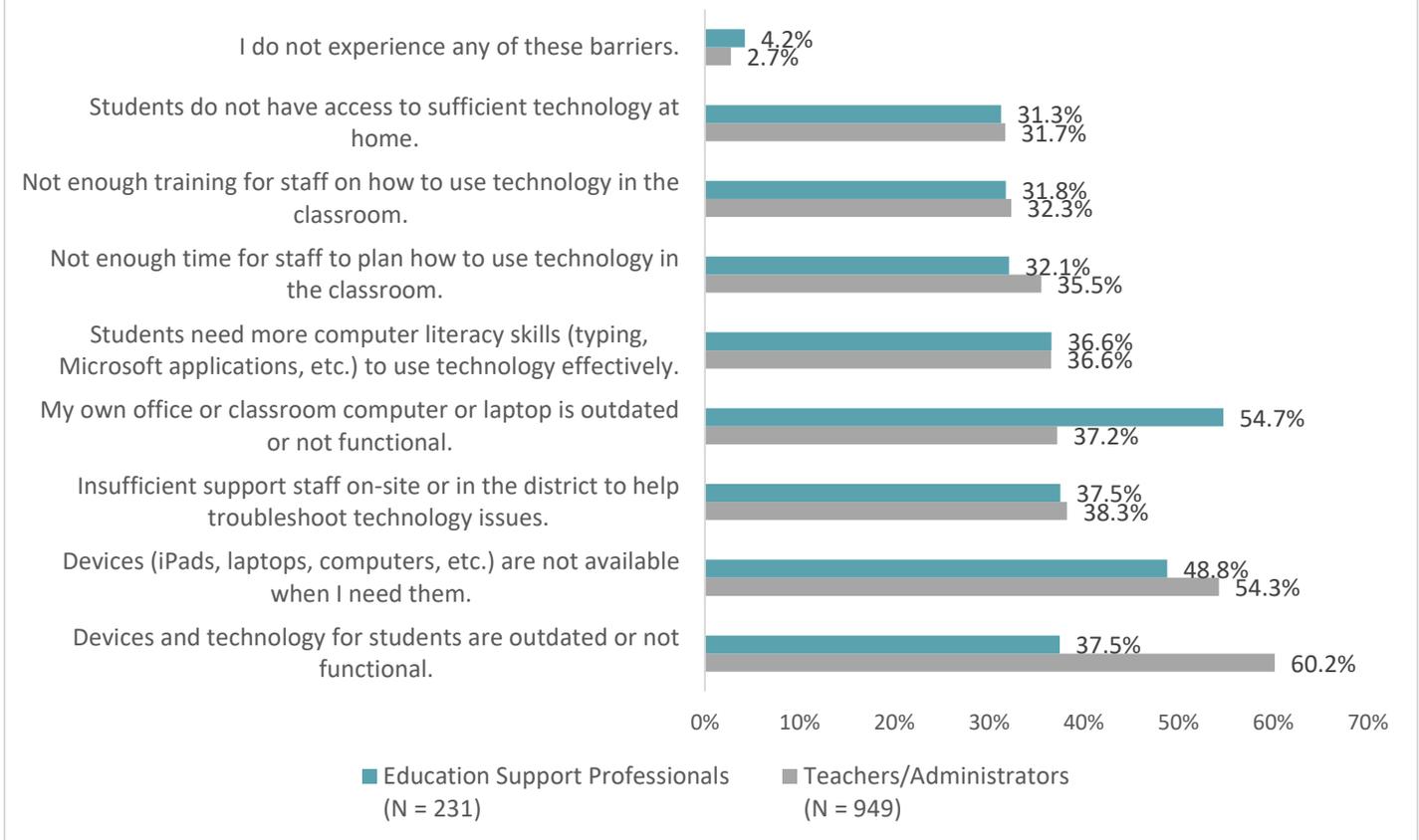
WCSD Staff Responses (N = 1,689)

Teachers, Administrators, and Education Support Professionals were asked to select the top three barriers to effective use of technology at their schools. Figure 4 below reports the results of this question. Teachers and administrators were most likely to report that devices for students were not functional (60.2%) or not available to them when needed (54.3%), while Education Support Professionals were most likely to report that their own staff device was outdated or not functional (54.7%).

An additional 97 school staff described additional barriers to using technology in their school or classroom through an open-ended comment section. Listed barriers included the following:

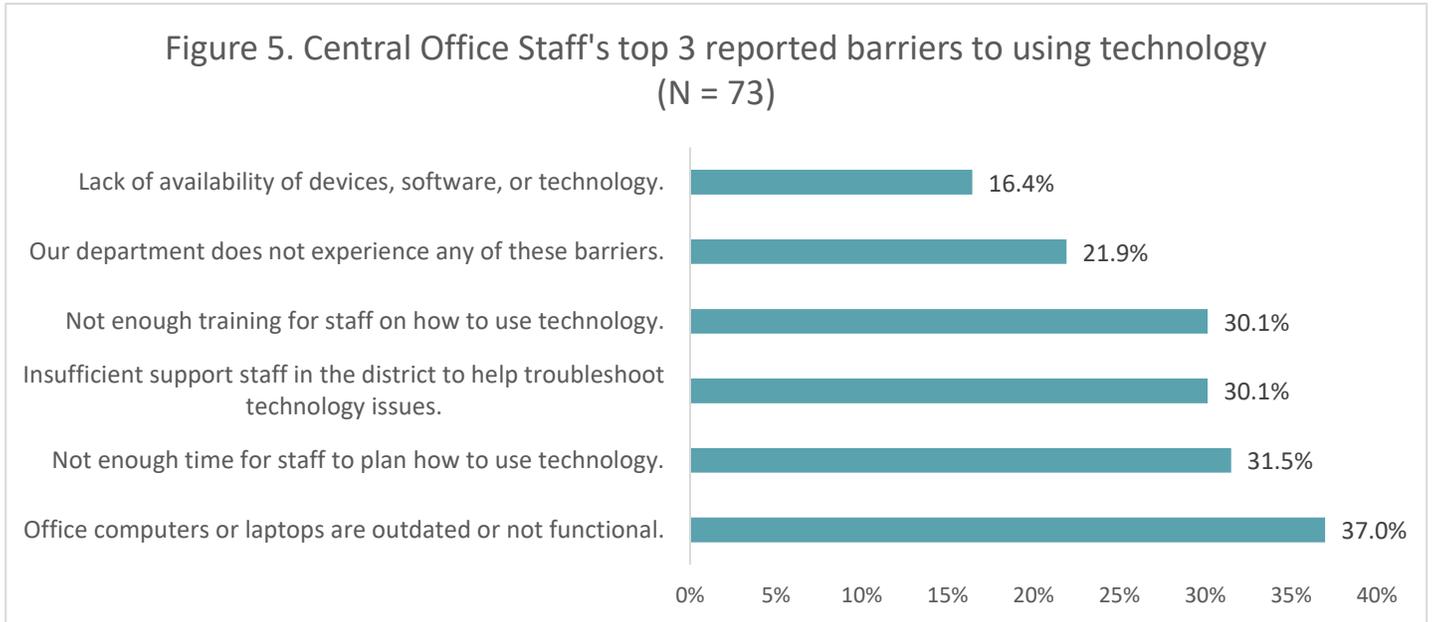
- Slow bandwidth/WiFi
- District barriers to using specific platforms or applications, including lengthy approval processes, and lack of support for certain products (e.g., Apple)
- Lack of responsiveness from IT for broken or non-functioning devices
- Managing discipline issues around technology
- Lack of devices for students and equitable devices across schools

Figure 4. Teachers/Administrators' and Education Support Professionals' top 3 reported barriers to using technology

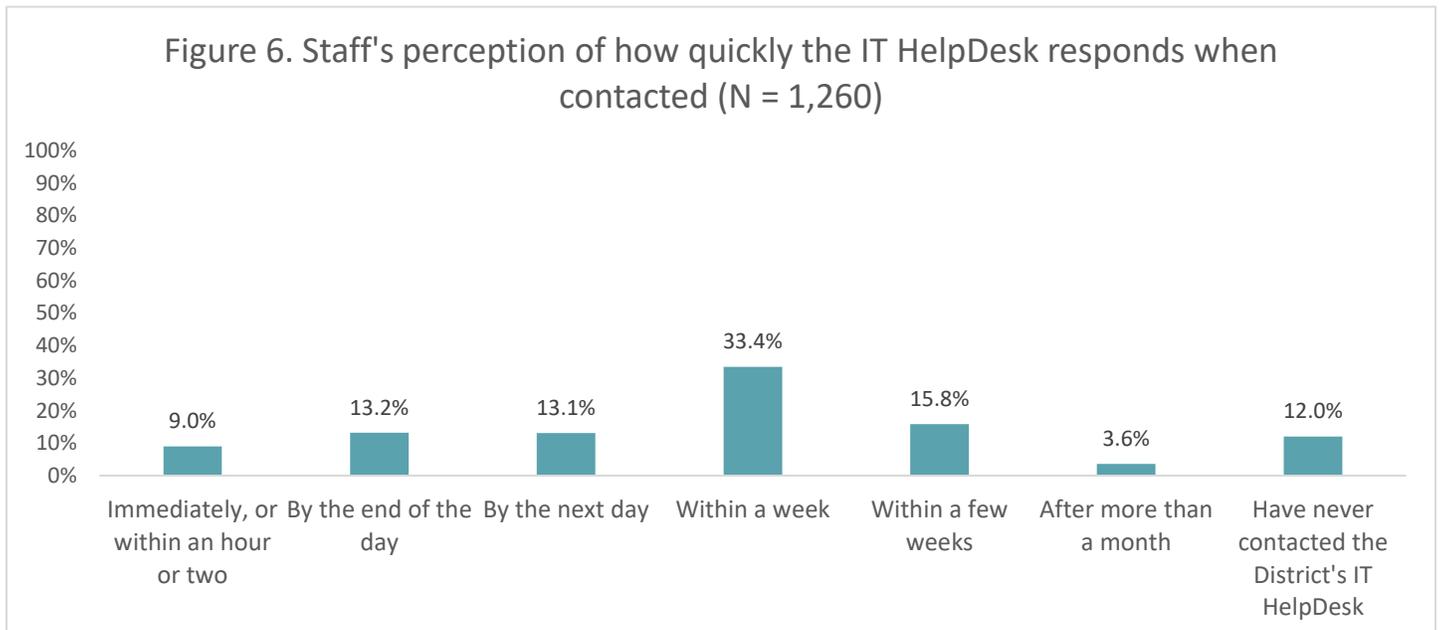


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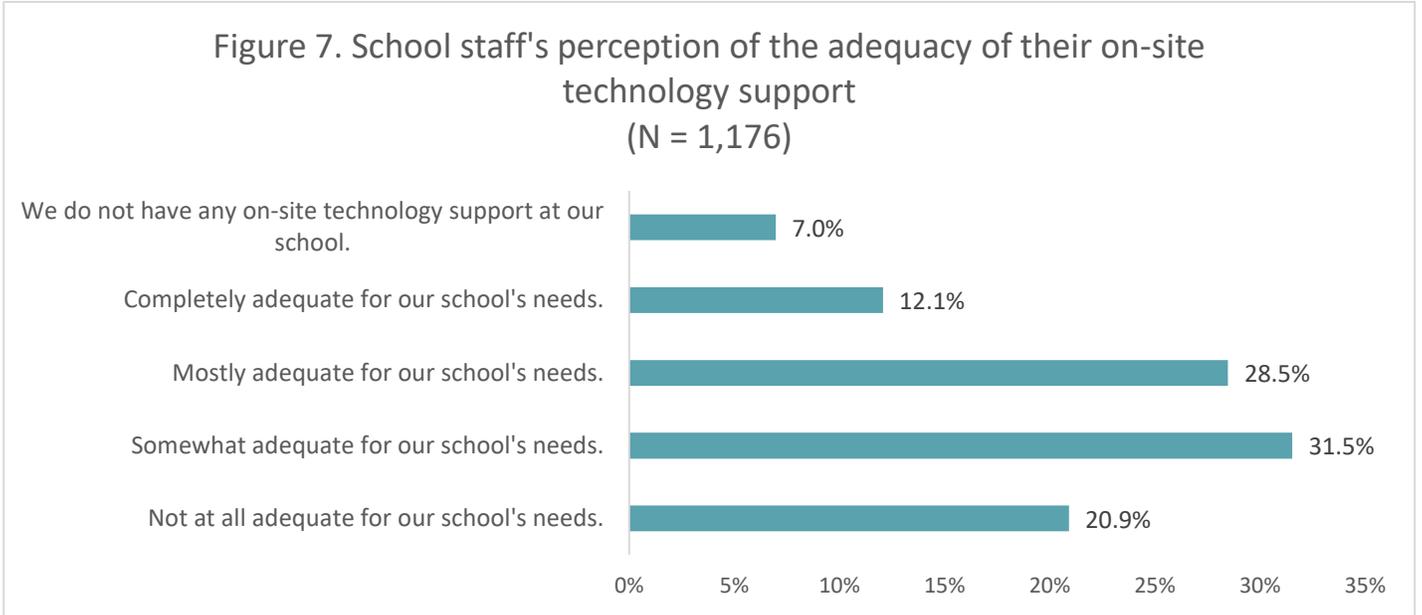
Figure 5 displays the results of parallel questions asked of Central Office staff about barriers to using technology. A total of 37% reported that their office computer or laptop was outdated or not functional. Additional barriers were provided in 11 open-ended comments and included frustrations with Microsoft Teams' functionality and slow internet.



Teachers, Administrators, Education Support Professionals, and Central Office staff were asked how quickly they typically received support for a device or internet when they contacted the IT HelpDesk (Figure 6). The majority of staff reported that they received a response within a week.

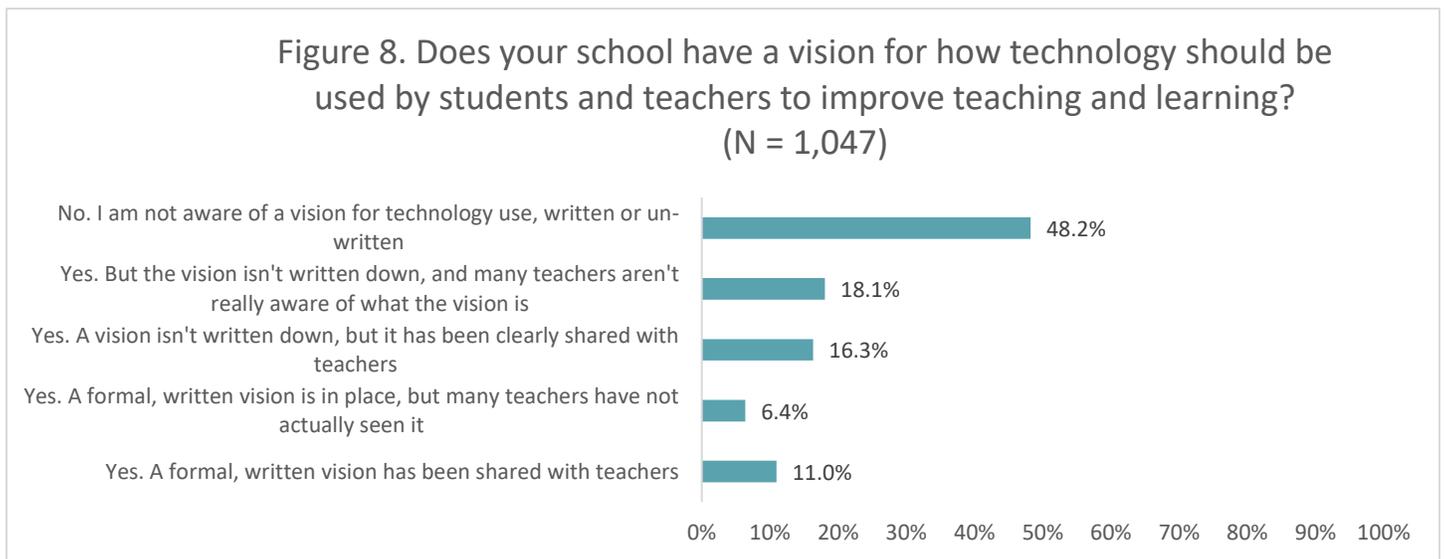


School Staff (excluding Central Office) responded about the adequacy of their on-site technology support (supported **not** provided by the IT Department; Figure 7). Just over 40% of school staff reported that their on-site technology support was completely or mostly adequate for their schools' needs.



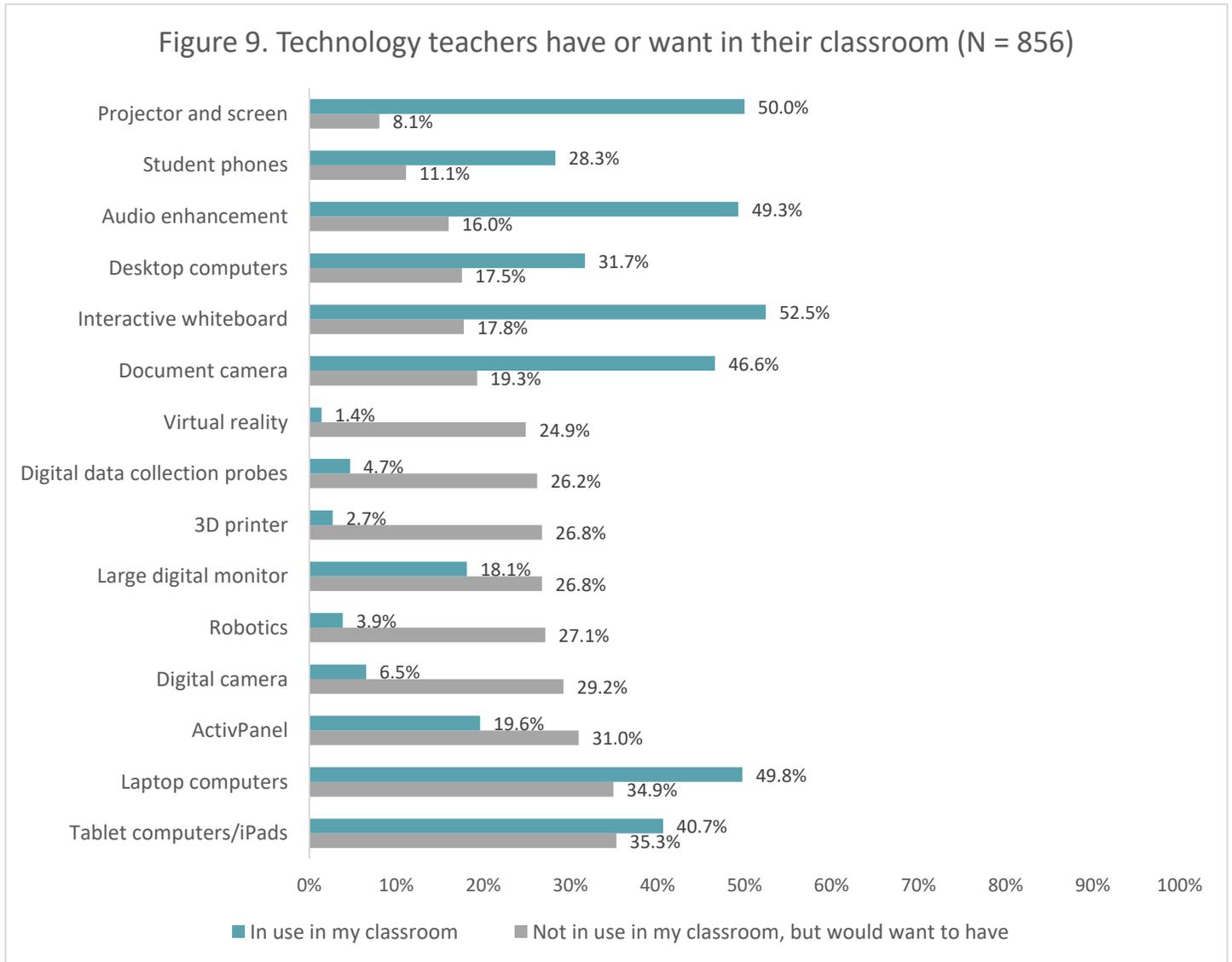
Additional Teacher and Administrator Results

Teachers and administrators received several additional questions specific to their roles. First, they were asked whether their school had a vision for how technology should be used by students and teachers to improve teaching and learning in place (Figure 8). Nearly half of all respondents (48.2%) indicated that they did not have a vision for technology in place. Teachers were more likely to report not having a vision in place (50.6%) compared to administrators (28.2%).



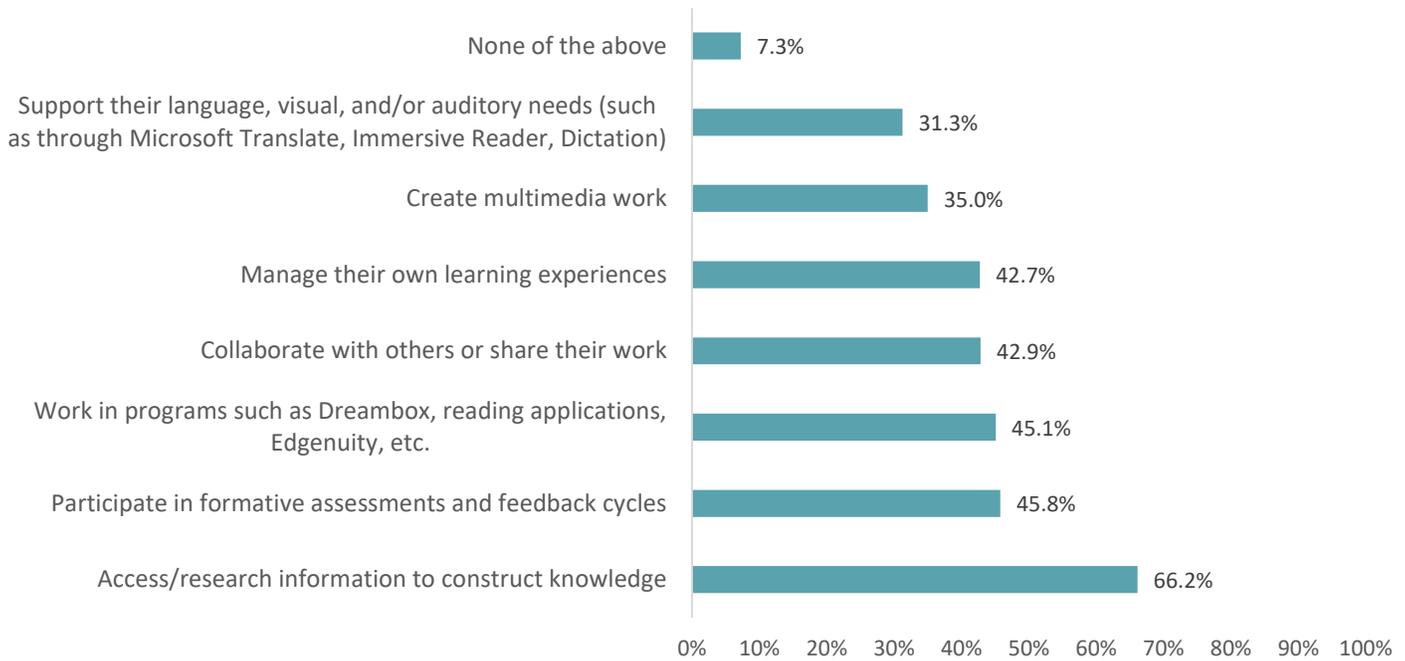
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Teachers were presented a list of technologies and asked to indicate if they currently had them in their classroom, or if they would want them. Figure 9 below reports the results of these analyses. Teachers most wanted tablet computers/iPads, laptops, and ActivPanels in their classroom. Fifty-two teachers also left open-ended comments about technology they wanted in their classes. The majority of requests included more functional versions of the devices they do have, including their staff computer, student laptops, and ActivBoards/projectors.



Teachers responded to a series of questions about how students use technology in their classroom (Figure 10). Two-thirds of teachers reported that their students used technology to access/research information for knowledge construction. Another 13.1% (n = 112) of teachers listed other ways they used technology. “Other” uses frequently included word processing and writing, digital textbooks, practice assessments, and various supplemental instructional applications.

Figure 10. How students use technology in teachers' classrooms (N = 854)



Teachers reported on a series of questions about how they used technology to drive instruction in their classrooms (Table 2). Teachers most frequently reported using technology to manage student data (83.9%), but the large majority (74.1%) reported the technology students had to use was not up-to-date.

Table 2. Percentage of teachers who agree with statements about their use of technology and whether they have the support for technology use in their classroom (N = 858).

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Total % Agree/Strongly Agree
I use technology to help me manage student data (e.g., using electronic gradebooks, Excel, BIG Data Warehouse, etc.)	2.5%	6.2%	7.5%	40.5%	43.4%	83.9%
When designing my lessons, I usually think about whether technology could enhance my teaching or student learning.	4.4%	8.7%	17.4%	43.6%	25.9%	69.5%
I regularly use technology to enhance learning in my classroom.	4.1%	12.0%	14.9%	42.1%	26.9%	69.0%
I use technology (besides email) to collaborate with my colleagues.	5.3%	14.0%	15.2%	38.5%	27.0%	65.5%
The technology my students use is up-to-date.	25.8%	32.3%	16.0%	20.1%	5.7%	25.9%

STRATEGIC TECHNOLOGY PLAN SURVEY 2020: REPORT OF FINDINGS

Administrators were asked a parallel set of questions about how many of their teachers used technology in various ways to support their instruction (Table 3). Administrators largely agreed with teachers' self-reported use of technology in the classroom, including that their teachers used technology most often to manage student data, and that the majority thought about how technology could enhance learning. Administrators also believed very few teachers had technology for student use that was up-to-date.

Table 3. Administrator attitudes about the proportion of teachers who are using technology in the classroom or have sufficient support for using technology in the classroom (N = 94)

	None or Nearly None	Some	About Half	Most	All or Nearly All	Total % Most/ Nearly All
Use technology to help them manage student data (e.g., using electronic gradebooks, Excel, BIG Data Warehouse, etc.)	5.3%	6.4%	11.7%	31.9%	44.7%	76.6%
Regularly think about whether technology could enhance their teaching or student learning.	2.1%	11.7%	17.0%	53.2%	16.0%	69.1%
Regularly use technology to enhance learning in their classroom.	2.2%	16.3%	17.4%	47.8%	16.3%	64.1%
Feel comfortable planning for class sessions that involve students using technology during instruction.	2.1%	14.9%	25.5%	44.7%	12.8%	57.4%
Have sufficient technology support on-site or from the District to use technology well in their classroom.	24.7%	29.0%	10.8%	26.9%	8.6%	35.5%
Have sufficient technology in their classroom to meet instructional needs.	16.0%	34.0%	20.2%	21.3%	8.5%	29.8%
Have technology for student use that is up-to-date.	18.1%	43.6%	16.0%	11.7%	10.6%	22.3%

Finally, teachers and administrators responded to four identical questions about technology behaviors among students at their school (Table 4). Nearly 40% of teachers and administrators were unclear about the rules and policies around technology for students at their school, and less than half (46.3%) agreed that the behavior policies were enforced equally by staff across the school.

Overall, only 22.2% of teachers and administrators reported that they spent a lot of time dealing with students' misuse of technology. However, this varied substantially by school level and role. Roughly 43.1% of teachers in high school and 37.2% of teachers in middle school agreed that they spent a lot of time dealing with technology misuse, compared to just 7.3% of teachers in elementary school. Twenty percent of middle school administrators and 22.2% of high school administrators reported spending a lot of time dealing with student technology misuse, compared to just 2.2% of elementary administrators.

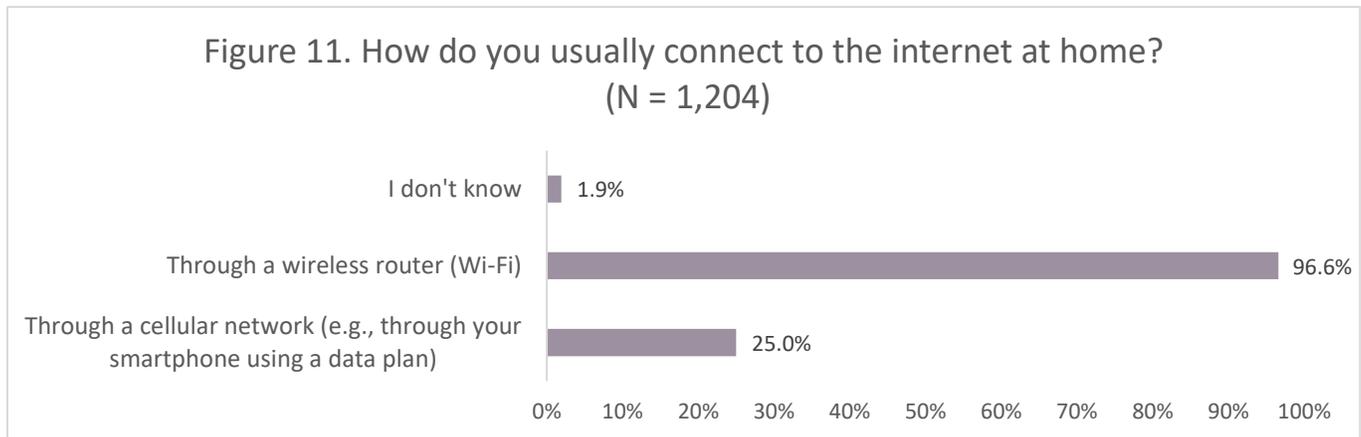
STRATEGIC TECHNOLOGY PLAN SURVEY 2020: REPORT OF FINDINGS

Table 4. Percentage of teachers and administrators who agree with statements about technology behavior at their schools (N = 953).

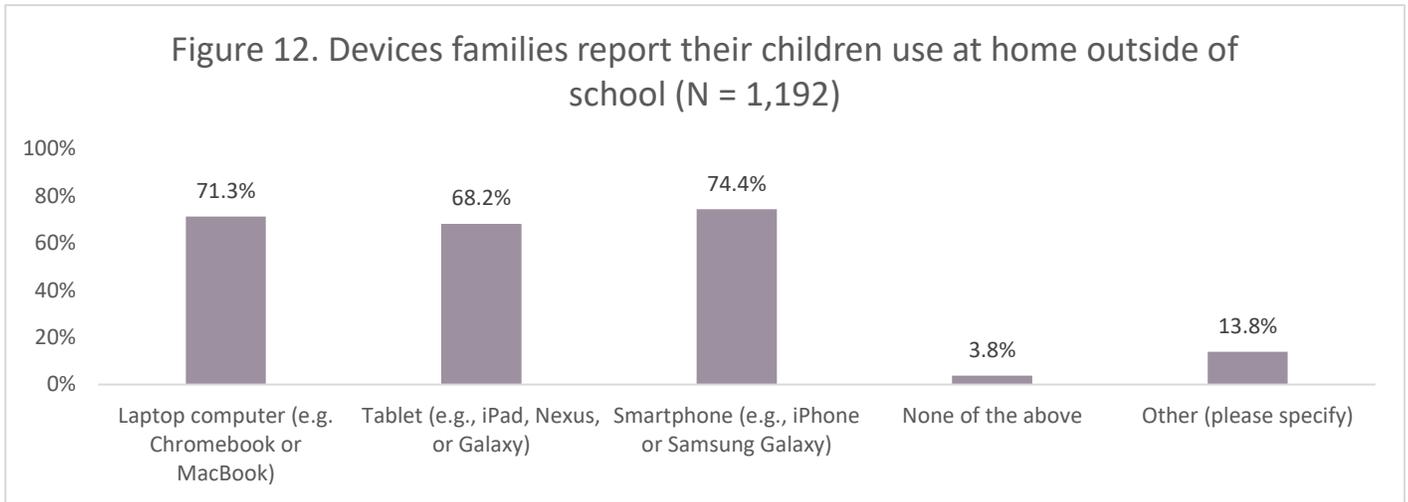
	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Total % Agree/Strongly Agree
I have/most teachers have strong classroom management strategies for using technology with students.	0.7%	5.6%	19.6%	51.2%	22.9%	74.1%
The behavior rules and policies around technology use by students are clear at my school.	5.2%	14.4%	19.9%	43.7%	16.8%	60.4%
There is consistent enforcement of technology behavior policies and rules across staff at my school.	9.2%	19.6%	24.8%	35.0%	11.3%	46.3%
I spend a lot of time dealing with students' misuse of technology at my school.	18.2%	36.3%	23.3%	13.6%	8.6%	22.2%

Family Survey Results (N = 1,204)

Nearly all families (96.8%) reported that they had consistent internet access at home. The vast majority of families reported having a wireless router (Figure 11).



When asked what type of devices their children used at home, most families indicated they used laptops, tablets, or smartphones (Figure 12).



Families were also asked how their children used technology at home (Figure 13) and how frequently their children used technology for homework or class projects (Figure 14). Most families indicated that their child used technology for school at least weekly (69.6%). Additional devices children used included desktop computers, Smart televisions, and gaming consoles like Xbox.

Nearly all families (91.2%) reported that their children used technology for entertainment or games, and three-quarters of families reported their child used technology for internet research at school (Figure 13). Another 9.7% of families responded through an open-ended comment that their children also used technology to play educational games, for instruction supplementation (e.g., Dreambox, IXL, etc.), or reading.

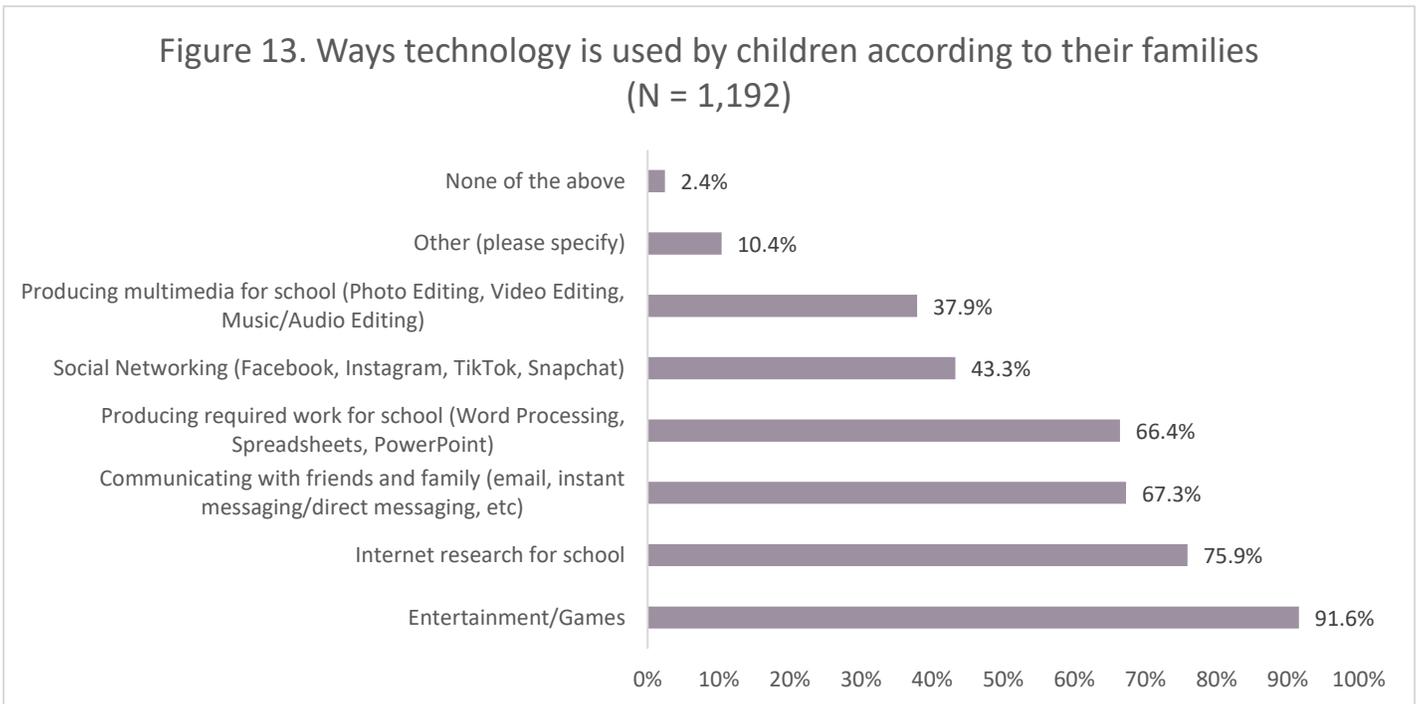
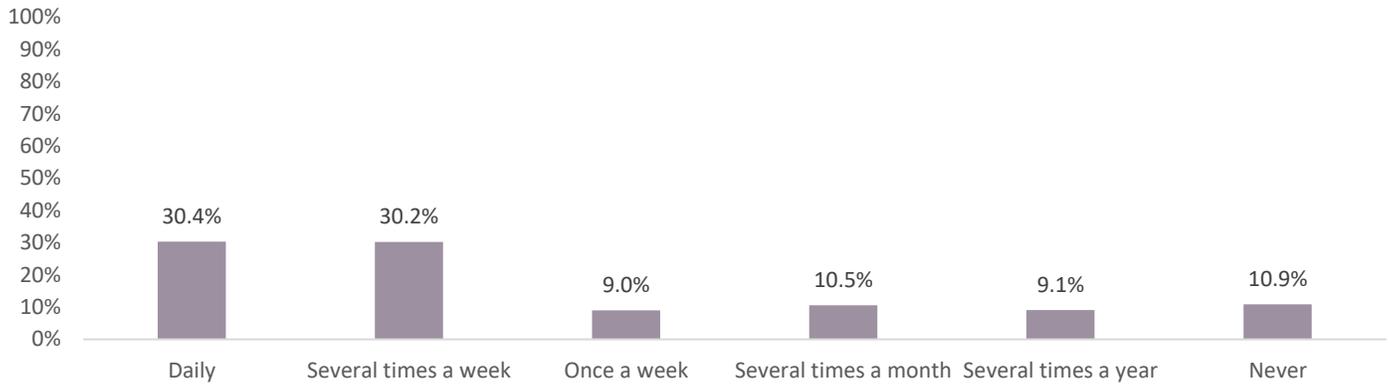


Figure 14. How frequently does your child use technology for homework or class projects?
(N = 1,235)



Finally, families were asked a series of questions about their child’s use of technology at home and at school (Table 5). Nearly two-thirds of families (63.0%) indicated that they would support the use of district funding to increase the use of technology in school and that they had a good understanding of how their child used technology at school. Only 15.7% of families agreed or strongly agreed that their children used too much technology at school, though nearly a third thought they used too much technology at home.

Table 5. Family attitudes towards their children’s use of technology in and out of school (N = 1,210).

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Total % Agree/Strongly Agree
I would support the use of district funding to increase technology use in the classroom.	8.9%	10.4%	17.6%	36.7%	26.3%	63.0%
I have a good understanding of the ways my child(ren) uses technology at school.	3.3%	16.2%	17.6%	46.7%	16.3%	63.0%
Having consistent access to technology at school is critical to my child(ren)’s learning experience.	7.7%	12.8%	20.0%	36.7%	22.8%	59.5%
My child(ren) is learning technology skills in school that will be necessary for college or a career.	5.1%	11.3%	25.6%	38.5%	19.5%	58.0%
My child(ren)'s technology access in school is sufficient.	6.6%	17.4%	24.7%	39.3%	11.9%	51.2%

STRATEGIC TECHNOLOGY PLAN SURVEY 2020: REPORT OF FINDINGS

My child(ren) uses too much technology at home.	9.4%	29.8%	26.2%	28.0%	6.7%	34.7%
My child is learning technology skills in school they might not otherwise learn.	12.5%	25.2%	29.5%	26.8%	6.0%	32.8%
My child(ren) uses too much technology at school.	15.3%	35.2%	33.9%	8.6%	7.1%	15.7%

Community Respondents' Results (N = 25)

Community members were asked a series of questions about the use of technology in the classroom. Table 6 below reports the results of this series of questions. Nearly three-quarters believed technology is a necessary part of everyday life, but only half believed teachers should incorporate more technology into their classroom teaching.

Table 6.

Community members' attitudes towards technology in the classroom (N = 25).

	Disagree	Strongly Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Total % Agree or Strongly Agree
Technology is a necessary part of everyday life and work and should be reflected in classroom teaching.	4.0%	4.0%	20.0%	40.0%	32.0%	72.0%
Exposure to technology skills in K-12 education is critical to students' college and career readiness.	12.0%	4.0%	12.0%	32.0%	40.0%	72.0%
Technology is a great way to engage students in the learning process.	4.0%	12.0%	24.0%	36.0%	24.0%	60.0%
Teachers should incorporate more technology into their classroom teaching.	16.0%	16.0%	20.0%	24.0%	24.0%	48.0%