## **Executive Summary**

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 students in elementary, middle, and high school through a series of 14 focus groups (four in elementary, four in middle, and six in high school) with 150 students. Questions asked students how they used technology in classrooms and at home, their attitudes towards the technology behavior policies at their school, and their attitudes towards one-to-one initiatives. Focus groups were conducted by staff in the Office of Accountability and by the WCSD Special Projects Administrator. Notes were summarized into major themes that arose across multiple groups.

### **Key Findings**

**Technology use varies widely across schools and classrooms**. Some students reported using technology daily, while others reported going months without technology use in their classes.

Classroom technology makes learning more fun, and sometimes helps with learning. As long as technology functioned properly and was monitored effectively, students thought technology in their classroom made learning more fun and engaging (games especially). They also believed it offered a variety of benefits to student learning including:

- Prompt feedback;
- Options for self-paced learning; and
- Collaboration with teachers and other students.

Policies around students' use of personal devices vary widely by classroom. Students reported some teachers forbid any phone use in the classroom, with some teachers collecting the phones every day to prevent student use. Fewer reported that there were no rules around technology use, and students could use devices freely.

Students think phones should be allowed in classrooms, but left on silent, used for learning, and embedded in schools' PBIS plans. Students believed phones should be accessible for some student learning (especially for research and formative assessments) and for emergencies.

Some students' families have rules about technology use, but most have access to and use technology at home (especially cell phones). Students describes several concerns about technology (bullying, distraction), but

## FOCUS GROUP METHOD

Six schools were selected to participate in the focus groups conversations between February 11, 2020 and March 12<sup>th</sup>, 2020:

- Duncan Elementary
- Van Gorder Elementary
- O'Brien Middle
- Shaw Middle
- Reed High
- Sparks High

Schools were selected because they represented a range of student demographics and had varying levels of technology access at school.

Administrators selected students for participation who represented a range of demographics and backgrounds. Focus groups were conducted either during lunch or morning advisory. Food was provided to all participating students. Families were notified about their child's participation via passive consent.

value that it helps with self-expression, learning in new ways, and connecting with others.

# Part I: Attitudes towards Technology in the Classroom

### Types and Ways Technology Is Used in Classrooms

Students at all schools indicated their teachers used iPads, computers, and laptops at least periodically in the classroom. Some schools indicated they could use their cell phones for activities like taking quizzes, conducting research, or reading on their phones when they have free time. Many others also mentioned having projectors, Promethean boards, or televisions in class, though students said only teachers used them. They were typically used to review homework or test answers, or for teaching from textbooks.

Common activities students used technology for in the classroom included:

- Conducting research
- Learning how to type
- Taking tests, or practicing for Smarter Balanced exams
- Creating Word Documents or PowerPoint presentations
- Playing educational games
- Completing or accessing assignments using Microsoft Teams, especially when they were absent from school.

### Software and Applications Commonly Used in Classrooms

Students listed a wide variety of software and applications used in their classroom.

The most commonly used applications included:

- Envision Math/Envision Buddy (math quizzes/games)
- PowerPoint, Word, and Excel
- Prodigy (math games)
- Microsoft Teams and OneDrive (applications to track and monitor assignments and files)
- Accelerated Reader (tests to assess reading comprehension)
- Dreambox (math game)
- Readworks (reading lessons and resources)
- Quizlet/Kahoot/Myquizzes.com/Edulastic and other online quiz applications
- Kahn Academy (math instructional application)
- Lexia (English Language Art assessment and instruction)
- YouTube, Google, and Twitter

### Less frequently mentioned applications included:

- Remind (message notification application)
- Turnitin.com (application to check for plagiarism)
- FlipGrid (classroom social media application)
- Minecraft (education version allows students to build virtual worlds online)
- Solid Works (computer-aided modeling application)
- Sway Application (Microsoft design application)

- Photoshop, Illustrator
- Rivet (reading application with leveled books)
- Seesaw (application to design videos/blogs/journals, and help with collaboration)
- Macken Via (online library of eBooks and education databases)
- Slack (social media site)
- Read Theory (reading assessment)
- Ed Puzzle (video and assessment site)

### Frequency Technology Is Used in Classrooms

Technology use varied substantially by school and by classroom. Some schools indicated using some form of technology (laptop, iPad, computers) at least twice a week. High schoolers indicated they used it at least every day, for 30-60 minutes, but that it varied by day. Others said a month would go by without any technology use. Most students said "it depends", both on the teacher and the week. Students at one school noted that their teacher did not have access to iPads or laptops and would have to wait to borrow them from another teacher, which they thought was "unfair."

### Attitudes towards technology use in the classroom

Students were asked a series of questions about whether they thought using technology in the classroom made learning more or less fun. There was general consensus across focus groups that technology usually made learning more fun, if it functioned well and was not used solely to deliver assessments.

When asked what made technology use more fun, students responded:

- Technology Delivers Content in More Innovative Ways
  - When we're working on geometry, it makes it more fun to draw the surfaces and stuff.
  - "When we play math games, like Prodigy, it's more video games than math. It's an adventure."
  - "On PowerPoint, you can add sound and bunch of crazy stuff. You can make it look super cool."
  - o "Games make everything more fun."
  - o "Kahoots is fun because it's competitive."
- Technology Provides Constructive and Fun Downtime
  - "We get to play games if we finish early, like Envision Games."

When asked what made technology use less fun, students responded:

- Technology Was Often Glitchy or Nonfunctional
  - "Our computers are so slow. When computers have to load and you just watch the circle go by..."
  - "You can only miss one question to pass to the next lesson. Or if you use a 'hint' it lowers your grade."

• • •

• "I don't like taking SBAC on the computer because the computers were so slow it added to the stress of the test taking."

Students were also asked whether technology helped them learn more or less than instruction without technology. In high school, 48.5% of students said they learned more with technology, 39.6% said they learned less using technology, and 11.9% said they learned the same with or without technology. Students in elementary and middle were not asked to vote, specifically, but overall expressed similarly mixed opinions about whether technology helped them learn more.

The following describes the ways students said technology helped them learn more:

- Technology Provides Better or More Tailored Instruction
  - "If you get the answer wrong, it explains it to you and helps you. You can retake the quiz too if you don't like your grade."
  - o "I like to be challenged academically, and a lot of the apps challenge me."
  - "It's fun because it involves animals and it involves actually doing it instead of reading about it....you can see them doing it. [You get the] real world perspective."
  - o "It teaches math better."
  - o "Technology can enrich a project."
  - "Computers have more information than books."
  - o "It's much better for research."

### • Technology Is Easier to Use or More Efficient

- "Instead of writing so much, you can just type, which is what we are going to have to do in our jobs."
- o "It edits all your spelling errors for you."
- "You get more practice because instead of a worksheet with a certain amount of problems, we can just keep doing more and more math problems."
- "Kindles are nice so you don't have to carry all those books around."
- "We can learn at our own pace instead of waiting like three years until our teacher teaches us."

### Benefits of Classroom Technology

"[With technology], it involves actually doing it, instead of reading about it."

"We can learn at our own pace."

"You get your test answers in a day instead of a week or month."

- "You get the information so much faster with technology."
- "You get your test answers in a day instead of a week or a month."
- "I don't read that well, so I wish I could use the audio books to help me more."

The following describes the ways students said technology caused them to <u>learn less</u>:

- Technology Provides Worse or Overly Complicated Instruction
  - "When you get better at doing [Math Kahn Academy], the questions get more difficult so it's not as fun doing them because you don't understand."
  - "If you are using it to edit a video, some students don't know how to use the program and they get frustrated and impatient."
  - o "It sometimes overcomplicates something that's pretty simple sometimes."
  - "I can read stuff myself, why do I have to have the computer read it to me?"
  - "I think it's easier to read in a book. It's funner in a book. I understand it better in a book."
  - "Teachers have to spend so much time dealing with technology."
  - "Sometimes you forget what a video said and you can't look back at it. If you read a passage, you can go back and find the answers."
  - "Sometimes with the videos it fills you in quicker but not as informed or in depth. But if you read, you learn it more in depth, but more slowly."
  - "I'd rather do paper because I tend to understand it better. And sometimes it's easier on paper just because it is."

### Challenges of Classroom Technology

"Teachers have to spend so much time dealing with technology."

"Just having my phone out is distracting."

• "I worry if everything was done with technology, we would lose the fun of hands-on labs."

### • Technology Can Be Distracting

- "I will switch to YouTube or Crazy Games if the teacher isn't paying attention."
- "Just having my phone out is distracting."
- "Much easier to cheat with technology."
- o "Social media makes it hard."

### Technology Students Would Like in Classroom

Students were asked what technology they would like to see added to their classrooms. Most indicated that they would just prefer to have more computers and iPads, with several students indicating they wish they had their own devices at school to use. Several just wished for faster laptops, computers, or internet. As one student noted, "In STEM classes, we have amazing computers that run quickly, but in others we have slow laptops that take forever to load. A lot of technology issues slow down learning." Some students wanted access to more games on their computers.

### Attitudes towards One-to-One Initiative

Conversations about which devices students wanted led to a follow-up question about whether students would be supportive of a One-to-One initiative at their school. That is, whether they thought they, and other students, would benefit if everyone were issued a laptop they could take home for the year. In general, students were supportive of a One-to-One initiative. At the two high schools, 96.0% of students participating

indicated they would want a district-issued device. Students thought devices would help them stay organized, make their homework assignments easier to monitor, and help students who did not have access to technology at home.

- One-to-One Would Make Homework Easier to Monitor
  - "If you had homework you didn't understand and didn't have enough time to ask your teacher, you have the laptop so you could go into Kahn and watch a video about it. It would be easier in my opinion."
  - "We've had kids getting sick and missing school. With the computers, somebody could call them on their phone and tell them the homework and they can do their homework while they are sick at home. Or the teacher could send them all their assignments."

One-to-One

"Teachers could send them all their assignments [when they're out sick."

"It would help kids get organized."

"It would be good for students who don't have a computer at home."

- "You could take [the laptop] from school to your home, write notes on there, and go back later and review it."
- o "It would help kids get organized."
- o "Stuff would be pre-loaded so it would run faster."
- "Teachers can assign things online so it would save paper, and you wouldn't lose paper assignments."
- o "It would be more fun. My brother has it and they got to do this game for homework."
- One-to-One Would Be Helpful for Students Who Don't Have Technology at Home
  - o "It would be good for students who don't have a computer at home."
  - "It would be good for homework as long as students have internet at home."

Students who were less sure of whether One-to-One was a good idea described several concerns:

- Students May Not Be Responsible with Devices
  - "Students go to websites they're not supposed to go to. It's hard for teachers to know what websites they're on."
  - o "My sibling might try to use it."
  - o "I'd be worried about losing something like a charger or breaking mine."

- "I wish we had computers in the classroom instead of on a cart. We maybe shouldn't take them home unless students show they're responsible first. Then maybe only kids that don't have computers at home get them. We'd need a lot of rules."
- "Some kids would abuse it and stay on it all the time."
- "There would be more judging of you (e.g., TikTok and Facebook) to be someone else and not yourself."
- "I think a lot of kids would forget their computer."

### • Easier to Use Paper and Pencil or Other Modes for Assignments

- "If it's reading, I would rather have that be on paper at home. If it's math, I'd rather do computer."
- o "On paper, you can go back and check your answers."
- "As long as we can still have fun hands-on labs and other assignments and it wasn't all technology, it could be good. Just so it's balanced."

# Part II: Technology Rules and Behaviors at School

### Policies about Using Personal Devices at School

Students were first asked to describe what the rules for using personal devices were at their school in general. They were also asked to describe how consistently teachers followed the school rules for technology. Most said there were very inconsistent rules across classrooms. Or that the rules were consistent, but the consequences varied substantially by teacher. Below describes the results of this series of questions.

- Student Description of Technology Rules
  - "We aren't allowed to do online games at school."
  - "We can only have our cell phones out for certain things and we have to ask the teacher."
  - o "We can't use internet."

### Classroom Technology Rules

"You can't touch your phone at all."

"We don't have any limits."

"Some teachers have phone pockets where you keep your phone during class."

- o "You can't touch your phone at all. It also has to be on silent mode."
- "One teacher passes out a bucket and we put our phone in and we get it back at the end of the day."
- "With our class, our teacher lets us listen to music on our phones, but we can't text or watch videos."

### Concerns about One-to-One

"I'd be worried about losing something like a charger or breaking mine."

"Some kids would abuse it and stay on it all the time."

- o "We can't eat or drink with the computers and have to wash our hands."
- o "We can't use social media or interact with random people. We can't listen to music."
- o "We can't go on any games that aren't on the school's website."
- o "The more advanced the class is, the less teachers care if you have your phone out."
- o "They'll let us use it if we ask permission."
- o "Most of my classes just say no. No phone use at all."
- o "Depends on the classroom. And what you're doing in class that day."
- o "7<sup>th</sup> and 8<sup>th</sup> graders get to keep their phones on them, but 6<sup>th</sup> graders don't."
- "Some teachers have 'phone pockets' where you have to keep your phone during class. But others don't."
- o "We don't have any limits."
- "Some teachers make us put our phones on their desk and we can use it when they say so. Like for an assignment like research."
- "No one ever told us phones weren't allowed at school. We just know because teachers get mad and take phones away if they're out."
- "You can't have it during the day, only before and after school."
- o "Lots of students sneak phones at recess or in their lunch box. Or hide it in their jacket."

#### Consequences for Misusing Technology at School

Students were then asked to describe what the consequences were for misusing technology.

- Student Description of Consequences for Breaking the Rules
  - "Students won't get to use the computer for the rest of the class if they misuse it. If it's really bad or inappropriate, they take it away so you are no longer allowed to use it and they call your parents."
  - "Students have to work on math or writing projects or do tests if they get their computer privileges taken away."
  - o "You'd probably get detention."
  - "They give it [personal device] to the office.
    The first time, you have to pick it up at the end of the day and sign a form to get it back. The second time, your parents have to pick it up. The third time you get detention."
  - o "They take your phone away."
  - o "You miss recess."
  - o "You can't use it the rest of the week."
  - "The teacher will mark your [PBIS] card. Every time you get a mark, you get minus 10 points. Then it explains why we got the mark and parents have to sign it."

### Consequences for Rule-Breaking

"You miss recess."

"They take your phone away."

"The third time you get detention."

 "If [teacher] catches us texting or playing games we lose our phone and we can't ever use our phone again."

#### Beliefs about What Technology Rules Should be at School

Students were asked to describe what they thought *would* be a fair set of rules around technology. At the two high schools, most agreed that the rules were fair. In other grades, students offered a variety of suggestions to improve the technology rules, including:

- Students Should Always be Able to Have Their Phones
  - o "We should have phones but they have to be on silent or airplane mode."
  - "If we had PS4 and Fortnight and Nintendos, more kids would want to come to school.
    But now, most kids want to be home and don't like school. If we used phones at school, it would be just as fun to be at school as home."
  - o "Some teachers answer their phones, which doesn't seem fair."
  - "I think it's going to be easier if we all have our own computers than everyone getting up and going to the computer lab."
- Students Should Be Able to Use Their Phones for Certain Activities
  - "Maybe if you are doing work by yourself, you can listen to music with headphones."
  - "I think if we obey the rules all week, then Friday should be free phone time to play games."
  - "The 'pockets' [place where teachers store student phones during class] are necessary for tests, but not always."
  - "They should allow phones so we can use Kahoot."
  - "We should be able to use our phones for research."
  - "We should be able to use our phones for [entertainment] or games if our work is done."
  - "Cell phones should be allowed. Sometimes you need it and then if you don't have a calculator you can use your phone."

### What Rules Should Be

"We should have phones, but they have to be on silent."

"We should be able to use phones for research."

"I think in emergencies, we should be able to contact families."

• "I think in emergencies, we should be able to contact families." Three students said they had their phones taken away when they had been texting their mothers.

### Part III: Student Engagement in the Classroom

In addition to questions about technology use in the classroom, students were asked general questions about what teachers or classes were most engaging to them. The purpose of these questions is to better understand how technology can help enhance already great and engaging teaching. From this series of

questions, several themes emerged about the characteristics of classes and teachers are most engaging to students.

- Strong Classroom Management That Ensures All Students Can Focus and Learn
  - o "The only problem [with that class] is sometimes students talk too much."
  - o "[Other students] just don't try and they keep bothering you."
  - "In our class, if we earn 20 bucks for good behavior we get a pizza party or we can buy a day where we can chew gum or have a class auction."
- Games and Other Hands-On Activities to Make Learning More Engaging
  - "Or when we are doing math, she plays around, she makes it fun. She jokes. She makes the math like fun. She makes little rhymes and hand gestures."
  - o "In science when we do labs. That's the most fun."
  - "My favorite teacher makes everything more interesting and makes me want to learn. She makes it fun."
  - o "When we do real stuff."
  - o "When we play jeopardy games."
  - o "Project based learning."
  - o "Simulations."
  - o "Modeling, and other hands on stuff."
  - o "Team-building"
  - o "Working in groups."
  - o "Debating"
  - o "Competitions."
  - o "Real world conversations."

### • Teachers Who Seem to Care about Their Students/Create Welcoming Environment

 "[The Teacher] feels like a super close friend, and is just nice overall. Teacher's job is not just to teach a student, their job is to be a friend and be involved with them, not just teach a subject."

### Characteristics of Good Teaching

"[The teacher] plays around. She makes it fun."

"She feels like a super close friend."

"When you get a choice about what to write about."

- "If we're having trouble, she goes over it again and makes sure that we understand it."
- o "When [the teacher] explains stuff and I get it. Not like everyone else [other teachers]."
- o "[Teacher Name] tries to make everyone happy and turn bad days into good."
- "When they play music in the background."

### • Teachers Who Give Students Choice and Flexibility

- "He's kind of chill about assignments and turning them in. If you need more time to turn it, in he gives it to you."
- o "It's nice when you get choice about what you get to write about."

- "Mr." [Teacher], he does activities and we can vote [on which activity we do], you have a new video and you can be watching it and sometimes then have an activity."
- o "When you get a say in what content is delivered."

# Part IV: Technology Use and Rules at Home

Students were asked a series of questions about their technology use at home, and whether the rules their families put in place about technology were the same or different as they were at school.

### Devices and Software/Applications Used at Home

Most students interviewed had some sort of device at home (nearly all at least had a phone), including in elementary school. Students used a variety of technologies at home for different activities including games, watching media (Netflix, YouTube, Rokus), connecting with others (SnapChat, Instagram, Twitter, calling/texting friends and family), and playing games (Play Station, Xbox, Wii, Gameboys, Game Cubes).

### Rules about Technology Use at Home

Rules about using technology varied substantially across students, with many indicating they had time limits on how long they could use it, or activities they had to complete before they could use technology. High schoolers were asked how many hours they used technology each day. Roughly 88% said they used technology for at least 3-4 hours a day, while the remaining 12% indicated using it for five or more hours per day.

- Time Limits
  - o "I can't use it after 9."
  - o "My parents don't take it away at night, so I can still get on it if I want to."
  - "We can't use any internet after about 9."
  - o "Can only use it for 3 hours a day."
  - "Can only use it for 30 minutes a day." (most common limit)
  - o "We can't use it on Sundays."
  - o "I can only watch TV or movies on weekends."
  - o "I earn time by doing chores."
  - o "No watching TV at night."
  - "My parents set self timers, so my phone shuts off automatically. It helps that they don't have to make me get off it."
  - o "We have rules, but I always push the limit. If my mom says 15 minutes, I stay on for 30."
- Activities to Complete Before Technology Can Be Used
  - o "I have to finish chores before I can use it."
  - o "As long as homework is done, there is no limit."
  - o "I can listen to music while I'm doing chores."
  - "I can't use XBox unless I have straight A's.
  - o "If I'm grounded, I can't use any technology."

- o "I can't use it at the dinner table."
- o "I can't have it when company is over."

#### • Limits on Content

- o "Nothing rated R."
- "No social media." (Five elementary students indicated they couldn't use any social media)
- "I can text people I know, like friends or family, as long as my family knows them. I can't give my phone number to people we don't know."
- "My parents can go through my phone any time."
- o "I can use it as long as I'm not doing 'stupid stuff' with it."
- o "My parents put codes on stuff like Vudu so we can't watch certain stuff."

# Part V: Benefits and Challenges of Technology

Students were asked to describe what the main benefits and challenges associated with technology use were, both in and out of school.

#### Benefits of Having Technology

- Entertainment/Connecting with Others/Self-Expression
  - o "Lots of entertainment."
  - "I can FaceTime family that I miss who live all over the world."
  - "You can call or text people a long ways away that would have taken weeks for a letter to arrive and get back to you."
  - "The good thing is that you can express yourself."
  - "Phones are good for emergencies and communication."
- Better Learning
  - "I can do assignments ahead of the rest of the class."
  - "Computers help us understand more. If you are smart and you already got taught that, maybe the teacher will give you something else to do that's more challenging while the teacher is teaching the rest of the class."
  - o "It can help with learning."
  - o "Knowledge is really fast and quick."
  - o "Everything is more efficient."
  - o "You can have more one-on-one time with teachers."

### **Benefits of Technology**

"You can express yourself."

"There are all these new ways to teach."

"Everything is more efficient."

- o "There are all these new ways to teach."
- o "Homework is a lot easier."
- "You can learn more because it [computer] knows everything. People only have a certain area in their head for information but the computer has endless information."

#### Challenges Associated with Having Technology

- Cyberbullying
  - "In this century, we live in screens and technology that judges you. You don't look good enough and you're always comparing yourself to everything you see on there. Kids need a break from that."
  - "You want to fit in and not be the weirdo or different kid."
  - "Bullying online is a problem because it's anonymous. Then the pictures disappear and there's no proof of all the bad things happening to you."
- Safety Concerns
  - "We have to be really careful about viruses."
  - "Bad people can get your number and find you on social media."
  - o "People can find out where you live."
  - o "It's really easy to get into trouble."
  - "I know someone who had to move four times because of cyberstalking."

### • Addiction and Distraction

- "I get distracted and sometimes you don't get the things that are more important done."
- o "You always stick to it."
- o "We don't play outside as much."
- "Kids sneak and use their phones during school and don't learn."
- "When we have to sit and listen to a teacher or sit still [students are] like 'more, more, more. I need more stimulation.'"
- o "Sometimes I don't even want to talk to my friends because I'm on a game."
- "It gets kinda addictive and you might spend a lot of money you don't need. Playing video games gets addictive.
- "Some people in my class don't have time limits and they are always tired because they are on their phones all night."
- "Kids get too attached and rely on it. When you don't have devices (they're taken away or lost or broken), it's different. You have to find other ways to entertain yourself and you have a lot of spare time."

### Challenges with Technology

"It gets kinda addictive..."

"In this century, we live in screens and technology that judges you...kids need a break from that."

"When we have to sit and listen to a teacher or sit still, [students are] like 'more , more, more. I need more stimulation'."

- "Kids hide their phones under their desks a lot."
- "My brother is so addicted, my mom has to literally unplug the game. Then he just goes to bed and doesn't really talk to anyone. He doesn't even blink."
- "We [siblings] are always competing for time on technology at home and it causes lots of problems all the time."
- Games and devices are expensive
  - "There's a game called Road Blocks, it will be so addicting it will make you buy a certain amount and give you money to buy stuff in games."
  - "I got this app on my family's Mac and it's supposed to help me learn. But it only allows me to do 5 minutes per day then I have to buy \$119 to get unlimited play time."
  - "You buy clothes in a game that aren't even clothes in real life."