

Educational Technology Recommendations to the APS School Board May, 2024

Recommendation #1: Increase awareness of educational technology through data.

Background: Since technology plays an increasingly important role in students' education, it requires oversight and accountability.

Need: The EdTech committee does not currently have a data-informed picture of how all students use their 1:1 devices on a daily basis. Without this information, it is difficult to support the effective use of technology to advance teaching and learning. Without this information, we have no way to know if any future recommendations made any difference. Without this information, parents are uninformed about how devices are used for education and ill-equipped to manage them at home. According to our curriculum: "All students need digital citizenship skills to participate fully in their communities and make smart choices online and in life." Increased visibility of device usage improves digital citizenship through accountability and self-management, potentially reducing teacher workload.

Solution: What follows are solutions for gathering pedagogical context for technical data and for the Parent Portal.

Pedagogical Data Gathering

1. How do we support teacher's pedagogy in the context of technology frameworks?
2. How do we follow up on the digital integration training and use in the classroom?
3. How are we implementing technology into the academic curriculum?
4. How are teachers supporting digital citizenship among students?

Technical Data Gathering Strategy

We have a window into usage available through LightSpeed Systems Analytics web dashboard. The goal is to enrich this data with student class and grade level information to produce a stream of data for each student which includes an anonymized student identifier, anonymized class identifier, grade level, day of year, time and url of each digital activity. This approach would work for all APS managed devices and would work on all websites and most apps. Raw data analysis is possible to reduce staff workload; alternatively, the EdTech committee could ask a custodian of the data to query it on our behalf. Some questions this data would help answer:

1. For each grade level, which apps and websites are most used?
2. Generally, how frequently do students use devices?
3. How does usage vary by student and class?
4. How much digital multitasking is done during school hours?
5. How many games are accessed during school hours?
6. How many digital advertisements do students see in a day?
7. How many teachers use Apple Classroom to support digital citizenship among students?

Parent Portal

The Parent Portal will be more effective when irrelevant URLs are filtered out. See [Appendix B](#). This clearer picture of usage invites parents to support digital citizenship at home. Parents are empowered to ask their students questions like “Why were you on espn.com during your Spanish class yesterday?” or “Did you plan to be on YouTube for 3 hours last night?”

Budgetary Implications and/or Implementation Needs: Much of this data is currently already available but would take some effort to organize and analyze. A small amount of development work on the Parent Portal would likely be completed via our ongoing business relationship with LightSpeed Systems.

Strategic Plan Alignment:

Core Values: **Excellence** through minimizing distractions, **integrity** through acting openly, **collaboration** with families, community and staff, **innovation** by responding to the changing tech landscape, **stewardship** by effectively managing APS software and hardware resources.

Goals: **Student success** through motivation to stay on task. **Partnerships** with families and community for growth in digital citizenship.

Strategies: This recommendation supports APS **organizational excellence** strategy because it aims to **identify and redesign inefficient services (S-OE-3)**, such as how devices are used in the classroom for learning, and such as the Parent Portal. Furthermore this recommendation **creates meaningful partnerships (S-P-1)** as well as **strengthens engagement with families (S-P-3)**

Committee vote: 4 in favor, 3 opposed

Staff response:

Staff supports the recommendation to increase awareness of educational technology through data. Having a comprehensive, data-informed understanding of how students use their device will help make informed decisions related to teaching and learning. Implementing this strategy aligns with our core values and strategic goals, fostering excellence, integrity, collaboration, and innovation in our educational environment.

Recommendation #2: **Equity in headphone and keyboard access**

Background: Students across Arlington Public Schools do not have equitable access to educational technology. Ed tech packages include: iPad or MacBook, Charger, Protective Case, and Keyboard (depending on the grade). Headphones are not included in this package, yet headphones are required in Arlington Public Schools for testing and for apps such as Lexia and Dreambox.

Need: Teachers and principals frequently ask for headphones. Parents may or may not purchase them. And yet headphones are essential to maintain a productive classroom and testing environment through sound isolation. The distribution of headphones across the county is not equal since they are not centrally provided by APS.

Furthermore, keyboarding is a part of Elementary School Standards of Learning (SOL) beginning in 3rd grade; however students do not learn to use physical keyboards until the 6th grade. Essays are currently written via the on screen keyboard. Students may see a keyboard for the first time on an SOL test, and yet have had no practice in using one.

Solution: Provide a durable iPad keyboard case to students in 3rd through 5th grade. Provide all students Pre-Kindergarten through 12th with standard issue headphones. The headphones are durable and include a microphone.

Budgetary Implications and/or Implementation Needs:

\$5.48 per pair of headphones per 27,000 students is approximately \$150,000
\$100 per keyboard case.

Strategic Plan Alignment:

Headphones

Core Values: **Equity** such that all students have access to the same resources, regardless of their financial situation. **Inclusivity** Some students have specific needs when it comes to the learning environment. For example, students with auditory processing disorders benefit from using headphones to minimize distractions and increase focus.

Goal: **Student success** in an environment of personalized learning. Headphones allow students to engage with educational materials at their own pace and in their preferred learning style. They also enable students to participate effectively in online lectures, discussions, and multimedia content.

Student well-being In many learning environments, students are required to use digital devices for extended periods. Using headphones reduces distractions and noise, creating a more conducive learning environment. Additionally, headphones can help prevent hearing damage by allowing students to control the volume of audio they are exposed to.

Strategies: **Innovative, Relevant and Differentiated Instruction** Headphones allow students to engage with learning materials at their own pace and in their preferred format. For example, students who require additional support or prefer auditory learning can listen to audio recordings of lectures or texts, while others might benefit from interactive multimedia presentations.

Keyboards

Core Values: **Equity and Inclusivity:** Students have equal opportunities to participate in learning activities and assessments that involve typing. Without access to keyboards, students who struggle with handwriting or have limited motor skills may be at a disadvantage compared to their peers. Providing keyboards promotes equity by removing barriers to participation and ensuring that all students can effectively engage in digital learning environments.

Goal: **Student Success:** Keyboards can enhance student success by facilitating effective communication and expression of ideas. For students who struggle with handwriting or have motor skill challenges, typing on a keyboard can be more efficient and enable them to produce higher-quality work. Additionally, familiarity with keyboarding skills is increasingly important in the digital age, as many assessments and professional tasks are conducted using digital platforms.

Strategies: **Student Well-Being:** Using keyboards can reduce physical strain and discomfort associated with extended periods of writing by hand. This is particularly beneficial for students with conditions such as dysgraphia or repetitive strain injuries. Providing keyboards promotes student wellbeing by minimizing physical discomfort and supporting ergonomic practices.

Differentiation: Keyboards support differentiation by accommodating diverse learning needs and preferences. For example, students who struggle with handwriting or have fine motor skill difficulties can benefit from using keyboards as an alternative means of expression.

Committee vote: 5 in favor, 2 opposed

Appendix A
Committee Members

Chair: Chris Woolfe






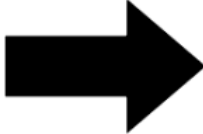





Vice Chair: Keith Cramer

Secretary: Cortney Weber

Members: Allison Silver
Anant Raut
Brandi Arnett
Gabe Arrington
Geoff Beier
Geoffrey Moore
Katie Sunderland
Kristie Saini
Melissa Hyatt
Zuraya Tapia-Hadley

Staff liaison: Dr. Amy Jackson

Appendix B Parent Portal

Top 10 Visited hosts			Top 10 Visited hosts	
 myaccess.apsva.us	49		 myaccess.apsva.us	49
 apsva.instructure.com	45		 apsva.instructure.com	45
 clever.com	28		 clever.com	28
 play.dreambox.com	28		 play.dreambox.com	28
 apsva.us002-rapididentity.com	27		 apsva.us002-rapididentity.com	27
 ocsp2.apple.com	22		 ocsp2.apple.com	22
 gateway.icloud.com	20		 gateway.icloud.com	20
 arlingtontraditionalschoolva.librarypass.com	19		 arlingtontraditionalschoolva.librarypass.com	19
 docs.google.com	18		 docs.google.com	18
 p44-caldav.icloud.com	16		 p44-caldav.icloud.com	16

The web domains crossed out in red are used for technical device management and therefore ought to be filtered out of this report. Removing this noise would allow a parent to clearly see this device was used mostly for Dreambox math, reading digital library books, and creating documents.