

To: School Board, Ferndale School District (WA)
From: Dr. Kristi Dominguez, Superintendent
Date: March 28, 2023
Subject: 2023 Monitoring Report
Results Policy 2.4 (R-2.4)
Academic Achievement: Technology

School Board's Monitoring Notes

(To be completed by each member individually prior to discussion by the whole Board)

Board Member: _____

Total Number of Improvement Goals = 2

Number Demonstrating Reasonable Progress = _____

Number Not Demonstrating Reasonable Progress = _____

Individual Improvement Goals:

- 1. Goal #1: Demonstrating Reasonable Progress _____ Not Demonstrating Reasonable Progress: _____
- 2. Goal #2: Demonstrating Reasonable Progress _____ Not Demonstrating Reasonable Progress: _____

Commendations

Recommendations

Do the indicators answer the questions?

Are there any questions that need to be added to this report?

Are there any questions that need to be removed from this report?

Other Notes/Questions

Overall Rating: _____ Reasonable Progress _____ Not Reasonable Progress

Superintendent's Introduction

This monitoring report focuses on technology education in the Ferndale School District. With each passing year, we incorporate computer and online skills into more and more of our instructional practices and operations. This ranges from teaching our elementary students the basics of typing, to having our high school students access their textbooks and submit assignments online. Technology itself is not a stand-alone subject (although there are a few technology-centered career and technical education classes); it is an educational aspect found in all subjects.

However, we believe this policy has been mis-categorized. For future monitoring reports, I would recommend moving the technology policy from a Results to an Operational Expectations Policy. Many of the improvement goals of previous R-2.4 monitoring reports dealt less with student outcomes and more about how our district operates: professional development, long-range technology planning, and so on. While these topics are associated with student achievement, they are not *directly* about student achievement, making them more appropriate for an Operational Expectations policy.

Policy

We will increase the number of students meeting or exceeding standards on grade level expectations in each required discipline and electives:

Discipline: Technology

Interpretation

We understand this policy expresses the Board's expectation that we embrace transformative digital learning in an effective and equitable manner. To this end, the Board expects all students in each grade band to demonstrate mastery of -- or progress toward meeting -- state-defined technology performance standards.

Improvement Goals

- 1. All students in the Ferndale School District, upon graduation, will possess the necessary computer and digital literacy skills needed for modern life.**

All of our students in grade 2-12 have a one-to-one device that is used in many classes. These devices are used for a myriad of purposes: typing essays, accessing workbooks, submitting homework, completing research, and more. For our K-1 classrooms, our students share a cart filled with iPads. Each grade level at each elementary school has their own iPad cart, so for example, only one Custer kindergarten class at a time will spend time on their devices. Many of the lessons at this early stage focus more on tactile learning and play.

The Washington Basic Education Act requires schools to “integrate technology literacy and fluency” into lessons and curriculum. So – as mentioned earlier – even though technology is not a separate subject, it is infused into all our core subjects in all grade levels. The state has standards for technology education for all grade bands. For example, students in grades K-2 are expected to [learn how to use the internet to find information using age-appropriate digital tools such as databases or e-books](#). The state's technology standards for each grade level can be found [at this link](#).

Each year, we send the state [a document explaining how we use technology to teach students, and which methods or tools were effective or ineffective](#). We have a team of staff, including teachers and paraeducators, who meet on a regular basis. These folks have on-the-ground knowledge of what tools and programs help our students learn, and what gets in the way, and provide vital input to our district technology staff, led by our Director of Technology, Martina Su. A current example of classroom technology this group is providing feedback on is [LanSchool](#): software that can monitor student screens and block websites.

We continue to build our student device bank to meet the needs of our students. In the 2021-22 school year, we received a donation of Evolve computers for our students in grades 3-5.

However, these computers had numerous deficiencies, from malfunctioning keyboards to camera problems. Therefore, this school year, we switched our older elementary students to Chromebooks, which have been more effective tools.

We teach our elementary students lessons on being effective digital citizens, such as how to avoid cyberbullying and think critically about online articles. Elementary students also learn basic computer skills, like using a mouse and creating passwords. All sixth graders also take a semester-long class teaching them typing skills, media literacy and digital citizenship. The state standards for digital citizenship and media literacy can be found [at this link](#).

We do have a typing program called [Type To Learn](#); however, our Teaching & Learning and Technology teams are researching better resources that might teach typing in a more engaging and relevant way.

At both the middle and the high school levels, technology is integrated into all core subjects. For example, math classes at the high school use the [online program Desmos](#) for advanced graphing. Desmos also has lessons built in – one activity gives students two points on a graph and asks them to come up with the quadratic equation that connects those two. Our secondary students access many of their texts and curricular resources online across the curriculum. FHS' technology-focused career and technical education classes are described in detail in the next improvement goal.

Students with specialized needs often use technology for specifically designed instruction, modifications, or accommodation needs. For example, 50 of the students who receive special education services have iPads assigned to them. These students use the devices to learn basic technology skills like safe internet use, how to write and send an email, and more. Furthermore, all Life Skills and Structured Learning Environment classrooms have one or two iPads for the class used for communication.

One critically important use of technology in our schools is to provide means of communication for students with limited verbal language. For more than 25 of our students, their iPad *is* their voice. It's their way of expressing their thoughts, ideas and needs with others. Our speech-language pathologists and other specialists work with students to not only get the devices those students need, but also to teach students how to effectively use their devices to engage with others and have a voice in their learning.

Furthermore, we have students who use assistive technology to communicate using something called "switches". For example, some students are unable to reliably move their limbs but can move their head or feet slightly. In these instances, our specialists set up switches near the student's head or feet so the student is able to respond to prompts and questions by touching the appropriate switch. This allows the students to respond to yes/no questions and actively participate in their classes.

In May 2022, FSD was the recipient of an OSPI Digital Equity & Inclusion grant to purchase classroom sound systems and student devices. This school year, [we installed classroom audio systems in every classroom from preschool through eighth grade](#) designed to improve communication and increase student attentiveness. The new FHS Academic Wing classrooms also had built-in classroom audio systems when it opened in January 2023. The sound systems directly connect with all of the classroom learning tools. Teachers said they promote attentiveness by helping them project their own voices above students, and the clarity of sound also increases student comprehension.

This school year, we hired a part-time assistive technology specialist, Mary Elliott. She helps any student for whom technology can support their learning. For example, for students who have difficulty with reading, Elliott can teach them how to use speech-to-text programs. She can also consult with teachers on how they can incorporate assistive technology tools into their classes, like active listening devices that connect students' hearing aids to the new sound systems in each class.

The state requires many of our teachers to complete at least 15 hours of professional development on integrating science, technology, engineering and mathematics (also known as STEM) into their lessons. This is to ensure our staff are knowledgeable about the technology used in their classes. For more information on this requirement, [click here](#).

2. We will develop a technology-focused career pathway program at the high school level.

At Ferndale High School, we have six career and technical education (or CTE) pathways. All of these pathways have technology integrated into their courses, and some have multiple courses exclusively dedicated to working with computers.

The CTE pathway with perhaps the most technology-focused courses is the Skilled and Technical Sciences pathway. One of our teachers, Logan Penland, has a variety of tech-based courses that fall into this pathway: video game design, video production, web design, and basic computer science (where students learn about programming, algorithms, artificial intelligence, and more). This pathway also includes a graphic design course, taught by Kirsten Varga.

Ilya Shportko's computer support classes fall under the Business and Marketing CTE pathway. Students in these courses learn how to fix basic computer issues that students may have, and his students serve as an IT Help Desk for any FHS student who has an issue with their laptop. Last year, his class repaired more than 800 student computers. In the second year of Shportko's class, students learn about cybersecurity.

In the Science, Technology, Engineering and Math (STEM) pathway, Mark Schneider teaches multiple engineering design courses. Students in these classes use [Rhino software](#) to design products, and also learn how to use 3-D printers and engraving machines. In the Power and Energy class, also in the STEM pathway, students use their computers to create energy systems with small solar panels and wind turbines.

In the Health Science pathway, Tom Diimmel's three courses – sports medicine, anatomy and physiology, and health science careers – use the table-sized [Anatmage touch-screen computer](#) to virtually dissect cadavers. These computers give students a detailed and safe look at the human anatomy.

In the Agriculture pathway, students in metals classes create designs online before cutting them in-person. And our new Aquaculture classroom – still under construction – will feature an egg incubator and computer systems that students can use to ensure their aquariums are the perfect climate to raise marine life.

Students taking courses in the sixth pathway, Culinary Arts, use the new [FHS kitchen classroom's high-tech equipment](#) to make delicious meals. For example, the [new iCombi ovens](#)

(which are also used by our food service staff in the FHS cafeteria) have dozens of specific settings on their touch screens. These allow students to bake or grill multiple items at once with different temperatures and moisture settings.

Superintendent's Final Remarks

One of the things COVID-19 distance learning taught us is the importance of having functional technology integrated into all aspects of our curriculum. This unfortunate event had the silver lining of encouraging our staff and students to be more technologically savvy. And even if the majority of our classes are no longer held over Zoom, we believe those skills can still apply today and to future generations.