Increasing Access to Technology

For Students and Staff @ Londonderry School District

C3 Committee Meeting, Sept 5th, 2018

The Work Has Already Begun

- Added 5 mobile carts of Chromebooks as a pilot
- Added 2 mobile carts of iPads and replaced 60 iPad 2s with new model
- Added 10 new SMART Boards districtwide
- Evaluated our wireless network to try to identify bottlenecks and dead spots
- Untangled the web of Apple accounts in order to simplify purchasing of apps needed to support curriculum and special education
- Created new Technology Budget Request Process
- Provided new opportunities for Professional Development
- Current ratio districtwide is about 1.66:1 (60%)

How do we expand access to technology?

- Increase the number of devices available to students and staff
- Make it easier to actually access the devices
- Provide knowledgeable and consistent support
- Build a flexible, and diverse professional development program
- Change our culture
- Maintain a robust and reliable infrastructure

Invest in Infrastructure

- Physical wiring throughout district needs updating.
  - Year 1: Middle School
  - Year 2: South School and Matthew Thornton
  - Year 3: Moose Hill School and older areas of High School
- Annual evaluation of wired and wireless networks
- Office 365 to provide access to Microsoft Platform from home and mobile devices
- Evaluate security practices, policies and procedures

Teach our Teachers

- Develop programs for different areas to provide basic knowledge and skills
- New pedagogy to integrate technology into our classrooms in a way that extends and expands the curriculum
- Allow teachers to become trainers in areas they are passionate about
  - Provide the time for them to be trained, and to train
- Help teachers who are stuck on old technology to make the move (or push them?)
- Survey of staff to identify areas they are most interested

A Picture of Access to Technology Now - Elementary School

Case Study:

About 130 devices (available for instruction)

Current Ratio 1.65:1

1 Physical Lab of Laptops

4 Mobile Labs (Laptops, Chromebooks)

Shared sets of iPads in some classrooms

- Some teachers plan and schedule technology out for the entire year, most teachers require more flexibility and schedule 1-2 weeks out
- Grade 4 & 5 are the biggest users of technology
- The library manages a schedule of the labs to try to accommodate as many as possible
- When a teacher has scheduled use of the lab, they send the students out of the classroom to go collect the devices in the nearby hallway
- iReady and Smarter Balance require 50-75 devices throughout the day, and then fills the stationary lab for makeups in the afternoon
- No flexibility to use technology during testing windows

We currently spend approximately $200,000 a year on new and replacement hardware for student use. Keep this in mind when examining the options below. The estimated costs would mostly replace this.

Improving our Ratio

OPTION 1: Dive Right In!

3900 devices in 4 years

Estimated Investment = $1,150,000

New Ratio = 1:1 Districtwide

Year 1: Grades 4,5 & 6 - About 1,000 Devices

Year 2: Grade 7, 8 & 9 - About 1,000 Devices

Year 3: Grade 10, 11 & 12 - About 1,000 Devices

Year 4: K-3 - About 900 Devices (iPads or Chromebooks?)

Devices would remain the property of district, but enough for each student would be available throughout school day. Refresh on 5-6 year cycle.

Elementary Case Study: Testing windows would be no burden on access. Non-testing classes could use technology as needed. No instructional time lost by sending children to retrieve devices. Teachers would have great flexibility to incorporate technology into the lesson at any time, and could provide a high level of individualized learning opportunities. Devices may go unused for a lot of the day in 1-3 as the need isn't as great there.

Improving our Ratio

OPTION 2 - Testing the Waters

405 Devices in 3 Years

Estimated Investment = $175,000
(Yr 1 $100,000, Yr 2 $25,000, Yr 3 $50,000)

Districtwide ratio would be 1.25:1 (80%)

Purchase 1 mobile lab for each grade over 3 years

Year 1: 9 Additional Mobile Labs for Elementary (225 Chromebooks, 9 mobile carts)

Year 2: 2 New Mobile Labs for Middle School (60 Chromebooks, 2 carts)

Year 3: 4 Mobile Labs for High School (120 Chromebooks, 4 carts)

Elementary Case Study: Each grade would share a cart among 4-5 classrooms. They would manage their own schedule. They could even share one set at any given time. There would be one mobile lab dedicated to testing during the windows but available to check-out from the library during the rest of the year to fill any gaps in access. This would provide teachers greater flexibility and cooperation between classes. This would greatly reduce the burden of testing on access to technology.

Improving our Ratio

OPTION 3 - A little of both

$560,000 for district-owned devices
plus cost-to-cost share
(Yr 1 $350,000, Yr 2 $210,000)

New Ratio 1:1 in 3-12

District owned devices for 1:1 in 3-7, Student purchased device in 8-12

Year 1: Grades 5,6 & 7 - 1,000 Devices

Year 2: Grades 3 & 4 - 600 Devices

Year 3: Grade 8-12 - District would cost-share student purchases (1,500 Devices)

50% would cost the district $260,000 each year

Case Study: The options combines the benefits of both previous options for elementary,middle and high school grades, and sits in the middle between them in cost.

Balancing Act - What can we adjust?

- Ask families to purchase devices. (Reduces cyclical investment)
- Charge a yearly Technology Use Fee to all students to cover cost of purchasing and maintaining Chromebooks. ($25 per student would be about $100,000 per year).
- Settle on a specific ratio below 1:1.

Culture Shifts Needed

- High School "Tech Rich Classrooms": We need to become a Tech Rich school or district, instead.
- New Professional Development opportunities: Not enough time for PD
- Digital Citizenship
- New policies and procedures to govern security practices, use of technology, etc
- Space Use changes: Do we still need labs? Should libraries change?

Next steps and questions for C3

- Buy-in is important - We need all stakeholders to have a say (community members, staff, administrators, School Board)
- What is important to us as we make these decisions?
  - Are we as a community committing to fully support student access to technology, no matter the cost? Or is it important to reduce costs to the community?
  - Are we comfortable asking families to contribute to the cost of increasing access? Or is it important to us to not ask them to pay?
  - What is the ideal ratio we are aiming for? Is it 1:1? Or is it something else?
- Do we need more data?
- WHY are we doing this? To save money or to improve our instructional impact?
  - *This is important so that we know if we have achieved our goal in the end.*