Why We Care About Digital Learning

In an era of competing demands on educators, why is digital learning an imperative in Arlington Public Schools?

Keeping Pace in a Digital World
Even a casual observer of young children today knows that big changes are underway when it comes to kids and technology. The mobile revolution that has hit adults is on the move with children.

The numbers are startling:
- Seventy-two percent of children age 8 and under have used a mobile device for some type of media activity (up from 38 % two years ago).
- 38% of children *under 2* have used a mobile device (compared to 10% two years ago).
- Among families with children age 8 and under, there has been **a five-fold increase** in ownership of tablet devices such as iPads, from 8% of all families in 2011 to 40% in 2013.
- Almost twice as many children have used mobile media compared to two years ago, and the average amount of time children spend using mobile devices has **tripled**.
- Access to mobile media devices and applications among poor and minority children is much higher than it was two years ago, but a large gap between rich and poor still persists.[1]

All of these numbers—and more like them—underscore the urgent need to acknowledge that the growing momentum of pervasive digital media use spells a future for K-12 education that will look much different than the past.

Modes of learning are changing dramatically—sources of information, the way we exchange and interact with it and how the information informs and shapes us all demonstrate the need to develop a strong connection between digital technology and classrooms.

In addition, the efficiencies that technology can provide to classroom learning can support an environment where a teacher is better equipped to address the individual learning needs of her students and prepare them for their future in a changing world.

To be sure, educators are conflicted. How much screen time is too much? How do we keep our kids safe? How do laptops, tablets, and mobile devices change the way students learn? And how do they change the way we teach? How do we shape an experience to provide our students with the skills they will need to make technology enrich their lives? What about the digital divide?

Yet, who better than educators to provide reasoned approaches to questions of students and learning? It's what we do best. The opportunity—the moral obligation—for educators is to shape technology use in a way to advance student learning for all and to produce responsible users who ultimately lead enriched lives as workforce-ready citizens.

New learning environments powered by instructional technology, will support teachers in their need to quickly assess a student's individualized learning needs and efficiently adapt practices to respond. While not intended to replace the power of face-to-face and collective learning, the addition of learning technology will provide a solution to the challenge of addressing the unique needs and horizons of each student.

How Instructional Practice Is Enhanced

Digital learning offers the promise for students to play a more active role in their learning by receiving more frequent and personalized feedback.

Building a Personalized Approach to Learning
One of the great potentials for digital learning is to move from a one size fits all classroom environment to one of personalization where each child's learning needs are quickly and frequently assessed and then teaching practices are either altered or reinforced. Digital tools in the hands of a teacher and every student, regardless of economic circumstance, can make that happen. This is using technology purposefully, not just for the sake of using technology. It's integrating it as an important strategy in the teaching and learning process.

Yet, it's not a quick fix. Some of the challenges include identifying effective staff development approaches, appropriate digital assessments and robust instructional tools. Teachers and instructional leaders are sorting through these issues and sharing their findings with each other. The pilot programs last year assisted the division in selecting the appropriate devices. The target of our pilots this year is to understand how personalization of devices can help expand and enhance instructional opportunities. By 2017, our division's strategic plan goal is to provide a personalized device to every student to support their learning.

Creating a Vision for the Future
Our continuing obligation to the Arlington Public School community is to graduate students who are:
1. College and Career Ready.
2. Provided access to opportunities.
3. Given choices in learning.
4. Provided opportunities for 24/7 continuous learning.
5. Provided a personalized learning environment.

The key to our success will be our focus on developing a personalized learning environment and integrating technology as an integral part of it rather than an add-on after the instruction is over. We're headed in the right direction. Research indicates that in addition to *efficient* personalization, technology helps students to improve content learning, develop higher order thinking and problem solving skills and become more workforce ready.[2] These are the outcomes we seek.

And our vision is ambitious. By the year 2020, APS aims to become the country's top media-rich personalized platform that features seamless integration with all instructional systems and creates a user-friendly interface that gives teachers an efficient tool for sharing instructional resources, assignments, activities and assessments with students and families.

Perhaps the words of John Dewey best frame our challenge: **"If we teach today's students as we taught yesterday's, we rob them of tomorrow."** Arlington Public Schools is committed to providing all of our students with the learning benefits of a personalized education that will lead them to successful and accomplished tomorrows.

Only On Our
Website
Check out our curated and continually updated list of relevant research and best practices for classroom integration of digital instruction.

digitallearning.apsva.us

How Digital Learning Can Work

Several teachers piloted digital learning in their classrooms in 2013-14. Here's a story about Ms. Hale's experience at Abingdon Elementary.

A visitor walking into Ms. Hale's 5th grade class at Abingdon Elementary School would see what is common in most classrooms. The class includes students who struggled to read, those who are learning to speak in English, and students who were academically advanced. In 2012, delivering differentiated instruction to her class using traditional methods was a challenge for Ms. Hale. She recognized the challenge to find new ways to better reach and address the individual needs of all students.

Ms. Hale reflected on her difficulties and identified two major issues. First, she needed a method to assess the level of student learning on a daily basis without losing valuable instructional time. Typically, she needed two to three days whenever she assessed the learning level of each student on the concepts being taught. Second, she needed to identify a method to differentiate supplemental learning tailored to their individual needs to accelerate and enrich all students learning opportunities and choices.

Ms. Hale's fifth grade class was one of several classrooms in Arlington that piloted the use of new learning technologies to support student learning during the 2013-14 school year. As part of the division wide pilot program, every school identified specific areas of instructional focus, which enhanced learning through the use of technology.

Each pilot had an associated SMART goal to measure the effectiveness of the pilot. Ms. Hale piloted the use of iPads with her 5th graders.

With the help of the school Instructional Technology Coordinator (ITC), Ms. Hale planned her instruction to leverage the new iPads by customizing lessons uploaded to each device that were based upon each student's individual instructional needs. With the support of the principal and parents, the students were able to take the iPads home with them regularly to continue their studies outside the classroom.

Through the personalized lessons on the iPads, **each day**, Ms. Hale was able to effectively and efficiently assess each student's academic progress, both in the classroom and at home. Based on the assessment

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>
> –TEACHER KATHARINE HALE

information, Ms. Hale dynamically grouped and regrouped students for classroom instruction and individualized supplemental learning opportunities to address specific needs.

This differentiated, personalized environment created a very high level of student excitement and involvement. The achievement of the objectives laid out in the SMART goal confirmed that the model Ms. Hale piloted has the potential to be useful throughout APS.

Little Chris in her class summed it up when he told her, "It helped me a lot because it allowed me to take **you** home with me and had **you** teaching me."

Working Together Towards 2017

Using the APS Strategic Plan as their guide, a wide coalition of APS professionals created a framework for impacting these five areas of technology implementation. Many more details available at http://www.apsva.us/DigitalLearning

Digital Learning @ APS *Targets for 2017*	
1. Every Student	**2. Every Educator**
Every student in grades 2-12 will have a secure, personalized device for learning at home and school. Status: Pilots underway. Phase in beginning in 2014-15.	**Every educator will effectively use technology to support instruction; the Department of Instruction will provide division wide, curriculum-specific professional development.** Status: Digital learning steering committee has devised a plan to phase-in professional development over the next three years.
3. Instructional Spaces	**4. Curriculum Resources**
All instructional spaces will have state-of-the-art technology available. Status: Defined schedule for regular equipment updates and replacements. Reached staff consensus on "alternate devices." Established APS Technology co-op for schools to join for reduced equipment costs.	**The best in digital technology will be accessible support digital learning.** Status: Digital learning steering committee has started developing a framework of functional requirements for incorporating into classroom use.
5. Network Infrastructure	
The network infrastructure will be robust and prevalent in all instructional spaces. Status: Platform Project started in 2011 and continuing today is expanding and upgrading the network infrastructure. Targeting accommodation of 90,000 devices by 2017.	

Endnotes:
[1] Common Sense Media: Zero to Eight, Children's Media Use in America, 2013.
[2] Center for Applied Research in Educational Technology, 2011