

## Beyond PARCC: The Next Generation Classroom

### **What:**

Set a new standard for Commonwealth schools to ensure that all students and educators benefit from a learning environment that provides adequate access to high quality 21<sup>st</sup> century learning resources.



### **Why:**

Empower our students and educators with next generation classrooms to:

- advance the use of data in the classroom to improve instruction
- improve access to quality content and more cost-effective personalized learning
- increase collaboration and classroom level engagement
- provide access to state resources focused on addressing the achievement gap

The Commonwealth continues to be challenged to ensure all students graduate college and career ready. As Bloom pointed out in the 1980s, a personalized learning experience achieves the best student outcomes. The next generation classroom helps provide the environment for a more personalized learning experience for all students. As the Commonwealth shifts towards online assessments, it presents us with a unique opportunity to re-assess the existing classroom learning environment. Investments to support the introduction of new learning tools and online assessments must be done with thoughtful planning in a supportive environment and ultimately focus on student learning. While innovation in the technology space makes it difficult to know what we need five years from now, smart planning and investments today can help empower students and educators while providing flexibility for the future.

As districts and schools work to understand their individual needs, the following simple framework can help:

**Establish the Need:** Investing in digital learning is not about purchasing a shiny new device. Districts should first assess what their academic goals are and then assess how the use of digital tools can help address these goals. Districts that do not develop a thoughtful, instructional-based-plan, rarely achieve the desired results. The transition to digital requires leadership at many levels. The community at large must also understand that districts are at a major crossroads, where digital literacy is not a luxury but a necessity. Both students and educators will need to continually work to grow their digital literacy. Districts should be wary of the myth that all students are inherently skilled in using a myriad of technologies to learn and collaborate effectively.

**The Next Generation Classroom:** A next generation classroom has wireless connectivity to encourage collaboration, provides enough bandwidth so all users can access digital content (at minimum 300kbps at peak), and provides students with adequate access to mobile technology (one-to-one is preferred). Schools should establish a solid infrastructure and ensure that adequate bandwidth is available before discussing device(s).

Wireless	Bandwidth	Device
90%+ of the school including all academic areas with adequate access points	At least: <ul style="list-style-type: none"><li>- 1 Gbps per 1,000 users (external)</li><li>- 10 Gbps per 1,000 users (internal)</li><li>- 300kbps at peak for all users</li></ul>	Mobile devices that can be used for instruction and assessments*

**Scaling Devices:** Districts can leverage PARCC planning as an opportunity to expand access to digital tools to drive more instructional outcomes in every classroom. Most districts start one-to-one enablement in a single grade at the high school or middle school level (and occasionally in a specific subject). A smart scaling plan ensures that districts and schools are not dependent on large periodic capital investments, but rather, incremental investments to ensure adequate device refresh cycles. In addition, in order to be ready for online assessments, schools will need to have the following device ratios:

School Type	Recommended Devices
For a school with three tested grades (K-5, 6-8, 9-12)	One device per student for the largest tested grade
For a school with six tested grades (K-8)	One device per student for the two largest tested grades

\*See [PARCC](#) for recommended device requirements for assessment.

**Provide Adequate Professional Development and Support:** Developing a one size fits all approach to professional development is typically ineffective in catalyzing the pedagogical change in the classroom. Educators need school level support and professional development that supports educators at their comfort level. Many districts choose to provide each educator with a device, along with professional development, before moving to a one-to-one model with students. Good professional development focuses not only on basic operations, but also on strategies for leveraging tools to enhance learning. Professional development and support should support the SAMR model.\*

**Policies:** As schools move to next generation classrooms and tools, educators will need to work to balance innovation and control. While basic federal and state policies exist, many decisions will also need to be made at the district and school level around what content and websites are appropriate, as well as how to best help students learn to evaluate the content they encounter online. Local policies should encourage access not just to more content, but content that drives learning outcomes.

**Sustainability (lease vs. purchase):** Most industries are trending towards a lease model to ensure that infrastructure and device costs become a part of the annual operating budget, as well as to maintain a healthy replacement cycle for devices. From a district perspective, this will depend on the local landscape, how the capital cycle is handled, and what the scaling model is.

Providing all of our students with a 21<sup>st</sup> century learning environment is no small task, but we as educators must ensure we are making smart investments, continually improving digital literacy, and ultimately providing our students with a 21<sup>st</sup> century learning environment to drive student outcomes.

**\*Resources (links):**

[National Tech Plan](#), [Edwin](#), [SAMR Model](#), [Bloom The 2 Sigma Problem](#) & [Ted Talk](#), [SETDA Broadband Imperative](#)

*In 2010, Burlington Massachusetts invested \$1.5M to develop a wireless infrastructure across multiple municipal buildings (including schools). Since the infrastructure update, Burlington has rolled out a one to one program in the high school. The district is currently expanding the program into middle school and building digital curriculum.*

*In 2010, Natick approved \$89M to build a new high school. That investment included the infrastructure and devices to support a one to one program. Natick currently has one to one programs in grades 8-12.*

*In March 2013, Boston Mayor Menino unveiled plans to put 10,000 more tablet computers in the hands of public school students in the next two years.*