## **Toward Technology Integration**

## Help students—and staff—master 21st century skills

By Lisa Vrvilo

y 2012, it was clear that technology was becoming a significant tool for learning. So, in an effort to better prepare our students for the 21st century, we decided to transform Cottonwood Creek ACTION School (CCAS), a high-performing Pre-K-5 school in Wasilla, Alaska, into an optional Science Technology Engineering Art and Math (STEAM) school with an emphasis on art and technology. This endeavor included the purchase of iPads for every student in grades 3–5, shared devices in K-2, and a STEAM teacher and professional development (PD) that was initially offered through Apple.

Today, if you walk around the school, you will see devices in use in nearly every classroom. Students are

working at their own pace, working from individualized playlists, and collaborating digitally with peers. They work on coding projects, practice words in Spelling City, work in Google Classroom, use Lexia to improve reading skills, watch math videos from Khan Academy, create personal digital yearbooks, take virtual field trips, and watch the daily school news broadcast created by students using green screen technology. Visitors are delighted to see this level of engagement as students expand their 21st century learning skills.

## **Benefits of Technology Integration**

Was it easy? No. Was it messy at times? Yes. Do we have it perfected? No. Was it worth it? Absolutely!

Here are some of the benefits we've seen as students and staff have increasingly adopted technology:

- 1. Less wasted time. 1:1 device usage eliminates time used to log on and off. It also eliminates the need to reserve the computer lab.
- 2. Students are prepared for the future with an evolving learning environment.
- 3. Students' critical thinking, communication, collaboration, and creativity skills—the four Cs of 21st century learning—are strengthened.
- 4. Increased student achievement through personalized



Cottonwood Creek ACTION School fifth-grade teacher Stephanie Udy integrates 1:1 electronic devices into the curriculum. Students work at their own pace and digitally collaborate with peers.

**46** Principal ■ May/June 2018 www.naesp.org

- learning and dynamic academic programs.
- 5. Expedited feedback to students.
- Increased student engagement. Students who have access to an electronic device take more control and ownership of their own learning than those with less access.
- 7. Expanded access to learning. Alaska can be isolating, but with technology, our minds are open to new learning and possibilities.
- 8. Improved opportunities to share authentic finished digital pieces, so students take a lot of pride in their finished products.
- 9. Students dig deeper and expand upon their abilities, knowledge, and curiosity.
- 10. Improved access to curriculum and materials.
- 11. Teachers can easily share work samples, pictures, and videos with parents using apps such as Seesaw, making communication more robust.
- 12. Teachers gain confidence in their own technology skills and learn from each other.

## **Implementation Tips**

Everyone experiences change differently. Some will jump right in, embrace the technology, and start immediately, while others need more time, more direction, and more support.

Find time for teachers to collaborate and learn together. Some of the best learning is the organic process of trial and error. Once a teacher finds something that works well, it spreads throughout the building, and slowly the innovations become common practice.

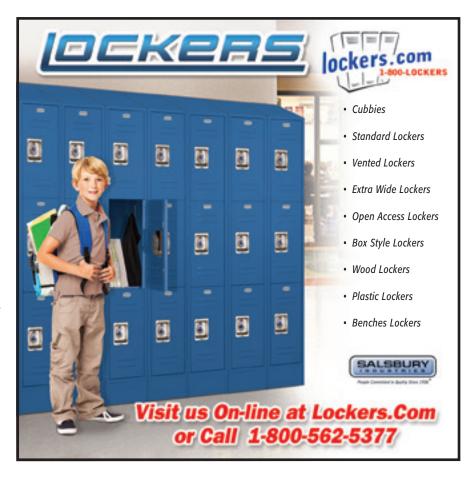
A few more implementation tips:

- 1. Pick one focus and jump in.
- Start small. Choose a paper/ pencil project and make it digital. For example, try assigning a Google Slides project.

- 3. Today's students may be "digital natives," but they still need instruction regarding the proper use of devices. For example, using a text box is not an innate or instinctual action. Students may know what they want to do, but they still need guidance on how to do it.
- 4. Frontload the school year by spending quality time teaching how to use the device. It will pay big dividends in time as the year progresses.
- 5. You do not have to be perfect, just be willing to try, fail, and troubleshoot.
- 6. Be patient. The process is long and can be frustrating at times. There will be bumps in the road, but even small steps are positive steps.

When students have access to technology, they are in a better position to know and be comfortable with the four Cs of 21st century learning. Communication is enhanced among staff, students, and parents. Students are afforded opportunities to collaborate with each other in ways unimaginable prior to the technology. Technology allows students to find information easily, but welltrained teachers using technology effectively as a tool supports students to think critically. This type of learning environment puts students in a position where they can be creative in a supervised and safe environment as they navigate research and 21st century learning skills.

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www.naesp.org Principal ■ May/June 2018 47