Technology Use at Barnard Academy
November, 2018

Technology Use in the Regular Classrooms at BA

PreK 3 and 4
Ann Behremovic:
My class uses tech in a minimal capacity. We utilize it in Library (at the end) by using Pixie to color something that coordinates to our in-class lessons. We also use the smart board to support songs and, most recently, to look up animals that live in our forest and what each of those animals eat.

PreK4- K
Ingrid Johnson
My K class students get technology once per week in the library with Mrs. Vaughn. I will additionally do another 15 to 20 min. two or three times per month to view their Scholastic magazine on the Smartboard. This is part of literacy and gives them the opportunity to view short video clips less than 2mins. and play a game or two (math, words, science vocabulary). This experience is centered on high interest/engagement.

Grades 1 & 2
Jamie Gidney
The students attend technology class once a week for 45 minutes. During that time the students work on keyboarding skills and become comfortable with tools in the Pixie program. During this time most of the class is connected to projects that pertain to the science and social studies lesson that we have in class. Students also learn to navigate different programs on the ipad. In the classroom students rotate through the program called Keyboarding Without Tears which is designed to teach proper finger placement on the keyboard. They spend between 15-20 minutes on this program 3-4 days a week. The second grade also uses the ipad during math in the Dreambox app. one time a week for 10 minutes.

Grades 3-4 Literacy
Meg Schindler
In literacy, we use a mixture of technology and printed resources. In the current academic and professional climate, students can prepare themselves for vastly more opportunities if they are technologically literate. Additionally, technology provides access to a myriad of high quality resources for researching and for sharing students' writing.

All classes will annually critique the benefits and drawbacks of technology use, with varying ranges of resources and purposes, depending on the age appropriateness. It is of the utmost importance that students understand the risks and responsibilities of technology use. There exists a pervasive dichotomy in regards to technology; It exists as both a helpful tool and as an addictive and potentially destructive feedback loop of unreliable information.

In our study of reading, we will be using computers to research reading topics. Students will learn about refining searches, finding reliable resources and resources to use as cross-references, and the skills required to apply "Close Reading" to a screen, versus printed documents. Students will also develop their multimodal literacy skills by analyzing non-print resources, such as advertisements and news reels. Between third and sixth grades, students will learn to consider audio and visual stimuli, how and why a given source is disseminated, and to whom the source is intended to reach. During this time, students may spend 15-30 minutes per day on a computer, in literacy class. That estimate does not hold true from week-to-week. Many weeks, we don't use computers at all. Others, students can only learn to use these skills by practicing themselves.

During writing, students perform their mentor text research, planning phase, drafting phase, revising phase, and even rewriting phases by hand, in a writer's notebook. They often draft many stories before choosing one to "publish" by typing it on a computer. In order to type their final piece, students in third grade learn to create a new document, title the new document, format the alignment, spacing, and font, and they learn to use folders to organize their writing. Fourth graders learn how to use spell check and "comment" on each others' writing, giving increasingly substantive feedback. Fifth graders learn use internet resources, such as *Thesaurus.com* to expand their writing repertoire, they also learn how to use the spacing feature. Sixth graders learn about the line between using the internet as a mentor text and plagiarism. All students work with adding text features in their informational writing, such as graphs, images, and captions.

Students also learn to "share" their writing via Google Docs. As a writing teacher, this feature is worth the computer's weight in gold. During class, I conference with individuals and meet with small groups to address individual needs and personal goals in writing. While that time is invaluable, the additional feedback the Comments feature allows me to give to students via Google Docs is more frequent, detailed, and individualized than I could ever achieve in a single class period.

Students are overjoyed to get to their writing when they know that overnight, I have left notes of what I noticed they were doing in their writing. I might write something like, "I noticed that

you remembered to use a time transition. Your reader will appreciate how specific you were when you said, 'About 20 minutes later,' versus if you had just said, 'Later'." Since we have been working on writing specific time transitions, the student can be reinforced in their work based on *their* writing merits, the work *they* are accomplishing. This Comments feature helps me to reinforce the professionality of their writing; they are not writing to please me or anyone else, but to fulfill and satisfy their drive to write and master writing.

Finally, using Google Docs, students can easily share their writing with their peers or with older or younger students, to expand the range and detail of feedback they can receive. When students complete their work, they can even easily share their writing with parents, grandparents, aunts, uncles, other teachers, etc. When their audience grows, so follows the dedication to their writing craft.

Grades 3-4 Social Studies and Science
Nancy Boymer
I have not used computers in science/social studies class with grades 3 & 4. I have used a science program called Mystery Science, which introduces concepts on the Smart Board. Then, the work and activities are in the classroom and on paper. In the future, I may use another program called Gizmos. They students will use the computer to manipulate science concept, ie, when teaching the unit on forces and motion, I may use the Gizmo called, Force and Fan Carts. The program allows each student to work independently and manipulate the elements on the program for that particular topic. Here is the explanation of the Force and Fan Carts.
Explore the laws of motion using a simple fan cart. Use the buttons to select the speed of the fan and the surface, and press Play to begin. You can drag up to three objects onto the fan cart. The speed of the cart is displayed with a speedometer and recorded in a table and a graph.

This is just an example of what I might use with the 3 &4 class. The students would be using a computer to run the program for about 45 min. For 1 or 2 class periods.

There will also be a time when the class will be asked to write a response to an observation or an experiment. I will use the Google Docs format as explained by Ms. Schindler for literacy. This would happen about once a quarter. The students would type on the Google Doc program for about 30 min.

Grades 5-6 Science and Social Studies
Nancy Boymer
The 5&6 grades use Google Docs to write their Claim, Evidence Reasoning responses to science observations and experiments. Please see Ms. Schindler's explanation of the value of Google

Docs. They work on them about once a quarter. They type for about 30 min. Per day when they have an assignment. They also use the Gizmo program as described in the ¾ science response. They use a Gizmo about once or twice a quarter. They work independently at a computer for about 40 min. for two days.

Part of technology is also to learn how to use digital cameras and create videos. They learn how to download and use the pictures/videos along with text. This work is presented during technology class, which is two 45 minute periods in a week. We just completed a service for the BEES, which was using the Pixie, (graphic design program) to design invitations to the Thanksgiving Luncheon. That project was completed in a 45 min. Session. We will use the internet to research as the we begin the study of US History. We will go online for one or two class periods when that time comes.

Again, the skill of internet research will be taught during technology class and carried into the classroom. We use a keyboarding program called Typing.com. That is used during times when other work has been completed. We don't have a standard time scheduled in for keyboarding. The most the students are using a computer for social studies or science is 60 min. In a day. There are many days, however, when they do not use a computer at all in those classes.

Grades 3-6 Mathematics
 Britney Koetsier
This is the first year with DreamBox for our entire school. This program has been used in our supervisory union by other schools and has been found to be a effective way to give the children more practice with mathematical skills. Each account is personalized for each child's skill level. Teachers also have the ability to assign lessons and tasks that would be helpful in building your child's math skills and understanding. Data is collected on the student to show progress, standards the child has met or are working on, and where they are in relation to their classmates. This data is useful to group students, see what needs to be reviewed, and show student growth. This program is aligned with Common Core State Standards. At school, I hope to use this program roughly 2 times a week for 15-20 minutes.

Technology use varies from day to day depending on the lesson. The math curriculum, Investigations 3, has a teacher online component with the program. With this online component I have the ability to project 10 Minute Math (i.e. quick images, equations sets), show short math videos, show lesson problems and display student work. When sharing work the students have the ability to see, critique and analyze each others work. This contributes to the sharing of ideas, collaboration, and math discussion and debates.

Eileen and I have discussed doing more coding this year when Mathematical units align, such as using Scratch when learning about angles and polygons. working with angles and shapes to move objects around the screen.

Three times a year children take the STAR Math and STAR English Language Arts (ELA) assessment on the computer. Each assessment takes between 20-60 minutes depending on the child. The data from this assessment is then used to track growth of students, find instructional levels, and create groups for instruction. Grades 3-6 also take the SBAC Assessments for Math, ELA, and Science in the spring. This assessment is required by the state and scores are reported to parents when they are released. In preparation for this assessment we have the option to do the SBAC Interim assessments. These SBAC Interim assessments are broken down into Math and ELA-with assessments for different concepts. With the SBAC Interim, teachers receive immediate scores on where a child is projected to score on the SBAC. Teacher's can also analyze what questions children answered correctly or incorrectly and how the class as a whole is doing.   These SBAC Interim assessments can take anywhere between 30-60 minutes for the child to complete. While the teacher gathers useful information from the SBAC Interim assessments on children's abilities, it is also extremely valuable for the child to practice and become familiar with the test before taking the actual SBAC assessment.

At Barnard Academy, we follow the following guidelines for daily student time
using laptops or iPads:
PreK & K --12 minutes (PreK licensing regulations state no more than 1 hour per week in class, which comes to 12 minutes per day)
K----15 minutes per day maximum
G1 & 2---35 minutes maximum (many days there is no technology use)
G 3-6 ----60 minutes maximum (many days there is no individual technology use)

Technology Classes with Eileen Vaughn

PreKindergarten gets a very short tech experience once a week (less than 15 minutes for the entire class, about 10+ children) with me after I share a book with them on Wednesdays. They go to the smartboard and touch an object to change its color. This experience is teaching them the beginnings of using a paint program on a computer. They do not have a device in their hands.

Kindergarten has a 45 minute Technology time slot on Tuesdays. This is not a time where children are continually engaged with a screen, but rather also have opportunities for hands on activities. The guideline is less than 15 minutes of screentime. Children are learning the basics

of computers and introduced to new programs. Tech time also means Makerspace time, when we combine virtual and real world, hands on activities.

Grades 1 - 6 all have 45 minute time slots with me on Tuesdays. Tech time can also mean Makerspace time, when we combine virtual and real world activities.

Some of the Programs/Applications We Use
These are some of the applications I use with students: The DuckDuckMoose suite (K-2)-including MooseMath and Draw and Tell. We have used BookCreator (all grades) to make virtual books (available for both iPad and Chromebook). We also use Tangrams.(K-2) We have Pixie, (all grades) a great paint program on the iPads and the Macbooks. We also have Frames, an animation creator from this same company. Scratch, created by MIT, is available for the younger students on the iPads, and the online version for older students.
We use iMovie on the iPads and the Macbooks, and we also use WeVideo on the Chromebooks for creating videos.
Older students use the Google Suite which is available in their Google Drive: Docs (writing), Drawing(drawing), Slides(presentations), Sheets (like excel) and Sites (working with and creating websites). Classroom teachers also have some favorite apps on the iPads.
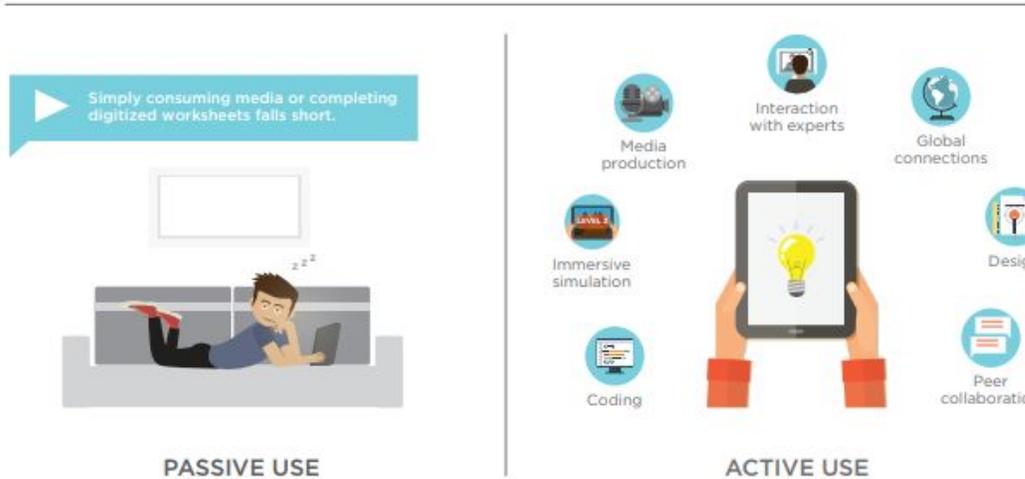
I do like CommonSenseMedia for many media recommendations. The screen time we have at school is always educational and active. When thinking about your use of screens at home, you might consult articles such as this one: Here is the link for parents and screen time.

Raphael Adamek, Director of Technology

While it can be helpful to look at the amount of time students spend in front of a screen, it's also important to look at what students are doing in front of the screen. The National Ed Tech plan has an interesting breakdown between active and passive technology use. We strive to have our students using technology actively:

Here is the vision that we articulated in the most recent draft of our digital learning plan:
https://docs.google.com/document/d/18THcT66okbyKbTiE7aV9V4SC1m2WTJDdFdXXuXLhTyE/edit?usp=sharing

The WCSU believes that 21st century learning effectively weaves technology into the curriculum to improve student learning, foster creativity and expression, promote personalized learning, improve efficiency and organization, and prepare students for college and career in a rapidly changing world. Throughout the curriculum we seek to create authentic, meaningful experiences that develop students' critical thinking, creativity, communication, and collaboration skills. We believe that technology is an essential component of 21st century education, but we also believe in balance. We are cognizant of the amount of screen time that students have, and as a result we strive to make students' screen time in school meaningful and effective.

This is the definition for Technology Integration as defined by the WCSU Technology Committee:

<u>Effective technology integration at the WCSU</u>:

The seven points on Technology Integration at WCSU are very informative. Looking at #1, one could ask: in what way is technology necessary for an educational activity to be highly effective (at the elementary level)? What would Makerspace time look like without any technology? Is tech necessary to obtain the goals for Makerspace - creativity, engineering concepts, problem-solving, etc...? The answer may be very different for 7 year olds and 11 year olds, as more complex concepts can be elucidated well through a computer program....

1. either transforms or redefines an educational activity. If an educational activity can be highly effective without technology, we should not add technology for the sake of adding technology.
2. fosters higher order thinking where students are applying, analyzing, evaluating, or creating content using technology.
3. engages students in educational activities in school and allows students to remain engaged outside of school.
4. provides real world relevance and an opportunity for students to apply their learning to authentic situations.
5. allows students to extend learning beyond the classroom to connect and collaborate with community members and experts from around the world.
6. uses appropriate technologies to achieve pedagogical goals (e.g, different teaching approaches, methods of assessment, different learning theories) allowing teachers to act as facilitators in the classroom.
7. promotes the active use of technology (coding, immersive simulation, media production, interactions with experts, global connections, design, and peer collaboration), rather than passive use (consuming media or completing digitized worksheets).