



BEYOND THE BUZZ:

Technology Integrators Leading the Way

Fall 2014



INSIGHT

District Spotlight: Fayetteville-Manlius Schools

Digital Student Portfolios



Teachers at **Fayetteville-Manlius Schools (F-M)** are some of the leaders in the region in terms of mass adoption of classroom technologies.

Innovative Technologies

At F-M, a significant majority of instructors maintain an **on-line presence**, use **web 2.0 tools** regularly, and engage in innovative technologies such as **digital student portfolios**.

Digital Student Portfolios

The portfolios are used not only as a way to assess technology proficiencies, but as a way to demonstrate student growth. Self-reflection and assessment provide meaningful insight for the student, teacher, and parents through the culminating years. Using audio and video, students record themselves reading, solving math problems, debating, and conferring with students in other countries. Teachers find these artifacts provide specific information to guide individualized instruction in addition to parent conferences. Students enjoy reading through scanned handwritten documents from their prewriting stages or reflect on the evolution of a piece of artwork as each step is documented. Writing samples, recordings of science experiments and career readiness checklists are included for the student to bring home at graduation, providing a wealth of professionally documented work.

THE BUZZ

MOBILE DEVICE

teacher training

1:1

Social Media
community

web 2.0

TECHNOLOGY
app

iPad

BYOD

integration

flipped

Google Drive

digital

INNOVATIVE

QR codes

classroom

TWITTER

Chromebook

Featured Teacher: Marcia Cornell

Westhill Central School District

May 2014



Marcia Cornell is a Chemistry and Forensics teacher at Westhill High School in the **Westhill Central School District**. She began her second career 16 years ago. Prior to launching her teaching career, Marcia worked in the private sector as a senior project engineer with Malcolm Pirnie, Inc.

What are some of the innovative ways Marcia integrates technology into her curriculum?

During March 2014, Marcia had a unique opportunity to pilot a **Bring Your Own Device (BYOD)** project in collaboration with the CNYRIC's Instructional Technology Team. The CNYRIC provided 30 mobile devices for students in Marcia's senior-level SUPA Forensics class--10 Chromebooks, 10 iPads, and 10 Google Nexus 7 Tablets. Prior to deploying the devices with students, Marcia met with the CNYRIC's Model Schools Coordinator Rob Leo to plan a unit and integrate a variety of technology tools into her lessons. Her goals were to provide students with a space to collaborate and communicate as they prepared a presentation. She chose to integrate two main tools into her teaching: **Edmodo** and **Google Drive**. Edmodo provided a space for Marcia to deliver digital documents and links for students to analyze. Students were able to post notes, reply to other students' posts, and collaborate in small groups. Google Drive provided the students with a space to collaboratively build their culminating presentations. In addition to using the mobile devices in Marcia's classroom, students were also afforded the opportunity to use their devices throughout the school with their teachers' permission. They utilized apps like **Evernote** to take notes for all of their classes and keep them organized in one place on the Web. Further, students brought the devices home and treated them as if they were their own.

How have students benefitted from Marcia's technology integration initiatives?

Students thoroughly enjoyed being part of the pilot project. They raved about Edmodo as it provided them with a sense of "community" where they could communicate with their classmates, and only their classmates, 24/7. It afforded them an opportunity to extend the learning process beyond the four walls of the classroom as they could post notes and share links anytime, anywhere. They also appreciated the convenience of having access to computing technology in all of their classes.



Marcia Cornell's students participate in a BYOD panel discussion.

Student Testimonials

"The biggest benefit in my opinion for participating is that it is introducing all of us to what is going to soon become a modern and new classroom setting. It is introducing us to new systems of learning using technology that I believe can be really helpful for when we move on to college."

"The biggest benefit has been being able to integrate the use of my device in all of my classes. It has been very helpful in the sense that I have instant access to all of my notes and the Internet."

Featured Teacher: **Lindsay Cesari**

Baldwinsville Central School District

January 2014



Lindsay Cesari is a Library Media Specialist (LMS) working at Durgee Junior High School in the **Baldwinsville Central School District**. This is her sixth year in the district. She has been teaching for seven years overall. Lindsay describes herself as a non-shining LMS who loves technology.

What are some of the innovative ways Lindsay integrates technology into her curriculum?

Lindsay relishes her role as a librarian because it allows her to collaborate with teachers from different subject areas to make the same technology work.

Baldwinsville's **iPad program** is a great example of this. Teacher and librarians have found ways to integrate the iPads in a wide variety of settings, some of which are listed below.

- Librarians use **QR codes** and the iPads to access orientation videos about the library.
- Global History and Geography students in 9th grade used **Explain Everything** to produce mini lessons on Islamic vocabulary terms for 6th graders.
- 9th grade ELA students used the iPads to complete an entire research unit, including using apps to master skills like note-taking, highlighting, and outlining. They demonstrated their understanding by creating an **eBook** using the **Book Creator app** as a final product.

Recently, Lindsay and some of her colleagues participated in the CNYRIC's on-line classes, **Flip Out and There's an App For That**, where they learned how to implement the **Flipped Classroom**, as well as how to integrate useful education apps on the iPad. As a result, they started using the iPads to model a flipped classroom environment.

How have students benefitted from Lindsay's technology integration initiatives?

The iPads allow students to create authentic projects that are easily shared beyond the walls of the school. For example, a recent lesson on root words asked students to use the **PicCollage app** to create a poster. In addition to presenting their posters in class, students shared their posters on **Instagram**, applying hashtags to categorize and organize their work. Instagram was a great motivator, as students went home and used personal Instagram accounts to like and comment on their classmate's work.

Another positive impact has been the collaborative effort to develop a flipped classroom environment. When students use **Nearpod** and the **iPads** to complete self-paced lessons, teachers are given immediate access to formative assessments. This data allows them to instantly address problems and pinpoint individual students who would benefit from reteaching. Integrating this technology prevents students from falling through the academic cracks.

District Spotlight: Trumansburg Central School

1:1 Mobile Devices



Beginning in the 2013 school year, **Trumansburg Central School District** (TCSD) implemented a **1:1** roll out of **iPad Minis** to students in grades 9-12. High school teachers were given iPads several months in advance of the students so that they could become comfortable using and teaching with the device. The teachers were expected to attend three training sessions provided by CNYRIC Instructional Technologist Jason Clark including Basics of the iPad, Google Drive, and Edmodo.

The on-line applications provided teachers with the necessary tools to create, store, and share work, as well as a platform for collaboration with students. Additional training sessions were provided as the program unfolded such as Flipped Class, Creation with iPad, Paperless Instruction, and There's An App for That. The program is now in its second year of implementation and things are going well. Some teachers are focused on using **Google Drive** and **Edmodo** to deliver their lessons, while others have branched into flipped and paperless instruction. According to Clark, "...the implementation has evolved from a structured 1:1 environment to a hybrid model where students are also bringing in their own devices in addition to the school-issued iPad."

Learning from Experience: Cellular versus Wi-Fi Connections

The 1:1 initiative was the result of a pilot implementation of Android Galaxy tablets at the 5th and 9th grade levels during the 2012 school year. The Galaxy tablets were connecting to the Internet via 3G cellular and did not work well because of low signal strength from thick school walls. At that time, there was no Wi-Fi in the district and both teachers and students struggled using 3G in the classroom. As a result, the district focused on upgrading the network and saturating the campus with WiFi connectivity, thus setting the stage for the 1:1 roll out of iPad Minis the following year.

"Grading" their Performance

As mentioned, the initial pilot program was prepared for 5th and 9th grade students. The plan was to purchase new devices each subsequent year, and the devices would follow students so that each building would be fully 1:1 in four years. Upon the pilot's implementation, a few lessons became evident. First, the district found that the 5th grade students were too young to take the devices home. Second, in the high school, having only one grade level of students with devices led to frustration in mixed grade level classes where some students did not have a device. Learning from the experience, decisions were made to focus on the high school grades for the 1:1 implementation, and focus on classroom implementation in the lower grades using a combination of iPads and Chromebooks.

District Spotlight: Homer Central Schools

Mobile Technology, Chromebooks



Homer Central School District is well underway with a move to mobile technology, making strides toward a **1:1** learning environment using **Google Chromebooks**. The decision to use Chromebooks versus tablets or laptops was based on multiple factors including ease of use, price, portability, and battery life. Additionally, Homer is a Google Apps For Education school, so the Chromebook fit with the district's strategic vision.

Pilot Program Begins

In the first full year of the pilot, 924 Chromebooks were purchased and distributed to over 40 teachers at different stages throughout the year. The Chromebooks reside in the classrooms and can be used by students during the day, but the district has not yet released them to go home with the students at night. The logistics of deploying a mobile technology program were discussed at length by district administrators. Procedural issues regarding damage, theft, appropriate use, and the policies guiding those issues were considered. Homer administrators spent time researching other programs and learning from those experiences before embarking on their own mobile initiative.

Teacher Training Secures Device

Before teachers were eligible to receive Chromebooks for their classroom, they needed to attend a minimum of two days of professional development. The training sessions consisted of everything from basic operation of the device, to integration strategies for enhancing instruction. Throughout the year, teachers were provided additional training sessions from CNYRIC Technology Integration Specialist Nick Lefort to ensure the learning process was ongoing, and embedded.

The Impact on Instruction

So far, the effects of the program vary from teacher to teacher, but the evidence is mounting. Many teachers are now using the Chromebooks to flip their instruction, allowing for a new way for students to learn. The teachers film a mini lesson and then setup one of their centers so students can watch the direct instruction while the teacher is giving individualized help to other students. Other teachers are using the Chromebooks to have students do on-the-spot research or to create video and photo documents so students can showcase their work in fun, meaningful ways.

Featured Teacher: Amy Furletti

North Syracuse Central School District

September 2013



Amy Furletti is a math teacher in the **North Syracuse Central School District**. She teaches grades 10 through 12 and has been in the district for 12 years; three at North Syracuse Junior High and nine at Cicero North Syracuse High School. She has 16 years of teaching experience overall.

What are some of the innovative ways Amy integrates technology into her curriculum?

Amy doesn't just teach math; she teaches students to love to learn. She continually seeks ways to improve her teaching and meet the ever changing needs of her students. Today's students are constantly plugged in, yet schools tend to be a place where students need to power down. Amy is interested in finding creative ways to integrate technology and turn students on to math. This past year, Amy attended training offered through the CNYRIC's Instructional Technology department where she learned about the **Flipped Classroom** concept to transform her teaching. Through trial and error, she gained immeasurable knowledge and skills and found dramatic changes in her students' performance. Amy

created instructional videos using **Screencast-o-matic** and the **SMART Recorder** on her SMART Board to demonstrate mathematical concepts. She posted her videos on **Edmodo**, a free social learning platform. Students were able to view the videos at home for homework, freeing up class time for deeper learning and differentiated instruction. In the event that students did not have Internet access at home, Amy provided **DVDs** of her videos for students to view off-line. In class, Amy fosters a collaborative culture using the **ti-nspire** graphing calculator and the Navigator system. This allows her to show students' calculator screens to the whole class and show multiple representations of a single problem.

How have students benefitted from Amy's technology integration initiatives?

Since she implemented the Flipped Classroom model, Amy saw a marked improvement on her students' Regents exam scores. On the Trigonometry Regents, 33 percent of her honors students scored 95 or better, with five students achieving scores of 100. She also noticed an increase in student-to-student interaction as the Flipped Classroom model allowed for more time in class. Students improved their communication skills, used higher-order thinking skills, and built more "math confidence." Further, Amy was able to provide more meaningful feedback during 1:1 time with students, build stronger relationships with them, and place math content into a more relevant context.

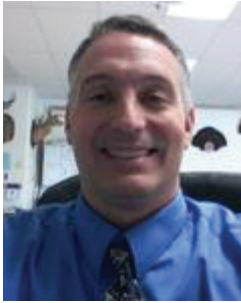
Student Testimonial

"This was a different way of learning, an innovative way to learn with today's ever-changing technology. The student was in control of how they learned, the teaching method fit the students wants and needs. For me, and along with my fellow classmates, a difference was found in this teaching method. Some of us have never done so well in math and some of us have never enjoyed it so much." - Bri Stahrr, student

Featured Teacher: **Michael Flood**

Trumansburg Central School District

February 2014



Michael Flood is a science teacher working at Charles O. Dickerson High School in the **Trumansburg Central School District**. This is his seventh year in the district, with 23 years of teaching experience overall. He currently teaches AP Physics which also serves as a concurrent enrollment course with College Physics at Tompkins Cortland Community College. He also teaches Regents Physics, Forensic Science, and Astronomy for grades 10 through 12.

What are some of the innovative ways Michael integrates technology into his curriculum?



Michael has been implementing the **Flipped Classroom** model to teach AP Physics, integrating **Edmodo** to establish an on-line web presence as well as setting up his own **YouTube** channel to post custom videos he has created using **Screencast-o-Matic** to make his class content available 24x7. The videos are used for delivering lecture-based content as well as providing students an avenue by which they can check solutions to homework problems assigned at night. Michael first heard about the Flipped Classroom

from the CNYRIC's Jason Clark, who works as an embedded instructional technologist at Trumansburg. With Jason's guidance, Michael has been able to quickly establish all of the tools he needs to successfully flip his instruction and is in the process of expanding the Flipped Classroom model to his other classes.

Michael is also leveraging a 1:1 iPad implementation in all of his classes. Trumansburg Central Schools are unique in our region as they are among the first to establish a 1:1 learning environment using iPad Minis. According to Mike Pliss, Trumansburg's Director of Technology, "iPads have exploded throughout schools and classrooms. Their flexibility, versatility, and mobility make them a phenomenal learning tool. As teachers seek ways to integrate these devices, we recommend focusing on specific learning goals that promote critical-thinking, creativity, collaboration, and the creation of student-centric learning environments. In Mr. Flood's Forensic Science and Astronomy classrooms, the iPads allow for paperless assignments using the free Adobe PDF Reader app."

How have students benefitted from Michael's technology integration initiatives?

After implementing the Flipped Classroom model in his AP Physics class, Michael has observed that he and his students have gained a tremendous amount of class time that allows for an increase in student collaboration in small groups to facilitate problem-solving and critical thinking, as well as more time for inquiry during laboratory experiments. For his students using the paperless assignment option in Forensic Science and Astronomy, student engagement is at an all-time high. In addition, there are some cost savings for the district as paper consumption has declined.

Featured Teacher: Christina Luce

Liverpool Central School District

October 2013

Christina has taught in the **Liverpool Central School District** since 2002. She spent 10 years in 6th grade and presently teaches 2nd grade at Nate Perry Elementary.

What are some of the innovative ways Christina integrates technology into her curriculum?

Christina is passionate about the integration of technology in the elementary classroom. She believes that utilizing technology to reach out to the school community, as well as the global community, provides teachers with the occasion to extend learning beyond the classroom walls and promote digital citizenship. Based on staff needs and her personal expertise, she conducts workshops or tutorials for her colleagues on topics such as the use of **social media** in education, **iPad** applications, **website design**, and web related resources to foster a home-school connection. She has established a **Twitter** account (@LuceClassPage) for her 2nd grade class where she connects to her students' families, as well as other classrooms, practitioners, and authors from around the world.



After working with CNYRIC Model Schools Coordinator Rob Leo, Christina developed a number of lessons in which students created math tutorials with the use of **iPads** and the free **ScreenChomp application**. With the ScreenChomp app, students were able to plan and record a math tutorial in which they explained a standard algorithm. Colleagues heard what Christina's students were working on and asked for assistance in setting up something similar in their classrooms. She provided a workshop on the application, and on the day each teacher implemented the lesson, she was able to send four students that she had trained to assist the teacher and their students during their class period. Experiences such as these are important for all learners as they reinforce the idea that we have much to learn from one another.

How have students benefitted from Christina's technology integration initiatives?

Using the ScreenChomp app on a shared cart of iPads, students demonstrated their understanding of math concepts, but also the required technological skill set. Students were eager to demonstrate their skills and to share their work with others. Students increased their success in understanding complex material and subject-specific vocabulary. The math tutorials, as created in ScreenChomp, can be shared and reviewed as evidence of incremental growth and overall understanding.

ITD TALKS: Flipped Classroom Pioneer Inspires

More than 100 educators attend Jon Bergmann's interactive workshop



Flipped Classroom Pioneer Jon Bergmann inspired more than 100 Central New York teachers and administrators during his interactive workshop at the CNYRIC Wednesday, Oct. 22. Throughout the day-long ITD TALKS event, Bergmann shared insightful tools, tips, and tactics for implementing flipped K-12 classrooms.

Flipped Classroom Defined

A flipped classroom is a form of blended learning in which the typical lecture and homework elements of a course are reversed. Students learn content by watching teacher-created video lectures at home and homework is conducted in class. "If kids go home and don't have the help they need with homework, then the flipped classroom will provide support outside of school," said Bergmann

Technology Has Changed

Bergmann began his presentation with illustrations of recent technology advancements and their impact on society. His goal is to encourage educators to change their teaching styles to meet the needs of 21st century students. Bergmann emphasized that while implementing a flipped classroom does take time and commitment, it's well worth the effort. "You're going to be working really hard that first year you flip your classroom. But to be successful, you need to invest time. In the end, this will create time for you in the classroom."

Bergmann's Flipped Classroom Highlights include:

- Create an environment for active learning
- Move from a teacher-centered to a project-based classroom
- Allow students to learn at their own pace via video
- Cultivate personal connections with students before flipping classroom
- Take time to teach students how to interact with videos



Save the Date: March 19, 2015

The next ITD TALKS event, "Flipped Classroom in Action – A Panel Discussion" takes place March 19, 2015. Go to itd.cnyric.org for registration information.



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