Inquiry Infusion: Surviving and Thriving in a 1:1 Environment

Feature

by Sarah Olson, Bridget Crossman, and Megan Coker, April 2016

Like the traveler in Robert Frost's poem, we found ourselves standing at a crossroads—facing a transition to the 1:1 device environment. Our success however, came not through selecting only one path, but through each library following its own path towards the common destination of inquiry and information literacy. This is the story of how our district's library program was able not only to survive the transition to a 1:1 environment, but also to thrive.

Set Your Goals

Here at Lake George Central Schools we are very fortunate to have a strong connection between the two libraries and the technology department. Together we created a shared vision of integrating technology and information literacy skills through inquiry-based instruction. This vision helps guide each school building in their integration of both inquiry and technology, and allows us to continue thriving even as faculty and technology resources change.

Build Your Basic Infrastructure

Our elementary library serves students kindergarten through sixth grade while our high school library serves students seventh through twelfth grade. Both programs are fortunate enough to have flexible schedules with collaborative lesson planning. Each library has built a web presence as well as a solid collection of resources to support students and teachers in teaching and learning through inquiry. In both libraries we use the WISE (Wonder, Investigate, Synthesize, and Express) model for inquiry, developed by the Warren Saratoga Washington Hamilton Essex BOCES (WSWHE) School Library System, to guide our instructional practice when working with teachers and students. This inquiry curriculum was used district-wide when building curriculum.

Officially, our three-year rollout of devices for a 1:1 environment began in the 2014-2015 school year, but the groundwork for effective integration was laid long before this with strong collaboration between the technology team, the library, and our curriculum teams. Our 1:1 technology initiative is called weLearn, because we want to stress learning and instruction, rather than focusing on the tool. This has been our guiding vision and continues to keep us moving towards the shared goal of an inquiry-based instructional program.

Curriculum Connections

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The real groundwork for the successful roll out of our 1:1 initiative came way back in 2010 when the Common Core Standards for ELA were adopted, and gave us something tangible to link curriculum, technology, and library goals together. Our focus then became making these connections clear as we worked towards our shared vision of inquiry-based models. Reflecting on this journey highlights the necessity for:

- Key partnerships and collaborative opportunities
- Participation in curriculum conversations
- Designing and delivering meaningful professional development
- Reflection and Action

Each school's path followed a different set of steps, and the routes that we took to get there were not flawless or smooth, but the shared vision of integrating technology and information literacy skills through inquiry-based instruction helped us develop a successful program.

Elementary School Path

It was five years ago and the start of a new career for our elementary librarian which jump-started a change in the elementary school library program. The new librarian's vision fit perfectly with the new Common Core standards. She and the instructional technology coordinator shared the same vision of wanting to see the library support teachers with the technology instructional changes and inquiry learning. This led to a key partnership.

At this time the teachers were working to align their curriculum to the new standards, and we capitalized on this through participation in those conversations. Together we led the teachers through the incorporation of three technology projects into their curriculum. Tireless hours, backed by a no-fail optimistic attitude, brought about minor success. However, because the outcome did not meet our vision, we reflected on the process and identified that we had not provided the teachers with a deep enough understanding of the WISE Model of Inquiry. By requiring the teachers to do three technology "projects," we had fostered a frame of mind where technology integration was seen as separate from the curriculum and it could be "checked off." It became clear that we needed instructional practice to be driven by curriculum and inquiry, with the understanding that technology is the tool to support learning.

This reflection led to action when we provided building-wide professional development over the summer. These sessions explicitly modeled and taught each component of the WISE Model of Inquiry. Teachers were engaged in the learning process with hands-on, authentic opportunities that followed the inquiry process and the project-based learning model. This time was also used for collaborative curriculum conversations and coaching opportunities for integrating inquiry and technology across the curriculum.

Our clear and consistent message, which began with professional development, was continued with shared stakeholders. Persistent exposure to inquiry language and vision was accomplished through presentations at faculty, cabinet, curriculum leaders, and technology meetings, along with ELA and social studies professional development sessions. In addition to these opportunities, it was also critical to maintain continuous curriculum conversations. Participation in grade level and curriculum area meetings provided for timely planning discussions that kept inquiry in the forefront. The teachers brought this language and process into their classrooms along with inquiry process posters. This ensured that the WISE Model also became a regular part of student conversations.

Incubating a Culture of Inquiry

We found that the idea of a "project" was still encountering barriers of time and integration. This reflection again shifted our conversations with teachers as we modeled how each component of the WISE Inquiry Model could be utilized in smaller chunks, allowing more practice with the skills and language. As the teachers and students developed a deeper understanding of the WISE Inquiry Process, we found that the focus was no longer three standalone projects, but an instructional practice with shared language and explicit skills that could be integrated throughout the curriculum.

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This final shift lined up perfectly with the first year of the weLearn roll out of devices. Grades one, four, five, and six became 1:1 in 2014–2015 with the addition of grades two and three in 2015–2016. The foundation of inquiry-based instruction was set and continued to be an integral part of all weLearn professional development, even though much of it was targeted at technology training. By continuing to use the WISE model in the structure of our PD, we held true to our message that it is "not about the tool."

Examples of Inquiry Instruction at the Elementary School Level			
Curriculum Content	Essential Question	Resources and Tools	Knowledge Product
Social Studies	If you were a colonist living in NY during the revolutionary war would you have become a loyalist or a patriot based on the events that led up to the war?	Multiple nonfiction titles from the library. Library of Congress Primary Resources Databases (FreedomFlix, World Book,	Build a commercial using 3 pieces of evidence from both primary and secondary documents supporting why someone should join your side.

		Britannica, Grolier) Various drawing apps (DoodleBuddy, Paper) iMovie app	
Social Studies	How does Lake George shape the community we live in?	Wonder grid EduCreations Community Experts PicCollage Book Creator	Build a collaborative informational ebook explaining different ways that the lake has shaped our community.

High School Path

As the Common Core Standards were being adopted and implemented, we simultaneously rolled out Classroom 21 in the high school, which was an opportunity for teachers to present a plan for redesigning their classrooms for 21st century learning, embracing technology and instructional shifts. Classroom 21 was the central component of the high school technology rollout as well as HS professional development from 2011 until 2013. We capitalized on the success of early adopters to encourage risk-taking with other teachers. These have become some of our key partnerships.

weLearn at Lake George High school is the formal integration of technology in an inquiry-driven instructional model, starting with the three year roll-out of devices: seventh and tenth grades in 2014–2015, eighth and eleventh grades in 2015–2016, and finally ninth and twelfth grades in the 2016–2017 school year. With this formal roll-out, we shifted our PD from focusing on the early adopters to all teachers at those grade levels. This PD looked different because, in addition to training on inquiry-based instruction, we also needed to provide more technical training. In addition, we recognized a need to continue to provide our early adopters with meaningful learning opportunities and developed a Teacher Leadership Summit, an after-school professional learning community to explore the New Literacies, as defined by Heidi Hayes Jacobs. These Teacher Leadership Summits will continue, with a different focus each year, allowing us to meet the needs of a diverse faculty.

The focus of our weLearn professional development was always on instruction, and we primarily used project-based learning (PBL) as our model through this phase. As we trained teachers on inquiry-based instruction and PBL, we engaged the teachers in the inquiry process. We specifically used strategies and tools of inquiry-based instruction in the structure of our training, rather than delivering passive "sit and get" PD sessions. Instead, teachers were engaged in Wondering, Investigating, Synthesizing, Expressing, and Reflecting. We wanted to be transparent about our use of the WISE inquiry model as our PD structure, so that teachers understood how much we believe in the power of inquiry instruction.

In the 2013–2014 school year, we reached a tipping point with both teacher buy-in and the number of student devices in the building. The impact of Classroom 21 on students and the shift in their learning tools and strategies was encouraging when even the more reluctant teachers began to inquire about the possibilities of integrating technology. We had laid a foundation of what inquiry instruction could look like with immediate access to technology, and both students and teachers were ready to take it to the next level.

Through the implementation of weLearn and Classroom 21, librarians have strengthened key partnerships with the technology team, teachers, and administrators. I have continued to participate in curriculum conversations as we Curriculum Map and now find myself on the High School Curriculum Team incubating inquiry at the forefront of curriculum conversations with most all teachers and departments.

Examples of Inquiry Instruction at the High School Level			
Curriculum	Essential Question	Resources	Knowledge Product

Content		and Tools	
Science: Animal Adaptations	What 5 adaptations would the best suited animal, in my animal classification, need to survive in my biome? EQ: How could we design an animal that is perfectly suited to a biome? Or, EQ: Choose an animal. How could a genetic engineering team adapt this animal to better survive in its biome?	Padlet Databases (*Groliers, eLibrary*) Various book titles EasyBib GoogleDocs	Ultimate Creature Project: Create a new animal that is best suited to its environment including 5 adaptations that help it survive within its specific biome.
English and Global Studies (Cross Curricular)	What economic, political, and social factors are important for the president of the United States to know about your country when making global decisions?	Databases (*Opposing Viewpoints in Context, eLibrary*) Scoop.It Blogger EasyBib	Presidential Blog: Create a blog, with multiple posts, as a panel member preparing the president to make global decisions

Converging Paths

Through the two varied paths, we've reached our shared vision for a K-12 inquiry-based instructional program that is supported by our 1:1 initiative. Our shared vision is no longer limited to just the three of us, it now includes many of our colleagues. Key partnerships, collaborative opportunities, curricular conversations, meaningful professional development, and reflective action will continue to guide our program. Libraries and librarians are necessary in this process. In fact, the real question is not how do libraries survive in a 1:1 environment, but rather: how does a 1:1 environment survive without the library program? Teachers and students need our support, knowledge, skills, and resources to build better brains and student success.

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