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To: New York State Education Reform Commission

From: Peter Ciarelli, Asst. Superintendent for Technology Services, Williamsville CSD

Topic: Technology Integration to Empower Our Students

In his book **Empowering Students with Technology**, Alan November asks some critical questions for funding technology in our schools. *Does technology really make a difference? Can we use technology to do things for our students that we have never been able to do? Are there basic skills that all of our students and teachers must have to meet the skill requirement of our society? Do we have the capacity to support teachers after the technology is installed?* Although published over 10 years ago these questions remain relevant. Our students are growing up in an era where approximately 2-3 billion Google searches occur each day, with 800,000 users globally on Facebook, and where people all over the world can easily connect and collaborate.

Mr. November's questions provide guidance for our technology planning at the Williamsville Central School District. While we strive to provide the resources and tools for teachers, students, and staff to work more efficiently, gather data for important decision-making, and save costs, our technology integration program attempts to focus on those areas which help promote an internal motivation to learn. In his 2009 book

Drive, Daniel Pink speaks to resisting extrinsic rewards as a means to motivate our 21st century students and workers, while instead fostering autonomy, mastery, and purpose. We hope to empower our students to be productive, self-directed, and creative problem solvers while providing them skills to examine and filter enormous amounts of available information.

Ours is a collaborative effort- instructional specialists assuring ties to the curriculum, building administrators providing time and encouragement, assistive technology members ensuring access for all students, faculty giving a digital upgrade to their lessons, our local BOCES providing expertise and support, and technology integrators working with all players to bring the pieces together. This collaboration helps to provide a clear path of targeted professional development that follows through in the classroom. Incorporating technologies that students use regularly outside of school generates an excitement for learning that helps increase the probability of improving achievement. This past year our resources have been focused on entire grade levels, content areas, and faculty teams to help insure that all students in a particular grade/content area were receiving the upgraded instruction. These faculty teams agreed to provide their students a digital upgrade tied to a specific unit. To paraphrase Heidi Hayes Jacobs from her book **Curriculum 21**, this model helps to *enhance the content using technology, encourages sharing between colleagues, provides evidence with student projects, and celebrates the victories!*

While I would prefer to show evidence rather than write about it, following are just a few of many examples showing how targeted technology integration can be engaging, creative, relevant, and intrinsically satisfying for our students.

Students acting as classroom scribes. A simple yet effective concept where one student becomes the scribe for the day. Using a wiki or other collaborative tool, the student scribes the days notes. The notes are reviewed for accuracy, and then posted so others can learn from them after leaving the classroom. Other students continue to contribute to the notes by adding supporting articles, photos and videos and other resources.

2nd Grade eBooks. A district-wide endeavor, 2nd grade teams provided a highly engaging project, interdisciplinary, and tied to the writing process. Each second grade student produced and published their writing into an eBook. The eBooks were then made available as part of our library catalog so others could read them and leave comments or reviews.

Public Service Announcements. Using digital video tools, all 5th graders in one middle school created PSA's to help them learn about colonial times. These short videos are then posted so students can continue to learn from each other.

Screeencast Tutorials. Students creating and posting their own tutorials not only promotes engagement in the classroom, but facilitates self-directed learning.

Blogs. 7th graders in one middle school used blogs to help them learn about degenerative diseases. This interdisciplinary project had students create blogs from the perspective of someone, or knowing someone with a particular disease they were researching.

Mobile Devices. President Obama has called for schools in the United States to transition to digital textbooks by 2017 and Williamsville CSD recognizes the need to prepare for every student to have access to a mobile device. Implementation goes

beyond any specific technology and carries implications on how teachers teach, how schools offer professional development, and how a school's infrastructure can support a classroom environment where every student has this type of access. Testing the waters, our district initiated a pilot of iPad carts in our four middle school buildings. Unlike other mobile cart initiatives, this project was targeted solely to 5th grade teams. With all stakeholders working collaboratively, training was provided, lessons were upgraded, and follow-through occurred. The entire process was monitored and adjusted as needed.

Our teachers and students celebrated many successes with this initiative. Students took greater responsibility for their learning. A device for each student meant instant access to information, fast feedback on learning objectives, and the opportunity for "just in time" learning. This targeted approach helped assure that professional development reached the classroom. Our 5th grade teachers are extremely excited about bringing this initiative to a new level next year, and the district plans to pursue this model at the 4th, 6th, and high school grade levels.

Williamsville is fortunate to have many available resources to foster meaningful technology integration for our students. Curriculum driven integration helps our 21st century learners enter an environment of engagement, excitement, creativity, problem solving, and self-direction. These experiences however require resources and support. In last year's state budget, NYS Education Law was amended to offer school districts greater flexibility to combine aidable hardware, software, and textbook funds. We are thankful to the Governor's Office and the State Legislature for this change in the law, as it offered a practical option for how schools can financially address the demands for present and future learning. Moving forward, the ability to transfer these funds, and

allow an increase *beyond* the voter approved equipment code will free up the resources necessary to purchase mobile devices in order to reach capacity with future technology initiatives. Most important, the support of trained technology integrators who can offer the ideas, provide the professional development, and support the implementation cannot be overstated. It is clear to see their direct impact, and their position is key to the success of any systematic, meaningful technology integration program in our schools.

Thank you for this opportunity to discuss our program with the Commission. It is my sincere hope that you find some of our strategies and student successes of value to your mission.