

## **New York Education Reform Commission**

Mid-Hudson Region

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It has been said that no decision is a decision and it is usually the wrong one. As we look at technology integration in our schools what we see is a myriad of exclusive decisions being made with the intent of helping children. Unfortunately these well-intended endeavors in most cases fail. 21<sup>st</sup> century pedagogy requires that we teach our students to learn independently. It is in all reality teaching students to “learn what they have not been taught”. However this independency runs counter to the current educational framework which is based on an industrial model. Currently most classrooms in New York are teacher-centered arenas of learning. Though the chalkboard has been replaced by the smart board, most instruction remains unchanged. We must look at our students and fundamentally change how we instruct them and the major component of that change is technology.

The 2010 National Technology Plan has several major goals. Goal Four states “All students and educators will have access to a comprehensive infrastructure for learning when and where they need it”. How is this to be accomplished? What are the sequential steps that the legislature can take to facilitate such a goal? Deliberate and precise decisions need to be made by the governor, the legislature, and by the state education department. The governor to date has demonstrated a willingness to affect real change within our educational construct. That leadership is essential to redesign our current structure.

### Structural Issues

The major challenge facing teachers is differentiation in the classroom. Schools increasingly are being compelled or encouraged to look at each student uniquely citing both learning styles and instructional modalities. Essentially each student is given a personalized education plan analogous to an IEP provided to students requiring special educational services. Personalized resources, strategies, and in some cases even goals are established independently for each student. From an instructional or pedagogical perspective this approach is sound and is validated by research. However the premise of the research is fundamentally flawed. It rarely addresses the challenges of a single teacher being able to deliver multiple instructional strategies simultaneously and with fidelity. Instructors enter classrooms with inherent strengths and weaknesses of their own. The problem is that our schools are structured for mass conformity with 20:1 ratios in a classroom and a set bell schedule following a common prescribed curriculum albeit with some imbedded flexibility. In the recent initiative to hold teachers accountable, a new evaluation system has been set in place. A major component is the student-to-teacher data linkage. The concept behind this adheres to the assumption that direct teacher- student interaction is a valid measure by which the teacher is held accountable on a percentage scale. New educational models eschew the concept that time and student performance is correlated. The assertion of these new models is that it is not seat time with a student that determines a teacher’s accountability or a student’s

Steve Jensen, Director of Technology at the Newburgh Enlarged School District.

success, but rather it is the impact that a teacher has on a student to foster growth. While growth models are included in the state's evaluation system, the concept of seat time still permeates the process. To truly change the way we instruct students we need to restructure institutionally.

The current time sequence of instructional time is determined by seat time, Carnegie units, and Regent requirements. New York has one of the most prescribed educational systems in the country. Flexibility is limited and those limitations constrain districts to better serve their students. In New York the school week is prescribed by law to be a five day week. State aid and other factors contribute to this dilemma. Many states allow for longer school days and a shorter week. Newburgh schools simply by changing start times in a three tiered bussing schedule realized a savings of over one million dollars a year with no loss of service to children. While many districts are too small to have multi-tiered schedules, savings can be realized. Imagine local districts able to go to a four day week and place the savings towards technology permitting students to continue independent learning at home. Imagine a district being able to save 20% of its transportation costs? Incentives for districts to go to a shorter week could be imbedded in the legislation to repurpose the monies towards technology.

Seat time and Regents testing present a barrier. New York needs to provide mechanisms for student to work at their own pace, test out of courses and truly use the educational system for what they need. As teachers transition from delivering instruction to facilitating learning, the focus of the classroom changes dramatically. The industrial model currently in place prevents this from happening and technology is the medium by which these issues can be addressed. The delivery and intensity of instruction modified for each and every student cannot occur in an industrial model. It simply lacks flexibility. Technology can be integrated by delivering content and differentiated modalities with surgical precision.

What has hindered technology integration? There are several causal factors we need to address.

#### Economic Issues

New York made an extremely forward- thinking decision by providing latitude in textbook aid to be used for digital devices and content. Newburgh was able to leverage those monies and purchase iPADS for every 6th grader in the district. We have spent months of planning and will launch the initiative in about four weeks. It is a bold move in uncharted waters for us, but we believe if done effectively we will see measurable growth. Some of that growth will obviously be in academic achievement, but there are other areas well. Lower discipline problems and less classroom interruptions will allow teachers and principals to spend more time on pedagogical issues rather than behavioral issues.

Capital projects is an area where the state should look to revise the regulation governing them. Aidable items for technology are limited to the basic wiring and computer labs. Standards for classrooms should be established by requiring technology as an essential component in all new construction and retrofits. Though some districts avail themselves to E-Rate funding many districts and individual schools do not qualify. Computer systems such as student information systems, email or financial software often are outside the purview of capital funding. These systems require security and minimum aidable standards need to be established particularly when districts are facing increasing threats to data security.

Steve Jensen, Director of Technology at the Newburgh Enlarged School District.

Technological support requires an investment of capital and resources. However, we need to look at the potential savings that can be realized by the effective use of technology. If properly implemented technology integration has proven to lower retention rates in schools. For example, this past year Newburgh had a retention rate of approximately 4%. When factored economically and attributing the per pupil cost the math is simple: 533 students X \$18,000 per pupil equal \$9.59 million. That hidden cost is crippling districts. As districts struggle to meet the state standards retention is seen as a viable option for students to gain mastery of a subject matter, but it is costly. Engaging students technologically could significantly reduce these numbers and districts will realize savings to support the technology infrastructure. Savings could also be realized by reducing extended year programs, traditional supplemental services and other state/grant funded initiatives.

#### New Vision/Direction

Online learning is rapidly becoming the predominant method of instruction at the college level. New York students need to be exposed to this methodology in the K-12 experience. Other states have begun to mandate online blended learning. Compelling districts to do this without it becoming an unfunded mandate is not difficult, but it does require a strategic plan and savings will be realized through fewer staff. Online learning needs to be encouraged at every level. Rigorous units of study that are state approved could provide students who have been suspended, on medical leave, needing enrichment or advance studies the instruction needed. An example where we have seen the success of online learning is in the home-schooling market. What was once an anomaly in districts has become commonplace. The homeschooling trend continues to grow and with marked success primarily because of the usage of technology. Parents who in the past felt inadequate to instruct their children in the higher grades have found technological resources to alleviate those fears. Schools and states need to look closely at the homeschooling market and derive from it the reasons for not only its growth, but its success.

We need to remove ourselves from the concept of student-to-teacher ratios. Students require instructional intervention at different times and at various levels of intensity. The differentiated classroom where the delivery of instruction is surgical and precise cannot be done in an industrial model. Flexibility is required and independence from a formalized classroom is needed.

The popular concept, "more is better" more time on task, longer school days extended school years are naïve, yet districts continue to pursue these strategies with a diminishing return. Over the past 40 years, spending on education has outpaced inflation almost two-fold with little if any improvement. It will take strong leadership to challenge this 40 year trend, admit the results have been tepid at best, and set a new direction. I contend that the cliché "less is more" is apropos for education in the 21<sup>st</sup> century. Less instructional intervention, more independent learning is what is not only required, but desired by the student. Many educators fear that students will become isolated in a technology-saturated world and lose socialization and peer interaction. Observing students in recent years, communication among peers has actually improved. Social media has grown exponentially primarily because the students have recognized the value of the medium and have engaged themselves enthusiastically. Collaborative learning models utilizing devices such as iPads allow students to participate individually.

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One key aspect of digital learning is the real time response capabilities. Student teachers and parent can avail themselves to the progress of student

We do not need more money to advance technology in our schools. We need to repurpose the monies we already have and begin to use the resources we have effectively. The classroom structure needs to change and in order to do that we need to restructure institutionally. Rather than being in triage mode reacting to the deficiencies in our districts, we need to look at the causal factors for disengagement and low performance. Common factors identified such as poverty, gangs, broken homes, drugs have been studied for years. These are factors schools will never be able to control. Student will always enter our schools with these issues. What should be the response? The most effective response is that we control the factors we can. Engagement is paramount and the students attending our schools are native technological learners. They have grown up with technology and interface with technology naturally with affinity. Students embrace new technologies they desire to learn despite their circumstances and schools need to send a clear message affirming their use of technology. Regressive policies such as banning electronic devices send the wrong message. While there are issues in allowing personal electronic devices, banning them come with a much higher cost. Students and parents will resist and it sends a message that a cell phone has no educational value. Schools should be teaching digital responsibilities and see the educational value of the device they possess. It is a self-directed life-long learning tool and should be respected as such.

Project Red, a national research consortium, addresses the difference between first and second order change. First order change is changes made to improve or enhance operations with the existing construct. Second order change is those changes that require a revamping of the construct, creating a new construct and moving forward. This second order change is what is required. The governor needs to have individuals at the table speaking independently honestly and frankly about the paradigms that will need to be changed. The question is does he have the courage and foresight to do so? I believe he does and that he will assemble individuals across the state to formulate a strategic plan. It will take courage for the governor to bring divergent thinkers to the table to redesign our schools. It is a second order change requiring breaking the norms, cultures and traditions.

Thank you for your time and your consideration of the issues facing education. They are daunting with serious ramifications but opportunities are present as well and I look forward to the dialog and changes ahead that benefit students.

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