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Five, Four, Three, Two, One Michigan

By Bruce Umpstead

Per pupil funding cuts, declining student enrollment, ballooning healthcare and pension costs, and an aging teaching pool has Michigan in the throes of a catastrophic education crisis. At the same time, Michigan's education system is rising to meet the challenge of preparing tomorrow's workforce to compete globally by enacting one of the most rigorous career and college ready high school graduation requirements in the country, adopting challenging content expectations at every level, and raising performance expectations for all students across the board.

For Michigan educational innovators, there is no better time to be in public education than right now. The four disruptive forces, identified in Harvard researcher Clayton Christensen's book, *Disrupting Class*, are sweeping through the Great Lake State: improved learning technologies, an enhanced understanding of and appreciation for multiple intelligences and learning styles; shortages of high qualified, highly effective, properly prepared teachers; and exorable cost pressures.

On April 27, 2011, Governor Rick Snyder challenged Michigan's public education system to embrace the sweeping changes by implementing "Any Time, Any Place, Any Way, Any Pace" learning programs that would allow school funding to follow

the student to the best learning resource that meets her/his individual learning needs and gives them the best opportunity to graduate career and college ready with a head start on earning college credit. In his special message he called for innovations that break with seat time requirements as the primary measure of learning and lengthen the school day and school year for every student, by blending online and face-to-face instruction. He identified online learning, project based learning, and experiential learning as promising trends that research is starting to suggest are "cost-efficient, competitive, innovative, and effective in motivating student achievement."

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The challenge for Michigan's educational innovators and to many of the Governor's reforms is the lack of technological infrastructure and innovative capacity available to schools. Many of the basic services that businesses rely on to innovate are not available in every school in Michigan. Businesses large or small would never hire staff without providing the equipment and support necessary to do their job. But every day we send 1.5 million Michigan school children and 90,000 educators to work without the proper equipment, infrastructure, and support to

produce a high-quality, globally competent workforce needed to reinvigorate Michigan.

What is needed in Michigan is more private-public partnerships, modeled after the New Schools Project in North Carolina (www.newschoolsproject.org) that can help focus public policy and resources on building the infrastructure and support necessary for schools to deliver on the promise of 21st Century learning. Such a partnership between state officials, schools, college, and universities, foundations, and a committed core of technology-focused corporate partners is the essential missing ingredient. This is the type of partnership we have modeled with MACUL in designing and implementing the *MI Champions*, *MI Champions Project-Based Learning*, and *MI Champions STEM* professional programs that provides more than a thousand educators and hundreds of schools with effective models for classroom technology integration.

But a broader partnership is needed to focus on achieving five broad, technology-based innovations over the next five years that would transform Michigan's education system, placing it on a sustainable trajectory towards long term success.

The five innovations include:

5. One:One Access and Connectivity: one-to-one computing is a given in any knowledge-based, global economy and yet we send our students to schools with outdated, inferior quantities of computers. If Michigan wants individualized, personalized learning that gives every student a chance at success, providing a device for every student is required. With the cost of Internet-capable devices plummeting, now is the time to address the real inequity in 21st Century Learning: the lack of Internet-ready devices in our schools.

What's more, because Michigan lacks an integrated statewide network, Internet connectivity of our schools is spotty at best. In one county, for example, you will find two high schools 30 miles apart, one with 100mbps to the high school and the other with 3mbps for the entire district. Shared networking is progressing in the state and holds great promise for lowering cost while boosting connectivity, but the current effort will leave schools behind. Thanks to large-scale federal investments, Michigan will have a premier Internet backbone in place within 5 years. What our state needs now is effective policy and an executable plan to connect every school building and library to this network at connectivity speeds of 1gbps or greater. We also need to look at creating financial incentives for school-age family discounts for broadband to the home.

4. Consolidation of Business, Data, and Technology

Services: There is hidden potential to fund our push for one:one for every student by reducing the cost of schooling in Michigan by consolidating "back office" operations, including student information systems, instructional data systems, and business accounting software. The lack of consistent Internet connectivity has slowed this progress, but we lack clear state-level policy and incentives for moving this consolidation forward. By consolidating business, data, and technology services to a regional level, Michigan will increase the quality of services while reducing cost and increasing the use of data in making decisions.

3. Teacher Capacity. If every student walked into their classrooms tomorrow with an internet-ready device with unencumbered access to the Internet, by and large, their teachers would not know how to utilize the powerful technology in their students' hands. I fear most teachers would ask their students to put the distracting device under their seats and take out their dated textbook. We would be wasting taxpayer funds if we bought devices ahead of providing high quality training and professional development for every teacher, even those teachers that score well on the use of technology in our current, technology-starved schools. We have to make the investment in our human capital if we want to leverage a large-scale technology investment.

2. Digital Content and Assessments: A device in every kid's hands and surplus broadband will free schools to think digitally, to stop pouring money into antiquated resources like textbooks, and to start using and producing rich, mobile education media that will truly transform education. Digital content will energize and enable anywhere, anytime, any way learning in schools and create the next generation of knowledge workers that are both consuming and producing content and leveraging "Crowd Accelerated Innovation" for their own education. On the assessment side, much is being done on the national level to develop and drive online assessments, but Michigan can do more. With smart investments, we can and should move all assessments into some format for electronic delivery. This will lower annual development and delivery costs and add instructional value by returning results to schools within weeks, not months.

1. 21st Century Learning Environments: Michigan must declare that the era of drill-and-kill assessments and sit-and-click software substitutes is over. We need to refocus education on engaging each and every learner through rich, meaningful, rigorous learning opportunities with the goal of producing a 21st Century workforce. There are more opportunities than ever to create authentic learning environments where students can analyze, discover, debate, explore, solve, and understand. Engaged, lifelong learners are the types of employees every employer wants to hire; that is what our schools should be producing. By focusing on this learning outcome, we believe student achievement will increase for all students and a world class workforce will result.

I hope you will join me in advocating a total solution to the challenges facing Michigan's education system. Let's get excited and enthusiastically embrace "Any Time, Any Place, Any Way, Any Pace" learning and at the same time, call for the technological and human capital investments needed to make our excitement a reality.

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