

**NOTE:** Responses that violated the [Terms of Service](#) for the EdTech Work Group Facebook page were removed.

## 7. Additional Comments

I have been closely connected to educational technology for my entire career (20+ years). For the first time, I believe technology can truly have an impact on student learning. The opportunity for every child to have a device, high speed access to the Internet, and content experts on a global basis is finally here. The software and hardware have finally matured to the place that school leaders can design learning environments that are engaging, creative, and rigorous for all learners and at all levels. We can truly personalize learning for every child! Our real challenge is scaling the success we are seeing in districts like Fraser. Districts need to understand the "why" with a lesser focus on the "how" and "what." I am hopeful this group can help others to answer the why. Thank you for your efforts.

We are constantly asked to incorporate technology into our curriculum but we are not given adequate resources to do so. I feel that my district used to be a very technology-forward district and we have fallen way behind. Our purpose is to prepare students to compete in the real world and they are severely lacking the necessary skills to do so.

Invest energy into our schools and tell the legislators to quit working so hard for charter schools.

Technology should be used as a tool to assist the learner in understanding a subject/topic. It should also be used to prepare students for the world of work. However, it is sometimes used too much in lieu of traditional methods of teaching. The problem with it being used too much is that kids are not learning how to communicate face-to-face. This also leads to conflicts and an inability to resolve them by having empathy for others, or be able to actively listen. It is critically important that students learn to work with others. It is also critically important that students learn to be empathetic with each other. Bottom-line: Technology should be used as a tool and not a substitution for human interaction.

## 7. Additional Comments

I would like to see the state develop a single student ID used to track students moving from one district to another. School of Choice students move in and out of districts and it is difficult to track their student records. A course compatibility chart between school districts would also make it easier on students.

Thanks for the opportunity to pause and reflect on educational technology with these questions. It's kind of like, "smelling the roses".

It is difficult to do more with technology in rural areas, where high-speed internet and infrastructure are lacking in the community! Michigan needs to ensure equal and adequate access for all citizens -- especially those in rural areas.

Human spirit and creativity is what makes america a leader, not a search engines or hyper-stimulation.

I think we are far behind in using electronics in the classroom. Devices can enrich learning experiences greatly if used properly.

Whether technology is good for learning depends on how it is used. Too often it is used to replace student-teacher interaction on in non-creative ways.

This current program seems like it will decimate schools. Why put kid on a computer when their social skills are bad already. We don't need anymore nerds in this state. Lets out more effort into public schools as we have some great teachers in this state. Don't discourage them and potential future teachers to get out of what can be the greatest profession in the country. I just hope the governor listens to our concerns as he has completely ignored teachers in the past.

Please clarify what question you are trying to answer. Please don't let the question be, "how do we reduce the cost of education?" It should be, " how do we advance the process of learning aligned with student needs & interests?"

## 7. Additional Comments

As a county-wide technology consultant, I see the widening gap between schools who are able to purchase technology and those who cannot. If ALL students are to be successful in a global marketplace, we must provide the tools and materials that will garner the greatest results. I am happy to discuss my opinions [jpmoore67@gmail.com](mailto:jpmoore67@gmail.com)

I would welcome the opportunity to give further input or be a part of this transformation for our state. I can be contacted at [dulmage@wbsd.org](mailto:dulmage@wbsd.org) This shift is only in the beginning stages in WB school district but we are moving and having a lot of conversations.

The biggest challenge with technology is infrastructure. Many areas don't have quality internet access, so switching students to on-line learning will only be valuable if the parents are still able to be a factor. This means districts will need to plan on providing a way for low-income or rural areas to have access to do their homework. Some children will NOT be able to travel at night so access from home will be a must. There are some things that can be done during school hours, but if homework is a must, then infrastructure becomes a big issue. Good Luck! Michigan is a very large state with many small rural schools with little or no funding to support that infrastructure.

Technology is here to stay, it is the world we live in.

Failure is not an option

Educational technology will be used more in the years to come in every class.

Every school should have current technology integrated into the curriculum beginning at kindergarten level.

I believe that all students' need educational technology to be prepared for the 21st century.

Every students should have access to computers at home or in a local facility that is in close proximity to their residence.

## 7. Additional Comments

I am a middle school principal with previous experience as a classroom teacher (Science & English Language Arts), a teacher who worked in a center-based program for talented and gifted elementary students, as well as the district's technology integration specialist, so I have the passion and experience to help shape the future of education which is coming fast and furious!

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When imagining the role of educational technology, it is important not to discount the benefits of reality over virtual reality. There has been lots of talk that, through technology, students can be learning "Any time, anywhere, any place, any space." But not all learning environments are created equal. The classroom is still the ideal place to educate the great majority of students. In the classroom, students interact with the material, with the teacher, and with each other. They build relationships - a key in education (remember, one of Gates' three R's stood for relationships) - and learn not just about the content expectations but also about getting along in a community. The classroom is simply a gift to our democracy, especially as our communities grow more and more diverse. I hope we will use our educational technology to enrich the classroom environment and increase the effectiveness of student learning. I fear a future where students are detached from each other, sitting in front of technological devices all day long. That is not the education I would want for my child.

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Most staff will need significant training and ongoing, just-in-time coaching to make the most of technology for the first year, as they shift from lecturer to facilitator. Successful adaptation requires community buy-in, especially from parents, so they must be lured in for an education to see that students are not just "playing around" but actually learning. Monthly curriculum nights and take-home games and software have helped us win over parents to the radically different Everyday and Carnegie Math programs that use group collaboration, games, software, and manipulatives more than lectures or demonstrations. Results have been stunning. The most rigorous and aligned curriculum, along with the best instructional practices, cannot succeed with unmotivated students. Technology engages and motivates students. Project-based learning, solving real community problems, demonstrates relevance to students and fosters community support for schools. Using technology to isolate students (working by themselves at a computer) does not teach them to work together to understand and to tackle problems as they will be asked to do in the work world.

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## 7. Additional Comments

Educational technology and technology as a whole has advanced far more rapidly than anyone could have imagined. Schools built in 1929 are still the hub of education for far too many communities. If the state is trying to do away with brick and mortar than count me out. As a working parent of a 7th grader, I can not manage his entire education from my work place during the day nor do I have the expertise to assist in all core curricular areas especially once he gets to High School. I can however support the schools and his teachers in ensuring that what they teach during the day can be reinforced and extended at night if I have access to curricular resources that will support the curriculum at school.

Why isn't the NP endorsement required by the state of Michigan to teach technology related courses if technology is "so important"?

The biggest challenge in supporting educational technology is money. Schools need a dedicated funding source in order to provide and support technology. Schools struggle to provide devices and adequate bandwidth to their students. As schools turn toward BYOD (Bring Your Own Device) solutions, the digital divide grows and grows. Sometimes it's those in the middle that are left behind. Students in more affluent communities are able to take care of themselves. Students in struggling communities are often propped up by low income grants. Students from "middle class" or "working class" communities are left with little or no assistance.

I do see a lot of expensive technology, such as cat labs, sitting idle, however, and I think that money might better have been spent on highly trained staff (real human beings) to work with struggling learners. Technology cannot replace the sensitivity and responsiveness of a real teacher/student relationship. No student was ever motivated to do something to please a computer.

This issue should not be talked about without the input of people who do the work everyday. Include teachers in the discussion and you may actually get ideas that support functional classroom practices. We need funding that can be used for infrastructure as well as support staff that has the knowledge about the technology we are being asked to use. One IT for 4 buildings is not enough to make anything work like it is supposed to. Lawmakers, although very good at making laws, aren't teachers and often make choices that don't make sense for the job. I wouldn't imagine for one minute that I knew anything about their job, so why do they get to assume that they can make legal decisions that dictate how I do mine? Just a thought from a very frustrated public school teacher.

## 7. Additional Comments

Schools need to find ways to use more technology in the classroom because even though some schools are doing a good job many more have not even started to implement technology resources they already have available to them!

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I do not see technology replacing the teacher. I have 4 relatives that went through the Florida system of online schooling and only one of them graduated from high school. No connection, no community, no relationship. I can see technology being used to allow a student to take a class that might not be offered at their school, but replacing the entire traditional school experience would be disastrous.

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Technology is a must in today's world. A

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All I have to say is abandon ship. Stop 22i, stop online K12. If schools are failing, fire the TEACHERS, don't start new schools or charter schools. They'll be tasked with fixing the kids broken by the bad teachers year after year. Technology is a waste of time. Teaching tablets or smartphones is a waste of time. The whole world went from not knowing what a tablet was to everyone figuring them out in 3 years with no teaching whatsoever, because that generation of people already had the skills needed to figure it out. We don't need to teach people how to click on a bird and throw it at a pig. We DO need to teach them SKILLS that they can use in a REAL JOB. Let's focus on what makes kids employable at age 18/22, not how can we give them more technology. I recently heard from a principal at my son's school that the whole 3rd grade class failed the SBAC because they didn't know how to scroll down to read the reading sample. #1-3rd graders have no business taking tests online, #2-this never would have happened if the test was on paper, #3-now the state has a bunch of USELESS information (test results) and kids are all frustrated and confused statewide. Good job! Whoever's reading this. I love technology. I love the way business uses it. I hate the way schools use it. Grades, attendance, online testing. What a waste of millions of dollars. I'm sure it was cheaper to pay a hall monitor to pick up the attendance, but now we need a computer in the classroom and teachers spend time each day not teaching because they're putting attendance in and emailing moms and dads who ask them stupid questions. Principals get emailed directly thousands of stupid questions that NEVER would have made it past a secretary 20 years ago. Let's put technology where it belongs. High schools. Career technical centers. Places where the minds are mature and kids know how to read and write and do math. They are mature enough to know the ramifications of sharing your private information and photograph on the Internet.... They know that computers are tools, not toys. They can learn programming and content creation, rather than content consumption. Stop babysitting my kids and wasting my tax dollars on computers! The last thing kids today need is more time in front of a screen. They get enough at home.

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## 7. Additional Comments

Students need technology skills to be effective in the workforce. Teachers need the training to use the technology and incorporate it into the classroom effectively. Thank you for taking the time to open this conversation. It is important, and I hope all our contributions help to inform your policies.

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Technology can be gimmicky, I've been teaching 12 years, and every few years there is something new. I think nothing replaces a good teacher who can connect with students. Technology is a tool, but is not the answer.

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I am not concerned that we will be taken over by terrorists--that is not going to happen. We are the "biggest, baddest, boys" on the planet, and we will "send you home crying to your mama." However, if we become too stupid to think, to create, to problem-solve, it will not take an army to conquer us; it could be as simple as flipping a switch. Educational technology is a tool to help us connect--to our excitement about learning, to the classrooms around the world, to each other. We have to invent the schools for the NOW--it is one of the most exciting times of all to be in education.

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Technology is not the answer it is a tool to move great ideas into practice and to help teaching staff assess students knowledge and move them forward on to higher levels of proficiency.

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Technology will only continue to be integrated into our everyday work (and home) world to make processes more efficient and effective. Our students need to start learning to use technology from kindergarten forward.

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The costs to both provide the technology and train teachers to use the technology is overwhelming, and, in my opinion, the largest hurdle we have to face. When I see the word and letter apps available now to kids as young as 2 and 3 years old--it is alarming to me as a citizen, teacher, admistrator, and parent/grandparent. We need to stop pointing fingers and blaming teachers, administrators, parents, etc., and have some honest communiation about how to jump this hurdle and keep our kids engaged.

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## 7. Additional Comments

Technology for the sake of technology, or technology because we live in a technology rich world, does not necessarily improve student outcomes and often makes technology a cost center versus an innovative center and/or value add. Think of the technology evangelist who leverages technology to engage learners and has great outcomes who may be next door to the teacher who still uses a chalk board, engages learners in other ways and get's those same outcomes. Technology should be leveraged using evidence based practices and should be another "tool" in the toolbox of the learners and educators - not the outcome itself. In other words, I don't believe we should give every student a computer because every student "needs" one. We should determine the needs before we fill them.

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We need to go back to basics. It is harder and harder to hire good employees who can work retail that know how to communicate with the public, give right change and have a strong work ethic. Digital technology should be second to life skills, basic math and communication. When I attended school you got in trouble for having a calculator when taking a test. Now you get in trouble for NOT having a calculator. We are dumbing down our students and we are wondering why USA is lacking in education!

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Not all technology is useful. To teach reading, for instance, one needs some decent light, a book, and a small group of learners. Technology can certainly help, but it is not a cure-all. Good teaching, parental involvement, and common sense are really the keys.

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I also think there should be technological opportunities in the upper grades that allow for non-college bound career path experience.

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A common theme as you have read my comments above have to do with how education technology is funded. This is a serious issue and needs to be resolved. I recommend that the State specifically fund technology tools for all schools in the form of a regular funded line item based on a per pupil amount.

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Please include academic, public, and school librarians in this conversation! Libraries provide important resources and services that support formal and lifelong learning.

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## 7. Additional Comments

Birchview teachers have taken it upon themselves to outfit our classrooms with tech needs. 2 years ago I came up with the idea to start a fundraising campaign and it has take off and we have put up so much equipment since then. Schools can't wait to be handed this stuff, go get it!

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Prioritize teaching and learning within the department of education. Have the Office of Fields Services be more receptive and innovative in what they'll allow in district/school improvement plans. I encourage MDE to be innovative while reducing redundancies and allow teachers more time with their kids in the classroom.

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The chalk and slate was technology of its time. It still is being used successfully today in the version of whiteboards and dry erase markers. Technology is a supplement. The main tool of learning is the brain and can not be replaced. We need to teach our students to be critical thinkers.

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## 7. Additional Comments

I am extremely saddened and dissatisfied with the current state of Michigan schools and the current state of funding. As a teacher who specifically moved back to Michigan to help the public schools, I have seen nothing but disrespect and little in regard to investment in teachers. The State BOE has talked for over a decade about improving the status of teachers, yet I see that very little has changed. Teaching out on the east coast, I've seen what good school districts look like - they cost money, they invest in teachers, they support students, they provide opportunities and infrastructure for parents and families. Having working in a private school, I have seen the path they are headed on - they are headed in the complete opposite of public schools. They are not testing their students to death, they are not trying to do online or "blended" learning, they are investing in their teachers and providing for their students. They know that there are no shortcuts to learning and achievement (They also, horribly so, only teach to privileged students). Michigan seems to believe that they can take shortcuts to learning - that there is a way around good teaching. I disagree. In addition, I am disappointed that the State of Michigan has done little to advance National Board Certification. Out of all of the measures of teacher effectiveness, National Boards is rigorous, challenging, and telling in regard to teachers. Instead there is an extremely faulty system recently put into place that does little more than require lots of time and paperwork and little actual constructive feedback for those of us that aren't poor or mediocre teachers. I wish I could stay in Michigan, but I'm not sure Michigan really cares about keeping it's good teachers. In reality, there are way more teachers produced here than there are jobs. I came back to Michigan to help - instead I just feel replaceable. I want to believe that Michigan has people in charge who know what they're doing, but having seen good leadership in other states, Michigan is way behind the times and the leadership is extremely lacking and uninformed.

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## 7. Additional Comments

Revamp Positions: Media Specialist/Data Specialist/Educ. Tech. Specialist to fit the needs of the 21st century learner. There needs to be a paradigm shift on the structure of education. We think technology will be the silver bullet instead of focusing on restructuring the platform of K12 education. Effective leaders develop a vision through collaborative effort, foster-shared beliefs among all members of the school community and ensure that everything that happens in the school is shaped by that vision. This current emphasis on outcome data alone misses the essential issues of effectiveness. Leaders must understand the research and theories of how internal school processes, procedures and methods impact staff effectiveness and student learning. The goal of all schools is student learning. Goals and outcomes are essential but leaders must also inspire a culture that will enable goals to be reached, this is something everyone has to work hard at. To attain the goals of an organization, various internal structures and processes need to be in place. These include: A focus on organizational health; \* Developing norms of collegiality; \* Fostering high staff morale; \* Communication; \* Decision-making processes; and \* Collaborative administrator and teacher leadership. An organization's ability to continuously improve can be directly attributed to addressing and promoting these key elements. The organization's inability to continuously improve can be directly attributed to not addressing and promoting these key elements. This is something I would have to constantly reflect on as an administrator and try to improve on how we achieve each one of these.

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Too often it is "all or nothing" when discussing technology. So-and-so has the BEST technology - without checking to see if teachers are actually using and if they are - is it working. Schools should NOT be encouraged to buy new just because it's the latest fad. STATE GOVERNMENT should evaluate and offer a "Consumer Reports" type overview of items. Every school the state would not buy a Promethean Board for \$12,000 PER ROOM - and find out they are not being used.

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The Superintendent needs to stop repeating the same old anecdote about his granddaughter's interaction with a book as if it were an iPad. It's a cute story, but it promotes a harmful myth that today's youth are "wired differently" than previous generations of children and that teachers who can't provide a learning infrastructure that responds to the same level of physical interactivity as a tablet computer are going to mis-educate the next generation. The field of educational psychology is dedicated to uncovering the continuities of the human cognitive and affective apparatus across generations, cultures and socioeconomic strata and to engineering tools that shorten the distance between sensory experience and accurate long-term storage in the mind. As popular as tablet computers are, the Superintendent and certain members of the State Board of Education need to realize that the market penetration of such technologies is not as ubiquitous as their privileged perspectives might suggest.

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## 7. Additional Comments

Thank you for your time in reviewing this. I am very passionate about educational technology. I know what it is and what it isn't. What I listed is simply the "tip of the iceberg" for me. I have taught in a business/technology classroom for the past 8 years. I am also in charge of ONLINE LEARNING in my district. I have a lot of insight on this. I was also very involved with planning the 1:1 laptop initiative in my district and have written a thesis on the 1:1 in a rural learning environment. Finally, I apologize for any grammatical and sentence flow issues. No proofread whatsoever. This was done off the cuff and fast. I would be happy to elaborate.

A teacher who oversees these classes do not have to be certified in the class. Mentor teachers may be overseeing the class and many times these are labs that have a multitude of courses taught at the same time. The students are not engaged with peers and stare at a computer all day. Needless to say if we are not careful the teaching profession will be lost. With phones becoming more and more like mini computers, students are loosing their ability to interact socially and professionally.

We need to upgrade technology in schools and students need 27/7 access.

thank you!!!

It's a brave new world!

The cost of maintaining this technology may be difficult as more and more school are required to do things on line. The smaller schools will have more problems keeping up.

Education seems to be behind the times because of budgets. Some things in education are looked at as just "really expensive pencil and paper." To the contrary, e-learning saves paper and trees, so it is environmentally friendly. There are open source LMS systems like Moodle that can help keep costs down. Overall, if students are not engaging learning via the latest efficient learning technologies, our nation is dropping in stature as one of the most educated and technological countries in the world.

When we talk about having students career and college ready--part of that readiness is the ability to interact with others in appropriate ways. Too often I see young people lost in their technology device--oblivious to what is going on around them. We need to find a happy medium.

## 7. Additional Comments

Technology will never replace learning; it can only enhance it.

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Education is an enterprise that is a serious responsibility of society. The connotation of "educational technology" as electronic media is an oversimplification of both the value of computers in education and of the educational process itself. I am sorely disappointed that our state has regressed so extremely in regard to its responsibility for using public resources for the Common Good. I would have appreciated an explanation of the purpose and activities of this group as an introduction to the survey. What is the Educational Technology Work Group doing? Educators know how to facilitate learning, and they are eager to make use of the state of the art for the benefit of students' learning! I strongly disagree with the private-public partnership/charter school/choice FALSE REFORM in our state and nation. the Department of Education should allocate funds, streamline standards/accountability and train/equip all public school professional educators with tools to successfully educate all students!

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Really? You want more comments? Why? You aren't listening.

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I am highly disappointed in the lack of concrete support coming from the Michigan Department of Education in communicating with school districts about the vital role that library media specialists can play in integrating educational technology in the curriculum and teaching the information literacy skills necessary for both teachers and students to be wise, critical consumers of digital information.

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Funding is a concern. The equipment is quickly outdated, software is upgraded, new gadgets are invented. Most schools aren't even wired for wi-fi making tablets a less than fully effective tool. Educators need training to effectively include the rapidly changing technologies in their lessons.

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I would love to see money go directly to schools for computers/iPads and training for teachers rather than books and pencil/paper activities. It would also be beneficial to allow teachers to teach students social skills that apply to online forums such as Facebook, and allow students to use these to learn and connect.

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## 7. Additional Comments

I remember reading an article that stated if a teacher's task could be replaced by technology than it should be and the teacher would be allowed to do the work that only a human being can do. Educational technology, just as all forms of technology, has become a vital and natural part of our world. Technology is increasing rapidly and will not stop. We would be hard pressed to eliminate technology from education. It is important to remember that there are those parts of education that only human beings can provide. Humane use of technology, and education that is humane.

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The importance of technology education is below reading, writing, analytical thinking, reasoning, and problem-solving. If a person does not have the primary skills, no technology education in the world can resolve those inadequacies.

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using educational technology outside of the classroom requires parents who are have access to technology, are consistant, and who have students who will participate appropriately

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I strongly urge the Michigan Association of Computer-users in Learning (MACUL) play a key leadership role in this area, as they already do with schools and educators across Michigan. I am a member and former officer in MACUL and this is the organization that should be leading the way on state policies, goals and implementation in Michigan.

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School libraries staffed with professional librarians are essential as long as the mission of school is to help students learn about the world we live in, how to make a positive contribution to society, and be effective users of information.

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I'm relieved to see that the skunk works has been called out to open up a discussion of the future for Michigan public education. For a while it looked as if this was being hijacked by a narrow special interest group who want to disassemble public education and do it in back rooms. The citizens of Michigan have a right to be heard by being a part of the conversation. This survey is a step in the right direction. More needs to be done.

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## 7. Additional Comments

The most unfortunate reality of education in Michigan is it is being destroyed by bad legislation. I can't fathom what the deep seeded motivations of our governor and legislators are in creating such an unwelcoming atmosphere for educators. As they reduce funding and increase expectations they are setting schools and our students up for failure. This is frustrating for current teachers but it will prevent the best and brightest from becoming teachers in the future. Teachers can't be replaced by computers, without good relationships education is flat, less engaging and less effective.

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I love my job and I learn new things every day! :-) As a parent of middle-school and high-school kids, I'm excited to see more of what the future holds for them, and I see every day that the options and opportunities for them are growing quickly.

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Technology is a tool, not the cure. It can motivate students, but they need how to be use it in the educational setting. It is another vocabulary. Schools are years behind in funding technology. The life cycle is shorter than textbooks. Staff as a whole are also years behind in knowledge of how to use & implement.

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I support moving curriculums to performance task assessments which force schools to change instruction to a more functional process versus a "sit and get". Technology will be an essential piece to this visionary move. The Common Core is on the right track, but it can be expanded greatly to have a more functional shift.

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Trying to do education on the cheap is an invitation to distaste, which seemed to be part of the mission of the "skunk works" project. There is a way to cut unneeded expenses without undermining a great public educational system. I attended K-12 schools in Michigan and earned a bachelor's degree from a state university in Michigan. I went on to eventually earn a Ph.D. and was well prepared due to the free public education I received. When I had children, I moved back to Michigan so that my children could have a similar quality experience. The recent attacks against education in Michigan is so disheartening we are considering relocating. My children's teachers work so hard and are so dedicated to their students. The contempt for public school teachers by certain political groups is atrocious.

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I hope we continue this discussion and begin intergrating some of the ideas discussed in education as soon as possible.

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## 7. Additional Comments

I have taught online and I think there are some values of online instruction. For some courses and for some students, online courses are fabulous. However, I urge Michigan educators to proceed with all due caution regarding moving to online education in our K-12 schools. We are losing out on critical socialization pieces, it is difficult to ensure who is doing the work, and some courses simply do not lend themselves to an online format. It may be cheaper to delivery, but you may be ultimately harming the development of Michigan communities by embracing it so fast without proper evaluation. Another concern I have is the access that schools have to technology--I fear that as usual the haves will get it and the poorer districts will not have it or will have old technology. Teachers and other school staff, as well as higher ed faculty, will need to be re-trained to use technology--this cannot be ignored. Also, there will need to be funding to support the purchase of technology.

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We must address the issue of current state of "school" facilities vs the future "learning centers" and what those learning center shall be comprises of

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Educational technology should not replace teachers or completely replace instruction. The human interaction involved in teaching cannot be replaced by a machine.

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Collaboration is enhanced with technology, but the person to person connections are irreplaceable.

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I hope that technology does not become the "tail that wags the dog".

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Inputting techniques on electronic devices have been severely hampered by encouraging the "two thumb" method. Productivity and accuracy will always be improved by learning to key by touch. There is still time to introduce this skill as early as fourth grade if only schools would realize that not every human being is capable of teaching a skill! There is a psychology to skill building keyboarding skills just as there is with playing a piano or hitting a tennis ball. Just because one has the skill does not mean that person can teach it! If it did, we wouldn't be paying millions of dollars to our college and professional coaches!

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Regarding recent issues about curriculum, instead of using the term "job" skills, can we say it in a more general way by expressing that we want to teach kids to be "employable" and not get hung up about teaching to specific job descriptions?

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## 7. Additional Comments

teachers indicate they don't have time for learning and incorporating into day to day, technology frustrations such as equipment not working properly, students losing equipment or breaking or viruses, etc. are all roadblocks - it seems more energy is spent in trying to get teachers to use the equipment than on actually helping the students learn something. . I think more energy needs to be spend on getting back to basics of learning and I would like to see more emphasis on individual learning or separating out higher achieving students so they can excel and then you can give more time to those who are struggling - this idea of not segregating students is not helping anyone - no one is average, the higher level students are bored, the lower level students can't grasp without additional time being taken away . .

Our real limitation is dollars. Schools are the least equipped places. Infrastructures are outdated as well as the rest of their school facilities. States like Michigan put their money into business structures in hopes that the dollar return will support other programs like township and county government, building a bridge to Canada, etc. Because education does produce a dollar return immediately, legislatures and the governor have a low value for education. Poverty does effect the schools and families. Professional development needs to accompany dollars so teachers and students get the most value for dollars spent. Good practices need to be replicated and MDE needs to do it.

Technology is something that has been continually pushed by state standards. The problem schools are finding is that the availability and, in some case, functionality of their technology is not meeting their needs. Some schools don't have enough computer labs to accommodate the number of classes wanting to use them each class period. Others don't have the money or resources to keep up with the maintenance demands of such technological buildings. Educational technology simply isn't going to help our students if they can't access it or it doesn't work when they need it. Teachers can't help students understand ideas or see external examples if they can't get into a computer lab when they are covering that topic or if the computers malfunction or don't connect when they get there. Just as with anything, the more it is required and necessary, the more resources need to be allocated in order for those involved to keep up.

Don't forget that the Michigan eLibrary at <http://mel.org> has LOTS to offer!!!

## 7. Additional Comments

Money continues to be an issue in schools. Districts are working hard to "make do" with what they have and striving for donations of outdated equipment but if we truly want to explore education technology then schools will need to be provided with the funds necessary to do so.

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Put dollars into educating parents how to support their children in the learning process. Success is not about tools... it about the expectation to succeed, the support provided, and the love that grows in the process. Parents say they want to help their children -- but, time and energy is not always there. No IPAD or computer can take the place of this.

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Please change the law and make technology a common core requirement. It's much easier to hit the multiple intelligences and all learning levels with technology (tutorial style lessons)

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Keep for profit companies that are touting virtual academies out of it!!! A first grader sitting on a computer at the mall is not "educational technology!" 100% of people in Michigan are disgusted by what we found out about "Skunk Works!"

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Broad access to the technology is a chronic problem. Many urban young people access the internet via smart-phone, which is cheap, easily available, and likely has no parent-controls. This is not an adequate replacement for a computer, as, among other reasons, it makes the internet appear to be a social playground, not an educational tool. Laptops are not a complete answer. In Detroit, many were stolen on route to and from school, or were used at home by other people in the home for their own aims. I do not have a ready solution for this.

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I have seen more and more subjects being moved to lower grades. This does not speed up learning. A student in 4th grade could learn how to do calculus but it would take a month to teach them how to do one problem. If they could learn how to do adding, subtracting, multiplying, dividing, fractions, and decimals a teacher in high school could move along more quickly. I taught in a school in another state for six years. One day I had an elementary teacher tell me that I should have seen the lesson she did with her class. She spent two weeks teaching her students how seeds travel. I taught 9th grade physical science and 7th grade life science. I had to spend a bunch of my time teaching my students how to work with fractions and decimals. If she taught them arithmetic I could teach them how seeds travel in ten minutes.

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## 7. Additional Comments

Thank you for the opportunity to comment -

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CTE in this state is dying a slow and painful death. Here is an example of what I mean. Our high school robotics team (a robotics team is all of the technical CTE areas working together - electrical, machining, CAD, programming, business) had 30 students on it this year - now mind you, these are kids giving up a large portion of their after school time to work and learn these various CTE areas. Business and industry gave our team \$42000 to operate this year. Our high school of 1800+ students can barely keep the doors open on our CTE classes in the coming year. As a matter of fact, the newly created Robotics Technology class will not run next year because only 9 students were able to fit it into their schedules - yet we will be turning kids away from our robotics team next year because we can only support so many. Business and industry gave our team the \$42000 because they are desperate for our kids...So the question is, how has Michigan failed our kids and our business partners in such a major way? How come our robotics team receives overwhelming support from everyone except the Michigan Department of Education, the Michigan State Board of Education, and the Michigan Department of CTE? My next question is how come these three entities have ignored CTE over the past 7 years? How come a student who wants to be a completer in a lot of our CTE programs has to apply for a personal curriculum in order to make room in their schedules to complete a sequence in a CTE program? How come Michigan has made it difficult at best for our students to explore possible career paths in CTE?? So this is our status in a popular Macomb County area an after school CTE program is thriving while our in school CTE programs are dying. Nice job... One last comment Michigan State Superintendent Flanagan's remark to the House Education Subcommittee that CTE is doing just fine is laughable and demonstrates his out of touch mindset. CTE is not doing "just fine" and that was an insulting remark to those of us in the trenches. When was the last time he talked to a CTE teacher and asked them how CTE is doing? As a matter of fact, nobody is asking. None of you ask because you don't want the answer.

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More funding support is needed for public education. What's happening is mean and irresponsible. Seems like a vendetta.

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Technology changes faster and in more directions than most educational organizations have the ability to react to . This is both financial and structural because educational systems do not support technology instruction as a full time component of the ongoing professional development of staff. Educational technology is always behind the curve.

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## 7. Additional Comments

I would like to see technology used to teach students 1 or more languages by the time that they are out of 5th grade. This country take a passive role at learning other languages and I wish this ability was available to teachers and students as young as Kindergarten when their learning ability is greatest. If I had my option I would require technology assisted language learning. Otherwise we loose our students to language based schools. Research has shown that this is a particular concern to parents who are college educated. I would like to keep the children of those learners within our school.

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Whlie I appreciate the opportunity to contribute to this discussion, I also think this format will likely only scratch the surface when it comes to considering how and why technology can help in K-12 and higher education. Recent efforts to promote use of technology in K-12 schools - like the requirement that HS students have an "online" experience before graduating and expanding the cap on enrollment for charter schools - may have limited impact on actually improving student learning if teachers are not provided with time, opportunity, and rewarded for integrating technology into their regular practices. Likewise, school administrators and policy makers would be wise to learn from the past regarding what has and hasn't been effective in supporting technology use in education. Ignoring this knowledge will not result in benefits that are possible being realized in the pursuit of technology use in education.

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I wish schools provided more training in this area, but resources have been spent on, and logically so, on the transition to the Common Core. I would like to see a push towards the integration of technology and the former.

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I would be more than willing to give testimony on the relevance and importance of CTE in the secondary educational setting. Not every student is fitted to a four year educational career. This is especially true in light of the nearly out of reach financial burden that graduates or non-graduates are incurring. Technical education in the secondary system not only provides a student with a high school diploma but in many instances a job description!

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One of the largest challenges is the inequity in resources various school buildings have to access. Purchase, maintenance, human resources for upgrading and security standards as well as the public definitions that include 1) using electronic technology is supposed to magically make a child's work product better and 2) that fair or equal means all having the exact same thing. Education is about professionals implementing the resources needed for the group in their care for that year.

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## 7. Additional Comments

Teacher professional development will be needed

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I think it is VERY important for Michigan residents to realize that ALL households do NOT have computer technology at home. Many households have Xboxes or other such gaming devices but most (in our district) do not allow their children to use the Internet. There is a ;misunderstanding that "kids are all tech saavy". They are NOT. I am constantly amazed and disappointed at how often my students tell me that "their parents don't allow them to use their computer because they use it for work." Our school purchases the rights to FREE websites in order to let Parents access the "just right" reading books at home, and math practice sites on their computers, Ipads etc. It is VERY difficult to get parents "on board". They make tons of excuses. I would like to see the State of Michigan have a K-12 Techonology Curriculum of "basics". THEN BACK IT UP with the equipment and TEACHER TRAINING to do the job. A Parent component would also be very helpful. They can't keep pointing at the schools and saying, "They should do it." And then not give us the means.

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There is a technology gap between the classes. The very poor have limited access, where the rich start at a very young age. In the schools, it is a similar problem. Our inner city school doesn't have the ipads or new computers like the nice suburban schools. It separates the rich from the poor even more.

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It is time for America to realize that just as roads are a utility provided for the common good, so is access to informational technology. I am not saying society needs to provide a computer in every home, but there is no excuse for high speed, reliable access to be so widely different from state to state or community to community. America is falling woefully behind in terms of both quality and reliability. This gap is hampering our ability to compete on a global scale.

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Thank you for your thoughtful consideration and invitation to comment on this important issue.

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## 7. Additional Comments

I realize that we need to keep up with current technology as it is the way of the world. What I struggle with is the fact that at home computers etc., are used as babysitters. Kids come home from school to parentless homes & spend their time on the computer playing games, facebook, etc. & are not doing the things that kids should be doing. What they are lacking is face to face socialization with other kids. What they are lacking is being outside enjoying nature & doing something physical. In my position at school I am currently not using technology on a daily basis. Yes, we use the computer to look up subjects we are uncertain or confused on. On a daily basis we read out of actual books, write in workbooks with real pencils. We have daily face to face discussions & interactions. My co-teacher in this reading recovery program has been using the computer with her students. My students were miffed because they were not getting to see music videos etc. I was amazed & proud when one of my students stated that the other class got to play games on the computer but this class was actually learning & way ahead of the others. It became totally clear to me at that point that what was making the difference was that for 30 minutes Monday thru Friday, these 4 students had the total attention of an adult.

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I would like to see our standards of education increase to a standard national level. I feel that we have changed our curriculums to fit the students, but our students need to fit the curriculum of higher education if we are to exceed our goals. We can not lower our expectations, regardless of our economy, political feelings etc.

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There are legitimate expectations for technology to be embedded into instruction. However, the reality of available computers, and current software does not match this expectation

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Thanks for asking the community for input! Mike Oswalt, Calhoun ISD

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I believe that we need to move toward decreasing the extremes (0 & 100% online) and move toward a balance of using technology in the classroom as a tool and having direct instruction from a teacher. Students respond well to the use of technology and lessons can be differentiated accordingly. However, 100% online learning does not serve students need for group work, co-operation, project-based instruction, hands on activities/learning, discussion and needed life lessons that only a teacher guided lessons can accomplish.

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## 7. Additional Comments

I have high hopes, but low expectations. Technology has been around for decades that could have been leveraged in the realm of education, but state governments are not traditionally early adopters either of ideas or of technology. This has had an enormous impact on our performance in the global context. The inertia of government is almost as legendary as its perceived untrustworthiness. Technology can change that--all of that. In this endeavor, you must eschew the normal bureaucratic mechanisms and make great, thorough use of true technology visionaries. Spend a few bucks to consult with Salman Khan, Bill Gates, and others who have established a global reputation as folks who have made great things happen in the arena of education and of technology. And just so you know, crowdsourcing opinions and ideas is no substitute for vision.

One focus will have to be to teach our next generations to be constant adapters while finding ways to look at long term goals and objectives. We need to learn how to filter out the massive mountains of information that is available now and find a way to condense and focus on what is important for us or our objectives. It will get much harder for people to not drown in all the possibilities and find focus and discipline.

Each state and community need to see the importance of providing for and maintaining technology so that the haves and the have-nots will not increase at a greater rate than it does already. Instead, technology can help close this gap.

As technology becomes more a part of the classroom, funding must be made available for schools. With limited budgets we cannot afford to purchase the equipment to provide technology to our students. Professional development must be provided for staff.

Our Governor Snyder needs to take a page out of the book from Tom Snyder, the founder of the company that led the way in innovative educational software. Tom Snyder made his millions making sure the teachers were involved in the learning process. Every aspect of it-- from planning to evaluating. I got a coffee mug with these words on it back in 1996. Very pertinent today with the recent, back-room Skunk Works meetings that had, not surprisingly, no members of the educational community present. "We believe the CHILDREN are the future. We believe TEACHERS shape the future. We believe it's the TEACHER, not the technology. We believe in INTERACTIVE GROUP SOFTWARE (Heck, we named it). We believe in the ONE-COMPUTER CLASSROOM (or two or three...) We believe EVERY CHILD is gifted. We believe in old-fashioned interactivity: HUMAN INTERACTION. We believe technology is cool. We believe TEACHERS ARE COOLER."

## 7. Additional Comments

Rather than focus only on technology the state should spend more time, effort, and money truly supporting public schools.

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I have taken virtual leaning courses myself, and although I finished the coursework and passed the classes, I feel like the learning was quite superficial. I also felt the course lacked a personal relationship, in addition to e lack of depth of content. Even when presentations or projects were included for application purposes, the courses were still not motivating and the learning did not stay with me for very long. We need to make certain that this does not happen to our children. Their learning needs to be deep and meaningful and last for life.

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More coding for students, no more unions, better attitude from teachers, students not playing games in class, teachers have to have norms!

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While technology is a wonderful thing, it cannot and should not replace human interactions, whether they are student-to-student or student to teacher. Technology can't replace the social/emotional growth that human interaction brings about and social /emotional growth is just as important in the education of of children as academic growth.

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Computers can not and should replace teachers

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I would love to see technology being used with a purpose; to search for information, to communicate with others, to create, to test, to collaborate. I would like to move beyond using technology to give students digested information rather than allowing them to construct meaning on their own. To worry less about scores and numbers that are later used to punish. Instead to be allowed to use this information to improve without financial retaliation.

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The idea that even my highly motivated children can learn "on their own" is pie in the sky thinking put forward by adults who enjoyed (suffered through?) an "old fashioned" education that taught them thinking skills. With out constant encouragement and pressure my kids would not learn as well as they do in a structured environment.

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Thank you for asking us for our opinion.

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## 7. Additional Comments

In my opinion, one of the first steps that school districts need to do is to STOP doing some of the things that they know are problems. The first one that comes to mind is the isolation teachers feel when teaching a group of students: one teacher in one room. And there is a more cost-effective model: three teachers teaching 120 students at a time. One teacher facilitates the learning of the high-flyers, one facilitates the middle-of-the-road students, and the third facilitates learning for those students who learn at a slower pace. The three teachers AND the students collaborate in an interactive and engaging learning environment. Another issue is time. Research after research comes out about the effects of too early of a starting time for high school age students. Some progressive districts have moved to a later starting time and have seen improvement. Dennis (Doc) Littkey's Big Picture high schools routinely start at 9 am. The culprits are usually the bus schedule and teachers not wanting to change because they would "get done too late." Use creatively, technologies could be used as part of the solution and the time barrier should become a non-issue. A related third issue is space. School buildings, in many districts, are some of the most under utilized facilities, AND they are public facilities. In our district, Community Education makes good use of the after-school-hours time for K-5 after school programs, as well as fitness and personal enrichment classes for the community. However, using the anytime approach, why not craft a "school-day" around the needs and requests of parents and students. If a student is an early riser in the morning, get them started early. If a student is a later-riser, get them started later. And if your high school student whose sleep clock doesn't turn off until 2 am and then on again at 11 am, they will most likely learn better if they start at 12 noon! Again, creative thinking and making use of the available technologies could make this happen. Another issue is quality. Yes, there are schools where we would not want our grandchildren to attend. I understand that having two grandchildren of my own. And attempts to "fix" those schools seem to not change things. Why not "connect" those schools with a "partner" school, and using available technologies, student learn through two-way streaming video instruction, which frees up teachers at those schools to help guide, tutor, and mentor their students. Just at hought. While there are other issues, one additional one that I would like to suggest would be that of state-testing. I see a lot of wasted time administering the MEAP and MMC. The state could save a lot of money and time by eliminating these tests and only requiring the ACT and or SAT in high school. I firmly believe that Yong Zhao has presented us with the right approach. The test results of U.S. students are not the best in the world, but the bulk of the students who graduate are doing just fine. I would rather we graduate students who are (still) tremendously curious and engaged in learning, and have a thirst for trying new things than have a generation of better test-takers. (response cut, too long)

## 7. Additional Comments

Michigan's children will not be well-served by a pursuit of educational technology at the expense of education. Technology is a nice luxury in the process of education; teachers and public schools are essential. The current focus on technology is wrongheaded, as evidenced by the widespread failure (as schools, if not as profit generators) of online charter schools. Before we work on luxuries like technology, we need to fully fund and support essentials, like teachers and traditional public school facilities and staffing.

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Schools need to be tech savvy and use it to the hilt. The STATE needs to support public education with the dollars we tax payers have paid. All charter schools should be required to test students just the same way as public schools. If they are so much better let the tests show that....

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I believe we must focus on "media and technology literacy and responsibility" and embed that in our practice, and front-end load it when we start initiating new technology resources. We've seen technology evolve rapidly and our students are far more savvy than we are adults. What I believe they are lacking is a sense understanding of the personal consequences of inappropriate use, and true understanding of the powerful tool for communication - both the good and the bad. This is something we need to teach and model for our students.

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Our students need to know how to use technology. But we're doing them an injustice because they are NOT learning to write or read or how to learn.

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I find northern schools at a disadvantage, we have poor Wifi connections, and have difficulty with connections. We also need monies to be able to supply and replace the technology we do have. The technology is moving faster than the school districts can afford.

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## 7. Additional Comments

The key is leadership. Leaders who understand that the goal is to personalize learning and the methods are numerous but the foundations are simple and clear. Those who understand the critical idea that you focus on what you want first and then ask the technology to enable it. First, we must look at our teaching profession on the whole and finally use technology to enable a personalized approach to educating our educators. Our teaching institutions should be ever changing and ahead of the advancements in learning enabled by technology. In a practical sense, they should be the first to adopt mobile learning, blended learning, personalized approaches, new types of teachers and different careers in education as part of their institutions. Why do so many school districts sit in 1:1 mobile technology environments but so few teaching colleges? Second, we need to enable the teachers and students. Provide them with a statewide and simplified architecture that puts the technology in their hands all day every day. Invest a set dollar amount per student in the foundation for mobile technology. Third, we need to push disruptions that support the first two goals. For example, today, it is possible to create and design your own textbooks with multimedia rich content .... for free! using free tools and mobile devices. Why are we not training a whole new cadre of educators to be content creators..... another cadre to be diagnostic and data specialists.... another cadre to be the surgeons of the classroom dealing with the hardest situations.... another to be the caring mentors.... etc. Our school system should resemble our hospitals with numerous different specialists working together. Imagine a career path as an educator that goes beyond just... you are either a teacher or a principal. In that system, the \$120,000 education specialist is not only possible but probably. In order to truly reinvent.... to truly transform... you must not be afraid to try new ideas.... to fail. You must be willing to completely let go of the past... and all that you know about the future.

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Technology is only as good as the teachers using it. Teachers need to graduate from college with a large portion of technology course work. I see technology courses far more valuable than some of the "teacher education" courses offered over and over again, just at a different level, so the colleges can make money. College instructors need to spend time in public school classrooms teaching not just observing.

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i like to try and stay informed with what is "out there" and being used in the classrooms - i know it's hard for teachers to integrate technology - it takes a lot of time and practice on their part, they are busy teaching, testing (!), meeting goals, proving how highly effective they are, parenting their students, feeding their students, clothing their students, being advocates for their students and sometimes using out-dated equipment or just not having access on a regular basis or at all! it's a tough, underpaid, under appreciated job (been there/done that for 39 years)

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## 7. Additional Comments

Technology funding needs to become available through grants, categorical, etc... so that districts with the lowest tax based once again do not get left behind. For example two school 20miles apart. School A passes 1 mil tech. bond = 1,000,000 however School B passes 1 mil tech bond and receives=\$125,000. The lowest tax based school will never be able to keep up with the "rich"districts. Very frustrating for those students who are left out based on current funding system.

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When I was an educator I saw many more misuses of technology than positive uses. Training of teachers is desparately needed but seldom provided by skilled presenters and then limited in scope without recognition of student diversity and different learning styles.

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I would live to be a part of some meaningful discussions and actions related to this topic. Charlotte Oliver - 248-688-7099

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I am glad that you are doing this and hope that you will not just bottom drawer it and actually use some of the suggestions you will be getting. The education of our population is paramount we need to remember that this is the people government not the politicians.

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Funding needs to be provided for district to have equal opportunities for current technology.

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We should be wary any time an outside group attempts to control what happens in the classroom, particularly if that group has few classroom teachers in its membership. Teachers are professionals--educated, certified, and experienced in the arts of teaching and leaning. Teachers should be the ones who determine when, how and why they will use educational technology.

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## 7. Additional Comments

I feel that principals try to pick the top few topics to work on that will raise their assessment scores to meet the standards set by the state. This is at the cost of allowing students to create and have vision for ideas. Kids having math sense isn't always from doing worksheets from a textbook that everyone in the district is using and that everyone in a grade is on page 47. It's taking time to reflect on the immediate feedback provided and seeing how their thinking may or may not make sense. As a teacher, it is the flexibility to say that my students don't understand a certain concept and I know this because I just gave them a quick exit quiz that told me so. I will change my lesson for tomorrow to meet their needs or I will change my lesson now because my students are ready for it. I think this also allows for meeting the needs of struggling learners as well as the having the accessibility tools needed for hearing and visual impaired students.

Please, stop the bleeding of funds from public schools to so-called charter schools that have a mixed record of success and less accountability. I believe properly funding our public schools is what is needed not necessarily more technology.

FUND PUBLIC SCHOOLS APPROPRIATELY. ALLOW CLASSROOM TEACHERS TO TEACH TO THE STUDENT AND NOT THE TEST. AND MR. FLANAGAN SHOULD CONSIDER HIS ROLE IN WHAT'S HAPPENING TO MICHIGAN SCHOOLS. HE AND YOUR DEPARTMENT BEAR RESPONSIBILITY FOR THIS MESS WE'RE IN. IT'S NOT THE LEA'S ENTIRE FAULT. STOP THE CARPET BOMBING APPROACH AND COME DOWN AND LOOK AT WHAT PROGRAMS LIKE THIS ARE DOING TO EDUCATION IN THIS STATE.

I have been an educator for 36 years. During this time I have seen many changes from computers that do basic word processing to what we have now. I am excited about the advances, but I do not want technology to replace a book or a teacher.

Ultimately, we need an educational system that truly reaches ALL learners. Technology can support that vision through flexibility.

What technology provides us a world of options in terms of access, deliverables, and course management. The current campaign for anytime and anyplace is yet another one size fits all solution to an extremely multi-faceted problem. The state of Michigan and the Department of Education treat every district as though all things are equal. More programs, services, and decisions need to be made at ISD and REMC level so that they are differentiated and more closely aligned to what the populations actually need.

## 7. Additional Comments

As a school leader I will love to see funds be made available for technology throughout the school system.

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Technology should not be the end goal of education for its own sake. Technology should be used as a tool to enhance the process of learning, and add to the boundaries of human brain power and creative thinking.

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I am greatly troubled by what I have seen happening in my state regarding education. The meetings and discussions being held in secret concerning schools is unacceptable. I believe that parents, students, and educators should be encouraged to get involved. They are the ones who know what is best. Not businessmen or politicians. I hope there will be some changes made in how these meetings will be held in the future. Why prevent those who care the most about education and have dedicated their lives to learning from participating?

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Be wary of being completely dependent on technology however it serves as a great fingertip information tool. It can be very engaging and fun...but using technology also keeps children more sedentary and not as active in their learning if it isn't used right.

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I hope this committee really allows their hearts to work in this matter and not just a political agenda at work. Our children are the most important resource our country has.....I see many fine public schools graduating Doctors, dentists, engineers, teachers, politicians, factory workers,....etc. and they have done a fine job. Those of you on this committee visit a public school , talk to the kids and staff. With all that has been done in this state it has been very sad to sit back and watch. The GOVERNOR and his legislators have taken away the respect many have shown to teachers and public schools....they should be ashamed of themselves. Teachers used to be highly respected and put way up the ladder in society, even though not highly paid for their work. They actually have helped make more money for this state than any corporation. Think about the effects of a good education, of which many have had in the public schools in Michigan. Why is our Gov. trying to destroy that and the respect...great question? By the way I am a retired education of 36 years. I educated 1000 plus First Graders and I am proud to say ....IT WORKED! Ask a student that now has a great job, and yes many are teaching. I am not proud to say I live in MICHIGAN anymore.

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## 7. Additional Comments

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Part of an educator's continuing education should include educational technology training. Requiring all educators to be current with educational technology would be one step in helping districts successfully and efficiently integrate technology into student learning. As wonderful as educational technology can be, it can also have a negative impact on student learning if responsible use of technology is not instilled in both students and educators.

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The school I work in is just a start in this process. It has taken us two years to learn how this process can work for success. The biggest problem we have is a time for direct instruction. We rely on the computer and its instruction to lay the blocks of success, not all students can learn tis way. Many still need to be shown how through examples, this our technology lacks. We need to move forward but understand this is not a complete package, we need to install this with what we do now in the classroom, and slowing incorporate more. If we try to fast we could lose more students before we gain success The bottom line we will progress to more technology as we move forward, our colleges must lead the way so our young teachers get trained in higher degrees and all are ready when they come to the classrooms to incorporate technology as another tool for success.

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Even CEO's from some of the largest tech companies have figured out that too much emphasis on technology can be detrimental to developing critical thinking skills. This is a link to a very interesting and eye-opening article. [http://www.nytimes.com/2011/10/23/technology/at-waldorf-school-in-silicon-valley-technology-can-wait.html?pagewanted=all&\\_r=0](http://www.nytimes.com/2011/10/23/technology/at-waldorf-school-in-silicon-valley-technology-can-wait.html?pagewanted=all&_r=0)

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Having worked in the field of educational technology since the mid-80's I am extremely unhappy at the "progress" we have made. In my opinion, we have been going backwards. Before networks and elaborate "teaching" software, teachers had much more flexibility in how they used technology and were much more creative in its use.

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The schools need financial support from the state and the federal government to be able to pay for the educational technology that students use in schools. Finances continue to be a major concern for Michigan's schools.

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## 7. Additional Comments

Politicians always say that money isn't the answer to a quality education. Well, I guess that can be true when you're talking to your own children at home who have a specific respect for you and for learning. However, in the real world, when classrooms are filled with 30 young students, even the best teachers in the world will NOT be as effective especially if as little a 1 student intends to be disruptive. With larger populations, teachers need to have the technology work effortlessly every day so that all students receive a great education. Regardless of politically motivated attacks, more money is needed in the classroom - not for more administrative functions. Technology is not free but is needed and even proven to increase student absorption of information. Districts at the low end of Michigan funding are hurting!

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I never want to see technology take the place of a teacher. Technology, although, wonderful, has caused lack of communication because no one talks to each other. That is a life skill that is necessary.

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Not all schools have educational technology available. Some don't even have working desk top computers for their students, no white board available, no tablets or Nooks.

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More funding to increase technology opportunities should be provided to innovative schools

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Schools need the appropriate funding to be able to support technology initiatives in their districts. Technology is so necessary for learning, but can put a burden on school budgets to be able to sustain and maintain the technology now and in the future.

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My district is a model program for technology use and as the superintendent I am a former tech director who is very engaged in the process. I have a large depth of knowledge and often work with vendors as a resource.

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With technology comes the need for money and investment. Most school districts do not have the money available to invest to the level needed to ensure success. We need money to be allocated to all school systems.

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## 7. Additional Comments

Technology in education needs to be narrowly defined. Programs that are based on the understanding and development of technology may have more need for technology based applications. That doesn't mean that all programs require all the available technology.

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Technology is wonderful but is not, nor should it ever be, the "be all, end all" in education. Students need to use critical thinking skills not just rely on search engines and websites. They need to question the information they receive and they need to be taught to use technology wisely.

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Technology in schools has always been seen as a drain on the budget. Unless you fix this fundamental problem, technology will create more problems. Districts have to pay for the hard ware, the soft ware and the upkeep of that hardware and software, PLUS train teachers how to use it. THEN the hardware and software get outdated and we're back to square one....more money for new hardware and software and training. The state has to fund all three. If the state cuts corners on any three, technology will be used as a "nice idea in the classroom, but will never work the way it should."

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Excellent conversation! I am excited to see where this conversation goes.

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My biggest fear is this: I already see students who cannot look a person in the eye and carry on a conversation because they are too attached to their devices. We need to make sure there is a balance in students' lives. Otherwise, we will be producing tech savvy individuals who have no clue how to communicate with other people face to face or in a group, and will have difficulty in life and in the workplace. My experience with many Adult Education students is that they want to do online credit recovery because they think it will be fun and easy, but when they realize the work involved, they ask to go back to traditional text.

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## 7. Additional Comments

I have been a grant writer at the ISD for the last nine years. Before that, I was an elementary and middle school teacher for 30 years. What concerns me is that a week never goes by, but that a teacher from my county asks me if I can help him or her "get a grant" for some form of technology (lately it has been iPads). If this technology is valuable in the classroom, and I believe it is, then the state and school districts must budget for and include technology in their capital expenditures to a greater degree. Teachers cannot rely on grants to provide what they need. That provides unequal access for students. Technology is changing everything about education, including the cost. While educators' salaries and legacy costs have driven up the cost of education, technology and IT support is a new dimension that MUST be included in a comprehensive way. We cannot continue to "patch" it together with grants and other limited measures.

I am a 35 year veteran teacher/educator. I work in a district where the median years of service is 17.4 years. We are antiquated. We have not done the paradigm shift of embracing technology as a means of delivering instruction to students. Personal Warning: educational technology has the GREAT potential to create continued disparity between "the have and have not" . Educational Technology was the potential to diminish the human contact factor (social contact with others through guided behavior). Educational Technology is chocolate needed to make a marbled cake.

Digital learning is incredibly useful & meaningful for our kids. However, I think it's important to recognize the negative impacts technology can have on our kids. There is significant longitudinal research to suggest too much technology in formative years can negatively impact development. Therefore, Limits must be set for technology to help curb cyber bullying or technological bullying, kids must be explicitly taught how to be a responsible digital citizen, etc. I'm not sure kids realize that anything they put out online (Facebook, twitter, blogs, texts, snap chat, emails, gaming systems, etc.) is there forever to be seen & retrieved later. Essentially, if you don't want something on a billboard, you shouldn't send it. I recognize that these are not necessarily educationally based issues... But they do impact our youth and we need to be cognizant of them so we can limit opportunities for these issues to arise. The average US teen spends 7 hours and 38 minutes per day online, on TV, playing video games, etc. which means they are not exercising, studying, reading or playing outside.

## 7. Additional Comments

Investments in Educational Technology efforts that streamline and stabilize the ability of schools to support increasing use is critical today. Concurrently, professional development efforts need to focus on building an understanding of and broad-based support for student-centered learning. Administrators need training and support on how to build this common belief and how to support teachers and schools as they transition cultures to support all learners and how to embrace learning options that can be more effective for some learners. Once these foundations are in place, schools will be positioned to effectively embrace and expand the use of educational technology to improve teaching and learning for all students.

I am glad that you started this forum to get feedback. Technology for the sake of technology should never be the mandate in education.

Please provide more open opportunities for Michiganders to share their opinions of education in our state. It is so important to our communities and future.

I think technology is making the students more lazy because of the easy access to everything. They no longer know how to spell, write with pen and paper, use correct grammar and even communicate with each other on a personal/face to face basis. Technology has taken over their lives and they are unable to establish relationships with other people. Yes, it benefits by being able to see things in far away places, but even then it is too easy just to look things up on the computer and not use their minds to accomplish tasks.

In my past 15 years in education I have seen the elimination of most all the courses needed to keep a nation productive. At our facility alone we have lost Welding(15 years ago),small engine repair and recreational vehicle repair, plastics technology, wood shop, cabinet making and finish carpentry,banking,electronics and electrical program(everything today uses electronic technology), and cosmetology. I have become more of a data and forms person and disciplinary person( with no authority) than a VOCATIONAL INSTRUCTOR as so much time is spent doing things that keep me from time with students learning. It is devastating to see education in Michigan and all the states chase the money to fund programs that go away after 2-4 years and then start over with something different.

## 7. Additional Comments

Technology should be available to all regardless of demographics!

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Cost and access is a major obstacle to effective technology integration.

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It all depends on the direction of the State and the nature of education. Will the current "reforms" lead to a more engaged teaching force, or will they create an atmosphere whereby teachers become scarce, due to irrational methods of teacher assessment, and punitive compensation policies? This must be resolved before we talk technology. Only if we have the best teachers will we have ones willing to engage the students in technology as a tool for learning. Wayne Schmidt is doing his best to prevent the best minds from entering education through his policies. I am currently looking to leave the field of education because the State of Michigan, as a governmental body, has established that my expertise, experience, and education are no longer valued or respected. Those realities reflect on the future of technology in education in Michigan just as much as how much money will be spent there.

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I believe relationships are the single most important thing that makes a difference in how well children learn. Educational technology used with young children is like the sprinkles on the frosting. The technology used by teaching staff is very helpful in keeping track of progress and collecting data.

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There are too many initiatives right now being pushed through without thought or successful pilot programs. Online learning has a place and role in our schools, but it should never replace our current educational system. I believe educational technology can enhance and strengthen our educational system, but I fear that too many students are going to fail and get left behind with the "anywhere, anyplace" initiatives.

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We need to stop putting money into unproven technologies. Too much money is spent on technologies that legislators put money towards because their support of that company ensures money for their campaign. Business needs to make clear the types of jobs workers can prepare for so students can move into fields that hold potential for their future. Then schools can help prepare students for the jobs that will be there. As it is now, we have no idea how to guide students into the work world. The big business world no longer seems to feel duty to our country or its citizens.

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## 7. Additional Comments

Technology can be a huge tool for teachers, but so far only those school that can afford it, have it. We need to give equal opportunity and access to all students and all schools within Michigan with this technology.

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Older administrators/teachers getting in the way of real progress. They do not embrace new ways for the most part. Our school Supt wont even consider newer technology yet sits on a 25% fund balance.???

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Technology is being used to farm our tax payers for funding while eliminating teaching positions. If technology is implemented, 3rd party businesses licking their chops for extra income need to be held at bay while educators decide how and where to implement. Technology implementation can be a fast process if the students and educators are willing participants. However, implementation of the hardware and software needs to be done correctly and long term, not to win elections and keep officials in their positions.

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Just as books allow us to capture and story ideas and knowledge outside the body, technology allows us to disseminate what we know and engage people through social media to collaborate and create. What is missing from so much of today's approach to education is the joy of learning. Using technology to create wonder in young people about their world is essential. Reducing education to tests and private profits is literally a dead end.

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Get rid of personal computers, drop the Ipads or anything else made by Apple Inc, and get back to basics. My only caveat is if 75% of the technology is manufactured in Michigan then we can take a second look at purchasing it for our districts. If not, we are just wasting taxpayer's money by sending it to a country that has no concern for our future.

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It is a fantasy to believe that online classes can replace classrooms, teachers, staff, other students, etc. and still produce an educated public. I wouldn't want and will refuse to let my children be exposed to such a thing.

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## 7. Additional Comments

When I was a new teacher in 1991 my principal said to me, "There is all this talk about how computers will one day replace teachers. They used to say the same thing about TVs. These are all wonderful tools, but there is one thing they can never do - manage a class." When I was a new assistant principal in 1996 I sat on a school/business round table. What the business people said repeatedly was that all their new employees knew or could learn the technical skills. Where new employees failed was in the "soft skills;" workplace norms, communication, interpersonal skills, ethics. Beginning with the end in mind, ed tech exists to serve public education's central mission of developing good citizens. When we lose sight of this central mission we risk using our resources on the new and shiny rather than the effective and efficient.

I'm excited to see the state moving forward with educational technology. I fear they are attempting to replace teachers and reduce face-time with responsible adults that actually engage students in instruction. I see the need to incorporate technology in our schools at all levels. I see a bigger need to teach DIGITAL CITIZENSHIP at all levels. In my opinion, digital citizenship goes beyond Internet Safety. It includes being a good citizen, showing respect to others, being "present and in-the-moment" with those around you. People need to learn how and more appropriately WHEN and WHERE to use their devices. I also have a concern with time on task. I worry about the quality of instruction when every student will have their own device and an open pass to the Internet. I worry about school safety, student safety, and teacher safety when every student will have access to every social network and communication/documentation device there is. Visit the following link for an interesting article about time on task- <http://blogs.kqed.org/mindshift/2013/05/how-does-multitasking-change-the-way-kids-learn/> Finally, I have a concern related to instruction of technology in general. I have been a business education teacher for over 20 years. My job has evolved to that of "computer teacher". We hardly teach any business classes anymore (a result of the increased requirements of the core curriculum). As a "computer teacher" - I teach document formatting and design, I incorporate writing and all the rules that go along with writing, I teach about ergonomics, posture, typing technique, and workspace set-up, I teach about evaluating websites, safety, and privacy. I worry about the future of my own job if suddenly everyone becomes the "technology-teacher". Finally, I have a concern with the state/districts being able to keep technology current. We can get all the newest devices - but will we be able to afford the next generation of devices?

Please fund our Schools! Please fund our schools equally! My children deserve the same opportunity as those in other schools. A child's zip code should not determine the value to the state and their educational opportunity.

## 7. Additional Comments

The governor needs to understand that increased technology is a great tool, but cannot replace direct instruction and intervention support provided by highly trained educators. Online resources can, and should, support learning, but it would be negligent to try to completely replace a school-based experience with technology based learning.

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I believe that educational technology is the future and will reach all types of learners.

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Teachers can't teach what they don't know - we need to help them advance their own proficiency in using technology themselves, then we need to empower them to enhance their pedagogy. Politicians and teachers both need to embrace CAS functionality so that we can spend more time actually "doing" sophisticated mathematics, rather than overwhelming students with meaningless procedures that either cause unnecessary cognitive obstacles or hold back their development. A calculator can do in 3 minutes what it takes 3 hours to do by hand, but somehow many people still seem to think that if you can do math "by hand" that must mean that you understand it better. Really?

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Never believe that IT can replace humint - not in the highest levels of the CIA or in the most important levels of education, which I believe are PK-12. On these foundations our nation depends. We ignore them to our peril. As the wealthy are able to educate their own children and ignore the children of poverty and increasingly also ignore the children of the shrinking middle class, we are reaping the harvest of ignorance by design. This nation was built on the foundations of public education - a passion of Thomas Jefferson and many others. I strongly believe in the critical importance of providing a strong, sound education to all of our children and believe that educational technology must be used carefully and well integrated into classrooms with human teachers and students.

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## 7. Additional Comments

If schools are constantly cutting teachers and programs then there is no way to afford up-to-date technology on top of that. I see our country in danger if our students are not provided with the best education and best technology out there. Schools should be our number one priority in the country if we want to continue to thrive- instead we are the ones always taking cuts. More students per room + more standardized testing (less time for teaching skills because we have to teach to pass a test) + less teachers + less programs to keep kids busy (teach social skills and team building skills)+lack of working technology = behavior problems, failing grades and lack of interest in education. I haven't see many positive changes in education and I've only been teaching for 8 years. I entered this profession because I want to teach but I do more trying to explain why education is important to students who argue that they don't need education, ACT testing accommodations coordinator, special education teaching, general education reading intervention (AIMSweb coordinator), and elementary computer teacher. In my small school my coworkers and I are spread to thin trying to fill in for all of the cuts that can be made and my fear is that I will be ineffective or burn out before I ever planned to be!

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Educational technology is important, but its' importance is not so much that it provides learning advantages, but that it is a necessary tool that students must acquire and master in order to function in the current workplace, and in order to acquire information needed for learning and workplace success.

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Technology should be used as a tool not a replacement for hands on, in classroom learning. When Doctors are in Med school, they are in the classroom. Would you feel safe if your Doctor took all Online courses and was operating on you? Classroom experience and basics can not be replaced by online work. We have Drones that can fight wars for us, however our government deems it necessary to have pilots to make judgment calls. Online learning would take away this type of feel and feedback that happens in the classroom.

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Funding is the elephant in the room. Why a survey like this when the funding of the public education system is in such a weakened state? The State of Michigan needs to step up and support public education, starting with the basics. Schools who are doing everything asked of them (Best Practices), are high on the list for amount of \$ spent in classrm versus admin, and receive the minimum foundation allowance are struggling even tho they are doing all the right things. Something is not right here!

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## 7. Additional Comments

It will never, and should never, replace educators in the classroom. Flipped classrooms and on-line education may be part of educational technology, however, it cannot take the place of the personal and motivational touch of a teacher. A fear I have as educational technology is used more and more is that funding is not a continual process. Computers especially are not going to last more than a few years and need to be replaced, especially if all students have one in their possession. Even if they don't, they get used and worn out. Their needs to be a long term plan.

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I see a huge need for educational technology, but I also foresee massive problems with all of the credit recovery classes and online learning options. I really think students needs to be in a classroom where they can question 'why' we do something or 'why' that makes sense.

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I know and understand that technology is extremely important in this day and age but one point that I think we must not lose in our thinking, is that technology will never replace a teacher in all students. We need to quit looking for th cheapest way to educate our children and start looking at options that encompass what we really need to have to get our goal accomplished. Our goal should be how to we better educate our children so that they can be better equipped to go out successfully into the world, not how can we do it cheaper now that technology has supplied us a means to do it. That is not the answer and that is the direction I feel the state is going in.

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There are many educators and technology specialists who have made it their mission to learn more and explore more about the options of available technology. Any changes or additional to educational technology for pre-schools, special ed. schools, general ed. schools - all levels, should be made by including these experts. The people who work in the trenches day to day understand better what their students need and also have wonderful ideas for new developments. I believe all players should be at the table helping to make positive changes.

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The teacher/student relationship is an art form. It can not be taken over by educational technology. Technology will never match the personal relationship of a classroom learning environment.

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## 7. Additional Comments

Infrastructure, Funding, & professional development are key to transforming educational approaches to using technology. Without a constant source of funding schools cannot keep up with the changes in technology. Without funding teachers cannot be trained on how to help students grasp content and then to utilize technology to assist in the endeavor. Without Funding weak and ineffective infrastructure is going to prove to be a hindrance to teachers and students having an experience with technology that is unhindered. Often school districts are more concerned with "locking down" the servers and preventing potential lawsuits from parents than they are about enabling students to have a robust learning experience with technology. Students already know how to get around these restrictions. One district has so locked down their servers that it is virtually impossible to use email to communicate with them. This is very problematic. Until those entrusted with managing these systems are properly trained on enabling access students and teachers are going to be unable to enjoy the full benefits that technology can bring into the classroom. Sure there are misuses, but to punish everyone is simply not a solution that is in the best interests of learning and kids.

It is important that all teachers are trained in whatever technologies they are required to utilize in their classroom. There needs to be a way for all Michigan teachers to communicate with each other and share what they are using and doing in the classroom that works and what does not work. Perhaps this can be the forum. With all the technology, why do we need all these administrators? Why not one for each county, especially now with the core curriculum? I think some times the educational technology is built in so that administrators can justify their jobs.

Good luck with your project. Would really like for you to follow through on being transparent and posting the results of this and any other work you complete.

I hope technology never completely replaces the written word like books and magazines but since it is here to stay it needs to be used to effectively advance education and not shoved aside as new fangled nonsense or dangerous.

I see the role of the State government agencies in the future to provide leadership to improve the infrastructure of educational technology. This should be prioritized as high-speed wired and wireless Internet and data portability between schools in Michigan. Regional consortiums should be supported to develop practical solutions in cost-sharing of goods and services related to educational technology

## 7. Additional Comments

My only concern is the lack of human interaction when too much emphasis is placed on technology.

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Hmmmm....where's the money coming from to outfit schools, especially rural poor/ inner city poor schools with educational technology? Both the public's and the politician's view that public schools are "well-funded" and are "wasting money" will have to be changed to the reality that most public schools can't even afford adequate janitorial services any more. The public/politicians will have to learn to respect the teachers for the professionals they are, instead of slandering them as wasters of money and incompetents. Without communicating effectively with the public about the reality of the classroom, I hold little hope that adequate educational technology can be a reality in such an underfunded and mistrustful environment.

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Technology is a tool - not a teacher. We need to address how to retain teachers in our classrooms and not on 'what else might work besides a teacher' because the answer to that question is - nothing. The attrition and mobility rate of our teachers is detrimental to the health of our education system. We need to treat teachers like they are the solutions - not the problems that get in the way and should be replaced. Technology can enhance quality instruction but without a quality teacher there is no quality instruction. Without the experiences and knowledge of teachers the technology means nothing.

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Students today are digital natives and many teachers are digital immigrants...Teacher need to change teaching styles to integrate more technology into the curriculum.

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Thanks for your efforts in this.

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Technology is at the heart of business and our economy. Teachers need to prepare them for this. Our schools need funding and resources if we want to do what is right for our youth.

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I see technology forcing us to shift our paradigm in the field of education, which is a good thing. We are finally breaking free of the traditional framework that no longer fits the way our society functions. Thanks for helping move this shift forward.

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## 7. Additional Comments

I worry about a generation of students educated behind a computer without learning interpersonal and social skills that are necessary to survive in our society. Schools are about more than just the subject matter and being able to pass a test. Technology must be an addition to the classrooms and instruction and not a replacement. I also abhor the idea of our tax dollars going to profit making ventures and out-of-state vendors on such a huge scale.

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I cannot afford a computer or internet on my teacher salary. Internet in my home would be a luxury. A lot of my time is spent after school or during summer hours developing and researching lessons for my students utilizing my district technology.

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Students are driven by technology but it needs to be implemented correctly, with the right tools for it to be a success.

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Schools still need to teach typing skills. Our children in middle school know how to use their iPads, iPods and iPhones, but not how to use a keyboard. In the future they will continue to need to use their keyboards in college to type papers and at work.

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We need a state initiative to get all students an I-Pad. Then the playing field would be leveled. It would help to do this for teachers too. We need to devote money for technology in a separate fund for the schools to use.

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I am an advocate for blended learning. I strongly believe using technology as a sole means of educating students is not in the best interest of all students. When using technology to enhance learning opportunities there are many aspects to consider--individualized by student--when developing a plan on how to incorporate technology.

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Online classes can be a good thing, but there needs to be policy on how it is going to work as I can/have seen blatant abuse by high school students concerning online classes.

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How will schools cover these cost? Equipment Staff/educator training Building prep for tech up-grades the cost of long distant learning

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## 7. Additional Comments

The dismal state of educational technology in Michigan can be directly attributed to the loss of school librarians statewide. School librarians are the ONLY school personnel who have professional training in the integration of technology and information resources in curriculum and instruction and training teachers to do the same. They are also strong community advocates for educational technology. Just this week, Howell Public Schools eliminated its last two librarians. This has become the norm statewide. The paraprofessionals who have been assigned to school librarians are not certified to teach and do not have the education required to serve as school librarians. In many districts, even those positions are now being cut leaving libraries unstaffed.

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We need to bring back our Michigan schools. We must get together and work together.

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Teachers need additional time and training for technology based applications.

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It would be great to see the state and federal governments increasing funding to school districts or offer grants to enable the districts to purchase the technology to enhance the student's education.

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the cost for the technology and the directions to use the technology must be reasonable for schools to afford it and teachers to use it. The number one complaint is that we can't afford the technology and when will be trained on how to use it.

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There needs to be a better way to police the negative effects of technology. For example: preventing cyberbullying and technology ettiquette.

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The major problem that we have in Northern Michigan is the lack of Internet access. Many areas do not have cable and satellite internet is so expensive that most families can not afford it. Our children lose major opportunities to access unique experiences.

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## 7. Additional Comments

I think it is terrible what you and the Republicans are doing. First you have your secret meetings at tax payer expense, which is unconstitutional. Then when caught, you try to make it seem as though it is a good idea and educators should be a part of this process. The reality is that you don't care what we think, by going through this process of gathering feedback you try to legitimize what you are doing, short selling education to students of Michigan for profit. Snyder pays \$20,000 a year to send his daughter to Green Hills in Ann Arbor. He pays this fee because he wants a good education for his daughter. For the rest of the students they get a profit driven, video education for \$5,000. Michigan currently offers one of the best educations in the country. No thanks to your policies of cutting 1.8 billion from schools and talks now of 800 million more. I am proud every day with what I do, no matter how you try to spin the data in a negative fashion. You should all be ashamed of yourselves for even considering this option and trying to destroy our great public school system.

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My district is facing a funding problem for next fiscal year. They have already increased class size, reduced staff and consolidated schools. They are now looking at reducing course offerings, reducing counselors, cutting music options etc. We need to address the school funding problem in Michigan first before we talk about technology. Also I do not see technology as the answer to the school funding problem.

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Michigan is a very wealthy state for K-12 learning as far as potential resources. I grew up in Hazel Park, Michigan in the 1960's. Our schools were one of the best in the state as far as academics and athletics. I believe we had the best technology available then. We had the best machine technology program in the state. At that time, there were many great schools in Michigan. Our state had the best schools in the country because we had the same resources then we have now. I am proud to say I went to school in Michigan. I owe a lot to my teachers, coaches, administrators, school boards, and people in Lansing. George Romney was governor of Michigan at that time. I only want our children today to have the same opportunities, and I am a team player in my faith to make that happen. Thanks-you so much for the opportunity to take this survey.

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Technology is a great tool to facilitate learning. However, vast amounts of learning can take place in the absence of technology.

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## 7. Additional Comments

The technology resources need to be more equally distributed throughout school districts. While one district has plentiful technology, another has none. Funding to schools needs to be appropriate so that schools can keep up with technological advances and opportunities. Many districts can barely afford to pay staff, let alone fund technology and keep it updated. If we want to remain a competitive state in the area of education, we must improve our school funding.

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Let's make technology and people our number one goal. Rather than viewing technology as a cheap, better replacement for people (especially educators), let's make use of the best of both to produce the best results.

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I would like to contribute to a broader scope of visioning and goal setting for the state. Education is changing and technology is one vehicle to get us where we need to be.  
Justin Ellsworth 248-259-6748

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I can remember putting on a presentation at MSU for a state teachers conference on the use of power points and having teachers come up to me and say that this technology would never have a place in their classroom. Any success you might expect will only happen with educators that are willing to adapt to the technology as well. I believe that at some point in the future we will have educators using holographic images from the Amazon Forest, the Pyramids of Egypt, or the Great Wall of China and maybe even from our space stations orbiting earth or from the moon or Mars.

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When we set a goal to prepare all students for college or career, we must provide a technology based learning environment within which they can learn. A learning experience without technology is preparing them for a world long gone.

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Any reform of any efficacy must be developed and implemented at the grassroots level. All recent "reform" measures have done anything but "fix" schools that need "fixing". Schools in impoverished districts have problems that are 180 degrees from the problems in more affluent districts. Address the effects of poverty and you'll begin to make improvements. Fix the bottom 20% and the whole ship float higher in the water. This fix is smaller. It's quicker. It'll be more effective and It's cheaper because the investment will yield higher returns 15-20 years later-- which is when "profits" are revealed regarding educational investments.

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## 7. Additional Comments

I approach the next era of technology in education with a good deal of excitement and a great deal of both hope and fear.

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needs to be more than powerpoint and a computer

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One of the new players in MOOC for K-12 is [www.myk12ed.com](http://www.myk12ed.com)

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The key question at this juncture is how will this be funded. If EVERY student is to be given the opportunity in an EQUAL fashion, then funding must be supported and not presented and then withdrawn. I do not see this happening at this time for any but the most elite school districts in the state of Michigan. Not without major corporate investment with an expected return. Thus, once again, an eliteist ideal that will give advantage to on those who already are advantaged and leave the disadvantaged in the sewer. Do not start this without thinking it through.

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Educational technology is an important aspect of schools. But this needs funding. Grants or donors need to be shared to allow schools to obtain the necessary technology to prepare the next generation of students.

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Building a reliable state-of-the-art virtual infrastructure would be an enormous draw for economic development and an improvement for our schools and colleges. What has happened with the P-20 system. It was presented that there would be a great new comprehensive database for tracking student records - a comprehensive virtual portfolio. When will that happen?

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Our country is too focused on keeping up with the Jones'. We need to base learning on what is best for American, or Michigan, children. Not all children will want our need the skills to be an engineer or a physicist. We need to teach our children how to be independent thinkers, and then offer them the opportunities to choose their own path.

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As soon as the conversation quits being about the device, we'll be able to get some real work done!

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We need a purpose and a curriculum for teachers. Telling everyone to just use more technology seems like educational malpractice!

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## 7. Additional Comments

Teachers and students need access to updated technology and the training needed to maximize it use.

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As a special education teacher I am constantly seeking ways to level the playing field for my students. I find that most students quickly engage with technology whether it is low tech or high tech and we find some means that works for them although it may take some trial and error to get the best fit. The more we use the technology the more we are familiar with what will benefit our students. So many resources are available and keep coming available that I feel that we need to share with each other about the successes we are having and encourage each other in the quest to find good fits for our students and our classrooms and what is a good match to the curriculum.

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I read in the paper about schools like Buena Vista, and Albion and wonder why you ask any of the public anything about education. It seems pretty obvious that you look at education as nothing more than a business. The notion of creating cyber schools makes me want to pack my family and move to another state. As a matter of fact, we are sending our resumes out. We have kids in elementary and middle school, and we can't afford private schools. The GOP in Michigan's agenda is driving many hard working Michigan families out of state. If the governor continues to cut education, why even bother with discussions about the use of technology? I voted for the nerd last time, but unless his and the Michigan GOP attacks on public education stop, I will never vote for a republican again and may just leave the state I have lived my whole life in. Have a good day.

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I hope all schools can have more technology where curriculum is connected and the resources to implement.

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If students and employers are the real customers of educational system, why do we allow the Colleges drive the path for students. Thought been at educating youth for 32 year. We got a lot more out of kids in the 80's and early 90's. when educators where free to teach. And discipline was demanded in the classroom. When will the adults be adults and put consistency and rules back into the classroom. The students produce less do to all the distractions brought into the classroom. End result less time on task. Equals less learned. Putting all the demands on teacher and not on the students. Fee the teachers up to teach and

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## 7. Additional Comments

Schools must break free from mortar and brick; from September to June; from 7 to 3 mentality. Teachers need to reclaim their leadership role, focus on flexibility and infuse creativity into all content areas. We need to be global in our thinking and network with the schools across all borders. The world our students will enter is not our world. We teach them how to learn, relearn, and relearn again.

I hope my limited comments are at least minimally helpful! Thank you for asking.

I am very concerned with the initial online instruction programs. There is tremendous potential here, however my experience has been that online instruction is a low expectation, low accountability, path of least resistance for students. Yearlong traditional math courses being completed online in 2 weeks. :(

Hope that State of Michigan will help all children to access the latest technology. I am amazed at how much I learn from my grandchildren.

Schools are severely limited due to finances and the sped is technology change.

Just a random thought about technology's role. Don't test students on "Google-able" information (years, dates, names, etc.). Let them use technology to find that information and use it to solve complex problems.

Thank you for the opportunity to comment. I am concerned that schools do not have the technology or modern technology to keep up with the everyday demands and much still needs to be done to come up with the means and structure needed in K-12 education.

I hope that through this "idea gathering" that the governor and Lansing representatives also gather ideas on how to not only fund technology in the classroom but to fund maintaining and updating it as well without cutting school budgets any more. Many districts are already operating in the red or close to it. Also to fund it without any hidden agendas to ultimately have the trickle down affect of forcing teacher salary below the poverty level and ignoring the educational backgrounds, experience, and long days that teachers put in. We know what can happen if one is employed without any actual experience - our governor and the despair of public education - need I say more?

## 7. Additional Comments

We have to identify the barriers that are limiting the responsible expansion and use of educational technology in schools. Barriers might be financial, lack of technical literacy, fear, lack of time, lack of support, etc.

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Right now with young children technology tends to be a limiting source - removing children from social interactions.

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Funding should never be a barrier!

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I recently visited another high school where the superintendent stated that it is "malpractice" if we do not educate our students in how to take classes online in either a hybrid class or through online learning. This is an excellent comment. My computer applications class teaches students exactly how to do this. It also teaches them how to use the Microsoft Office products, which are heavily relied upon in "real life". It was a great disappointment to watch our school board vote against leaving the course as a requirement and I strongly believe that it will be a detriment to any student who does not take the class.

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Statewide charter schools will drain resources from traditional public schools using technology that is already readily available but denied from traditional public schools because of politics. Sad.

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Thank you for the opportunity to participate in this survey.

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GREAT WORK ON THIS!

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When I first read M. Flanagan's invitation to fill out a survey, I thought for a minute the state might want the tax payers' feedback, but these questions are ridiculous. What really matters here is - Will the state FUND technology for our schools and students or not? In fact, will they even continue to fund K-12 education at the promised minimal requirement? If they're not going to fund technology and the infrastructure needed to operate it, then who cares what any of us think the terminologies mean? And who cares if M. Flanagan is philosophically in favor or it? MDE - put money, serious money, where your mouth is!

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## 7. Additional Comments

I hope we are not planning to replace traditional live teaching and interacting with others in the classroom with online learning exclusively. I see many advantages in using programs that direct practice to the areas the student needs to focus on, and using technology for dispersing and organizing factual data, but we have to remember we are educating the whole person to become a contributing member of society, and that takes more than just knowledge. It takes learning to live and work with people with different backgrounds and attitudes and skill levels, and it takes interpersonal skills that are developed over the years as a child grows and cannot be learned from a machine. We also must be sure that all learners have the same access to educational technology in order to give them equal opportunities to function successfully in this electronic world.

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Educational: We cannot rely on computers to teach our children. Our kids need to have a qualified, motivated teacher in front of them every day. On-line learning only works if a student has the discipline and support to stick to it. On-line learning can certainly augment what is being done in the classroom. Teachers need additional training (starting in the teacher ed programs) on how best to incorporate technology into their classrooms. We cannot allow ourselves to think a computer can replace a teacher. Operational: Common software for SIS, finance, etc. should be implemented either regionally or throughout the state. The state should work to become a leader in Internet/broadband access. This will help education and business. One final comment, districts spend too much time filling out reports and submitting the information to a plethora of alphabet-soup acronyms. We need to cut down on the number of agencies and the reporting that each wants. For example, if the state adopted state-wide SIS and financial packages, that data would be readily available to the agencies, thereby saving time and money at the district level related to report preparation. Timothy D. Hall, Ed. D. Superintendent Sault Ste. Marie

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Integration of high quality resources into the classrooms will not be cheap. If the current environment of school funding in Michigan continues, the best we could hope for is merely the addition of a few more technological tools rather than truly effective, integrated technologically based learning.

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Technology is not going to save us. We must work to improve instruction and I hope that will be our focus. Technology is wonderful but I repeat that it will not replace good instruction. Our resources are much better spent on Teacher and Administrator Quality. You do not go into good schools void of good leadership.

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## 7. Additional Comments

I do believe that educational technology is extremely important for our students as well as for our state. Working in a poverty, low income area of Michigan is difficult at best. Our students need the opportunity for educational technology learning but many will not be able to afford the devices or the internet services required to be successful. This topic should also be discussed.

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Some interesting start-ups here in Michigan that align to the aforementioned goals:  
www.myk12ed.com: A social learning website enabling users to create and customize courses to the needs of students <https://sites.google.com/site/excelancellc/>  
(ExceLance): A company that uses business intelligence software (Tableau) to create customized, dynamic, and interactive dashboards and data products to serve the needs of educators in terms of reporting and making decisions pertaining to curriculum and instruction.

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The state can't keep cutting funding to schools, the schools will need money to upgrade systems and provide technology for each school and perhaps student

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Start funding schools appropriately so they can provide the necessary tools to prepare college and career ready citizens. Quite playing the charade game with schools and the media, make things equitable, and fund at appropriate levels. Stop expecting more for less. At this rate, we will end up with inferior products that put us further behind and increase the educational gap between the haves and have-nots (i.e. socio-economical differences). Take all aspects of education into consideration when making funding decisions (i.e. transportation, athletics, socio-economic status, co and extra curricular activities, staffing in relation to students and grade levels, etc.).

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I truly do not believe we should be pushing online learning and online courses except for Juniors and Seniors in high school. We are quickly teaching our kids to be anti-social and unhealthy by encouraging them to be constantly sitting in front of a screen with little to no human interaction. Many kids can hardly have one on one conversations anymore because they are so used to texting. There is so much more to be learned besides the core curriculum in a brick and mortar building.

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## 7. Additional Comments

Overall, we need to not look at technology as a magic bullet for education. There is no one size fits all solution that we can buy and implement and live happily ever after. What technology does best is individualizing things to fit needs that can be ascertained by algorithms. Much like Amazon can tailor its suggestions to customers to fit their known buying patterns, we can do the same in education. There needs to be incentives for people to take these risks and develop these concepts. If we can do that, then just like the internet, educational technology will develop the solutions that we need.

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We need to utilize the existing research on teaching and learning in deciding what technology can actually improve education, not just make it cheaper for those who abhor paying taxes for just about anything. The current research on the effects of technology on learning have not been very impressive when compared to other educational practices. Is this because of the ineffective use of technology by schools, or is it simply reflective of technology's limits in fostering student learning? I don't pretend to know that answer but I believe we must be pursue a rational process in deciding whether additional technology will improve our educational outcomes, not just make the process cheaper.

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Bring back the requirement, and add to it, that students should have to take at least one course in computers and one course in computer programming and students will be better able to use Educational Technology. Otherwise(even with online classes), we are just flinging them into the "water" and asking them to sink or swim.

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Technology is so critical for today's learner. Unfortunately, I also see this as the biggest advantage or disadvantage depending on whether the student has access to it at school and home. Many families don't have the funds or understand the necessity for having access to the internet. It isn't always the teachers that are fighting the technology. I work with parents daily who are concerned about the internet safety and think it is a waste of time. Although our school has put in as many filters as possible, it isn't a fool proof system. Parents get upset and blame the schools for when their child might come across something inappropriate. In school, we try to protect but also teach students responsibility when using technology. This is a major culture shift for both schools and families.

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Money, is a big factor in the success of our tech ed programming presently.

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## 7. Additional Comments

Without equal access to technology for infrastructure or technology hardware such as netbooks or ipads across all demographics there will always be a gap in those poor schools.

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I truly feel that our educators are not prepared for the use of educational technology to the extent it should be used. We must consider how we can provide districts and individuals the support needed to move forward. Money and time are obvious issues but so is the varying levels of knowledge. How do help move teachers into relevant technology use when there is so little money and time?

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It is very concerning that our current state of school financing in Michigan is creating a huge digital divide! I was previously in an urban district for many years and I am now in a rural district. I am so saddened by the lack of resource to students living in poverty in the rural setting! Students in urban poverty have so many more opportunities! Some of our students live in rural areas that do not even have internet available! (They are beyond the current service areas of all of our local carriers.) We have had to be very creative with MIFI units (trying several carriers!!!) to even get an intermittent signal with our online learners in our outlying areas! This is very frustrating when you are trying to provide equitable learning opportunities!

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PLEASE, PLEASE, PLEASE, MDE REMOVE the barriers and incentivize schools to innovate with technology. Let them use sinking funds to pay for technology, let them use seat-time waiver more easily and reward those schools who do.

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Power to people Who only serve to Teach technology to the young minds who deserve nothing less ..

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This should not be a way to cut or decrease teachers in the State. Humans in the smallest possible class size is the key to great education. Governor Snyder understands this as I and he both know that is what his children get at Greenhills School. We should emulate the best and find out how to make it happen for all. Any reform that ignores that goal is poorly founded and threatens to be what SO many parents I know fear -- deform of public ed.

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## 7. Additional Comments

On a side note, there is too much information out there. When are we going to stop with the memorization and let kids take the knowledge and adopt it to solve the problem? Memorization needs to stop in many areas and we must focus on can students learn how to find what they need and use it correctly.

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Additional funding support is needed to ensure that high school programs maintain the up-to-date equipment that industry currently uses, so that career and technical education programs mirror what a real-life industrial plant/factory/workplace looks like.

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Online classes in and of themselves are not useful to the vision I have laid out. At best, hybrid courses are necessary to develop the kinds of skills necessary to achieve the goal in #6.

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My biggest concern is that technology NOT override an underlying human need for personal relationship building in the quest for a formal education. "Education anywhere, anytime," etc is a great idea AS LONG AS a student has plenty of opportunity to interface and interact with other human beings. Critical life skills are only adequately learned when there is human modeling and interpersonal relationships being played out. This cannot be done solely by using technology, or even by using technology as a major component. Team work, self regulation, getting along, responding appropriately, compassion, etc. etc. cannot be learned effectively in isolation from other humans.

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Supt. Flanagan, sir, Ed technology sounds fun... But the State Supt should focus on the more important job of improving teacher colleges and then, of course, our current teachers thru improved professional development. No sound-byte solutions. No fancy software! No cheap methods. Do the hard work of improving education by improving parents, schools and teachers, AND by figuring out how to afford and to replicate the small trials that have worked to help children with many obstacles to succeed in some areas. Just because one school beats the odds, and you applaud, does not mean that concept can be replicated. That is your job... Figure that out. Not through flashy lights and sound bytes but improving the structures for teacher development and addressing the underlying issues of poverty. Follow the sound, peer-reviewed research-driven methods. That used to be your focus... Until you were co-opted by the Gov's corporate methods. Go back to your roots: Research. Not flashy psychometrics to push technology. You feel pushed and keep giving a little so as not to lose your voice... But at what cost? I miss the Flanagan of old who knew what was right and pushed for it.

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## 7. Additional Comments

I have dedicated myself to STEAM education, as a matter of national security! To secure the jobs that we are producing and redefine our economy. Edutainment is the vehicle I use to get my class from introduction to mastery. This vehicle is fueled by a combination of inspiration, competition, cooperation, and motivation.

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The state needs to give local control back to the local districts. Pushing districts to use technology when they are not ready for it is a waste of money and time. Mandates such as requiring students to have 20 hours of online learning, testing 8th graders to ensure they are "technologically literate", pushing 1:1 programs, and forcing districts to administer the smarter balanced tests online create major distractions for district personnel and takes them away from their legitimate efforts to ensure teachers and students have meaningful and worthwhile technology experiences. The push for more technology will come from the students, parents, and teachers. Allow the local districts to determine what's best for their constituents.

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Schools are not be funded adequately and the State needs to add funding so schools can purchase more technology for students.

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Most public discussions of technology in education, it seems to me, are either ideologically driven or driven by profiteers. It would be useful for any discussion to begin with what is actually happening at universities and top school districts

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I am very passionate about leveraging the right tools for the right learners and using these tools to move away from a one size fits all model. I am not sure that the culture that surrounds education will allow this to happen at the rate our students deserve. I am not sure that our parents understand what their children need today and will need in the future. Everyone went to school so everyone can fix it. We also need to address the stigma tied to failure, moving this to an acceptable model of growth may allow us to move the system at an acceptable rate. I won't hide behind my answers and criticism of a broken system that has far too many educators and leaders afraid to have the tough conversations needed to change our outcomes. David Tebo, Superintendent of Hamilton Community Schools

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## 7. Additional Comments

I find it unconscionable that we have not funded, or provided for educational technology in the past 12 years, when the bulk of funding has been allocated for assessment and accountability. Even though my work depends on assessment and accountability, the promise of educational technology in the United States has fallen far behind other developed nations, while the use of assessments has increased far beyond that of other developed nations. Our reliance on standardized testing to increase "student achievement" is short-sighted and counter-productive to learning, period.

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Do not assume that younger teachers are automatically "tech savvy" in the classroom. Overwhelmingly, teachers - of all ages - teach the way they were taught, and this perpetuates "the way we've always done it" year after year after year. ALL teachers need hours and hours and hours of technology training - both in how to actually use the technology (even things you might take for granted like e-mail, Word, and Excel) and how to then teach and assess with it. Until we can provide teachers 100 hours or more of PD a year, with technology tools and strategies embedded in content training, we will not see a major change. Our students will continue to be bored in school and amazed at how irrelevant school is to their experiences outside those walls.

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Teachers need adequate professional development, and adequate time to acquire the professional development in order to use technology effectively. The State needs to make a conversion whereby they value the men and women who teach in public school classrooms across the State each day. Public school teachers do not feel valued or respected by our State government.

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Professional development has to be a main focus on any educational technology, if we want the desired results.

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This survey is nice in theory but I doubt will do much. Lets be honest, schools are having trouble even keeping their doors open. How are they going to be able to bring in additional technology unless they pass a bond issue. Now there is talk of the \$5,000 student voucher. Amazing that the governor's pays \$20,000 a year for his one of his kids education because he is one of the "haves" and the rest of us "have nots" only get \$5,000.

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## 7. Additional Comments

thanks for doing this. As long as I have your ears: Don't let the narrow-minded idealogues in the MI legislature continue to slash and burn education funding so they can get their friends to start for-profit schools owned by private companies using those horrible vouchers. Remind them public education needs to be treated with more respect, not starved so it's begging for resources to teach our youth. Education technology is one more tool to assisting our public schools do the job they're capable of doing; to deny them that set of tools is stupid

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necessary

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Need more funding for educational technology!!! Many of the schools are already stretched thin with budgets and there is little additional funds for technology needed to run the district, let alone educational technology. Both areas must be funded to work. The district can have the best educational technology in the classrooms, but if the infrastructure such as the servers and network are out of date and slow, that does not help the students. The same is true in the reverse.

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Some of the challenges of educational technology include keeping the computers working and problem solving when there is a problem with a machine. Teachers don't have the time to spend just getting the computers to work. Tech support is especially important.

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This year, I have seen a lot of misuse of technology. Some districts are substituting technology for teachers.

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This is a waste of time unless the Legislature is willing to INVEST in education to provide equal opportunities for EACH Michigan public school child.

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## 7. Additional Comments

We need to understand that technology is not only a tool for education, but a tool that is transforming the day to day life of people in work and in their personal lives in radically powerful ways. So that means that schools need to think about how schools can adapt to this new environment. Some things that schools needed to do in the past (bring knowledge to students) is now happening on the web in real time and in individualized formats. That means that schools may need to eliminate some of what has traditionally been left to teachers and allow students to learn on their own, with the guidance of teachers. Schools may not be the only source of knowledge but they may be a good place for students to access knowledge and learn how to process it. Schools worked in isolation of the real world and now technology has made communication with the outside world very accessible. Virtual field trips to other nations is a reality at this time. Also communication and collaboration with other teachers and students is practical and a powerful tool for teachers. If we move into a competitive model of education, where parents have a choice of schools, those that choose to use technology will outpace those that are reluctant to change. However, if in our effort to introduce the latest hardware and software we must take care not to overwhelm teachers or fail to value them as mentors.

When our own Dept [MDE] can't use technology to talk about technology, I don't hold much hope for MDE moving the ball in this arena. The whole section 22i grant has been a slow motion train wreck so far. We need to get back to the original legislative intent with this technology grant.

with all the budget cuts, districts have a hard time keeping up. Cuts should come from the free trials criminals get and any extra services in jail, and not from public education.

It will be equally important to not be a part of raising a "stupid" society...one that cannot communicate effectively face to face and interpret figurative language and body language. A society that knows that too much of a good thing is...well... not that good. We would be remiss to forget that.

We need to encourage minimum general standards, but not enforce specific ones. The more things we specify as a state wide blanket solution, the more we shoot ourselves in the foot. Set general standards and let schools find a way to flourish. Please do not have a "state sponsored" assessment contracted out to some company that is going to milk it for the term of the contract with no innovation. Technology moves way to fast for that, by the time the one size fits all solution supports everything, "everything" will be better suited for a museum.

## 7. Additional Comments

There is a tremendous need to train staff - schools are good at purchasing technology and software - training staff is tougher. We've relocated one of our technology teachers to train staff to use technology for student projects and have found it to be very successful. Money specifically for training staff would be beneficial in moving staff towards this goal.

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The state and feds are leaving some of our poor, rural districts behind. The message seems to be, "If you're urban, we'll pay for your technology. If you're minority, we'll pay for you. If you're suburban, you can pay for yourself. If you are close enough to a city to be classified urban but are really poor, white, and rural, too bad!"

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Educational Technology and Virtual Classrooms do also have a down side. Many student are already lacking social skills and interpersonal relationships that are learned in a traditional classroom. We still need human contact to develop the skills needed to become a well rounded person.

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I think technology is vitally important for students in today's world as it will feature prominently in their lives. But I think there's a balance and kids need non-technology time as much as they do tech time.

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Technology is an 'enabler' that will allow learning to be accomplished with more flexibility and more options to individualize curricula to each student so that individuals needs are met. Technology is NOT a replacement for classroom learning or for teachers and should not be viewed as a means to increase the ratio of students to teachers. Learning in today's classrooms has suffered substantially because there are too few teachers to give the one-on-one guidance and feedback that most students need to stay on track and achieve their goals.

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As an organization of 11,000 members who use technology (primarily in Michigan schools), MACUL stands ready to assist Superintendent Flanagan in every way possible.

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I am not in favor of online learning. I will not have my children take online classes in core areas and I will not send my children to colleges where there is a heavy emphasis in online learning. I feel if I do not believe it is good enough for my own children, it is not good enough for my students.

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## 7. Additional Comments

It is going to cost a lot of money and it will not replace 100% the face to face time students will always need with instructors and peers. I have taken several online classes and they did teach me what I needed to know as most were tech focuses. However, in different classes, such as business law, I very much thrived off of the discourse of my instructor and my classmates.

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Policy makers, administrators, educators, learners, and families have access to learning objects and assets that is unparalleled in the history of civilization. Education technology gives stakeholders the opportunity to eliminate bias and discrimination, intended or accidental, in the learning experiences of the students with whom they work. Forward thinking and responsible participants in public education should be pro-active in their efforts to engage with and seek counsel from eLearning experts to ensure fulfilling and successful educational opportunities as well as the efficient and responsible appropriation of state and local education dollars.

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Tap into the expertise of researchers and teachers in Michigan. We have brilliant people at Wayne State that you have not talked with.

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We need people solely dedicated to meeting this goal. It might be the #1 priority with meeting the demands of our fast-paced technological world. Yet we have very few technology courses and limited time within courses with their curriculum demands.

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I truly hope that funding can be made available to provide current technology to all schools. It's sad to see all of these students who don't know how to utilize what's available. For example, my employer provides me with an iPad. I would never be able to afford an iPad, and my children would have no exposure to an iPad if it weren't for my employer. iPads offer a huge opportunity for educational enrichment, and it's sad that there are some kids who've never even seen an iPad in real life.

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We cannot simply focus on the things and the connectivity, we must give our teachers time, training, connectivity and equipment to make this transition.

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I know that in the school district where I belong, a lot of people do not have internet access in the home, and to truly make it work there would need to be ways for students to access the internet. Like McDonald's but a little more conducive to learning. I guess like the library but with later hours.

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## 7. Additional Comments

There needs to be some sort of flexibility when it comes to HQ/Certification requirements. We're aware of the "appropriate" assignments updates but when it comes to cross-curricular integration and collaboration of teachers to address multiple areas of curriculum, schools are limited with what they can do. For example, we can offer STEM as a course for elementary because of being a Self Contained Classroom where teachers plan units that integrate Science, Technology, Engineering and Math (perfect fit for the new Science standards) but if this was to be done at the secondary level it would require certification and HQ requirements of 2-3 teachers or teachers with multiple endorsements covering Science and Math (Technology can currently be taught by grade level certification). Almost every lesson a teacher designs is going to cover multiple content areas so when it comes to the assessment of curriculum and issuing of grades as assigned teacher of record if there's flexibility where students at secondary can take STEM courses and classes taught guides can be updated to include either Science or Math certification with maybe a minor or minimum PD hours/field experience in other fields to qualify a teacher then schools would be able to be more creative in their scheduling at the secondary level! =)

Technology, in my opinion cannot replace the human factor in education for the average student. However, since we are currently forced to gear instruction more for the average or below average student today, technology can be the tool that allows the above average student to accelerate to the level of their capability.

The number one problem with educational technology is funding. While some districts have passed bond issues to improve technology, they must use the operating budget to maintain and support these advances. In the past several years we have lost all building level technology and instructional technology support, as well as all of our media specialists. If employees don't have 33 kids sitting in front of them each day, then the jobs are cut. Those in charge of our digital resources are hourly clerks without a college education or any real training in technology. They don't have knowledge of teaching theory or practice. Teachers are already overwhelmed with paperwork and large class sizes, so they don't have time to learn or prepare technology lessons that may flop if they don't have building level support. Many don't try. As one of the lowest funded districts in the state, our children and teachers are at a significant disadvantage compared to wealthy districts.

## 7. Additional Comments

I am very disappointed in the state for not having a media specialist requirement for all Michigan public schools. School libraries should be the hub for ed tech collaboration. They have the technology, research and the expert. Schools cannot claim to be preparing students with 21st century technology skills without having experts in the building. Having a laptop is not a ed tech solution. It's rather silly and a waste of money.

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Please stop pushing online learning for all students. This has not worked for majority of the students. We need to push for better integration of technology in the classroom (given that classrooms are equipped with technology tools). I would also recommend that ALL of us in education start working together. The content folks should be working side by side with the instructional technology folks. We cannot and should not have PD of effective instructional strategies without tying in educational technology tools. Math, ELA, SS, and other consultants should be all meeting together with instructional technology consultants at MDE, ISDs, and at the district level. Finally, please have the content specialists review online courses before they are approved for students to use. We spend so much time reviewing other instructional materials for students so why not online courses? A committee should be formed of MDE, ISD, and LEA staff to review online courses before we provide them to students for credit. That way, we can assure schools and parents that this is vetted content approved by educators and is aligned to common core with effective instructional strategies (not just some vendor selling courses).

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STUPIDEST IDEA EVER! The only time this is even remotely appropriate is in college online classes. This does not belong in any K-12 school program.

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We need some amazing public relations campaigns to sell parents and students, to help them see the big picture, so that existing school structures don't continue to win the battle of maintaining the failed status quo. We probably need to remove the discussion from Republican versus Democrat, labor versus white collar (the old divides). How this might be accomplished given the diversity of communication technology and the lack of public interest in traditional journalism (thanks to poor teaching over the years, I worry), I am not sure, but I think Facebook and social media can't be ignored. Good work!

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Thank you for this opportunity.

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## 7. Additional Comments

Granting agencies are moving away from funding projects to bring computers and calculators into the classroom, unless it is innovative (read not done before). For a school or a classroom to implement proven practices with technology, the funding has to come from the district, which is often not there. For technology to truly be implemented across the public school system, it must come from the taxpayers and the state. Schools are continuously being asked to do more with less. That just doesn't work. At some point, if education is truly a state priority, if an educated workforce is an economic goal, if a dynamic, self-learning citizenry is a societal priority, then the state has to fund it. This includes, to some extent, funding technology in our schools and helping to provide professional development to effectively implement that technology.

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Thank you for providing this opportunity to the entire community. We should be excited about the opportunities being discussed. However, I do caution us about coming up with "big" ideas with "big" price tags that school districts can not afford because school funding has continually decreased compared to associated mandated expenditures. Not every community will support a bond proposal for technology funds and technology is not currently an allowable expenditure under a sinking fund ~ and even if it was, not every community would support additional taxes for that either. Just be mindful of the costs associated with such endeavors.

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To truly determine the viability of technology tools in education, you must try them AND test them. To suggest that in the fall of 2013 that students would be able to exchange the classroom experience for an online class is irrational, untested and unproven, therefore also making it irresponsible.

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Just purchasing a bunch of iPad's and giving them to a school is not the answer. Planning, creating discussion around purpose and lots of inservice for teachers first is important. Teachers need "play" time with technology before they can feel comfortable using it fluently and schools should provide this time for staff.

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Superintendent Flanagan is simply providing cover for the Governor and the Republican skunk works. They will do whatever they can to cut educational costs. They are interested in cost cutting, not education or technology. Superintendent Flanagan needs to refocus on being a champion for public education.

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