

MI Miracle

A Michigan Education Policy Recommendation

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Introduction

We have high hopes for our education system. Each of us hold different values, come from different backgrounds, and plan for different futures, yet our education system is expected to bridge the gaps from today to an unforeseen tomorrow. Educators are asked to maximize our unique human potential more than any other single source, and to prepare us to shape the course of history. In America, education is expected to perpetuate the prosperity of a nation, supply the electorate that will preserve the model of democracy, and to give global cultural perspective while retaining our local identity. In the 21st century, more than any other, education is expected to prepare students for a time where information is abundant and available at a tap of a finger, where innovation and change are ubiquitous, and where ideas are inculcated into you. These formidable expectations are paired with the frightening future should we fail to achieve our goals.

So the question is then: How are we doing in our pursuit of these goals? The world grades are in, and students in the United States fall in at average for their performance in science and reading, while shuffling to the bottom quartile of industrialized countries in math. This comes at a time when America's economy is being redefined and challenged by upcoming global economic powers. Even among the individual states, Michigan is ranked only at twenty-seven of the fifty (Edward 2009).

Michigan's unemployment rate is hovering around nine percent, over 2% higher than the national average and the 8th highest in the country. In order to improve, Michigan's economic future is hinged to an education system that produces college graduates. By 2018, 28,000 production jobs are expected to leave the state, but over 100,000 jobs are anticipated to be left vacant in healthcare, computer sciences, engineering and other technical fields ("Michigan Unemployment Rate" 2012). Michigan needs to produce the college graduates capable of meeting the demands of these jobs to improve its economic standing.

However, Michigan, like the rest of America, is in a talent crisis. Our education systems are struggling to provide college-educated workers to sustain the coming changes. The result of continuing along this path is that without producing the college educated students who will pioneer our future and drive our economic engine, twelve to twenty-four million jobs will vacate America. The businesses that create them will search for the talent they need wherever they can find it, and Michigan's economy will stagnate or shrink as those jobs leave (Edward 2009). The gap in available jobs for those with post-secondary education and in the number of people available to fill them comes from several cumulative sources. One of the largest contributors is that high school graduates are not prepared to

learn at the higher level demanded by college. Current Michigan high school graduates are severely underprepared for the expectations of college, and that is the largest contributor to the dilemma we now face.

This does not sound like the Michigan of America's history. Michigan's history is that of innovation and entrepreneurship that has literally driven the nation's economy to its industrial heights. However, at this moment of tempestuous change, Michigan is in a position to again drive the future of this nation to the head of industrialized nations. If Michigan can innovate in education, and inspire the next generation of college educated workers, Michigan will once again be the model of American ingenuity.

It seems a formidable task to reimagine education for the 21st century that will drive Michigan to the head of the pack. Creating the K-12 education that will lead the transition into the information age will demand a new partnership among students, families, communities, teachers, administrators, and legislators alike. The outcome will be unprecedented economic and social growth as Michigan develops a workforce driving a 21st century economy. As companies flock to Michigan to fill their talent gaps with high earning professional jobs, revenues will skyrocket and the Michigan taxpayer will see high dividends on their investment in education. Access to higher education will increase, crime will decrease, and dependency on social welfare will decline. It may seem like a miracle is necessary, but when everyone does their part, miracles will be easy. When everyone takes the strides necessary, the outcome for Michigan will be even more miraculous.

MI Miracle is a K-12 policy that illustrates the changes that the Michigan legislature can effect to create the changes needed. *MI Miracle* combines a series of hand-picked education reforms from across the nation and world that, when combined, delivers an education Miracle. The education innovations have been rigorously selected based on the following critical criteria:

- Michigan's specific needs
- Data on effectiveness
- Return on taxpayer investment
- Feasibility of implementation

Each innovation, as well as the complete proposal, was vetted by Michigan teachers, administrators, school board members, and district superintendents to determine its effectiveness, return on investment, and any unintended consequences. What is proposed will require significant effort from all involved parties, but *MI Miracle* is rooted in the belief that when everyone does their part, miracles are easy, provided there is an overview of the policy and vision of its implementation. It discusses what must be expected from students, families and communities, teachers, administrators, and legislators to make a Michigan miracle happen. This is not a complete public policy. Fifteen pages could not possibly deliver as much detail as would be needed.

The policy centers around a technological innovation referred to as the *MI Miracle Hub*. This online portal will connect students, teachers, families, and communities in a end-to-end user experience never before seen in an education tool. The MI Miracle Hub will require a team of developers to build and maintain, but the dividends of such an investment will be high as some of the best tools on the internet are melded together to help revolutionize education.

Definition of Terms and Conditional Statements

The operational definition for “College Readiness” throughout this policy is, “A Michigan student who graduates high school capable of enrolling in first year college courses without any remediation, and earns a grade of ‘C’ or higher in each of these courses.” Other variables to determine college readiness exist; however, this operational definition best captures the needs for Michigan students while limiting itself to what K-12 can effectively affect.

MI Miracle recognizes that even in the 21st century, not all students need a college education. So, it may be argued that all students should not be required to perform at a college preparatory level. However, in the 21st century, the job market for those without post-secondary educations requires greater technical skills and cognitive capacity. Therefore, for the purpose of this policy proposal, *MI Miracle* requires that all students must be expected to perform at a level that is both “life preparatory” as well as “college preparatory,” and this policy makes no distinction between the two.

The outline of *MI Miracle* defines the requirements and incentives that this policy delineates to the government employees that the Michigan State Legislature can directly affect: teachers, administrators, and politicians. However, it is not possible for just these individuals to create the change needed. So, within each group, responsibility and incentives are introduced to develop positive change in the communities, families, and individual students over which an education policy has no direct control.

While the elements of policy affecting teachers, administrators and politicians are introduced individually, they are intended to intertwine to deliver college-ready students who will drive Michigan to lead the economy of the nation. Some proposed changes are more politically feasible in the near-term than others. As such, those that can have a positive impact unilaterally should be implemented to benefit Michigan quickly. The whole of the policy will have more impact, however, as a cumulative effort than just the sum of its parts.

MI Miracle describes, through successfully piloted innovations, the data backed process by which college prepared students are developed. However, the course by course and grade to grade construction of the Michigan K-12 curriculum would be created by a committee of education professionals that would be designed from the top down in order to deliver high school graduates

that are prepared for the rigors of college.

MI Miracle recognizes that these changes cannot be made immediately without severely hurting the students who have not already been adequately prepared. Thus, the *MI Miracle* changes would begin with, and follow, the 6th grade class in the fall of the year that the policy is implemented, as proposed by Michigan educators familiar with the reform debate (Carol Neff). This will allow teachers and districts to prepare for the rigorous curriculum slowly. *MI Miracle* will see its first introduction at middle school, as that is where tracking generally begins, and is consistently named by educators as the location where an education gap begins to form (MI Education Professionals).

Teachers

“What was wonderful about childhood is that anything in it was a wonder. It was not merely a world full of miracles; it was a miraculous world.” - G.K. Chesterton

The backbone, and most critical component of education, is the teacher that has daily interaction with the student. Michigan teachers are the critical point-of-delivery mechanism that develops the young minds in their classrooms into the innovative engines that can drive a nation. Each step a child takes through the education pathway is inevitably shaped by interactions with teachers, and so teachers are the keystone of the *MI Miracle* policy.

Experts in education, legislation, administration, or entrepreneurship who analyze education seem to agree upon only two fundamental insights. First, that students graduating high school are, on average, unprepared for the demands of college, both in core subject matter, and, more dangerously, they are deficient in the cognitive skills critical to learning (Hart 2005, Conley 2007). Second, in order to see college success, the expectations of student performance need to be raised in order to bridge the gap between preparation and need. Subsequently then, the expectations on teachers, families, administrators, and legislatures need to change (Robinson, May 2010, "Academic Rigor" 2007). Once these experts start analyzing solutions, the debate becomes hotly contested, and no one solution has risen to show the potential to unilaterally deliver the needed change for public education's future. Through intensive research, and by vetting based on Michigan's needs, *MI Miracle* illustrates a pathway for Michigan students to graduate high school college ready.

In order to facilitate the graduation of college prepared college students, *MI Miracle* will implement rigorous curricula that facilitate the development of core cognitive capabilities, and train teachers to teach these courses. All students will be required to participate in this new course path, and school systems will remove systems of tracking students based on their anticipated academic performance. Teachers will have additional responsibility to ensure that families of their students are aware of the changes coming to their student's education, and that they are prepared to do their part to ensure student success.

To accomplish these requirements, teachers will be provided with data systems that will flag students who are at risk of underperforming, or who are excelling in their academics. Teachers will be given access to user-friendly and intuitively presented data on student performance that will help them to tailor their interactions with students to the student's own learning style. Teachers will be given tools that can help them educate parents on how they can ensure their child's success, and will be able to track if the resources are being used. Finally, teachers will have access to easier and better professional development so that they can learn from and help each other to deliver the best education they can.

Removal of Tracking

The first step in increasing student expectations is the removal of student tracking based on anticipated academic performance, a system that was designed for a post-war economy where a college degree was not necessary. This policy was piloted in Finland's education system, and contributed significantly to their top world ranking, and it has since been proven in the United States.

Critics have said that removing tracking and increasing expectations will cause at-risk students to fail in even greater numbers. There is concern about how such a plan would impact Michigan's high risk districts like Detroit, Flint, and Saginaw with 81%, 82%, and 80% of students likely to be at-risk respectively. However, it is these areas that have the most to gain from such a program. Of all students classified as economically disadvantaged, only 40% are considered proficient at reading, 31% in writing, and 13% in mathematics ("STATE DEMOGRAPHIC REPORT" 2012). This policy has been shown to address these Michigan specific needs in both low performing districts around the country, as well as in higher performing districts.

Mastery is a charter school program that "holds all students to a single college preparatory graduation standard." Mastery ran a pilot program in an inner-city Philadelphia public school which resulted in an 80% decrease in violence, a 40% increase in test scores, 50% less turnover, the students' math scores up 14%, and their reading scores up 9%. These results were seen in the first year of the program ("Mastery Statistics" 2012). Summit Preparatory School in Redwood City, CA also has abandoned the system of tracking. All students take the exact same courses, and the results are telling. Of their graduating class, 96% of students graduate, and of those graduates, 100% are college ready ("Summit Statistics" 2012). At California's San Jose Unified School District, implementing universal college-prep curriculum increased the test scores of their minority students to over six times more than that of other minority students across the state (Murray 2004). The data hold that maintaining a universal high standard for all students will increase district wide success.

Develop Core Learning Abilities in Rigorous Coursework

“How do we educate our children to take their place in the economy of the 21st century, given that we can’t predict what the economy will look like at the end of the next week?” - Ken Robinson

The true preparation for college is in learning how one learns. By understanding the process by which they learn, students will have been proverbially taught to fish, rather than just memorizing and circling a word bank of fish anatomy.

When schools expect more out of students, there are dramatic effects on student performance. Research shows that the rigor of curriculum is one of the top indicators for whether a student will graduate from high school and earn a college degree; a meter that is even more indicative of achievement of a postsecondary credential than parent education level, family income, or race/ethnicity (Adelman 1990). Challenging students in high school is critical to building the higher level cognitive abilities required in post-secondary education. Currently, however, students graduating from high school are allowed to slide through with minimal challenge. Students who felt that they were challenged in their high school curriculum felt that they were prepared to succeed in the new, and more challenging, environment of college (Hart 2005). Even enrolling in a single college level course has a dramatic effect on students’ likelihood of post-secondary degree achievement; and the more students take these college level courses, the better the indication of college success (Klepfer 2012).

In order to succeed in these new, more rigorous, courses, and to succeed in their future college curriculum, students need to develop key cognitive abilities necessary to learn, and apply their learning (Conley 2003). The most commonly cited abilities by education experts in research are: Intellectual openness, Inquisitiveness, Analysis, Reasoning/Argumentation/Proof, Interpretation, Precision/Accuracy, and Problem Solving (Conley 2007(a), Conley 2007(b)). These core skills are derived from tailored instruction in rigorous curriculum, are interdisciplinary by definition, and the lack of these skills is debilitating our students in their pursuits of higher education (Lundell et al., Marzano et al. 1993).

Current testing measures do not capture these skills, and in the heat of preparing students for standardized tests, these most crucial skills are lost from the forefront. It is the responsibility of the legislature and administrators to continue to prioritize and incentivize the instruction of these critical college preparatory skills. These are challenging skills to teach, and increased professional development for teachers is required in order to produce these results (Murray 2004).

MI Miracle will derive its pedagogical roots from a panel of excellent education professionals to create a universal statewide curriculum that will be specific enough to demand results, while still providing flexibility at the teacher level. The International Baccalaureate program (IB) is a successful model that seeks to inspire students to be thinkers, inquirers, and communicators

by developing the core cognitive skills of *MI Miracle*. The IB curriculum builds these strengths through specific courses dedicated to open discussion and critical thinking. IB also has an international focus, encouraging students to consider the perspectives of other cultures. By examining successful systems like IB, *MI Miracle* will develop a world-class education system that will deliver the results Michigan needs.

By crafting an education system that asks students to connect the dots between all of their rigorous courses, *MI Miracle* will create Michigan graduates that are strong in all major knowledge areas. By designing a curriculum that has an international focus; Michigan students will be prepared to excel in a globalized economy. By including courses dedicated to examining key questions through open discussion, students will develop a foundation and confidence strong enough to build a college degree on. Ultimately, Michigan students will graduate with strengths in all the core knowledge competencies.

Create Red Flag Systems

In the midst of daily class, it can be extremely difficult to identify exactly how well students are grasping content, and if they are on track, or behind. Identifying these students, and rectifying the deficiencies in their education, is imperative to keeping them progressing through the system and extracting the greatest benefit from subsequent instruction (*Torgesen et al. 1997*). With advances in technological resources, teachers can use predictive metrics to identify students who need additional support to understand content or build core skills through red flag systems.

The challenge for all teachers and counselors is in identifying struggling students before they are failing exams and courses, when it is too late to recover the opportunities to learn. The challenge for Michigan is epitomized in the issue of dropout rates; every day, 23 students in Michigan drop out. This equates to just under 8,600 students per year ("State Information for Public Schools" 2012), placing Michigan at 45th among U.S. states for public school dropouts. Implementing these red flag systems will allow teachers to identify with greater accuracy the students who are struggling before they fall behind the curve necessary to deliver them to college.

An excellent model for red flag systems is currently in place in Chicago Public Schools. Using metrics defining "Freshman on Track," such as attendance, middle school grades, and other indicators of success, they are able to predict 80% the students who will graduate and 72% those students who will drop out (Allensworth, Oct 7, 2011). Utilizing this resource, teachers can then focus energy on the students who can be most impacted by their help. Specific to college preparation, this technology can be geared to determine how students are progressing on a more rigorous curricular track, and pick up students who are lagging behind. Continuing to innovate along this pathway, schools can create a progress tracking system that can indicate which students are lagging in which categories, and allow individual schools to innovate ways to bridge the gap. As

this technology continues to flourish, it holds incredible promise to increase the amount of impact teachers can have for those struggling in their classroom.

Driving Personalized Learning

MI Miracle focuses on helping teachers provide ever more personalized education to their students by using the latest innovations in education technology. New ways to extract and interpret personalized data provide an excellent way for teachers to understand how their students learn, and to maximize the amount of effective one-on-one time they have with their students.

Khan Academy created a model for *MI Miracle* in its pioneering innovations in the flipped classroom and in granular, student level data exported to teachers. Khan Academy created whole curricula, in lectures from mathematics to the social sciences, which allow a teacher to assign a lecture to watch at home, and to do homework problems in the classroom. This allows a student to watch lectures as many times as they need to understand the information, and to pause and rewind at their leisure. Then, in class, the teacher can work through problems and help students individually, or to create demonstrations and hands-on activities that spark learning. Salman Khan, creator of Khan Academy describes it this way: “We don’t view this a complete... education; what it does is free up time for the simulations, the games, the mechanics, for the robot building, and for the estimating how high that hill is based on its shadow” (Salman 2012).

Khan Academy also pioneered ways to present homework data to teachers in its Dashboard system that enables teachers to see what students are struggling with, down to the concept. This level of detail in its data mining is complemented in a user-friendly format that is visually intuitive and reduces the amount of overhead time required for teachers to understand student performance. Using a system like Khan’s dashboard integrated into the classroom curriculum, teachers can quickly see which students are proficient in a topic and those who are struggling and in need of help. This allows the teacher to truly see which styles of education are most effective for which students in their classroom, and then to personalize education appropriately. By knowing where the student is struggling, and personalizing their education to their needs, teachers will be able to help the student without potentially embarrassing them, and build the critical relationships necessary for student success (Elaine Allensworth, CRIS Webinar). Utilizing the technology and philosophy of flipped classrooms and personalized education, sustained by intuitive granular data, teachers will have the tools they need to spend more time delivering transformational education to our children.

Online Supplement Lectures

Everyone remembers their favorite teachers, the ones who delivered the content of their course in a format they enjoyed learning in. *MI Miracle* will give these great teachers the opportunity to help other teachers maximize their effectiveness in the classroom. Each teacher has

unique areas of expertise or passion, areas that they deliver with exceptional excellence and with great impact for their students. *MI Miracle* will provide a database for these teachers to upload mini-lectures about the topics, things they are passionate about, in a format that can be shared as supplemental material with teachers around the state. These mini-lectures can then be picked up by teachers and used to supplement a lecture, allowing them instead to focus on the interactive learning opportunities for the students.

Not only will *MI Miracle* allow teachers to share their passion for any given subject, but it will also support teachers and districts that want to pursue a blended classroom. Instead of relying on third party systems, *MI Miracle* allows Michigan to utilize the teachers already in place to lead blended lectures. Putting this framework in place also provides future support for a Michigan based online video curriculum, allowing Michigan to keep funding in state.

Expectations on Families

It is a constant struggle for teachers when students and their families assume that all learning happens in the classroom. In order to improve college readiness, it is necessary to reverse this dynamic, and to extend learning beyond the classroom walls. As students are expected to complete more rigorous coursework, it will add additional responsibility for families to support the increased expectations. This, however, will be gradually implemented as the new curriculum expands after implementation at 6th grade, and the communication will be led by teachers. By coordinating their efforts with their student's teachers, families can be plugged into their child's progress in far more and easier ways. Families can be shown the steps they can take to keep their child on a college preparatory path.

In lower-income, and even some middle-income districts, it can often be difficult to connect families to the children's progress (Johnston 2012). For parents of the highest risk students, making it to every parent-teacher conference or orientation day can be a significant challenge (Stippel 2012(a)). So, *MI Miracle* will create a centralized portal that will deliver course and progress information to parents. This ability will connect parents to their children's progress at their convenience, and by asking parents to register themselves on their first visit teachers can receive feedback on which parents are checking in on their students and if a parent has missed an online orientation.

Teachers and schools can go a step further in their connection to parents by providing video resources to parents the same way it provides video resources to students. A teacher can create short instructional videos for parents to learn how they can help their child succeed in that teacher's class, and post it for the student's parents to watch and learn from. This will allow teachers to effectively communicate the expectations of their course, and help ensure that the student is building the study

habits and content skills necessary to stay on a college track. Even more promising for the future of integrating families to their children's college readiness pathway, is in the innovations that schools will be incentivized to implement, and the interactions of administrators that will spread these innovations to other school districts. As *MI Miracle* is implemented, it will grow exponentially in its usefulness for teachers and families.

An important criticism to address is that any investment in advanced technology will disproportionately help the upper income students the most. This is an important consideration for legislatures and communities. Legislators will need to be mindful of this, and implement technological advancements at pace for community support to provide the resources necessary for disadvantaged students to utilize them. Community support will be required to assist those in need so that they get full use of the technology, and when looking at the expectations and rewards specifically discussed in the subsequent section on community, it should not be a progress-stopping requirement.

While we must recognize this challenge, in order to implement an education system for the 21st century, we need to utilize the technology available to improve the college preparation for all income level students. Avoiding this technology because it will help upper-income students the most ignores the positive effect it will still have on lower income students as well.

Administrators

In order for this policy to be effective, it will require administrators who continue to prioritize the goal of college preparation, incentivize high performance among teachers, and reach out to other school systems to improve themselves and others. Administrators are the key to maintain community involvement as well. By communicating the needs of their schools, they can ensure that support is put in place to assist low-income families so that they can make use of the technological advancements in education. Administrators can also implement value-added pay incentives that will encourage teachers to work together toward the common goal of preparing all students for college.

Increased Professional Development

In order to deliver the results needed for Michigan in the 21st century, teachers need more and better professional development. “[Teachers are] trying to get the frame of mind that teaching is a practice, much like medicine or being an attorney, and you [can] always get better,” says Carol Neff, the International Baccalaureate coordinator for Midland High School.

The *MI Miracle* policy will outline the use of video delivery as a tool for peer-to-peer professional development. This concept is modeled after the Denver public school system, where

teachers who are particularly strong in an area, for example cultivating critical thinking by asking students questions that required thought and discussion, would be video recorded and uploaded for other teachers to access if they are struggling. Then, on a rotating basis, teachers and administrators from within the district would drop in on classes and take notes on areas that that particular teacher may want to improve on as well as their strengths. The teacher could then look up videos of teachers who have been noted to be particularly strong in those areas. The teacher may be asked to pick out a few points from the proficient instructor, and implement them in their classroom before the next review. This program creates a cost effective way to personalize professional development and mimics the support networks set up by doctors and lawyers around the country.

For teachers to deliver excellent instruction at a college preparatory level, it is crucial that they can continue to hone their practices with professional development (“Multiple Pathways to Student Success” 2008). New teachers, fresh out of their academic training, benefit significantly from learning effective techniques from master teachers (Stippel 2012(a)). Specific to preparing students for college, teachers need to have competencies in three major domains: knowledge, pedagogy, and professional skills (“College and Career Readiness” 2007). These three elements of an educator’s development are crucial to delivering rigorous material to students, and are especially critical to ensuring that the core cognitive skills are built into the students’ education in an interdisciplinary fashion to create college ready students.

It is crucial that administrators in particular emphasize this professional development, and ensure that time and resources are allocated to it (Stippel 2012(b)). With the pressure to deliver high standardized test scores combined with the long hours and hard work teachers already put in, professional development can lose perceived value. However, implementing valuable training is critical for effective classrooms (U.S. Dept. of Edu. 2007, Corcoran 1995). Additionally, administrators will be incentivized to facilitate cross-district professional development by integrating the development videos into a common statewide source that can be accessed easily by all teachers in Michigan.

As these changes are implemented, administrators will have the ability to view the data from *MI Miracle*, and see which schools are implementing effective innovations in their districts. By collecting the content and cognitive data from benchmark testing, district level administrators will be able to see clearly how schools serving similar demographics are faring, and either reaches out to improve themselves, or others. The last phrase sounds a bit awkward to me. It will be the responsibility of the legislature to implement value added incentives for schools to improve themselves, and for districts to improve each other.

Communities Expectations

MI Miracle will include a marketing and taxation structure designed to drive a cultural shift in the perception of public education. For the technologically oriented changes to have the greatest effect, community members must embrace the system, and dedicate resources to bridging the socio-economic gaps of students. While the use of technology has been outlined extensively, charitable organizations and other community support are needed to be responsible to support the at-risk students who are less likely to have tablets, computers, and high speed internet at their disposal.

MI Miracle provides flexibility for how districts find funding to support these students. In keeping with the *MI Miracle* theme, district administrators are encouraged to reach out to local businesses currently providing WIFI and ask them to be a partner location in supporting K-12 education by allowing students internet access at no cost.

MI Miracle program will extend the proposed tax breaks of house bill No. 5593 to companies and small businesses that create a formal job shadow and/or internship program for high school students. Companies will be given a \$10 tax break for every unique student they allow to job shadow for at least 6 hours, and a \$500 tax break for every paid internship or co-op lasting longer than three months. Encouraging job shadows and internships in both technical and nontechnical fields will allow students at the high school level to be able to identify a career path of interest and establish complementary educational goals. By providing tax break incentives, community members will be encouraged to participate in the education system.

A study by MDRC, a nonpartisan education and social policy research organization, examined the impact of exposing high school students to a career themed education. The survey was based on 1,400 students, approximately 85% of whom were non-white. The results showed increased real earnings of \$3,731 per year, per student. A career focused program resulted in a sustained 11% earnings gain over students in a non-career focused pathway ("Career Academies" 2012). Thus a goal of the *MI Miracle* proposal is to have 100% of Michigan high school graduates having experienced some type of career engagement. The resulting increased individual revenue is likely to remain in state, boosting the tax revenue brought in and paying for the program.

Legislatures

Invest More into Pre-K

Research has shown the impressive returns on investment in pre-K education, indicating that children enrolled in pre-K instruction enter kindergarten more ready to learn than their peers and saw higher test scores in reading and math (Gayl 2008, Gormley et al. 2007). Investments in pre-K improves the ability of children to grasp and apply rigorous content required for college preparation, and specifically can help to bridge achievement gaps from minority students (O'Brien et al. 2007,11). Even comparing long-term effects of pre-K investment shows that the effects of hitting the ground running in kindergarten continues to show returns through high school, and even shows

significant advantages decades later ("Lifetime Effects: HighScope Perry Study" 2005, "Abecedarian Project").

Currently, Michigan is putting investment into the pre-K programs, specifically assisting low and moderate-income families, through the Great Start Readiness Program (GSRP), one of 39 states providing public funding. The results of GSRP are impressive; higher level cognitive abilities in kindergarten, higher interest and retention in second grade, higher pass rates for the MEAP and fewer students held back, and higher graduation rates (Xiang et al. 2002, Xiang et al. 2007, Flanagan 2012)

Even with the proven framework GSRP provided, Michigan has unfortunately divested funding in the program over the past decade, decreasing funding by 23% when calculating inflation's effect. Michigan currently ranks at 24 of those 39 states for access to public pre-K; states like Florida and Oklahoma who provide universal voluntary access are reaping the reward of their investment (French 2012).

Develop Mission Statement

In a study by Bain & Co. conducted in 1996, of the 25 management methods and techniques deployed by senior leaders all over the world, mission statements had been consistently shown to be the top-rated management tool during each of the prior ten years (Christopher 2012). MI Miracle proposes the creation of a unifying Michigan Department of Education mission statement, which serves as the guiding mission for all school districts in the state of Michigan. This is an example of an almost cost-free way to improve Michigan's public schools, and set the vision for what Michigan needs from its K-12 system.

Conclusion

Today's education system was designed for a time when it was unnecessary for every student to graduate from high school college ready. The workplace demanded a range of skill levels, and jobs for those who did not attend college were readily available. However, as we progress further into the technological revolution, it has become clear that to be successful in the workforce a college or trade school degree is essential

Michigan has an opportunity to be the forerunner in education reform. Michigan can be the state that places forward-looking technology in the hands of its teachers and students. Michigan can be the state whose education administrators and legislatures capitalize on available resources, and pioneer innovations, to deliver the next generation of students. Michigan can raise its expectations, and in return see the rewards of its investment in higher economic growth and lower social dependency.

Students graduating from a *MI Miracle* school system will have succeeded in rigorous college preparatory courses that prepare them for the challenges of secondary education, and life beyond it. They will graduate with the cognitive abilities of critical thinking, analysis, reasoning and problem solving. They will be self-thinkers, intrinsically motivated, and have hands-on experience with using technology as a tool for learning. Their education will eliminate the need for remedial courses. All students will graduate having been universally prepared for college, in a way that accounts for their unique individuality.

By implementing *MI Miracle* Michigan, legislators will be on a proven road to achieving economic development. Michigan will become a pioneer in education reform, and be a model for the nation. We will have achieved what seemed like a miracle, by each of us taking the steps necessary to achieve our unified dream.

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