



Review of the Launch Michigan Framework and Proposals for Next-Stage Development

Report to Launch Michigan

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Our Charge

The authors of this report were asked by the leaders of Launch Michigan to review the Launch Michigan Framework. Launch Michigan is a coalition of business, education, governmental, philanthropic and advocacy organizations, dedicated to improving the education of Michigan's elementary and secondary education students. The Framework recorded a set of agreements on their agenda reached in December of 2021 by the members of the coalition, the culmination of a series of meetings they had had following an intensive retreat the previous summer.

The leaders of Launch Michigan also wanted our advice on what the coalition might do next to improve education in the state, based partly on our analysis of the framework, but also on extensive interviews with the coalition partners and others and our analysis of many other documents.

A list of the documents we read and a complete list of the people we talked with can be found in the appendices. We are deeply indebted to the many people who spent time talking with us and for their candor in those conversations. We promised all of them that, though we would share the list of people we talked with, we would not attribute anything we said to any individual or organization.

Our Process

The National Center on Education and the Economy has been doing research on the countries with the most successful education systems in the world for 35 years. We approached our task in your state in the same way that we have approached our research on the countries with the world's best education systems.

We begin by immersing ourselves in the history, economy, politics and culture of the country, because it is impossible to really understand the education system of a country without understanding the context. Only then do we burrow down into the goals, organization, finance, and all the other aspects of the education system itself.

We make a special effort to look at the education system through many different—often conflicting—lenses. When looking at an American state we want to know how it is seen by key officials in the legislative and executive branches, the chief state school officer and the state board, but also by the superintendents of big city districts, wealthy suburban districts and small rural

districts, by the heads of unions and local teachers, foundation heads, leaders of advocacy groups for children, journalists and by analysts in think tanks and universities.

We are no less interested in understanding how the state economy works and where that economy seems to be headed, because the opportunities students face when they leave school and the standards of academic achievement they will have to meet will be profoundly affected by the structure of the economy and the direction it is taking. So, we want to talk with leaders of the state's many business communities, key figures in the state economic development system, people with important responsibilities in the job training and workforce development fields and academic analysts of the state economy. We want to make sure that we have some understanding of the different kinds of economies that exist in the state, peoples' hopes and fears for the future and the degree to which employers think the education system is providing graduates who will be able to succeed in their business and the degree to which those graduates have the skills that both they and their employers need to survive and prosper.

And finally, we work to understand the politics of the state because the politics of making major changes in education systems at the scale of a nation, state or province are daunting. All over the world, parents and community members expect their schools to look and work like the schools they went to unless they are presented with a very compelling reason to change the way the education system works. What we are interested in understanding, in any particular case, is how the structure of the political system works, and what would need to be done to build the kind of support that would be necessary to enact policies that would give a state like Michigan an education system that is competitive with the best in the world.

In addition, in this case, we also wanted to understand how the key participants in Launch Michigan viewed its place in the landscape of education reform in the state, gain some insight into their hopes for what the coalition might accomplish and probe their views on the obstacles standing in the way of reaching these goals.

The purpose of this report is to share the picture that emerged from that process, to tell you what we make of it and to share our recommendations for the next stage of Launch Michigan's development.

Reflections on Michigan's Past, Present and Possible Futures

Michigan has a proud history as a manufacturing state. Though manufacturing no longer plays the outsize role in the state's economy that it did in the years immediately following World War II, more of its economy still depends on manufacturing than in all but a handful of other states. And today, just like a century ago, automobile manufacturing dominates the scene. That includes both the big three auto companies and all the smaller firms in the state from which the Big Three buy many of their parts and subassemblies. Put those together with all the companies that supply products and services that the people who work in the auto industry buy and you have a big chunk of Michigan's economy.

Health care is another major industry in Michigan. Health care is a very different industry from cars and trucks in a way that is important for our story. For every dollar that the people of Michigan spend to buy something produced outside Michigan, it needs to sell something of the same value to someone outside Michigan, whether that is a new TV or a movie or a trip to the Canadian Rockies. The vast majority of what is spent on health care in Michigan is spent on care—people employed in Michigan's health care manufacturing and bio-tech industries account for less than one percent of total Michigan employment—and almost all of the money that is spent on care comes from people who live in Michigan. If they are doing well financially, then there is plenty to fund the health care industry. If they aren't, then the health care industry is headed for hard times and less employment.

So, if the size of the one of the state's biggest industries—health care— depends on the size of its biggest industry—auto manufacturing—then the future of the whole state—its economy and the future of its students as they enter the workforce—is still very dependent on the future of the auto industry.

We were very interested in understanding what kind of jobs are likely to be available to Michigan high school graduates in the future, and that reasoning made us look hard at the future of auto manufacturing in your state. That industry does not dominate the state's economy to the extent that it once did, but it certainly dominates manufacturing, which still accounts for 19 percent of the state's economy. That compares to 12 percent for the nation as a whole, which still makes

Michigan much more dependent on manufacturing than the vast majority of other states. What we saw was disturbing.

The auto industry may still be the backbone of the Michigan economy and a key source of employment, but that is just about all that is the same as it used to be in Michigan's Golden Age.

Back then, high school graduates with only a very shaky grasp of English and math could literally walk across the street to a big auto assembly plant, put the same four bolts in the same four holes all day long and make enough money to start a family, buy a split-level in the suburbs, get a boat with a trailer and take it on nice weekends to their cabin in the woods. All boats were rising and the boats of the auto workers were rising to unprecedented heights.

Back then, the Big Three dominated not just the national market for autos but the global market as well. Their headquarters were in Michigan, and they made most of their product in Michigan. A large share of their suppliers were in Michigan. Back in the 1950s and 60s, the United States had the best educated workforce in the world. The Great Lakes states were America's unchallenged industrial heartland.

Very little of that is still true and there is a very real possibility that none of it will be true shortly.

The Big Three are still headquartered in Michigan, but their product is made all over the United States and the world now. Not so many years ago, the name of the Boeing Company was synonymous with Seattle. Now they are headquartered in Chicago and just announced a move to Virginia. Tesla set up shop in California. Now their headquarters are in Texas. Could the same kind of decisions be made by the Big Three?

We asked ourselves what will keep the Big Three in Michigan. Tennessee now advertises itself as the new auto capital of the United States. Its workers are at least as well educated. They are paid a little less. And—a point that appears to be important to some manufacturers—there is no union presence there.

Some people we spoke to mentioned that Michigan has the Great Lakes, a very attractive proposition for battery manufacturers, because battery manufacture requires a lot of fresh water, suggesting that that fact played a big role in attracting the new LG battery plant. Maybe so, but LG

is building battery plants all over the United States, including Arizona, not known for an abundant supply of cheap water.

The real competition for the legacy auto companies isn't Tennessee, formidable as that may be. It is China and EVs. Foxconn, the company that manufactures Apple's iPhones, has factory complexes in China, some of which were home to more than 600,000 workers each. They announced, some years ago that they were buying hundreds of thousands of robots to replace many of those workers. At the time, manufacturing workers on the coast of China were making one-quarter of what American manufacturing workers made. Even so, Foxconn had decided that it was cheaper for them to buy automated equipment to replace those workers.

Bear in mind that the manufacturing workers in China's coastal provinces are now much better educated than the typical American manufacturing worker. That's why Michigan's auto workers' competition now comes not from Tennessee, but from China. Well, maybe we should say from Vietnam, because Foxconn has more recently gone into the EV business in a big way, building the cars under contract for other companies, the way they build iPhones for Apple. One of the countries they are now partnering with is Vietnam. There are now many countries that offer cheaper labor than China, but Vietnam has the distinction of being able to offer labor that is much, much cheaper than both Chinese and American labor and is also *much better* educated than American labor.

Foxconn, to be sure, is coming to the United States. It is building EVs under contract for startup American companies and others. But this is the same Foxconn that has fully-automated giant manufacturing complexes in China, where the workers made much less than their counterparts in the United States. We can expect the company to do the same thing here.

The Future Will Be Different

We have described auto industry as focused single-mindedly on battery-powered EVs and as essentially a branch of the software industry. But that is misleading. Powerful players are making big bets on developing autos and trucks propelled not by batteries but by fuel cells using hydrogen for fuel. One company is making a big bet on making car bodies fabricated not from sheet metal but from metal powder deposited layer on layer by a computer-driven printer. Digital tech is deeply

involved in all of this, but it is certainly an oversimplification to say that the industry has become a branch of the software industry. New cars are certainly loaded with chips that require software, but that is not the only technological change driving the industry. After a half century or more of slow, very incremental changes in the design of internal combustion engine vehicles, there is explosive change in materials, energy sources, propulsion systems, control systems, manufacturing techniques, supply chains and more.

The auto industry is not, of course, the only industry that can be described in this way. But it is an excellent example of the ways in which advancing technology, particularly in manufacturing, appears to be rapidly transforming one industry after another. Very highly trained nurses now sit outside rooms of patients in intensive care units in hospitals monitoring a dizzying array of instruments attached to the patients to monitor every facet of their condition and dispensing a no-less dizzying array of medications, making life and death decisions that only doctors used to make. Farmers sit in their offices monitoring driverless tractors loaded with software that dispenses fertilizers, nutrients, insecticides and seeds in different amounts for each square yard with remarkable precision, while tracing a path through the fields designed to conserve as much soil as possible.

All of these people whose work was just described work in jobs in which the technology adds to their capacity and makes them far more productive than they would otherwise be. But that is not the only future for the use of these technologies and others only on the drawing boards. While these technologies will enhance the productivity of many, it will destroy the jobs of others and leave them very little to fall back on.

Once again, we come back to cars. Assembling an internal combustion engine car takes 6.2 hours whereas assembling an EV takes 3.7 hours. The new entrants in this field have also greatly reduced the number of options available to buyers, so that they can cut down on the number of suppliers and increase the number of parts they buy from the surviving employers, thus reducing unit cost. The legacy manufacturers now make the frames, panels, engines and transmissions and virtually all the other parts and subassemblies. If Michigan's legacy manufacturers go to the new model, with its greatly slimmed-down supply chains, which they almost certainly will be forced to do, many small- and medium-sized manufacturers in Michigan will go out of business, and most of those jobs will be lost.

Overall, in any case, it will take many fewer workers to make a car. More of those workers will require a high level of education and technical skill and many fewer of those who have only a high school education will be needed. This is the future, not just in the auto industry, but right across the board.

In 2013, two professors at the University of Oxford reported the results of a study showing that, at that time, close to half the jobs in the United States could be automated with equipment that was already available then, when the report was released. This was a report, not a prediction. Since then, the equipment has become much more capable and much less expensive. Covid produced a shortage of workers, employers increased compensation for low-skill workers at the low end of the pay scale. That was long overdue, but the reality is that those increased wages gave employers an even greater incentive to substitute automated equipment for human ones. Employers all over the country have considerably increased their rate of investment in automated equipment in the wake of Covid.

We gave some examples above of the ways in which digital technologies can complement the skills of highly educated and trained workers. But the Oxford study shows that they are just as likely to replace workers with less education and lower skills because it is easiest and cheapest to build automated equipment that does the most routine tasks, the very tasks that those with little more than a high school education are able to do.

As you will see below, Michigan produces fewer students with the kind of education and the level of skills that will be rewarded by this new economy and more of the students who will struggle to make it in the new economy than its most formidable competitors in the auto industry in the United States, and, by a wide margin, than its most formidable competitors in other parts of the world.

Michigan, it seems to us, is at a crossroads. Its legacy auto companies face challenges in entering the EV market that the new companies in the highly industrialized countries don't face. They also face challenges from lower-cost competitors in other countries and from companies like Foxconn that are world leaders in automating manufacturing and contract manufacturing. They may nonetheless survive and even prosper in the future, but, even if they do, they have strong incentives to do most of their manufacturing elsewhere, in which case they, like other large American firms lately, may move their headquarters elsewhere.

The people of Michigan could wait and see what happens and hope for the best, or Michigan could choose to recognize the threat and figure out how to build a bright future for the state.

A very small number of companies have accounted for most of the growth of the American economy in recent decades. Those companies have been global leaders in the development of the new economy driven by advancing digital technologies, new materials, new sources of energy and advances in biotechnology and other sciences. Researchers who have studied their development observe that they grow and flourish in ecosystems that include many different actors, each of them playing vital roles. New and rapidly developing firms have close personal and institutional connections to major research universities and laboratories doing cutting-edge research in the fields that are most important to those firms' development and provide those firms with a steady stream of new employees and faculty members who, working together, advance the field in the lab, in the factory and in the field. Investors and bankers who understand this work, and are willing to take big risks for big gains are on hand, as are attorneys and venture capitalists who can supply the legal and management talent needed to grow a company and take it public.

In every successful case we have studied, great attention has been paid to education and technical training, at every level. What really makes the whole thing go is the marriage of these sorts of resources to a physical, cultural and intellectual environment that is vibrant and attractive. Put it all together and all these parts and pieces of an ecosystem of this sort form a stimulating community with all manner of social, intellectual, cultural and economic rewards for those fortunate enough to participate in it.

Do this wrong and it will lead to the development of cities in which only the rich can afford to live and firemen, teachers and owners of luncheonettes have to commute from 50 miles away to find a place to live they can afford.

Do it right and all boats rise. In an economy that works for everyone, the middle-skill jobs are just as important as the jobs requiring the most advanced education. The people on the factory floor who build the turbines to unbelievable tolerances; the nurses who sit at stations in intensive care wards monitoring panels like those on modern jetliners; the craftsmen and women who make composite construction, resin-infused hulls for sport fishing boats; the people who build precast panels in one country that become the outside of skyscrapers in another; the local plumbing and heating

contractors who have to know the economics, technology and often the science behind various options for heating and cooling and supplying electricity to your house all have to be highly educated and deeply skilled if our society is going to work. And when they are, they will no longer be left behind. The trucks will drive themselves and the diners will order their meals with table-top iPads and all boats will rise.

That point is central to our argument.

In most of these cases where we see successful ecosystems of this sort in which all boats are rising, far-sighted leaders, sometimes from government, sometimes from business, sometimes from education, have had the vision, provided the leadership and organized the work that was needed to build these ecosystems. In some cases we have studied, this was done for an entire—albeit small—country. In others, it was done at the scale of a city or large metro area.

Michigan is not without resources to mount such an effort.

Michigan has the opportunity to build on some real strengths here. It is home to two of the nation's most highly-ranked research universities. National surveys show that the state rates high on several metrics for state investment in research and development. It ranks at number seven in the nation on investment in university research and development, number four on industry-based research and development, number one in physical science and engineering workers and number four in high-tech manufacturing.

But those resources are not a vision for the state or a road map for reaching that future. And that is what seems to be missing. Does Michigan want a future for itself that is built on taking a world-leading role in manufacturing and other areas in which it chooses to be a world leader? Is it prepared to do the hard work entailed not only in coming to a consensus on that point, but on building a plan to get there that can win the support of people from all over the state, cutting across divisions of race and class?

We were asked to comment on the Launch Michigan plan for education reform in the state. But it seemed to us that there was a prior question. It is hard to say what sort of education system a state needs unless one knows what sort of future it wants for its children. Most state constitutions require the state to offer an “adequate” education. Adequate for what? We see Michigan, like many other

states, preparing as many as half of its students for a losing battle with automated machinery and heading for a life of struggle. And we see many of the rest of your students years behind their peers in other countries in a world in which labor markets are increasingly global and a premium is awarded to the highly educated and well trained. Surely, these facts redefine what it means to get an “adequate” education.

Toward the end of this report, we will make some recommendations concerning initiatives Launch Michigan might take to help Michigan come to a consensus on where it wants to go as a state. But, before we do that, we will share with you our perspective on the education and skills your students are getting compared to those of their peers in the countries whose students score at the top of the world’s education league tables.

How Well Are Michigan Students Positioned for the Future?

Michigan high school graduates perform a little below the U.S. average, which doesn’t sound too bad until one learns that the U.S. average is mediocre when compared to the rest of the world. High school students in 37 countries perform better than ours do in mathematics. That means a large proportion of Michigan students perform no better than do the students in many developing countries.

The students in America’s community colleges appear to be taking a curriculum that is roughly equivalent to the curriculum in the high schools of the countries with the world’s most successful education systems. And a large fraction of Michigan’s high school graduates do not do well enough on the community college placement tests to have a decent chance of successfully completing the first year of a typical community college curriculum. That means that they, like high school graduates elsewhere in the United States, would have a very poor chance of being ready to succeed in high school in a country with a first-rate education system.

In the 1950s and 60s, the Golden Age of Michigan’s manufacturing prowess, the United States had the best-educated workforce in the world. Now, the Organization for Economic Cooperation and Development (OECD) surveys show that younger workers in the United States workforce have the worst basic skills in the industrialized world. How could this be? How could the skills of our workforce have sunk so far?

The answer is that they haven't. Their measured skills have hardly sunk at all. They are about the same as they were half a century ago. What has happened is that the education and skills of high school students in countries that were largely illiterate during Michigan's Golden Age have been steadily improving, to the point that the education levels in many of those countries not only match ours but exceed ours, sometimes by large margins.

That puts Michigan in the position of offering a workforce that is under-skilled and over-priced on the world market for manufacturing labor. If Michigan does not find a way to offer a workforce that is much better educated and much more skilled, neither the state nor its workers will be able to avoid getting poorer, much poorer. They will be put out of work by better educated workers in countries with lower wages or by increasingly capable machines that cost less each year than they cost the preceding year.

Either way, the future for Michigan workers with only the kind of high school education they are now getting or even some college appears to be dismal, for both the ones in the workforce now and the ones leaving high schools and community colleges full of hope.

A Slow-Moving Crisis

Indeed, when we pulled our lens back to reveal a wider picture of education in Michigan, the state's failure to educate its children to a standard that could return its people to an economy in which all boats were rising was only part of a much bigger picture of decline. People are leaving the state, but the state can't seem to attract newcomers to replace them. Michigan's two top universities are continuing to attract students, but their graduates are leaving the state in increasing numbers when they graduate. Its other universities are losing students, with one of its major state universities now down to only half the enrollment it had just a few years ago. And enrollments in its community colleges are way down too—enrollment in 2020-21 was roughly half of what it was in 2008-09—a trend that started before Covid but was greatly accelerated by Covid. The Governor has proposed measures to address the slide in college enrollments, but this steady and steep erosion of the pipeline of highly educated and well-trained people into the state's economy is a growing cloud over the state's future.

Michigan has the 12th oldest population among the states and the slowest-growing population. As the average age of Michiganders rises, more people leave the state and fewer come to stay, there will be fewer and fewer workers to support more retirees and more people who are struggling. The taxes needed to support them will rise, robbing the state of the resources it will need to invest to turn the situation around. At some point, it becomes very difficult to change the direction of this arrow.

When we shared what we thought we were learning with the people with whom we talked, it became clear that this picture, at least in outline, was familiar to most of those people. Not a single person we talked with thought it was inaccurate. But no one could point us to a plan for dealing with it. We concluded that they had heard stories of outsourcing and automation since the 1980s and lived through the recession of the 2000s and thought, because the state had not fallen off a cliff yet, maybe it never would.

But what we have just described appeared to us to be a slow-moving crisis, gathering speed. The people we were talking with were as concerned, as smart, as competent and as well-informed as the leaders of any state or country we had done this kind of research in. Most of them agreed that the state appeared to be sleep walking into a crisis but was not coming to grips with it. When we asked them why, most talked about the deep distrust among the stakeholders, the culture of conflict in a heavily unionized state, the effects of the short terms of the members of the legislature on the ability of the legislature to take a strategic view of anything, the tradition of weak government in the state and strong emphasis on local decision-making. All of these things contribute to an environment that makes it exceptionally difficult to come to a thoughtful consensus on any complex issue and then to develop a coherent plan and execute successfully on that plan.

But most pointed to a Michigan culture in the habit of looking wistfully back to a Golden Age of the 50s and 60s, rather than forward to meeting new challenges head on, and a habit of looking inward for solutions it does decide to work on, within its own borders or, if outside those borders, only to nearby states. Michigan, they told us, knows at some level that the world of the 1950s and 60s is gone forever and knows, too, that its children will grow up to compete with peers on the other side of the world, not just those across state lines, but has found it hard to come to grips with what that means.



To most of the people we talked with, the challenge of overcoming these governance challenges and insular outlook seemed very formidable. That is what made them ready to accept—however reluctantly—solutions that will certainly make things better, but fall well short of what would be needed to get to broadly shared prosperity.

But, at the same time, there was a real hunger for something more. As several said to us, in effect: We joined Launch Michigan years ago with a shared vision. The vision seems to have receded into the background, but the need for a vision like that is more urgent than ever.

From our standpoint, the challenges that Michigan faces are certainly formidable, but they pale in comparison to the challenges faced by Singapore, Hong Kong, Estonia, Finland and other countries when they began their long climb to preeminence among all the nations in education and the march to broadly shared prosperity.

That long climb takes time, but the journey always starts with a vision and a goal, the subject of the next section.

Launch Michigan's First Task: Building a Widely Shared Vision

There is nothing inevitable about a grim future for Michigan.

In the 1960's, when the Malaysian Federation kicked Singapore out of the Federation, its new Prime Minister wept. The Singaporeans had no direct access to fresh water. They were surrounded by enemies and had no natural defenses and no army. You could put all the Singaporeans with a university degree in one small room. Outside that room, all the ethnic groups in the city-state were hammering away at each other with whatever weapons they could find. The only employer of any size in Singapore was the British naval base, which shut down shortly after Singapore was left to fend for itself. So, their economy was a wreck. Illiteracy among adults was running at about 70 percent. Today, Singapore is one of the wealthiest, best educated countries in the world.

When the Soviet Union came unglued and the Wall came down, the Finnish economy, which had been heavily dependent on sales to the Soviet Union that were protected by trade treaties, suddenly collapsed. The Finnish economy went into a tailspin, first into recession and then into a depression more severe than the Great Depression. The Finnish political leaders, of every political



party, put their differences aside and met to find a way forward. They concluded that Finland would have to join the high-tech world to survive. They decided to build on the good start made by their leading telecommunications firms, using the state to create a web of support for the full tilt development of that industry, to make it a global leader. Education and high technical skills were key to the strategy. The nation's leaders called on the best young people in their schools to become school teachers, enabling Finland to develop a new generation of workers with the education and skills they would need to make the Finnish telecommunications industry a global leader—as an act of patriotism! The Finns did not set out to top the world's education league tables, but top them they did, a result of the deep systemic reforms they made in Finnish education to achieve their dream.

The most important fact about the world's best education systems is simply that they exist. They are living proof that Michigan can have an education system that produces much higher achievement than the one it has, enjoys much more equity of results among different groups of students and costs no more than the system you have now. You will find top performers in Asia, Europe and North America.

The countries with the best-performing education systems did not all do it the same way. They have different goals, values, histories, religious beliefs and ethnic backgrounds as well as different forms of government and economic and political systems. But the principles that underlie the design of their systems are remarkably similar.

The Design of Top-Performing Systems

What follows is definitely *not* a do-it-yourself pocket guide to the design of a top-performing education system. It is intended to highlight just a few of their characteristics, to give the reader a glimpse of some of the most important differences.

Support for Children and Families

First is the support that children and their families need so students can hit the ground running at the beginning of first grade, and the additional support that many need beyond that. All over the world, families with young children in the countries with the best education systems get much more support for their children before they ever get to school than is the case in the United States. This includes substantial payments per child as general grants that are often independent of family

income with supplemental supports for those with lower income, pre-natal care for the mother, in-home assistance for young mothers, *years* of parental leave, free or very low-cost high-quality child care and the same for early childhood education. The early childhood education system is closely aligned with the formal education system, to make sure that the children in early childhood education are getting what they will need to succeed in first grade. While Michigan has taken significant steps to address this agenda, with an emphasis on quality in its state pre-K program for example, it is far behind both nationally and compared to top performers in many areas.

For many disadvantaged children, extra support is needed after first grade begins. The proportion of students from low-income families in our schools is typically much higher than in many of the top-performing countries. That is certainly true in Michigan.

The rate of child poverty in Michigan is the ninth highest in the United States. More than half of the children in Detroit and other urban centers live in poverty. But poverty is also no stranger to many parts of rural Michigan, too. The result is that many students entering the first grade have such a limited vocabulary and range of cultural experiences that they find it hard to understand what is going on in first grade. Teachers, forced to teach to the skill level of the middle of the class, leave many behind. They fall further behind in each successive grade, waiting until they can drop out of school.

These students often can't pay attention in class because they are hungry, don't have a safe place to sleep at night, have a toothache or had a close friend or sibling get shot the night before. Again, Michigan has been taking on this agenda, but has a long way to go to give all of its children the support they and their families need to make it possible for those children to succeed once they get in the school building. Michigan has been a national pioneer in the use of school-based clinics to address the health problems of disadvantaged children, and the Governor has proposed creating more of them, but even that number may be well short of what is needed, and health care is only one of many kinds of help these young people need to get the kind of start that their peers in many other countries get.

Teacher Quality

Second, there is the matter of teacher quality. Most of the top performers get their teachers from the top half of the students who graduate from their high schools, some from the top 40 percent, some from the top 30 percent and so on up to South Korea, which gets its teachers from the top five percent. Mastery of subject matter is not, of course, the only important criterion that teachers should be expected to meet, but it should not be optional.

Scholars differ in their estimate of the quality of high school students enrolled in the education programs of American universities who then become the pool from which school districts select their teachers. The most optimistic of these estimates suggest that we get our teachers, on average, from the middle of the distribution of high school students going on to higher education.

But you might say that is not so bad. If some of the top performers get their teachers from the middle of the distribution and we get ours from the middle of the distribution, then perhaps we don't really have a teacher quality problem. But that is an illusion. Shanghai gets its teachers from the middle of the distribution, but Shanghai's students score at the very top of the PISA league tables. That means that the middle of Shanghai's distribution leaves high school three years ahead of our students of the same age. They may both be at the middle, but they are very different middles.

When we say "middle," we usually mean a middle that is determined by standardized tests of basic skills. And you might well say that there is more to good teaching than mastery of basic skills as measured by a standardized test. But these countries are looking for teachers who have more than strong academic records. They often put candidates for admission to teaching programs in lab settings where they can watch them interact with students to see whether they can really connect with young people and have master teachers interview them to determine whether they have a passion for teaching. Countries with students of many ethnicities take special care to attract teachers who look like the children they are teaching. But they all, without exception, make sure that teachers at every level of their system have a deep understanding of the subjects they teach, even at the elementary school level.

Michigan, like most other states is far from meeting this standard, and its response to the teacher shortages driven by Covid has made matters even worse, opening the occupation to people without

any certification as teachers whose qualification to teach consists of service as a bus driver or school secretary.

One of the top performers is Canada. For years, high school graduates who fail to get into a teachers college in Ontario are told to come down to Michigan, where they are sure to find a college that will be happy to admit them, irrespective of their level of achievement in high school.

The obvious question, of course, is what it would take to get teachers for every one of your students who have the same command of the subjects they teach and the best way to teach it that their peers in the top-performing countries have. Most Americans would say, pay them more.

Michigan teachers, on average, make a little more than the average teacher makes in the United States. That fact, however, masks a very unpleasant reality. There are enormous variations in teacher compensation among your districts. As is so often the case, the districts whose students have the greatest need for good teachers and good teaching cannot afford to offer their teachers the kind of compensation that the most affluent communities can afford to offer. The affluent districts can be counted on to poach the best teachers—often the ones the less affluent districts have invested the most in—from those less affluent districts.

In contrast, many top performers have laws requiring teachers everywhere to be paid, at a minimum, what people in the high-status professions requiring the same amount of education are paid in their jurisdiction, which is a lot more than American teachers are paid. They are confident that this policy will produce highly educated teachers because they also limit the right to offer teacher education to a handful of their best universities. So, they know they are getting top quality for the money they are spending.

You will say that Michigan could not possibly afford to pay their teachers what you pay your engineers, accountants and attorneys. But it turns out that the per pupil cost of elementary and secondary education in many of the top-performing countries is only about two-thirds of what it is in the United States. That is in part misleading, because the very large amounts they spend on children before they get to school are not included in the school costs, but there is every reason to believe that, after taking this into account, the top performers spend no more on their schools than we spend on ours, per student.

These countries get more for their money because they spend their money very differently than we do. The Launch Michigan Framework references some of these features of high-performing systems.

It begins with the way we treat our teachers, which is not very different from the way we treated them in the early decades of the 20th century when our school system took its current shape. The schools, as workplaces, were organized like smokestack factories. The workers in those factories were not expected to have much education. They were told how to do the work by the engineers and managers. American school district offices, especially in medium and large cities, are far larger than their counterparts in the top-performing countries because our system of schooling was based on this model of organization. Teachers in the United States are expected to be in front of students for more hours every week than in any other major country, as if they were on the line in a factory. This, too, follows the smokestack model of school and district organization.

In the top-performing countries, schools are organized much more like major law firms or engineering firms. Teachers are treated like high-status professionals. They teach fewer classes, leaving time for them to work in teams to systematically improve the curriculum, perfect more effective ways to teach it, and work together to identify students who are beginning to fall behind, figure out what the cause might be and try out solutions until they land on one that works. They visit each other's classes to observe their teaching and critique it. They work with individual students and small groups who need extra help. Very senior teachers lead research teams that comb the research when a team begins its work, locating the best research done anywhere in the world that bears on the problem they are trying to solve. They lead the team as it uses the research to put a plan together, and they create a research design that will let them measure the results of their design as it is implemented, so they can keep improving it until they get the results they are looking for. Just as in a big law firm, the most senior teachers bear a heavy responsibility for mentoring the newcomers and colleagues who are in trouble.

In the U.S. system, there is no career in teaching. The job is the same on the very last day as it was on the first day. If you want to get ahead, you have to go into school administration. In the top-performing countries, as in any U.S. professional services firm, there is a real career progression, which is matched to the kind of school organization just described. As one moves from lowest rung on the ladder toward the top, a teacher gets more responsibility, more authority, more status and

more compensation. They move up the ladder as they demonstrate more competence at the work and assume more responsibility for sharing that increasing competence with their colleagues. In the most advanced form of the career ladder, it branches in three directions, one to Professor Master Teacher, one to school and district administration and another to the kind of specialty expert assignments one gets in the ministry of education. Master teachers in the school make as much as the principal. Professor Master Teachers teach in schools that are used like teaching hospitals partnered with medical schools, and they have the same status in the university that tenured professors do.

It is not just the compensation that attracts many of the very best high school students to teaching. Teaching, of course, attracts people from all backgrounds who love young people and want to feel that the work they do makes a difference. But a profession that is structured to reward people who are constantly working to get better at the work attracts people who are determined to excel and who believe they are likely to succeed in such an environment. That's why, in the top-performing countries, teaching is organized as a profession that rewards first rate teaching and teachers who work hard to get better and better at the work as criteria for career advancement. It is a profession that is known to be hard to get into and hard to advance in. One does not have to leave teaching or get a second job to support one's family. All over the United States now, and in Michigan, teachers are advising their own children not to go into teaching. As long as that is true in Michigan, nothing the state does to improve its education system will make very much of a difference.

In the top-performing countries, school leaders are first trained as teachers and do not become administrators unless they are very good teachers. In the United States, the pool from which school administrators are chosen is formed by teachers who volunteer to be teachers and apply to graduate schools of education for admission. Those who are admitted to such programs do not have to show any evidence at all that they have demonstrated the kinds of abilities that might make them effective leaders or that any district has any interest in hiring them if they get the required credentials.

In the top-performing countries, teachers who have demonstrated strong ability as the leaders of teacher teams are identified and groomed over a period of years for more senior leadership assignments. They are given steadily more demanding assignments and lots of support as they take those assignments on, including what amount to paid fellowships to spend substantial time in other

states, provinces and even countries, studying highly effective systems and the way education is managed in those countries. They are also cycled into and out of central office positions, including positions in the ministry, to get a rounded picture of the policy environment in which their work will be done. When senior managers in these systems are evaluated for promotion, their record of success in grooming others for advancement in the system is a major consideration in their own advancement. We know of no state education systems anywhere in the United States that are organized this way.

All over the world, university schools of education play an important role in the education and training of school teachers and administrators. In the United States, the faculty of the schools of education are free to teach whatever they wish. In many of the most successful education systems, the schools of education are expected to organize their curriculum to prepare their prospective teachers how to teach the state curriculum. In Michigan and many other states, there is no state curriculum. Even if there were such a curriculum, there is no reason to expect any alignment at all between what prospective teachers are taught and what their future students are expected to learn, because the state department of education has no control over the curriculum in your teachers colleges.

In some of the best of the world's education schools, future teachers are educated in the subjects they will teach in conjunction with the most effective way to teach it. But, in most programs in the United States, the subject is taught in the faculty of arts and sciences and how to teach it is taught in the school of education. Because the most effective way to teach is specific to the subject being taught, the result is much less effective teaching.

In the best organized systems, new teachers—people who have graduated from teachers' colleges—spend as much as two years under the direct supervision of certified master teachers before they are fully licensed to teach. The Master Teachers are released from their regular teaching duties to do this. The apprentice teachers are assigned to teacher teams to get initiated into their responsibilities to the other teachers in the school. They also teach, under the supervision of the Master Teacher who is responsible for them, but they are not expected to take on a full teaching load. They spend a lot of time observing experienced teachers and getting coached by them. They are not fully licensed to teach until the Master Teacher responsible for them attests to their fitness for the work. In the United States, staffers from the school of education are relieved to



find any teachers at all who are willing to supervise practice teachers, irrespective of their ability as teachers, while the prospective teacher is still in training. When they graduate from a teachers' college, new teachers are often thrown into the most difficult schools and classrooms, classrooms that the most experienced teachers do not want to teach in, with little help, to sink or swim.

Learning Systems

The preceding discussion was about what the top performers do about the quality of those who teach; but there is also the issue of what the students are expected to learn. What we usually find in a top-performing education system is a unified, coherent and powerful learning system.

What we mean by “learning system” begins with a set of clear goals for what students will be expected to know and be able to do when they leave the system, including not just academics, but the values they want the students to have, the way they will be able to relate to others and qualities like resilience, independence, moral judgement, empathy and the qualities they are looking for in their citizens as active participants in a functioning democracy.

Those aims are translated into a set of curriculum requirements. The curriculum requirements are set to standards of achievement that students are expected to meet before they leave the system. Then the architects of the system describe trajectories that would enable students to meet those end goals from a standing start at the beginning of first grade. The state often establishes course syllabi for a progression of courses that would get students through that trajectory. Sometimes those syllabi are required. Sometimes they are available for reference if the schools want to use them. Typically, there are state or national examinations that are aligned with the goals, trajectories and syllabi. Most such systems are set up so that there are two or three gateways, each with its own exam, one at the end of each major part of the trajectory from beginning of the first grade through the end of the last grade. That is what we mean by a learning system.

It is very important to the top performers that the parts of these systems be fully aligned. The measures should measure the extent to which the students are learning what the goals say they should be learning. The curriculum should be matched to the goals as should the instruction and the way the teachers are taught to teach and the measures should measure what the students are supposed to be taught. Of course, you would say, but that is not what we see in Michigan.

An American teacher reading about learning systems of this sort might see them as very constraining, quite out of keeping with their view of what a teaching professional ought to be. For many American teachers, having autonomy from interfering administrators is the essence of what it means to be a professional. Autonomy for these teachers is what happens when you close the door to the classroom and do what you think is the right thing to do.

That is not what it means in the top-performing countries. Years ago, NCEE did a research project in which we asked middle school students what they were doing in school in January. Most responded by saying that they were reviewing what they had done the previous year. Their teachers confirmed what their students had told us. When we asked their teachers what they were teaching, it turned out that it was often the case that a particular topic was taught by many teachers of that subject, but in different years. In many cases the same topic was taught in as many as five different years in the same school district, or even the same school. The result was that any given student was taught the same topic over and over again but only at the introductory level, because no teacher could assume that most or all of the students had mastered the prerequisite knowledge needed for anything beyond a beginning treatment of the topic. Hence the report from the students that, in January, many were reviewing what they had learned the previous year.

The teachers in the top-performing countries know that teaching is not a game of solitaire. If the teacher of the seventh grade can count on her students knowing what was supposed to be taught in the sixth, then she can build on that. But that requires agreement on the goals, the trajectory, the developmental sequence and the syllabus, not just in one school, but across schools and districts. If the student isn't where he or she should be within that framework, then all of that student's teachers can contribute with confidence to the task of getting that student back on track. Teaching, it turns out, is a group sport.

So, what is professional about that? The answer is that students are very, very different, with many sources of that difference, just as doctors' patients are very different. Accurate diagnosis takes a lot of skill and experience and getting the treatment right does, too. That is why the teachers in the school in the top-performing countries spend a lot of time working together to design courses and create experiences for their students that fit the needs of those students and not some other students. Doctors don't invent new pharmaceuticals, and they can be sued if they don't use validated procedures, but no one accuses them of lacking professional standing on those accounts.



One more general point is pertinent here. The top performers do not set their goals in a vacuum nor do they design their systems without reference to any other systems. None of them have any interest in copying the learning systems of any other country. But all of them devote a lot of attention to the way the world is changing and to what other top-performing systems are doing to adapt to those changes. They are constantly benchmarking each other's performance and each other's strategies, policies and practices, worldwide. We have seen no sign of that kind of behavior in Michigan nor in other U.S. states.

To the extent that Michigan has learning systems as we have defined that term, it has hundreds of them, one for each school district, because the authority that the state retains in the world's best education systems is largely reserved for the districts in your state. Building effective learning systems requires a lot of resources and many kinds of expertise. Most Michigan districts are much too small to be able to afford that kind of expertise.

But there are other major issues for Michigan related to what it takes to have a world-class learning system. The first is being clear about what you want to achieve. Building a learning system starts with setting the goals for the system. American testing systems are designed to sort students out from one another, to tell the observer how well each student, school and district did relative to some norm. Our school systems are sorting systems. That worked very well when most jobs did not require a very high level of education and most people who had just the basic skills could do very well for themselves, but, if the changes taking place in the global economy are going to greatly reduce the number of jobs available for those who graduate from high school in the lower half of the sort, then we need a different kind of learning system, one that is designed to sort students in, not out, to get virtually all but the most severely disabled to a very high standard and at least some of them to an even higher standard. If Michigan decides it wants to do that, it would change your learning systems in very fundamental ways.

You would begin by setting goals for student learning that would close the gap—our research suggests that this is close to three years in mathematics, less in reading and science—between what Michigan students learn by the end of high school and what their peers in the top-performing countries are learning. That would not only mean closing the gap in average performance but also closing the gap in equity, meaning the gap in performance between the top tenth of students and the bottom tenth. And finding a way to do all this that does not break the bank.

The top-performing countries are not sitting still. They are actually working on what amounts to a common agenda for their learning systems. They are creating new curriculums intended to result in much deeper understanding of the conceptual structure of the core subjects in the curriculum than most students achieve, the kind of understanding that enables people to synthesize what they've learned from several different subjects to tackle a problem they've never seen before, to apply what they've learned in one subject to another, to learn new things quickly, to see how a new problem can be solved by creatively applying what they've learned in one domain to another domain. But, at the same time that they are looking for much deeper understanding of the core subjects in the curriculum, they are working to create school programs that have many more opportunities for students to continually apply what they are learning in real world contexts, integrating theory and practice all the time, in every way.

It is easy to do this in a way that results in a superficial grasp of both the theory and the practice and exceptionally difficult to do it in a way that provides a much deeper understanding of the theory and a much better grasp of the practice, drawing on the work of the most adept teachers of academic subjects and the very best of their vocational education instructors. Not only is this difficult to do well with the most advantaged students, but the aim is to create environments in which students from very disadvantaged backgrounds can achieve high levels of success, too. Making this happen at the scale that is required raises the bar even further.

We have spoken of the changes in the global economy that are driving the need for ever better educated workers. But there are other changes that are making it ever more likely that any given worker will not only change jobs much more frequently but will be doing very different kinds of jobs, often many different kinds of jobs, at the same time. Because it is much less likely now than it used to be that people will work for decades for one employer, many employers are less willing to invest in their employees. Because the work often demands so much specialized knowledge now, employers are much more interested than they used to be in hiring people who bring that specialized knowledge to the job, rather than having to be trained by that employer. Because the technology and the way the work is organized are evolving so quickly, the idea that one could enter the workforce with all or even most of the knowledge that will be needed is very out of date.

All this means that students will have to leave high school better at theory but also better at practice, better at academics but also better at getting things done in the real world, accomplished



in a specialized field but also a much better educated and more flexible generalist, ready to hit the ground running but not even close to being finished with their education.

These demands just pile on when educators in the top-performing countries think about the curriculum. A student going into many technical fields will have to have a deep understanding of science and mathematics, a lot of practical experience, be able to write really well, be a very effective team member, develop creative responses to novel problems, learn very quickly, do what the employer would want done when no one is around to say what that is and be ready to do the ethical thing when no one is looking.

So, the top performers are going back to the drawing boards even as they try to get even better at what they have already learned to do. They now see their elementary and secondary schools not as the system, but as the front end to a tightly integrated system of lifelong learning—a system with no dead ends—that they are now building. They are trying to figure out how to redesign their systems to make sure that virtually all students have lots of choices but choices that are framed so that all students get an education that can prepare them well for a future that none can now foresee.

Michigan is far behind that leading edge. That is partly because it lacks some basic tools that are needed to construct such a system.

Just one of those tools, for example, is good measures of the kinds of skills, knowledge and abilities that you would want in your students. Your peers in the top-performing countries spend far more per subject per student on assessment of student learning than you do, for much better tests that they give much less frequently. The United States is the only country we know of that tests all students every year with standardized tests. Teachers in Michigan, like teachers all over the United States, teach to tests they do not respect and parents, employers, universities and the community at large have very poor tools to assess whether the system is producing students with the qualities they are looking for.

Many professionals and parents are so upset about the failures of test-based accountability systems that they want to do away with any standardized testing. But, if there are no standardized assessments, there is no way for government or the public to know whether and for whom the system is working and no good way for the system to fix itself when it is not working. The answer to

the problem of poor tests is not no tests, it is much better assessments, the very kind of assessment that the top-performing nations often use.

Accountability, Finance, and Governance

But the biggest reason that Michigan is so far behind the leaders is not the lack of availability of the right tools. It is its lack of capacity to set a direction for its education system, to develop effective plans to implement those plans and to bring together all the elements of this complex system into alignment in one powerful, effective whole.

Suppose for the moment that key figures in the state had their heart set on creating, over time, a world-class education system. If they were in one of the top-performing countries, they would turn to the ministry of education to benchmark the best such systems in the world and come up with a plan that reflected the global state of the art. That plan would be produced after two or three years or more of consultation with many different stakeholders, garnering deep and wide support from many stakeholders of all kinds from all over the state.

Once the policies that had been proposed were enacted in legislation, the nation would again turn to the ministry, this time to implement a thoughtful, carefully sequenced multi-year implementation plan, with a lot of input from the education professionals. The ministry, peopled by many of the most admired education professionals in the country, would know that they could not implement the legislation by decree, but only by persuading the professionals of the need for major changes in the system and for adoption of the specific measures that had been enacted.

Because the ministry was responsible not just for the schools, but also for higher education and for early childhood education and for workforce development and technical education, it would have the authority it needed to rebuild all the institutions in a new framework. Because of the stature of the ministry staff, it would go without saying that most of the professionals in the system would do their best to make the new system work.

None of this is now possible in Michigan. There is no ministry or any agency that looks very much like a ministry in top-performing countries. The State Department of Education lacks the authority to do much of what has been described. It is virtually impossible to get highly qualified, very experienced school people to work in the Department because they can join that staff only if they



are prepared to take draconian cuts in compensation. The reason that the State Board of Education's authority has been sliced so thin is that its authority comes from state constitutional provisions that result in the election of its members from the extreme wings of the state's political parties. Successive governors of those same two parties, unable to have much influence on state education policy because of that feature of the constitution, have addressed the issue by stripping the State Board of Education and the Department of power in increments as the years have gone by. But there is no other center of state policymaking for education.

Just as the elementary and secondary system has been left without a real, accountable center in the state government, much the same can be said of higher education. Most states have a state board of higher education by that or some other name that is responsible for the health and efficient organization and management of the whole higher education system and the alignment of that system with other important state functions. But Michigan has no such agency. The policies and practices of your universities, and their schools of education, cannot be aligned with the state's education goals for the schools because the institutions that would normally be responsible for making sure the whole system works have either been deliberately weakened or simply don't exist.

It will be difficult to set a common high standard for student achievement in Michigan, to say nothing of agreeing on a common curriculum framework because each school district has most of the powers that only the ministry of education has in the top-performing countries. Because the size and wealth of your myriad districts varies so greatly and the resources that these districts can bring to their schools is allowed to vary so much, there are formidable barriers to significantly reducing the gross inequities among your school districts in student results. The school finance reforms embraced by Launch Michigan would certainly help address the most important financial disparities among districts, but they would not do much to alleviate other disparities, including those among your ISDs, nor would it address the problems caused by delegating so many of the powers typically reserved for the ministry in the top-performing countries to the districts in Michigan.

All of this could, of course, be changed, even the parts that are now in your constitution. But that is not likely to happen unless the state decides that it is facing a crisis, which brings us back to the starting point of this analysis.

Agreeing on a Vision — Turning it Into a Plan

We have sketched at least two possible futures for Michigan. One, a continuation of its current trajectory, is a path to a smaller, aging population trying to get by with shrinking incomes in a shrinking economy, amid increasing political discord. The other is a path to broadly shared prosperity, a growing and inclusive economy that provides rewarding lives and a bright future for all of Michigan's citizens.

We have argued that, given the realities of global economic competition and of advancing digital technologies, Michigan cannot get to broadly shared prosperity unless it rebuilds its education system to produce a citizenry that is as well-educated and as highly skilled as any in the world. We have tried to give you a sense of what such a system would look like, and of the distance between the education system you have and the kind of system you would need to have.

We have suggested that getting from where you are to broadly shared prosperity is not a naïve pipe dream, that there are numerous examples of countries that were desperately poor and largely illiterate during Michigan's Golden Age that are now wealthy, enjoy broadly shared prosperity and whose populations are considerably better educated than Michigan's people are today. They have come a much longer distance than Michigan now has to travel and have done it in only a few decades. It can be done.

And, finally, we have pointed out that most of the countries that now host the world's best education systems got there only after they faced what they recognized as a full-fledged crisis. Only very rarely do countries, states and provinces decide to redesign and rebuild their economy and the way they educate their children without such a provocation.

It is that logic that brings this report back to where it started. The reason that the Launch Michigan Framework is not a plan that could give the state a globally competitive education system is that the state has not yet decided that it is in the kind of trouble that would require it to redesign its education system for that kind of performance.

There does not appear to be a consensus in the state that it is on the kind of downward trajectory that would require it to change course, much less a consensus that broadly shared prosperity should be the overriding goal for state policy. Absent such a consensus, it is hard to see how the state could get a consensus on making the kinds of changes in your education system that have been made by the countries that now lead the world in student achievement and equity.

As you will see below, we think that there are proposals made in the Launch Michigan Framework that are sound and are needed and should be energetically pursued, but, if you want to vault the state onto a more promising path than the one it is now on, we urge you first to find a way to engage the state in a serious conversation about what kind of future you want for the people of Michigan and what it would take to assure a future of broadly shared prosperity in the state. What that might look like, how it relates to the work you have already done and how both this work and the work you have already done could lead to the development of a sound, broadly supported, plan for educating Michigan students to global standards is the subject of the next section.

Starting from Where You Are — How the Work Ahead Could Be Organized and Staged

As we see it, there are three big tasks in front of you. As you will see, these tasks need not be sequenced. They can be done concurrently.

1. Create a Commission on Michigan's Future

This body would be tasked with making a careful analysis of the current prospects for the state's economic future and with recommending policies the state would have to adopt to greatly improve the likelihood that the state will enjoy broadly shared prosperity in the coming decades. It would be asked to take into account the effects of globalization and advancing digital technologies on the competitive position of Michigan businesses with respect to competition from other states and other nations, with particular attention to what it would take for the state to become more attractive to global employers and employees in the industries that are likely to pay their employees well and less attractive to employers who are more likely to pay poorly.

The commission would be asked to consider what policies would be most likely to result in an economy in which all boats, not just some boats, would be rising, including what mix of industries and jobs such an economy could plausibly be based on and the kinds of supports it would need, from university-based research capability to the kinds of amenities that well-educated and highly skilled workers expect in the places they choose to work in.

This means that the commission would have to think hard about the kinds of industries that Michigan would have to grow to expand opportunities for workers who will be sidelined by the



industries in which employment will be declining, industries that could build on small beginnings that already exist to become major forces in the next economy. These would have to be industries that reward firms that compete on the skills of their workforce and the value they can add to the products and services they offer, rather than firms whose business plans depend on keeping wages down and getting big tax abatements from the state.

Not least, the commission would be asked to describe the profile of education and skills such an economy would require in its workers at every level.

Such a commission would require a strong staff or advisor capable of providing a wide range of fact-based analyses from a global perspective on the effects of globalization and advancing digital technologies on Michigan's competitive position, as well as deep knowledge of the research on economic development, the effects of globalization and advancing technology on skill demand, demographics, urbanization and the nature of the ecologies of investment, research, development, innovation and other factors that are collectively required to support high value-added, high profit, high skill, high pay industries.

But the success of such a commission would also depend on much more than the quality of its technical advisors. To gain the attention of the public and policymakers, it would have to be composed of people who command a great deal of respect among the people and policymakers of the state. It would have to be led by someone with broad and wide experience of Michigan and of the world at very senior levels, someone widely respected for their integrity and leadership ability.

The members of the commission would have to see their task not only as producing an accurate analysis of Michigan's position in the global economy but as creating a compelling vision, one that people from many backgrounds and walks of life can sign on to, a vision that is not only compelling, but believable, a goal that can be reached.

And such a commission would have to be accessible, willing to share its vision as it is being developed with many people whose input would be valued and who could see themselves as having contributed to it and invested in it.

It would have to work hard as it was doing its analysis and coming to agreement on its recommendations to build a sense of anticipation for its report in the press, among policymakers and in the public.

Many members of the commission should be chosen not because they are the elected representatives of some constituency because people in such positions feel constrained to represent all of their members, so their ability to adopt positions on issues on which their organization has previously taken positions is very limited. They should instead be people who are widely admired by many people whose support the commission will need but who will feel free to say what they think and to take positions that may vary substantially from those of the formal organizations with which they may be associated in some way.

The product of the work of such a commission would be not only a portrait of the state and its future that is the basis for a clarion call for action, but also a plausible description of the road that could be taken to broadly shared prosperity for the state. It is almost certainly the case that such a report would contain a call for the redesign of the state's education, job-training and lifelong education systems to match in reach and quality the best such systems in the world, as well as other initiatives that would be required to support a bright future for the state.

While the membership of this commission should include a diverse group of people who collectively represent many parts of the Michigan community including professional educators and advocates for those who have been left behind by globalization and advancing digital technologies, it should, at its core, be composed of senior members of Michigan's business community who are far seeing and committed not just to what is good for business but also to what is good for the people of Michigan, as well as key figures from both political parties. It should be set up with input from the Governor and key people in the legislature to make sure that the report will have the ear of both.

2. Create a Commission on a World-Class Education System for Michigan

The work of this commission would be based on the rationale for its work provided by the first commission, though, as you will see, we do not think that the work of this commission has to wait until the first commission has finished its work.



The job of this commission would be to research the best education systems in the world, identify the strategies used by those countries to get superior results at costs that don't greatly exceed what Michigan is currently spending, compare those strategies to the related policies and practices in Michigan and propose policies and practices for bridging the gaps between Michigan's education system and the world's best performing education systems.

Though this would be a different commission, some of its members would also serve on the first commission. But the core members of this commission would be chosen from among professional educators, key advocates for disadvantaged students from all parts of the state and key members of the political community, because their assignment would be the redesign of the education system.

In this case, some of the members of this commission would be chosen because they represent positions in government or in education that make them central players. Most would not be in positions in which they would feel constrained to represent members of their organization or association but would be people who were very highly regarded by those people and who could therefore play an effective leadership role in securing widespread support for the recommendations of the commission.

This commission would need advice and support from an organization that is intimately familiar with the strategies used by the world's top-performing education systems and with the way education systems in the United States work, but this commission would have to take the advice such an organization would provide and use it to come up with a new design for Michigan education that is very sensitive to Michigan values, history, politics and goals.

The product in this case would be a plan for the reconstruction of the Michigan education system, laid out in phases over a period of ten years or more, structured so that the work in each phase lays the base for the work to be done in the subsequent stage. Budgets would have to be built, phase by phase, tied to the nature of the work to be done at each stage.

The work of this commission would not be done behind closed doors to be released on an inattentive public only when done. Its deliberations would be open to the public. The commissions would invite comment and testimony from experts, the public, advocacy organizations, professional organizations and others on the work as it was being done. The consultants advising the

commission would be invited to make proposals to the commission on recommendations the commission might adopt to build the new system, but all those groups just mentioned would be invited to comment on those proposals and to make their own proposals to the commission as it did its work.

In this way, the commission could gauge the reaction of various groups and individuals to the proposals being made to it before it took a position and, because these interactions would be organized as an exchange, the commission and its advisors could make the case for adopting or adapting the strategies used by the top performers to a growing public.

These interactions need not be confined to the formal meetings of the commission. The commission leaders could, between commission meetings, reach out to many stakeholders and parent groups in the state in the course of doing its work, talk with press and speak to meetings of professional educators to build interest in its work and increase anticipation of its findings and recommendations.

The agreements reached by the members of the Launch Michigan coalition have been reached behind closed doors. What we are here proposing is throwing those doors open, and, in the process, providing an opportunity for many people who have an interest in the outcome to participate in a way that is much more likely to result in wide and deep support for the recommendations made by the commission.

The work of the first commission should begin before the second one is convened. But the work of the second commission need not wait to begin until the first commission has completed its work. As the first commission makes progress toward building a growing consensus in the state on the need for a strategy to build broadly shared prosperity in Michigan, the second commission can begin the work of figuring out what kind of education system the state would need to reach that goal.

3. Begin the Work of Implementing the Recommendations Made in the Launch Michigan Framework

Each of the two commissions just described could take a year or more to do its work. But Launch Michigan already has a plan of action that came out of the agreements reached following the meetings last summer and fall. Thanks in part to the actions of the President and United States

Congress, there is now a substantial amount of money on the table for education and you have a plan for using some of that money in ways you think will benefit Michigan children.

While we do not think that the plan laid out in the Launch Michigan Framework will get the state into the league of world's best education systems, there are a number of proposals in it that you could and should move forward on with all deliberate speed. That would include proposals that would provide some real equity where there is very little now, including, importantly, equity among the ISDs, so that, irrespective of the wealth of the districts they serve, they all have the capacity to play the robust roles they should be playing. Others would improve the governance of the system, in particular the Departments' ability to attract experienced senior staff and the alignment between the Governor's policies and the education policies of the state.

We also think you might want to move forward as soon as you can with your plan for fully implementing a pupil-weighted school finance plan, although we would not do that until you think through how the implementation of that plan should be connected with the accountability system to make sure that the schools do not get some portion of the new funds unless they can show that they plan to use the strategies that you believe will result in the student achievement you are looking for and there is agreement on legislation fully implementing the kind of Accountability and Implementation Board mentioned in the Framework.

Finally, we think you should move forward with the research we propose you do to establish the College and Career Ready standard described in first section of the Framework. Getting that right is precondition for much of the long range parts of your Framework plan and for putting the whole system you have in mind in place.

If you were to pick out a few of these proposals that make sense to do quickly and get them enacted in legislation, these early wins might build the kind of confidence in Launch Michigan that would enable you to do harder things later, when the two commissions have done their work.

If you chose to follow these recommended steps, NCEE stands ready to help.

A Second Golden Age for Michigan

The Golden Age of the 1950s and 60s was not a paradise. Most of the women who answered the call to replace the men who had been working on the assembly lines when they put their uniforms on were fired when the war was over and told to go home. Many Black Americans who had left the South during the Great Migration looking for a better life in the Northern cities and factories arrived just in time to be left behind in those cities as those who had worked in them went out to the new developments in the suburbs and took their jobs with them.

But, for the immigrants who had flooded to our shores from Eastern and Southern Europe in previous waves of immigration, Michigan's Golden Years were all that they might have hoped for. We forget that these people had emigrated from countries that had been at war—more or less continuous war—with each other for centuries, but their people who had come to Michigan had somehow managed to live and work with each other here in our country, side by side. Together, they built the most productive economy the world had ever seen. They provided for themselves and their children a life their own parents could not have imagined, and got their children started on paths that they might have dreamed of but never imagined they could have had themselves.

In those days, very few idealized factory work. It was dull, tedious and often dangerous. Most people did not go to work to “follow their dream” or seek self-actualization. They went to work to earn a living. They were proud of what they did and of the contribution that their work made to the country. They worked for companies whose names were household words all over the world. And their work was without doubt a major contribution to the immense flow of new products and services that contributed mightily to longer lifespans, less drudgery, a healthier life, a richer culture, a more inclusive democracy.

We had figured out how to manage our economy so that all—or almost all—boats were rising together. But most of them did not need a very advanced education. That's because much of the work that had to be done did not require a lot of education. In fact, back in those days, many of the most powerful people in Michigan and in the country had had no more than a high school education, if that.

The global and technical dynamics we briefly described above have changed all that. And now, those same dynamics, gathering speed, are creating a world in which, at least in the more advanced economies, machines will do most of the routine work and replace the people who were

doing it. Much more—though certainly not all—of the work that is left for people will be done by very well-educated and technically skilled people who will partner with the machines in the lab, in the studio, on the shop floor and in the field. If we get our politics and our economics right, there will be plenty of that kind of work for all who want it. If that happens in Michigan, it will feel like the Golden Age has come back to the state. Only this time, work will not just be what you do to earn a living. It will be much more rewarding.

There is one hitch. To get there, you will have to build an education system that provides to virtually all children an education of the kind and quality that up till now you have provided only to the children who live in wealthy suburbs.

If Michigan succeeds in building for itself the kind of education system that we have seen evolving in the countries with the most successful systems, some of the groundwork for which you have already laid in your Framework, your children will come to school at the beginning of first grade ready to learn at the level expected by the schools. They won't fall behind, because the school will be organized to catch them as soon as they begin to fall behind with whatever it takes to put them back on track.

A growing number of their teachers will come from the upper reaches of their high school graduating classes and the best universities in the state and will know the subjects they teach at a deep level. There will be a surplus of very high-quality teachers because teaching will have the same status in the community as the high-status professions do. Their work will be organized the way professional work in law firms, accounting firms and engineering firms is organized. There will be a real career in teaching. Master Teachers will be paid as well as principals and other professionals who need advanced degrees. When most students get to the end of 10th grade, they will be good writers and they will be several years ahead of where they typically are now in mathematics and better readers too, on par with their peers in the top-performing countries.

The gaps in performance between the students in the top tenth of the distribution and the bottom tenth will be much smaller than it is now. There will be only about half as many students in special education as there are now—only those students with severe cognitive or physical disabilities—because the other students who are now in special education will not have to be assigned to special education in the first place. Those students who really need special education will get



greatly increased resources and those who really did not need it will perform at much higher levels because they and everyone around them will expect much more of them. There will be many fewer dropouts.

Because the vast majority of students will end tenth grade far ahead of most of the students at the end of tenth grade now, there will be many more students who will be able to take demanding board examination programs qualifying them for admission to the world's best universities, like a program of AP courses, the IB program or the University of Cambridge IGCSE Program, and the students who decide to enroll in those programs will be much more successful than the students who now enroll in them, because they will be much better prepared. But students who do not want to go that route in high school will have the option of doing a full Associate's Degree program in high school at no cost to their family or enrolling in a high-quality career and technical education program that will prepare them either to start a rewarding career right out of high school or for enrolling in a postsecondary polytechnic technical education program. And you will get all this for not much more than you are spending now.

There will be many more Michigan high school graduates going to college, including the ones who will leave high school with an Associate's Degree, and who will therefore need only two more years of college to get a Bachelor's Degree. Many more students who enroll in college will complete college because they will be much better prepared to succeed there. Because many students will complete an Associate's Degree in high school, many community colleges will become polytechnic universities, offering advanced technical education in many fields to students who began a demanding applied technical program in high school and want to continue with it in college.

The results for many Michigan students—probably as many as half of the whole cohort—will be transformative. These are the students who now leave high school with very poor reading and writing skills and able to do basic high school mathematics only with great difficulty. But these changes will also open up many possibilities for those in the upper half of the distribution that are now closed.

This may sound like a dream, but it is no more than what the best of the top-performing countries do now. To match that accomplishment, Michigan will have to study what the top performers have

done and how they have done it very carefully, but we know it can be done, because they have done it.

We have a lot to learn from the top performers. For half a century or more, we have not thought that we needed to learn much from anyone. But these things go in cycles. From the middle of the 19th century well into the 20th century, the United States led the whole world in public education, first with our public elementary schools, then at the turn of the 20th century with universal secondary education, and then at the end of World War II, with the world's first mass higher education system. The world beat a path to our door to see how we did it, so they could go back and build their own.

But if you look closely, you will see that, as the United States was designing the system we just described, we stole the idea of public elementary schools from the Prussians. We took the design of our vocational schools from the Scots. The idea for the research universities came from the Germans. Our educators were doing all this borrowing while our industrialists were learning the most advanced methods of steel-making and the basics of our chemical industry and much more from the Germans.

The people who came to learn from the way we built our education system after World War II went home and put what they had learned to work. And they did more than that. They matched the performance of our system and then figured out how to do it even better.

Isn't it our turn now? These are the cycles of history. Michigan has a chance now not just match the Chinese and the Singaporeans and the Japanese, and the Finns and the Estonians and the Canadians, but, if you have the will, to once again take the lead and show the way.

Appendices

Appendix I: Commentary on the Launch Michigan Framework

We applaud Launch Michigan for its ambitious aim to create a Framework for the reform of the state's education system. The Framework offers specific proposals designed to address important issues in ways that make a lot of sense to us, proposals that should be acted on as soon as possible. Some of those proposals would make your education system fairer than it is now. Some would improve the way it is governed and others would improve the effectiveness of key education agencies. Still others would address the pressing problem of inadequate teacher compensation. All of those proposals address real problems and should be priorities for your legislature.

However, as we said in our full report, we believe that the proposals made in the Framework fall far short of what would be needed if your aim is to enable your students to perform at levels comparable to the performance of students in the countries with the world's best education systems. We argued the case for making that goal your goal in our report.

It is that perspective that we adopted when we reviewed the Launch Michigan Framework. Our critique of the Framework was based on what we have learned over 35 years of studying the countries with the world's best-performing education systems. We were asking ourselves at every point how what you are proposing compares to what they have done to get to the top of the world's education league tables.

That is admittedly a high standard. But we believe it is the right standard for the reasons presented in our report. And we believe it is a standard that you can meet, if you decide that is what you want to do.

Overall

- Over the decades we have been doing this kind of research, we have developed a framework that we think accounts for all of the major determinants of education system success at scale. Address them all in a sensible way, and you are very likely to build a very effective system. Leave of one or more out, and you are likely to fail. At the top level, there are only four components to the structure we use, as follows: 1) World-class Teachers and School Leaders, 2) A World-class



Learning System, 3) Broad Supports for Children and Families to Ensure Students are Ready and Able to Learn, and 4) A School Finance, Governance and Accountability System that enables the people who work and learn in the schools to function at the highest possible level. We suggest you adopt this going forward rather than organizing a plan around the system principles of performance, resources and accountability that the current Framework uses, as it is not specific enough to education to analyze education systems at scale.

- The Framework is presented as a series of discreet proposals rather than as one systemic reform plan, all the parts and pieces of which are designed to support one another. There are a number of your proposals that could and should be parts of such a plan, but we think that you will have more success in gaining support for those proposals if they are presented in the context of a broader, more systemic approach than if they are presented in their current form.
- In a different version of the same issue, the goal of the new education system you are trying to create is not clear, either in terms of the standards students will be expected to meet or how that relates to the billions of dollars in new funding Michiganders will be asked to raise for a new system. Language like “much improved” or “significantly improved” does not give the reader confidence that this set of reforms will be any more effective than the reforms that preceded it.
- In some places the Framework aims to have a system benchmarked to the best education systems in the world, but in other places, only to other U S. states. These are very different targets. If you want to produce students who are as well-educated as any in the world, you need to be clear about where you will look for the policies and practices that would enable your students to perform at world-class levels.
- The document proposes measures intended to get educators to use “evidence-based” policies and practices. But most of the research on which those “evidence-based” policies and practices are based was gathered in the United States, not in the top-performing countries. If you want to match the performance of the best education systems in the world, we think it is very important that your plan be based on careful study of the policies and practices they have used to get there, not the policies and practices in wide use in the United States.

Performance



- We fully support Launch Michigan’s effort to create a new College and Career Ready (CCR) standard for the state and commit to getting all students to this standard. That said, we have some comments on how the CCR standard in the Framework is defined and how it would be used.
- The definition of the CCR standard should be clarified. We think you should make it clear that the CCR standard, if met, would enable a student to perform at levels comparable to performance of students in the top-performing systems across the globe, the students with whom they will be competing with economically when they are in the workforce. The CCR standard is the cornerstone of any effort to ensure Michigan puts itself on a pathway to competing with top-performing educational systems.
- What it would take for Michigan students to reach your CCR standard needs to be made explicit. We think that standard should be based on a combination of the standards set by student performance in the countries at the top of the global league tables and a careful study of what it takes to be ready to be successful in the first year of your typical community college programs. Our best guess, based on our research, is that it means raising the average performance of students graduating from Michigan high schools in math by close to three grade levels, improving their reading performance by at least two grade levels and greatly improving their writing ability. We would be happy to talk with you about the way we arrived at these metrics.
- These goals will not be easy to reach. It will require redesigning the Michigan education system. The state will likely need to develop a 10+ year plan to get there. It is important, we think, to keep this as the goal rather than lower your sights to something “more achievable” as a first step. States that have tried to start with a more modest goal and then ratchet up the standard have failed, whereas states (like Massachusetts) that have set their goals high at the outset and kept them there have come much closer to achieving them. We were glad to see that the Framework would not implement full consequences for the students or others until 2038 when a full cohort of students would have moved through the redesigned system.
- If the CCR standard is set at “what it takes” to succeed in the first year of a Michigan community college, we agree with the Framework that the right place to set this CCR standard is the 10th grade, not the end of 12th grade. Put another way, your students should be performing well



enough at the end of 10th grade to succeed, at that point, in the first year of your community colleges' credit-bearing courses. This is because the curriculum in community colleges in the United States are the equivalent of what is in the secondary school curriculum in the top-performing countries.

- We agree that students who reach the CCR should be offered a choice of post-CCR programs including those that prepare students for competitive colleges (such as AP or international exam programs like IB or IGCSE), community college programs, or demanding programs of career and technical education (CTE) leading to the acquisition of widely recognized occupational credentials. A few points:
 - We think it is very important that the community college programs offered to high school students allow them to achieve an Associate's degree while still in high school. This will make these programs much more attractive to both parents and students.
 - We also think that all students should be offered access to all of these options, even if offered by different schools. We were not comfortable with language in your Framework that suggested that career-based high schools and magnets could be exempted from offering college preparatory programs using international exams like IB. No school should be relieved of the requirement that they either offer the program the student wants or find another school the student can easily get to that offers it.
 - And no school should be able to offer a CTE program or any other post-CCR option to a student who has not met the CCR requirements.
 - The Framework says that attaining a CCR standard should be a criterion for graduation. We think that is a mistake. The CCR standard will be a much higher standard than your current de facto standard. There will be students who have managed to get all the way to the finish line, in the sense of attending their classes through the 12th grade, but who simply can't, for whatever reason, meet the requirements of the CCR. Many employers offering many jobs that do not require a great deal of cognitive effort do not need much more than that. They want people who will show up for the work at hand and do their best. Far better for both such employers and for these students to get a diploma that recognizes the effort they made to show up and do the work at hand than to be grouped with those who did not. The reality is



that, in many places, the high school diploma is little more than an attendance certificate now. If you don't do this, we think you encounter a groundswell of opposition to the whole plan from parents who worry that adoption of the plan will consign their children to a life of constant struggle.

- As mentioned above, we think you need to think carefully about how to define and assess the CCR standard, as there is no clear understanding of what college and career readiness means in the United States. NCEE undertook a national study of what level of reading, mathematics and writing was actually expected in first year community college courses by examining the texts, syllabi and exams in a sample of courses across a range of the most popular areas of study. We involved some of the country's leading reading experts in assessing the reading level of the texts and some of the country's leading math experts in determining the topic content of the mathematics textbooks and we asked the community college instructors to send examples of graded writing samples from their students, so we could analyze the implicit writing standard. We discovered that the majority of texts were written at an 11th or 12th grade level, but typical high school students had a hard time comprehending them because their high school texts are not at that level. Most of the content of the introductory mathematics courses in the nation's first year community college mathematics is the topics in Algebra I, a course that is typically taught in the first year of high school, and the majority of high school graduates come to community college not ready to take that course and succeed in it. Most of the community college instructors who taught courses other than English composition we talked with told us that they no longer ask their first-year students to write anything, because they cannot do it and they said they were not hired to teach basic writing skills. We would be happy to share the methodology we used to do this study and to help you set standards on appropriate assessments to measure whether students achieve it. Having this kind of empirical data on exactly how far your graduates are from being ready to succeed in community college is the indispensable step in setting the CCR standard. We think that replicating our study in your state is the first thing to do as you set out to implement the CCR in Michigan, to decide what you actually mean by CCR and to settle on a way to measure it.
- Once the CCR standard is set, Michigan will then need to redesign its curriculum and build the learning progressions and supports students will need to achieve these in 10th grade. This is no

easy matter and it cannot be done without greatly increasing the capacity and resources of the system and refocusing the system on the kind of practices and policies that have been shown to be successful. More of the same will not do it. The current Framework has no actual plan for changing the instruction that students get through school from kindergarten through time they graduate, nor is there a plan for developing teachers' capacity to help them make what amounts to three more years of progress in the 12 years they have in school than they make now, in order to match the achievement of their peers in other countries. Without serious plans of this sort, plans for delivering on the promise of the CCR, the business community, and advocates for students and educators will likely have no faith that this effort will result in any real change and the state will risk spending more money without improved outcomes.

- In addition to establishing a rigorous academic foundation for all Career and Technical education (CTE) programs, Michigan will also need to launch a substantial effort to study the CTE programs in top-performing countries and rethink how CTE is provided to students in Michigan. The current Framework includes CTE but contains no description of what a world-class CTE would look like or what is required to build one. In top-performing countries, students are offered two-to-five-year programs with very high academic and occupational standards (for everyone from electricians to air traffic controllers) that involve substantial work-based learning. This is far from what is typically done in Michigan and the state should not underestimate the work to be done to design and implement such programs. It will need to be done in partnership with community colleges and with regional workforce boards, as it will need to be part of well-thought-out career pathways that include initial, advanced and ongoing training in key industry areas.
- The Framework says that districts whose students are not performing will need to create individual acceleration plans for these students, based on evidence-based practices. A key issue for us, as mentioned above, is that it is not clear to us what “evidence-based” practices are since in our experience there is “evidence” for the effectiveness of almost any practice you can think of. This “evidence” is generally developed by researchers looking at practices in U.S. schools. The United States has relied on “evidence-based practice” for many years without any appreciable improvement of outcomes at the high school level, while costs have been steadily rising. If Michigan wants to build its education system on the evidence-based policies and



practices that contribute to highly successful education systems, it will have to look for evidence in those systems.

- We doubt that the creation of individualized education plans will be very useful as levers for improving student performance. Instead, what we see in the top-performing systems is teams of teachers regularly getting together to identify students who are beginning to fall behind and pooling what they know about that student to diagnose the problem and come up with a strategy for dealing with it, then assigning one of the team members to implement their plan and come back to the team with a report on how well their plan worked, developing another plan if the first one did not work and continuing that process until the student is where he or she should be. Without a process like this, formal individual education plans will produce paperwork but not progress. With a process like this, you don't need all the paperwork.
- The Framework proposes updating the current school rating system. We agree that the state's rating systems are not helpful and agree that it should be aligned with the one in place to meet the federal ESSA requirements. What families are most interested in understanding is how well students do on the exams that determine their next steps and the assessments that give them a sense of how well their students are doing. They also want to know how well subgroups of students do on these exams. Much of this information is currently provided by the Department of Education's dashboard.
- Finally, we support the Framework's efforts to provide social, health, financial and educational supports for children and their families before they come to school and once they are enrolled. These include proposals to expand Michigan's pre-kindergarten program for four-year-olds and the state's EarlyOn program for children 0-5 with learning issues and to add weighted funding for disadvantaged students in the resources section. The Framework also includes provisions to provide Out of School Time (OST) enrichment for students and expand supports through the Integrated Student Supports (ISS) proposal. We do think that there is more to this agenda, however, and suggest you consider expanding these provisions to include the kind of comprehensive supports provided in top-performing countries to ensure that students are ready and able to learn when they arrive at the school in kindergarten and continue once in school. These include: parental leave and support for new parents, high-quality and affordable child care, pre-k for three-year-olds, community school programs offering wraparound social, health,

mental health and enrichment to all students in school. Michigan's existing school-based health centers and effort to expand these are a good foundation. We think this agenda is critical for the success of the education system, even if some of it falls outside the authority of the education system.

Resources

- We agree that Michigan's system is currently underfunded and inequitable. The goal of investing more than \$3.5 billion in your education system, based on the School Finance Research Collaborative report, is ambitious and warranted. It is based on APA's approach, which we support and which many other states in the United States use, of weighting funding so that students who need more support to be successful have that support.
- The Framework is not clear with respect to the relationship between its recommendations on school finance and the larger goals and strategies proposed in the Framework. Early on, it says the state will use the new revenues to make "strategic investments" towards "significant and sustained progress" but it is not clear whether that is a reference to everything else in the document or to particular proposals. We think you need to be specific about how the funding you are asking for is related to the substantive proposals you are making. You do say, as do the recommendations from your consultants, Augenblick, Palaich and Associates, that the increased funding should be spent on the implementation of evidence-based policies and practices, but you don't say which policies and practices. As we pointed out above, we have found that educators can find evidence for almost any policy or practice. Our strong recommendation is that you confine the use of additional funds to implementation of the policies and practices used by the top-performing countries and that you specify what they are. If you do that, then you can build a budget for the whole reform program that is based on careful analysis of what it would cost to implement policies and practices based on those used by the top performers, adapted for use in your state. You can then make a powerful case to the Governor and the legislature and the public that what you are asking for is what the experience of those countries shows is needed to match their performance. You are also then in a strong position to insist that the schools not get that new money unless they are making a good faith effort to adopt those policies and practices.



- The Framework’s proposals for changing how the Chief State School Officer is selected and how the Michigan Public School Employees Retirement System works are both very good ideas for beginning to address the broad governance and capacity issues in Michigan. Again, these alone are far from what is needed to truly build an aligned and coherent system with the capacity to implement the broad reaching reforms Michigan needs, but your proposals are clearly steps in the right direction.
- We understand the need for accountability. But our reading of the proposed Student Achievement and Investment Plan is that it could easily become an elaborate compliance system that would be very costly but very unlikely to lead to much improvement in student performance. Like other parts of the Framework, it insists on the use of evidence-based practices, which we think is of as dubious, as well as ideas provided by various Michigan institutions, but very little reference to the policies and practices used by the countries that are far ahead of Michigan. In the end, it is likely to be a long, detailed checklist of sources of guidance for Michigan. We think you would be better served by waiting until you have studied what the top performers have done and then, using that knowledge, you have decided what the criteria should be for approving school and district plans. You don’t need to do this now. When you do it, you need to make sure that teachers and school leaders see not a checklist but rather a design for the kind of schools that are good for students and would be rewarding to work in. They will have to see in those designs a bridge from where they are now to a different vision of schooling that they can embrace with enthusiasm. If money is withheld from a school because the school has not been able to show that it will be used well, it should not be taken away but only held back while the state and district find a way to help it develop a plan that has real promise of actually working. This should not be a matter of running through a checklist, but of providing sympathetic help to a school that may be in chaos and is having a hard time organizing a thoughtful improvement plan.
- It takes world-class teachers to produce world-class student performance, but we think this agenda has yet to be fully developed. The Framework does suggest creating a career progression and suggests better approaches to teacher evaluation, but changing how schools are organized and improving teacher evaluation are only two parts of a much larger agenda. Teachers need to be very well-educated before they can be well-trained, so that they have a



deep understanding of the subjects they are teaching, including our elementary school teachers. This means rethinking admission standards for universities that offer teacher education programs and for admission into those programs. As we explained in the report, scholars differ on which segment of our high school graduates we are getting most of our teachers from, compared to where the top performers are getting their students from. But the most optimistic estimate for the United States is that we get our teachers mainly from the average high school students going on to higher education. The top performers vary in where their teachers come from: some get their teachers from the top tenth and even the top five percent of their high school graduates, but some get their teachers from the middle of the distribution like the United States. But their “middle” is achieving at a level far above our “middle.”

- The Framework suggests a pay raise for Michigan teachers. As matters stand now, Michigan teachers make a little more than the national average. But they make a good deal less than other professionals in high-status professions requiring the same amount of education. Attracting well-educated high school students to teaching means attracting students who could be engineers, architects, attorneys or accountants. So, most top performers pay their teachers at levels comparable to pay in occupations requiring the same amount of education. But increased pay is part of a larger package that would change the way teachers’ work is organized from the factory-like model that prevails in the United States to a model that is much more like the way professional work is organized in law firms, engineering consultancies, architecture firms and accounting firms. These countries do this because they know that getting high school students who have academic records that could get them into the highest status jobs in the society won’t go into teaching just to be paid what these professionals make. They want workplaces that treat them as modern professionals are treated elsewhere. These countries have done that by changing the way schools are organized and managed, so that teachers work together in teams to improve the curriculum, perfect their instructional practices and support students who are starting to fall behind. In no other country do teachers spend almost all of their working hours working on their own in front of students. Countries that are leading the changes in the way the work of teachers is organized have formal career ladders for teachers. A career progression is proposed in the Framework and this is something we support, but the description in the Framework is not tied to any proposed change in the way teachers’ work is organized. It is precisely that connection that makes all the difference in the places it has been implemented



well. As teachers acquire more expertise in these systems, they get more responsibility, more authority, more status and more compensation. This would be a huge—and necessary—change in Michigan. We think this proposal, if it is to truly raise the quality of teachers in the state, needs to be thought out and designed in much more detail if it is to be the cornerstone of reorganized schools.

- There is currently no plan in the Framework to provide training and support to teachers so that they understand and can implement a new reform agenda of this kind. This training and support could be provided by your schools of education or by your ISDs or others in the state contracted for this purpose. The capacity of the ISDs and of the schools of education, varies widely. You would have to address this challenge, but the bigger challenge is that none of these institutions will have more than a tiny handful of people who themselves studied the strategies used by the top performers, much less experience teaching others what those strategies are and how to use them. So, whoever you end up relying on to help the school and district staff understand the need and the rationale for the new system and train them in how to implement it, you will have to find a way to train the trainers first. That will be a big job, a job nowhere mentioned in the Framework.
- We agree that special education services in Michigan—like in many states—need to be rethought and that the current funding levels are nowhere what they need to be to help many of the students who need support. We want to point out that when we compare special education services in the United States to those in top-performing countries, it is striking that the percent of students assigned to special education is about half of what it is in the United States. This follows from research that we have done, and many others have as well, that suggests that many students assigned to special education in the United States do not belong there. These are students who have behavioral issues or have learning issues that could be addressed in a mainstream classroom but were not identified and addressed early enough to prevent the students from being years behind academically. Top-performing systems are organized to identify students who are falling behind quickly, diagnose the cause of their problem and deal with it before the students fall so far behind that their behavior leads to them being identified as a special education student. If this were done in Michigan, the cost of special education would greatly decrease even as student performance shoots up, and that would be true even if some

of the savings went to increase the amount available to address the challenges faced by students with severe physical or learning challenges.

- We reiterate what we said in the performance section concerning our cautions about relying on “evidence-based” practice as a criterion for determining what to spend money on. We would add to that a caution about the use of the term “adequacy” in education funding. It is far from clear what is an adequate level of funding for a high-quality education. International research shows that beyond a baseline level, it is far more important to focus on how money is spent than how much money is spent. Data from PISA show very little correlation between student performance and per student funding across the whole PISA system, after a very low funding threshold is met. That said, there is clearly a need to address the highly inequitable funding structure in Michigan, without losing sight of the importance of ensuring that all public monies are well spent.

Accountability

- We agree that Michigan’s education system needs strong accountability, to ensure that the outcomes are achieving the goal of preparing students to be successful in further education, their career and their civic and family life. An accountability system, however, should not operate independently from a broader system of planning, governing and managing for system improvement. These functions need to be fully integrated. If they are not, to take just one example, you get a system in which accountability stands alone as the lever of change. That kind of system assumes that the people on the front line have known all along how to improve the outcomes, but have, for some reason, refused to do it. It is exactly that kind of “measure and punish” accountability system that has failed over the last two decades in the United States. They do not exist in education in other parts of the world. The best education accountability systems build on the kinds of norms that we commonly see in the best professional service organizations, like engineering firms and law firms, in which the success of each professional depends on the success of the other professionals and so each professional is accountable to the professionals around them on their teams as well as their supervisors. In organizations built that way, all the professionals know just who is measuring up and who is not, and they are the first to push out professionals who are not doing the work expected of them.

- It might be useful to consider the principles that underlie a very successful system of education governance to understand how this is very different from what we find in the United States and in Michigan. In many top-performing systems (which are often parliamentary democracies) the head of the party in power appoints a minister of education from his or her party who is part of his or her cabinet who generally oversees all parts of the education system; reporting to the minister is a permanent secretary who is a seasoned education professional who stays in his or her role regardless of the party in power and is essentially the chief executive of the whole education system. Superintendents, principals and teachers all report to this person. There is no question about who is in charge. The people who work in the ministry are highly educated education professionals; it is a job to be aspired to. The entire school system is run as a single organization which means there are uniform expectations for students and for financing of schools, teachers are trained to teach the state curriculum, tests are designed to measure how well it is learned.
- Michigan has very little of this; governance is extremely atomized. Each district is its own system; schools of education operate absent any oversight; higher education is not coordinated and is not aligned with K-12; neither boards of education nor the chief executive or the governor really have any control over the system. When we look at this we wonder where the capacity to oversee and implement a major redesign of the education system will come from. We are not suggesting Michigan shift to a parliamentary democracy, but we do think a new system of governance needs to be designed for the Michigan context, which will likely involve constitutional changes. Fixing one piece—like creating a stand-alone accountability system or changing the way the superintendent of public instruction is selected—will not really make it function effectively. It is likely to require a set of connected reforms.
- We commented on letter grade school report cards in the performance section of the Framework. Another note here: If the system will be organized around getting students to a CCR standard by 10th grade, parents should have information about the progress their own child is making toward getting the CCR by the end of 10th grade and the whole community should get easy access to information about the degree to which students at each major transition in their school career— like going from elementary to middle school and from middle school into high school —are on a path to getting their CCR by the end of grade 10. This should be done for the

whole cohort and for each protected group of students. And they should also have information about the success of students in the various post-CCR pathways. They should get the data on their school but should also see how their school's performance compares to other schools serving similar populations. This information should be at the very core of the public accountability system. What we just described is close to what your dashboard does now. The major difference is that we would revise it to make performance relative to the CCR standard the heart of the reporting system.

- There are provisions in the Framework designed to address the issue of chronically low-performing schools. While we understand the motivation to set clear policies to ensure that schools do not continue to under-serve students year in and year out, the proposed policies are ones that many states have tried and which have not led to better overall outcomes for the system. Top performers often take a different approach. They generally have leadership development systems for education. One of the key tasks of leaders is asking first rate principals to take one or more struggling leaders under their wings, while continuing to run their own schools. This approach involves more than the leader; it is the whole team of teachers and educators who work with the struggling school. Leaders who take on such assignments and are successful in them have a much better chance of promotion than those who don't, so they have a strong incentive to take on struggling schools and do a good job with them. The "Partnership Model" used by some of your ISDs have some of these features, and so it might make sense to draw on some or all of the ISDs to provide help to their districts in implementing this model.
- We agree that teacher evaluation in Michigan is problematic and support efforts of Launch Michigan to improve the current system. But we think the discussion of teacher evaluation needs to be reframed as only one part of a comprehensive performance management and professional learning system. This is what top-performing systems do. Teacher evaluation on its own is not the solution to issues of teacher quality. The way to improve teacher quality is not to first evaluate and then fire teachers, but to do a much better job of building a much bigger diameter pipeline of first-rate teachers coming into the system, providing much more support as they learn their job on the job and then provide a much richer array of supports for them as they develop their career.

- One last point. We are aware that Michigan is a strong supporter of charter schools, has many of them and has chosen to regulate them only very lightly. There are countries among the countries with very high performing school systems that provide financial support to schools sponsored by religious groups and other private organizations. Those countries, however, typically regulate those schools much more heavily than charter schools are generally regulated in the United States. That includes, for example, requiring them to offer the state curriculum, to report on student performance using the same standardized examinations that the regular public schools are required to use and abiding by many other rules intended to assure the public that these schools offer a high quality education. These systems can usually be found in countries that had a state religion and whose schools therefore were at one time all religious schools or countries that were at one time colonies of other countries in which the colonists set up schools run by the religious authorities in their home country before there were any public schools. Because this background is so different from what we see in Michigan, we don't see much in the experience of other countries that would apply to Michigan. The way and the degree to which you regulate charter schools, it seems to us, is more a matter of your value choices than choices made on the basis of what will lead to the highest student achievement, the most equity and the greatest efficiency and productivity.

Appendix II: People Interviewed

Amber Arellano, Founding Executive Director, MidWest Ed Trust

Rick Baker, President and CEO, and **Nate Henschel**, Director of Government Affairs, Grand Rapids Chamber of Commerce

Dr. Charley Ballard, Professor of Economics, Michigan State University

Brian Calley, President and CEO, and **Alexa Kramer**, Director of Government Operations, Small Business Association of Michigan

David Campbell, Superintendent, Kalamazoo Regional Service Agency

Lindsay Case-Palsrok, Vice President, Business Leaders of Michigan

Jeff Donofrio, President and CEO, Business Leaders of Michigan

Kristin Dziczek, formerly Senior Vice President of Research, Center for Automobile Research; Policy Advisor, Federal Reserve Bank of Chicago

John Engler, former Governor of Michigan

Rob Fowler, Affiliated Consultant and pending CEO, Public Policy Associates, Inc.; former President and CEO, Small Business Association of Michigan

Melissa Goldberg, Director of Competencies and Credentials, Corporation for a Skilled Workforce

Dr. Matt Grossman, Director of the Institute for Public Policy and Social Research, Michigan State University

Paula Herbart, President; **Doug Pratt**, Director of Public Affairs; and **Michael Shoudy**, Executive Director, Michigan Education Association

Ron Hall, CEO, Bridgewater Interior

Dennis Hoeg, Vice President and North America Chief Operating Officer, Nexteer Automotive

Eric Hoppstock, Superintendent of Berrien Regional Educational Service Agency

Mike Jandernoa, Board Member and former CEO, Perrigo Company



Brandy Johnson, President, Michigan Community College Association

Dr. Tina Kerr, Executive Director of the Michigan Association of Superintendents and Administrators

Florine Mark, Founder, Weight Watchers

Karen McPhee, Education Advisor to Governor Rick Snyder; retired Superintendent of the Ottawa Area Intermediate School District; Educational Consultant

Dr. Scott Menzel, Superintendent of Scottsdale Unified School District (Arizona); former Superintendent of the Washtenaw Intermediate School District

Jen Nelson, Chief Operating Officer and **Steve Bakkal**, Senior Vice President, Michigan Economic Development Corporation

Dr. Naomi Norman, Superintendent of the Washtenaw Intermediate School District

Dan Quisenberry, President, MAPSA

Ambassador John Rakolta, CEO Walbridge Construction

Dr. Michael Rice, State Superintendent of Public Instruction and **Dr. Sue Carnell**, Deputy State Superintendent

Doug Rothwell, former President and CEO of Business Leaders of Michigan; Chair, Chancellor's Economic Development Council and Executive in Residence, University of North Carolina at Chapel Hill

Doug Ross, President, America's Promise Schools; former senior advisor for Michigan Prosperity to Governor Whitmer; former State Legislator and US Department of Labor Assistant Secretary

Dr. Sarena Shivers, Deputy Executive Director, Michigan Association of Superintendents and Administrators

Tim Sowton, Vice President of Government Affairs and Public Policy, Business Leaders of Michigan

Kevin Stotts, President, Talent 2025

Punita Thurman, Vice President of Programs and Strategy, Skillman Foundation

Dr. Andrae Townsel, Superintendent of the Benton Harbor Area Schools

Adam Zemke, President, Launch Michigan; former State Representative

Appendix III: Documents Reviewed

Education

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The Best Education System for Michigan’s Success, *The 21st Century Education Commission (2017)*

Business Leaders’ Insights: Leading Practices in K-12 Education That Can Improve Student Outcomes in Michigan, *Business Leaders for Michigan (2018)*

Career and Technical Education in Michigan: Access and Participation, *Youth Policy Lab at UMich and Georgia Policy Labs at Georgia State University / Brian Jacob and Jeremy Guardiola (2020)*

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A Marshall Plan: Reimagining Michigan Public Education, *Michigan Achieves! (2020)*

Michigan Career and Technical Education Facts 2019-2020, *Michigan Department of Education (2020)*

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The Education Trust – Midwest (2021)

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A Path to Good-paying Careers for all Michiganders: Improving student outcomes from education,
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Rebuilding Equitably: Overcoming Educational Inequity Through Michigan’s Budget, Tabitha
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The Road Toward K-12 Excellence in Michigan: How an upgraded financing system can better
support enhanced student achievement, The W.E. Upjohn Institute / Kevin Hollenbeck, Timothy
Bartik, Randall Eberts, Brad Hershbein, and Michelle Miller-Adams (2015)

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Education Reform Task Force (2017)

Economy

American Rescue Plan Recommendations, Michigan Future, Inc. (2021)



Building Michigan's 21st Century Economy: A Report for Governor Rick Snyder, *Building the 21st Century Economy Commission* (2017)

The Business Case for Racial Equity, *W.K. Kellogg Foundation / Ani Turner and Beth Beaudin-Seiler* (2018)

Four state policy levers to end Michigan's two-tier economy, *Michigan Future, Inc.* (2021)

MI New Economy, *Governor Whitmer* (2021)

Michigan's Career Outlook Through 2028, *Michigan Department of Technology, Management, and Budget* (2020)

Michigan's Road to Top Ten, *Business Leaders for Michigan / Randi Berris* (2022)

A New Economic Development Strategy for Michigan: Put People and Place First to Create Good-Paying Jobs, *Ned Staebler, VP for Economic Development at Wayne State University; and Lou Glazer, President of Michigan Future, Inc.* (2021)

Overcoming Barriers for the Underemployed: Opportunities for Michigan to Grow, Leverage Its Labor Force, *Citizens Research Council of Michigan* (2020)

The Relationship Between Education and Income: Separating Fact from Myth to Inform State Strategy, *Michigan Future Inc.* (2021)

Governance

Imagining What Should Be: Robust Legislative Oversight in Michigan, *Citizens Research Council of Michigan* (2021)

Improving Oversight of Michigan Charter Schools And Their Authorizers, *Citizens Research Council of Michigan* (2020)

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