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For decades, General Motors was the heart of the American economy. Then in early 2009, the one-time market leader in the automobile industry found itself on the brink of insolvency. More recently, GM has been in the news once again, this time touting its back-on-its feet strategy. Our K-12 education system could learn a few lessons from the business dynasty’s failures, and more importantly, from the savvier overseas car companies that nearly put it out of business.

First, a comparison can be made: In the same way that GM was the market leader, the United States K-12 education system was once the best in the world. Countries around the globe worked hard to reach a comparable level of American academics.

To a large degree, that is no longer the case. For much of the first decade of this century, the test scores of the U.S. students have fallen behind their international counterparts, particularly in science and math, in Singapore, Korea, Hong Kong, and Japan, to name a few. The Programme for International Student Assessment (PISA) results, released in December 2010, echoed this continuing trend. The top performers on PISA, an international standardized exam administered to 15-year-old students, were Shanghai, Korea, Finland, Hong Kong, and Singapore, respectively. The United States ranked 17 out of 65 participating countries and economies (which included individual states and cities).

The scores on the latest National Assessment of Educational Progress (NAEP) indicate that most students across the nation continue to perform poorly in science. NAEP’s main assessment, administered to students in grades 4, 8, and 12, showed that less than one-third of students performed at the Proficient level in science, meaning they could demonstrate competency over challenging subject matter. Of students in grades 4 and 12, only 1% scored in the highest group; 2% of 8th graders scored in the same group.

The NAEP results in reading and math were not much better. Although national reading and math scores of 12th grade students rose slightly, both sets of scores were not where they should be. Reading scores stayed flat for 4th graders and rose slightly for students in grade 8. Moreover, at the current pace of education progress, it could take more than 100 years in some states to close the achievement gap between white students and students of different races, according to the Center on Education Policy, which released a study, State Test Score Trends through 2008-09, Part 2: Slow and Uneven Progress in Narrowing Gaps.

Doing Business as Usual

So, why does the United States continue on this downward trend? Perhaps it could be that our school system has had the same attitude of “this is the way
we do business” as the American auto industry has had for decades. GM and other American automobile companies ignored worldwide changes that were occurring on a monumental level around them, until their business model imploded. Even as gas prices soared and became a major concern among the public, gas-guzzling SUVs continued to be the industry’s standard business model.

Compare that to the overseas companies, such as Toyota and Nissan, which took a much different approach. They developed small energy-efficient cars, most notably during the oil crisis of the 1970s, to survive in — as well as to reflect — a changing world.

Schools in other nations have taken new approaches in education for the same reason. Countries that knew they were not number one in education, or in economic standing for that matter, took a few risks and tried different approaches in the effort to propel their students forward academically. In other words, they took an entrepreneurial approach. The idea was not to be better than the United States — many of them didn’t think they could directly compete with American education. But they knew they had to be different if they were going to change their current system, and for many of these countries, that kind of thinking has effected change.

Best Practices to Next Practices: Thinking Differently for Real Reform

One of the most recent elements of the “business-as-usual” model as it relates to American education is what has turned into a national buzzword over the past several years — “best practices.” Originating in the business world, the term largely encompasses standardized strategies that have been deemed successful.

But, using best practices exclusively as a mode for innovation contradicts what schools really should be doing. Education leaders insist that they want their schools to be innovative, yet teachers are required to use limited best practice strategies. If a teacher offers a new idea, a likely response is: “That’s sounds like a good concept, but where is the data that backs it up?”

That’s not to say that schools should ditch all of their best practices, especially when it comes to research-based strategies. For education leaders, there’s good reason to implement best practices. After all, who can argue against what seems to be working in the best schools in the country? Indeed, in its mandates for higher standards attached to the recent school-improvement grants, particularly in reading and math, the U.S. Department of Education has called for better use of data to ensure that students will have met these more rigorous standards. Hard data is an important component in the school improvement process.
But, here’s the catch: In order for schools to truly be transformed into something different, educators have to think differently — and offer something creative and new. Being able to introducing novel ideas means considering and implementing something so new that it has not been proven to work. This is the kind of environment in which we need to place ourselves. There may be critics who will say we shouldn’t be experimenting on our young people. But, if the current system isn’t getting the job done, then we need to do what innovators and entrepreneurs do. We have to work our way toward a new and largely untried solution, even if the first version is not perfect in its original form and we need to launch versions 2.0 or 3.0.

Think about the first television set or computer or clunky cellular phone. They were far from perfect devices when they were initially released, but they were tremendously innovative, and, over time, they transformed the very fabric of society. What has been a major business model — launching something new and then improving it based on public feedback — should be a key strategy in school reform.

In order for such transformation to work in our education system, schools must first change their current practices. Even when there is no data to back them up, they must have the courage to try something that has never been introduced before to their students in the classroom. During this process of transformation, data will become a critical factor as educators begin to collect information and statistics on implementing a novel program or instructional practice. This new data can then be used to drive changes in the current system, and eventually education policy.

Next Practices: Infusing Innovation for a 21st Century School

Many of the latest research-based best practices come out of a 20th century classroom. Most of them are textbook driven, classroom driven, and teacher directed. But if that type of classroom is not a reflection of the future, then we have to break away from some of the research-based best practices and attempt to use what the business world and a few education leaders refer to as “next practices.”

The concept is simple: Schools must focus time on creativity and innovation — new ideas that have not been proven to work. The next best practice isn’t about being better; it’s about being different. Who knows how much time should be spent on such innovative strategies? Perhaps it’s 20 or 30%, with the remaining time spent on best practices. Teachers, in particular, should be encouraged and empowered to help determine what this ratio might be. Then, when some of these ideas become accepted best practices, schools should already be working on a new set of collaborations that link to new best practices.
Sustaining and Disruptive Innovation

Broadly speaking, there are two types of innovation: sustaining and disruptive. Typically, sustaining, or what sometimes is referred to as “incremental,” innovation improves an existing product or service. It primarily serves existing markets. We have better refrigerators, TVs, and cameras, for instance, than we did a few years ago. The second type of innovation, disruptive innovation, disrupts or displaces an existing market, as part of its name indicates.

Disruptive innovation is not about making an existing product or technology better. It’s about creating something that’s completely different or revamping an existing product in such a way that it will never again be seen as the same thing. Take the transistor radio, for example. It allowed people to listen to the radio anywhere, not just where there was an outlet for the plug, because it was portable.

The downside of disruptive innovation is that the first versions are not perfect. Although people could take transistor radios wherever they wanted, the sound quality was not comparable to the console radio. But, it improved after several models, eventually overtaking the former technology.

In large corporations and small emerging markets, disruptive innovation is at the heart of technological entrepreneurship. New always comes before improved. But most people seem to focus on the latter. They tout the importance of improving existing products and services. They’re not entirely wrong. Incremental improvement is what keeps profits up and customers happy.

But disruptive, or radical, innovation — the creation of products such as microwave ovens, personal computers, MRI systems, and other such leaps in technology — is what determines a company’s future. If Motorola had been content simply to improve its pagers, it would have not have developed the first cellular telephones, and maybe it would have even gone out of business.

In other words, firms that stay competitive over the long haul must be able to introduce new-to-the-world innovations along with improvements to existing products. They must offer performance features never before realized or make their products available to new markets through dramatic cost reductions. The overarching theme here is that if they want to stay on top of their game, companies themselves must continually change. Motorola is not the same company it was 50 years ago. (In fact, at the start of this year, the company split into two independent public companies, Motorola Mobility and Motorola Solutions.)

It would be wise for educators to assess their current school system in a similar entrepreneurial fashion. While it is good to be rooted in best practices, at the same time, we need innovation to serve as a game changer if our young people are to stay ahead of the curve and be successful in an ever-changing society. So if the world is changing, shouldn’t our practices in schools change? Shouldn’t our mindset and work be rooted in creativity and innovation and not just in best practices?
Building a “New Box” for Thinking

Taking an entrepreneurial approach means resisting the notion that everything somehow has to fit the current model. True transformation will not take place if every potential innovation is tailored to sustain the existing education system. In other words, for effective change to accommodate students in today’s world, educators need to do more than think outside the box or “outside the system” — they need to build an altogether new structure in which to spur new thinking. Disruptive innovation, rather than sustaining innovation, will make a real difference, but it is difficult to break free from a system that has been in place for more than 100 years.

The way technology has been incorporated in most schools is a good example of innovation that could have been used to propel next practices, but instead has been used to perpetuate current practices. Over the years, U.S. schools have spent billions to bring computers into the classroom in order to keep up with society’s technological demands. But instead of using technology to create a new model for change and to help students learn new and different sets of skills, schools have incorporated computers into the existing structure. For example, rather than having students use computers to better understand a math equation through a virtual hands-on activity, their use has been largely limited to word processing, much as we used the typewriter more than a generation ago.

Yet, technology can be an optimal learning tool, allowing students to work with graphic and interactive displays, viewing study material as it appears in real life. Technology provides them with tools to obtain immediate results. Distance learning can be an everyday occurrence, with students communicating with each other in the same or separate classrooms or across the country and the world. Organizational and problem-solving skills can be developed through the use of technology and honed for use in the work world.

A visual analogy can drive home this point. In the graphics that follow, the circle represents a school and the triangle represents an innovative idea. Let’s assume the school agrees to incorporate the new idea, but instead of allowing innovation to re-shape the school, it takes the new concept (the triangle) and tries to fit it in its current school configuration (the circle) But the new idea — the triangle — doesn’t quite fit, so the parts of it that don’t conform are not implemented. Unfortunately, it was those elements that had the most potential to become a next practice and an agent for dramatic, positive change.

In contrast, if the school (the circle) stretches to an oval to accommodate the innovative idea in its entirety, the school reaps the benefits of the entire idea — including the next practices. In the illustration on the next page, the circle is stretched to accommodate the next practices. This is how next practices can occur — by stretching the system to accommodate the innovation rather than limiting the innovation to fit within the existing system.
Sustaining innovation tries to fit the idea into the current structure, so the school has to eliminate important parts (next practices).

Disruptive innovation stretches the school into an oval to accommodate all elements of the innovative idea, so the school reaps the benefits of next practices.
Technology and the Global Landscape

Other countries have understood what the technology revolution could do for them and, as a result, they have leveled the global playing field to expand education and job opportunities for their citizens.

Singapore, for example, requires all teachers to work with e-learning techniques and strategies, even if they don’t actually teach online on a regular basis. Education leaders there believe that students will need to be adept in using technology throughout their careers and in the world beyond school. Moreover, 100% of secondary teachers use online learning in combination with face-to-face instruction.

China has digitized its entire K-12 curriculum and is working to train master teachers to teach online to reach students in the most remote areas. India, too, is working on developing an internationally benchmarked K-12 online curriculum through the Educomp project, a private-public partnership. India is also working to develop a $10 laptop for mass distribution. Turkey has also scaled online courses to 15 million K-12 students in just three years through public-private partnerships.

Michigan is one of the few states that are experimenting with online learning in a broader way than what is standard in the United States. In 2008, the state fully implemented a seat-time waiver program that allows high school and middle schools students in participating districts to take courses by certified teachers online and off campus. Many students who have been granted these waivers were either dropouts or at risk of dropping out. Seat-time waivers are also granted to students seeking courses not offered by their home schools and students with physical disabilities.

Are seat-time waivers helping to improve student performance? There probably is no conclusive data so far. But what we do know is that learning happens 24/7 in today’s world of ubiquitous, in-your-pocket access to the Internet. To dismiss the possibilities of online learning because it doesn’t meet the standards of “best practices” is to turn away from a tool that has already changed the way kids (and adults) communicate, collaborate and consume information and allows students of varying skills and interests to pursue their passions.

In Michigan, best practices would have required every student to take district-approved courses by district-managed instructors. But this next practice might very well transform the way students learn and better prepare them for college and careers.

It is heartening to know, too, that individual teachers are taking a leadership role. For instance, during the H1N1 flu virus pandemic in 2009, a science teacher at Kirkpatrick Middle School in Texas conducted a state test review on Twitter because the school was closed due to the flu outbreak. All students attended.

For these schools and this educator, one could argue that their innovative ideas turned into action came as a result of conducting “what if” scenarios or out of
desperation because nothing else was available. It would benefit educators and communities at large to adopt a similar mindset, considering today’s economy in which the education system in its current state and financial environment is not sustainable for the future.

**The “New Normal” Requires a New Way to Educate**

Some educators and communities will argue that our education system is getting better. To some extent, that is true. But it is not enough to keep up with what U.S. Secretary of Education Arne Duncan and others have referred to as the “new normal,” a time during which schools are being required to do more with fewer resources and the harsh realities of global competition face every student.

States continue to slash budgets, and districts are resorting to hiring freezes, layoffs, and closing buildings. One repercussion is increases in class size. In New Jersey, for example, as a result of staff reductions, Herbert Hoover Middle School in Edison had 25-26 students in math classes, up from the previous year’s average of 22. Foreign language classes had 29 students on average, and one social studies class had 30 students.

In the summer of 2010, after Governor Chris Christie slashed school aid by $820 million, the New Jersey School Boards Association conducted a survey in which more than 80% of responding districts said they intended to reduce teaching staff. Of those, more than 40% said they expected to see increases in class size as a result.

Most states do not expect revenues to return to their pre-recession levels for at least two or three years; 40 states had to reduce their general fund expenditures in fiscal year 2010, according to Duncan. Schools received support from federal stimulus money as part of the *American Recovery and Reinvestment Act of 2009*, but the money is running out, and districts are still in dire straits.

One question that is rising above all others in such situations is: What will schools that survive this tumultuous period look like? It may seem daunting to even look squarely at this question. But there is an upside. Usually significant change happens when there are no readily available resources to fix a chronic problem. Many educators say money — more funding — will save the education system. It’s true that schools have basic needs that must be met. But in the end, it is our brains, not money, which will help schools prevail in the face of dwindling budgets, placing innovation on a new playing field.

There are some schools and individual teachers who are using technology as a way to optimize learning despite dwindling budgets. Some teachers schedule virtual fieldtrips when there are no funds for travel. These virtual fieldtrips, many of them free, could be an interactive museum exhibit or a spacewalk on the moon. Schools also access online tutorials for students who need extra help when
appropriate staff are not available and offer online courses off campus when there are no resources available to hire a specialized teacher. Schools across the country also are beginning to take advantage of “virtual desktops” as a low-cost way to bring computing into the classroom.

Desktop virtualization technology allows multiple users to compute at the same time through a shared computer. One person running multiple programs on a typical computer uses on average about 5% of its capacity. The rest is unused. With desktop virtualization, the excess capacity can be shared with other users, which saves on technology and energy costs. Using a few simple hardware devices and a software program, technicians can hook up 7-16 virtual desktops to a single access point, allowing multiple users to work on various programs and applications at the same time.

A Better 20th Century School Is Not the Answer

Much of our current education system is outdated. American educators must understand that students need a different and more diverse set of skills than their parents were taught. The changing nature of work, technology, and global competition have far outpaced what the U.S. education system provides for students, despite the ongoing efforts of educators and communities to improve schools.

Recognizing this, the federal government placed new mandates on schools and allocated $100 billion for school-improvement efforts in 2010. Of that, the $4.3 billion Race to the Top fund was targeted for innovative education reform. It remains to be seen if schools are actually using that money to transform themselves into something new and ground-breaking.

Still, there is something to be learned from the outdated model of the last century for educators who seek true reform. During the earliest stages of the automobile industry, when horses were still the main mode of transportation, Henry Ford said, “If I had asked people what they wanted, they would have said faster horses.”

Initially, there were lots of reasons not to develop cars. There were few service stations and no real roads. Horses, however, were an integral part of everyday life, hauling people and goods from town to town. Why change a good thing, especially if it could be made a little better? What we realize now, of course, was that the act of transformation in transportation meant offering options that the average consumer of the day could not even imagine.

Most educators and the public at large want better schools, but they do not want them to be different. This is a major obstacle in seeking to transform our schools to accommodate what is already the second decade of this century. The bottom
line is, if we really want change to occur in our schools, we have to approach education in new and different ways. Just as making gas-guzzling SUVs no longer works as a business model given today’s economic and energy climate, making a better 20th century school is not the answer to the problems we are facing in education today.

21st Century Teaching and Learning

One way to begin to facilitate the move toward next practices is to focus on student-centered learning instead of teacher-centered instruction. When teachers view their role as facilitators of learning and focus more on the building relationships with students, they can begin to customize instruction based on each student’s need, using software as an important delivery vehicle. Teachers will be able to handle larger classes while paying attention to students’ different learning needs. Students will use computers to access online programs that allow them to learn at their own pace.

A 21st century learning model is about education happening at any time and any place, opening the doors to broader learning communities in which students are able to fulfill credit requirements at various times and places, not necessarily within school walls. This model calls for the school year to be defined in terms of hours of instructional time rather than number of days per year. Like Michigan, New Hampshire is gravitating toward such a model, implementing a seat-waiver program and allowing students to take online courses in place of classroom time. Students also are allowed to take end-of-course exams even if they did not complete the course.

The 20th century model, still largely in place in the United States, focuses on teaching as opposed to learning. It is system-centered and regulated by bells and other time constraints. Learning takes place during a set schedule of 180 days, and students have four years to complete high school. Time and place are the constants in this model, a carryover from the Industrial Age. Students are educated within the confines of classrooms and led by teachers as the primary content providers. Curriculum exists within silos, making interdisciplinary learning and real-world relevant instruction difficult to achieve.

To emphasize again, learning happens 24/7, especially in today’s world of technology and the Internet. And yet, for the most part, schools are still working in an industrial-era model. The results are disappointing: 52% of boys and 43% of girls say school is boring. The high school dropout rate continues to be high in many districts.

21st Century Leadership for Next Practices

For education administrators who want to take the leap toward change based on next practices, their leadership is critical. Administrators can have the best
intentions in wanting to reinvent schools to accommodate today’s students, but may lack an overall vision and the coherency needed to propel their schools forward.

A big part of leadership centered on next practices is developing a culture that not only has standardization (best practices), but also accepts and delves into uncertainty (next practices). For this to happen, leaders have to balance traditional skills with a penchant for innovation. This requires allowing collaborative responsibility among teachers, other staff, and even students for reaching future-oriented goals. Ideals for reaching these goals include trusting an idea (from a teacher, for example), taking risks, and plunging into the unknown to harness innovation. This means understanding and accepting the fact that structure will change as next practices (new strategies) emerge.

As the International Center has long advocated, leadership is a disposition, not a position. Successful leadership does not reside in a single position, but reflects the attributes, skills, and attitudes of the many staff members who take action and improve through effective professional development activities. By growing leadership through the approach of top-down support for bottom-up reform, a culture of change and empowerment will begin to emerge.

Conclusion

Here are some talking points that summarize the focus of this paper as it relates to next practices and embracing an entrepreneurial mindset for real school transformation:

- Business as usual can no longer be the standard. This should be the first lesson when it comes to transforming our schools to accommodate the 21st century world. We have to take on a new mindset, one that thrives on the unknown, appreciates ambiguity, and relishes being different.

- A blend of best practices and next practices is the right mix. Standardization needs to be balanced with new, yet-to-be-proven ideas.

- Focus on being different first and then on being better. If schools want to break free from the 20th century model, different strategies and ideas have to be given priority. “New” should come before “improved.”

- Collaboration is essential for success. Cooperation won’t get leaders the results they need. Collaboration is mutual engagement among all stakeholders to solve today’s complex challenges in schools, in the workforce, and in life. Dedicated time to be innovative is an important concept to support.

- Expect the first version not to be perfect. Perfecting any kind of product or service takes time and requires constant feedback. The same is true for new school programs and initiatives. Schools should not be penalized for initiating new ideas and practices that are not perfect the first time around.