

Time for a Perfect Storm!

By Paula Gangopadhyay, Chief Learning Officer, The Henry Ford

Various trends, forecasts, events and successful innovations as shared by Elizabeth Merritt and Katherine Prince underscore the fact that major transformative changes are occurring rapidly in the learning arena. In the United States, K–12 education has faced harsh criticism in recent decades, especially compared with its counterparts in countries such as Finland, Singapore, Australia, China and South Korea. Yet if we look at the issue from a glass-half-full perspective, the environment and resources for adoption and adaptation of transformative changes in American education have never been more conducive than they are now. I truly believe that it is the time for a perfect storm—the perfect opportunity for museums and other nontraditional educational institutions and catalytic players to gather speed and power with stronger, tighter collaborations to bring about a tsunami of transformative improvement in education and make it more focused on learning.

This section of the report focuses on the role of museums in the learning ecosystem. Colleagues from museums and formal education further shed light on this topic and talk about their game-changing work. Though some of us are trying to “walk the walk” and have not yet found the answers to all of our challenges, we are witnessing positive change. We firmly believe that with insights and participation from other



stakeholders, we can change education for the better.

All great innovators are dreamers who explore uncharted territories. But they also are realists who put action plans together, experiment with ideas, are tenacious, learn from failures and, in the end, launch innovations that can change our lives forever. They also embrace and respond to unintended consequences that emerge in the process of innovation. They think about the “what ifs” and “why nots.”

Henry Ford's passion for collecting artifacts was inspired by his deeply held wish to make education “functional” and his belief in students' ability to “learn by doing.” He realized his dream in 1929 by starting the Edison Institute, an innovative school, and Greenfield Village in Dearborn, Michigan,

Formal and informal education should make more room for creativity and innovation in their offerings.

Photo: Gary Malerba

“ Museums need to be recognized as real-world contextual experts in the education sector. It’s time to make the implicit more explicit. ”

long before it became the multi-site destination we know today as The Henry Ford. One of today’s education innovators, 2013 TED Prize winner Sugata Mitra, is working on realizing his radical “School in a Cloud” concept with similar passion and commitment. These examples from the past and present tell us that innovators in education have the power to make radical and long-lasting impact.

The National Innovation Initiative and Council on Competitiveness back in 2004 talked about “thriving in the world of challenge and change.” The importance of “thriving” is as applicable today—and actually more feasible—with the explosion of communication and technology innovations. Innovation still remains key to determining this country’s success.

Critical Questions for Reflection Today:

- How can museums ride this perfect storm of rapid transformation and innovation in education and learning and carve a different role for themselves?
- How can we move from being considered just an optional resource in education to playing a more central role in influencing how learners learn and contribute in the 21st century?

If education is on the cusp of transformation, so are museums. I believe museums can gain much more traction and visibility by focusing on three core strategies:

Be proactive: Catalytic leaders are proactive. If museums want to play a significant role in the transformation of learning, we must prove our leadership value.

One huge leadership opportunity lies in directing the power of the learner. Imagine

a world of education where teachers teach less, yet students learn more! That is the definition of 21st-century teaching and learning. We need to recognize the innate power and proclivities of this generation—the iGeneration—and change how we teach. The central issue is that children are not engaged. Tamar Lewin’s August 8, 2009, *New York Times* article, “In a Digital Future, Textbooks Are History,” quotes Sheryl R. Abshire: “Kids are wired differently these days. They are digitally nimble. They multitask, transpose and extrapolate. And they think of knowledge as infinite. They don’t engage in textbooks that are finite, linear and rote. Teachers need digital resources to find those documents, those blogs, those wikis that get them beyond the plain vanilla curriculum in the textbooks.” We cannot prepare students to succeed in today’s world if we don’t change our learning environments, our teaching methodologies, our juxtaposing examples, our tools of engagement and lastly our mindsets.

I want to share the story of Caine to demonstrate what can happen if we empower learners to learn in their own defined ways.

Caine is a 10-year-old California boy whose innate entrepreneurial spirit and desire for self-directed learning allowed him to build a cardboard game arcade in his father’s used auto parts garage. A short documentary film on Caine’s arcade, made by Nirvan Mullick and posted on YouTube, garnered millions of views on Facebook, spurred a national movement and a global challenge, and led to the inception of the Imagination Foundation with the goal of inspiring many more Caines. As a poster child for the 21st-century learner, Caine shows us how we need to change our teaching methods and learning environments.

If we want to change education and learning, we need to acknowledge and respect today's youth as "knowledge creators" versus "knowledge recipients" and redefine the role of teachers as facilitators of learning. We also need to focus more on learning versus education, which is perceived as K-12 in-school experiences, and recognize that learning can happen anytime, anyway, anywhere and at any pace. So a related paradigm that needs to shift to bring about the desired change is that learning cannot be shoehorned—or in my word, "chunk-atized"—into 9 a.m.–3 p.m. (in-school) and 3 p.m.–9 p.m. (out-of-school) blocks.

Be relevant: Today more than ever, everyone in formal education is advocating for and welcoming contextual interdisciplinary learning. Rigor is no longer just related to mastery of content. Rigor now is all about adaptation and application of content in real-world scenarios. This is also at the core of the changes advocated by the standards movement with the new Common Core State Standards and Next Generation Science Standards.

The shift to relevance offers a great opportunity for museums to contribute unique content and multidimensional problem-solving methodologies. I use the Four A's of Learning model to design relevant learning experiences: **A**cquisition, **A**ssociation, **A**pplication and **A**ssimilation of knowledge. Museums have the distinct advantage of offering all four A's. Collections-based museums can do that with their "artifactual" stories, and science and children's museums, zoos, nature centers and aquariums can do that with their unique methods of exploration, engagement and play.

To make education relevant, more and more forward-thinking schools are opting for the "blended" and "flipped" classroom models where students are encouraged to use resources outside the classroom and learn in a self-directed manner. But the content has to be high quality and authentic. More and more museums should grab this opportunity, get their collections digitized and launch innovative partnerships with area schools where they become accepted and direct "digital content partners" to activate the new classroom models versus providing these assets as optional resources. This is more of an outcome-oriented approach than an output-oriented approach. Museums can also play a transformative role in teacher preparation and professional development.

Be "top of the mind" in education:

The education sector and after-school providers have always considered museums and libraries eager community partners. Museums spend a significant percentage of their budgets on developing and offering supplemental resources. But if we have been such well-wishing partners in education for decades, why are there still relatively so few museum voices in the current education reform dialogues? Often when I am at state and national education debates and dialogues, educators have asked me, "So ... you are from a museum? What brings you to this conference?" Have we thought about why teachers, who are so pressured to increase student engagement and achievement, aren't talking to policy makers and other stakeholders about the tremendous value museums bring to the table? It is for this reason that I invited two student leaders and the 2012 Teacher of the Year to join the conversation and tell us firsthand what their needs are and how museums can work toward becoming integral partners in education.

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”

“ Museums need to push the boundaries and become stakeholders instead of just partners. It is time for museums to become drivers of educational change. ”

These individuals have already begun their revolutionary work. Maybe museums can join hands with them and lead with a shared vision.

To become “top of the mind” in education, a radical paradigm shift needs to happen in the learning landscape, in which we are able to question and change the accepted architecture of formal education—preschools, K–12 schools and post-secondary institutions like colleges and universities. Museums have the potential to become the fourth element of that architecture in the 21st century or the common denominator as centers for lifelong learning.

Education Reform Inhibitors to Be Reckoned With

To be successful with any systemic change, one has to be cognizant of critical factors that can compromise the effort, process and results. Many of these factors restrict the rate of education reform and innovative ideas. If museums want to be a catalyst in education, it is important for them to be empathetic to sensitive issues such as:

Ever-evolving standards in education:

In an attempt to rise to meet international standards and testing of student achievement, new standards have come and gone, yet the desired outcomes have not materialized. The U.S. curriculum is still an inch deep but a mile wide, with little or no room for creativity and innovation.

This-too-shall-pass syndrome: With the rapid influx of third-party “problem fixers” in education, many of whom are transient in nature or dependent on short-term funding, front-line practitioners—educators—have developed apathy for solutions that are

forced on them. This has translated into a “this-too-shall-pass syndrome,” which unfortunately makes valuable solutions, models and partnerships go untapped or underutilized.

Pull-versus-push syndrome: Most reform initiatives are mandated as top-down “push” methods, which leave educators without a feeling of ownership to activate change. The common result is “push back.” The “pull” method empowers educators and serves as a shot in the arm in which they become champions of change and we remain the catalysts.

It’s ironic that even though everyone is talking about innovation being the most desirable 21st-century skill, educators and students are still held captive in the least innovative teaching and learning environments. Most museums are eager to align their educational offerings with the ever-evolving standards rather than advocate for change in the curriculum itself. It is time to ask: Is more really more, or should we make room in the existing curriculum for creativity and innovation? If this change happens, museums will fit into the education and learning equation seamlessly.

Communities of Innovative Practice and Voices from Education

So are all of these strategies a thing of the future or more aspirational? I would like to share a few examples of visionary leadership in which organizations and individuals have made the choice to push traditional boundaries and define a different leadership role for themselves, and are having an impact on education.

The Henry Ford’s Innovation Education Incubator is a national initiative that aims to empower teachers to teach innovation using stories and collections of American innovators designed to help youth think and act like innovators.

The Remake Learning initiative, led by The Grable Foundation, is galvanizing an entire city to solve problems creatively and inspiring a generation of lifelong learners in the Pittsburgh area.

The Boston Children Museum’s Race to the Top—Early Learning Challenge Grant initiative, in partnership with the Massachusetts Department of Education, is mentoring museums and libraries across the state to develop skills and proficiencies for early learners.

Big Picture Learning works with over 200 innovative schools across the nation and world, where museum assets and experiential learning are included as core elements of the curriculum.

Author and activist **Nikhil Goyal**’s book *One Size Does Not Fit All* and his revolutionizing leadership voice are challenging the test-based model of education and asking for radical changes to better suit learners’ needs.

Erik Martin’s personal life experiences from middle school led him to conceptualize a National Student Bill of Rights.

Rebecca Mieliwocki became the 2012 National Teacher of the Year from among 3.2 million teachers in the U.S., and in her role visited educational systems in 30 states and eight foreign countries. She concluded that the most amazing things

are happening in American schools, and that other countries still look up to our system for producing confident, articulate, creative thinkers.

All of these examples show that we can steer the new learning revolution toward what we all desire: more power to the learner; holistic and real-world knowledge to learn from, apply and adapt; a new cadre of innovators and entrepreneurs; and a strong economic future for the U.S., where self-directed learners not only learn in new ways but also teach and enlighten us in new ways.



Dean Kamen, an innovator most known for the Segway and initiator of the First Robotics competition, tells the amazing story of how empathy and his desire to meet a real-world need for his brother, who was at Harvard Medical School, led him to develop tiny needles for babies with cancer, which then led him to develop the insulin pump used to treat diabetes for millions of people. Dean’s story gives us hope that small innovations and grassroots movements can be scaled up to cater to the needs of millions. That’s what American education needs today.

Dean Kamen talks about how empathy inspired some of his innovations.

Time to Harness the Power of the Whole

Hundreds of museums, libraries and nontraditional learning spaces are developing innovative models and exemplary partnerships to impact learning. They are well known and respected in their communities. But on the national map, these efforts still seem fragmented, even though they have powerful elements that can benefit all. Lack of a system of information distribution amounts to museums reinventing the wheel over and over until the “aha” moment when someone connects those of us doing similar work.

Museums have to become a force to be reckoned with so our collective wisdom can steer the ship of learning. The good news is that, even though it may seem like an indomitable task, there are ways we can streamline our efforts. But we cannot do it alone. I leave you with the following quote, which I found appropriate to the work we have gathered here to initiate and sustain:

“Coming together is the beginning,
Working together is progress,
Staying together is success!”

—Henry Ford

Paula Gangopadhyay is the chief learning officer for The Henry Ford, which includes the Henry Ford Museum, Greenfield Village, Benson Ford Research Center, Ford Rouge Factory Tour, IMAX and Henry Ford Academy. She brings more than 19 years of experience from the cultural, education, policy and business sectors. She is heavily involved in several state and national professional organizations and serves as a thought-leader and speaker on innovation-related dialogues and forums. President Barack Obama appointed Gangopadhyay as a member of the National Museum and Library Services Board in 2012 for a four-year term.

