

Is Our Educational System Preparing Students for the Rapidly Changing World?

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OUTLOOK: *It is more imperative than ever that schools around the world examine their capacity for providing students with the skills and resiliency necessary to navigate in a world of rapid globalization. The stakes could not be higher and the challenges less pressing. As Friedman states in his new book, Thank You for Being Late, it is like “dancing in a hurricane”.*

Is Our Educational System Preparing Students for the Rapidly Changing World?

We are living in an era of high-stakes testing and global comparisons, which has engendered an urgent need to re-examine the world’s educational systems. The educational foundations that one could once point to with pride are now being brought into question as to whether this is an education worth having. The tectonic shift from didactic to heuristic pedagogy has left most school systems woefully unprepared to scale up for this progressive mindset and universal reality; the departure from predicated skillsets ideal for an industrial construct, and the shift to creativity, innovation, entrepreneurship and non-cognitive skills is proving to be more apt and desirable for 21st Century life opportunities. Today’s youth need to accelerate to keep up with the pace of change and the confluence of mitigating factors that have tilted the trajectory of the future. The influx of new ideas and educational thought, the diversity of our new reality requires resilience and the right tools in order to embrace and thrive in a world that is not static, but exponentially evolving. As Friedman (2016) states, “Average is officially over. When I graduated from college I got to *find* a job; my daughters have to *invent* theirs (p. 204).”

The real challenge for today's schools is threefold: to prepare students to thrive in a competitive global labor market after completing their education; to achieve community harmony on a global scale; and to promote cultural diversity and the value of universal citizenship in a global community.

Preparing students for a competitive global labor market

Tom Friedman, in his seminal book *The World is Flat*, acknowledges that today's core educational values and dictates are becoming increasingly irrelevant in a rapidly changing and complex world. He sees the following "flatteners" (2005): digital, mobile, personal and virtual, as game changers in terms of opening up networks and 'windows' of opportunity that are not only transformative, but disruptive at the same time. These global platforms allow people all over the world to communicate, collaborate and work together as never seen before. The capacity for processing information has increased to approximately one billion searches; millions of emails sent and received, tweets and other forms of social media in a single day (www.worldometer). To sustain momentum and remain competitive, the work force must become more adaptable to keep up with innovation, therein, youth entering the job market for the first time will be more employable. To not acknowledge these inescapable truths is unthinkable.

Community Harmony on a global scale

The radical changes in understanding how the brain functions and the nature of learning requires that schools not only reform current practice, but rather reinvent themselves. Instead of focusing on discrete tasks, schools need to emphasize the mastery of processes and the ability to know what to do when you don't know what to do. In other words, today's and tomorrow's students need to function very nimbly in different contexts, such as mathematics or literacy, not just master specific knowledge in each domain. They also need to learn how to get along with people who are different from them. Globalization has the unique ability to level the playing field for those living in poverty. Merely having a mobile device immediately connects one to the world. By educating students to be global citizens rather than citizens of a local geographic community, state or particular nation, perhaps the world would become more tolerant of

differences and people could work together on more pressing global problems, such as sustaining our planet for future generations (Zhao, 2015). Globalization centers world problems such as climate change and biodiverse loss (the web of life), in individual communities. Coping with these potentially life-altering events requires collective cooperation and the ability to assimilate different and sometimes conflicting points of view from diverse cultures outside the borders of the neighborhood or community at large. Friedman (2016) calls this creating a “topsoil of trust” where such communities, as they embrace their increasingly diverse and digital population, anchor their common values, and thus seek solutions to problems that will ultimately reach the far corners of the earth.

Cultural diversity and the value of universal citizenship

Teaching students what success looks like up front is very powerful. Success could be defined as the ability to subsume sufficient surface knowledge (skills and discrete facts) and through recursive practice; this knowledge acculturates and transfers to new learning contexts. Success in this context requires critical thinking and analysis, which contributes to one’s ability to thrive in career and life. Our responsibility in schools is to teach students how to value the practice effect. Gladwell (2008) supports this construct with his observations of social phenomena. To be the best hockey player, or most successful technology entrepreneur; to achieve world-class expertise in any skill, requires 10,000 hours of practice. To transfer knowledge, one must practice and rehearse skills regularly for deep understandings to endure. Hattie (2016) asserts that schools need to be made inviting places to be, not the place where redundancy and irrelevancy prevails. He posits that students become engaged in activities when they are skilled at it. Skill comes with practice. Some schools are introducing different approaches as opposed to traditional classroom instruction such as Problem-Based Learning (PBL). Problem-Based Learning is a student-centered pedagogy in which students learn about a subject through the experience of solving an open-ended problem and applying an inquiry process. Students learn both thinking strategies and domain knowledge. Problem-Based Learning helps students know when to apply learning strategies that are anchored in tacit knowledge. In today’s classrooms,

however, 90% of learning is surface learning (Hattie, 2016), which does not prepare youth for the current and future economy.

PISA scores (Program for International Assessment) for example, are negatively correlated with entrepreneurial skills and outcomes (Zhao, 2015). Today's economy requires collaboration skills, the development of diverse talents, and interactions that transcend borders and cultural divides. Simply sitting in a classroom, listening to a teacher lecture, memorizing facts, and then taking an exam does not help students develop these essential skills. Education needs to change and adapt to the dynamics of a changing world. Through universal learning communities and collaborative learning models, teachers can learn to learn and in turn students can learn to learn too. Students who have been given the autonomy to set their own learning goals will no doubt be better equipped to become lifelong learners and be better prepared to reinvent themselves over and over again both in career and life. In other words, students will develop an innate curiosity about the world and its contextual conditions, diverse values and vast cultural resources.

Innovation and Educational Reform

In order to widen the range of excellence in schools as we know them today, the approach to learning has to fundamentally change and will require innovation. Teacher professional knowledge needs to shift from tacit to explicit, where working collectively and building knowledge together becomes the norm not the exception. Hattie (2016), in his meta-analysis of what works in schools, found that teachers working together matters. Learning communities can potentially become a model of learner behavior that will reshape student perceptions of how problems are solved, and how to approach and resolve conflict.

Through a fresh lens, schools should examine how to measure student outcomes and engage students in setting those outcomes. Instead of focusing on the memorization of discrete facts, assessments should examine students' deeper understandings of concepts and how this knowledge can be integrated and applied. Far too much of the current schooling model is time bound. Students focus on a particular subject in a silo

for a set period of time. Life and careers are not confined to forty-five minute blocks of time examining one topic then moving to a completely different topic or element and doing that for forty-five minutes and so on. Career and life is integrated, it is message not confined to a set of similar boxes all the same shape and size. Knowledge does not and cannot come from one source, but from a variety of sources: social media, technology, books and experts from around the world. Customizing learning, where the instructional framework is flexible enough to adapt to personalized needs and interests, is the future of teaching, learning and schooling.

To really change education, one almost needs to build new schools from the ground up, where differentiated learning spaces replace closed classrooms; where students work in groups on projects with the teacher acting as a guide or facilitator of learning rather than a content expert; and where school life and the life after school is bridged.

Every child is unique and a school has the great responsibility in discovering and nurturing this uniqueness. Sadly, most schools don't even look at the child. Instead of starting with the child's passions and interests, schools start with the curriculum as the primary perspective and predetermined. The interventions and strategies that yield the highest effect sizes are those that are underscored by student passion (Hattie, 2016). Self-instruction, self-consequences and organizing and transforming are various meta-cognitive strategies that result in higher effects. These top strategies promote increased motivation and a higher level of engagement with the content (Hattie, 2012).

Powerful and passionate teachers focus on developing ways of thinking that promote problem-solving, provide meaningful feedback, not just praise, where questions are more important than answers, who insist on rigor, adjust the pace of instruction, identify the entry point for each child, and most importantly, view learning through the eyes of a child (Hattie, 2012, p.19). They provide deliberate practice, are relentless in helping students achieve their goals, and share the passion for the work along the way.

The picture is not all bleak, however. There are great schools in the world, which are rewriting history by changing the way teaching and learning occur. Some of these forward thinking schools have formed an international alliance, the "Global School's Alliance" (www.globalschoolsalliance.org) to further the cause of changing educational

institutions, and to share ideas, best practices, and data on effective teaching and learning. These are schools that are setting the pace, breaking new ground and challenging the status quo with measurable results.

To prepare the future workforce, one that can compete on the world's stage, the scale of necessary change cannot be underestimated. The quality and kind of school education offered will make all the difference. Progressive learning environments must be led by people who have the right mindset, knowledge and skill-set; who are passionate about education reform and innovation and, are willing to learn from a global context. The change needs to start now, lest we deprive an entire generation of children the great opportunities that await them. There must be a sense of urgency to take action and build the airplane as you fly it.

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