

## THE BLOG

### **Education Doesn't Need to be Reformed - It Needs to be Transformed.**

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All sides of the vitriolic public education debate are missing a fundamental point: our changing society presents new challenges that require us to fundamentally rethink our concept of school.

Our public education system is stuck inside a [framework of factory efficiency](#) designed by last-century industrialists. All one needed to succeed as a factory executive or worker was basic knowledge of reading, writing, and arithmetic and the discipline to conform to rigid work requirements and carry out and deliver orders in a hierarchical organization. Our public education system successfully trained millions of children for this environment. But times have changed, and the industrial society and economy are long gone.

Due to the proliferation of digital technologies towards the end of the last century, we socially reorganized into a [society of distributed networks](#) whose economy runs on knowledge. As education researcher [Andy Hargreaves](#) states, "A knowledge economy runs not on machine power but on brain power - the power to think, learn, and innovate." Thus, the competencies required for success in the 21st century are very different than those required in the last century.

Recognizing the need for different competencies, The World Bank issued a [report in 2003](#) recommending an educational framework of lifelong learning, which is, as they state, "education for the knowledge economy."

According to The World Bank, the three core competencies that schools need to develop in students to prepare them for life and work in the 21st century are: 1) the ability to act autonomously (including knowing how to learn on one's own) while seeing one's self as part of a larger system, 2) the ability to effectively use tools, which includes language, information, knowledge, technology, etc., for communication, and 3) the ability to collaborate, cooperate, and handle and resolve conflicts with diverse groups of people. These competencies equip students to effectively manage the rapid changes in technology, knowledge, and society, enabling them to retool and create their own work. This latter ability is essential because the days of relying on others to create work for us are over.

To develop these competencies, The World Bank recommends moving away from traditional teaching methods to methods wherein teachers guide students toward a variety of knowledge sources rather than instruct using a single textbook; where students learn by doing, and they learn from each other, not just the teacher; where

learning plans are individualized and assessments actually inform those plans; and where educators themselves are lifelong learners and model same for students.

Rather than developing these competencies, however, our public education system is still using traditional teaching methods focused on delivering standardized content via single textbooks and testing students on mastery of that content - content that is likely to change before students have even finished school. The only current "innovation" in education reform is that content is now delivered and tested electronically, which, frankly isn't very innovative. It's just doing the same thing with fancier gizmos.

[Montessori](#) education, however, utilizes The World Bank's recommended methods to develop the competencies necessary for success in the 21st century. Montessori is a framework of lifelong learning. But Montessori goes one step further - it considers the developmental needs and tendencies of children at their various stages of development from birth through [high school](#) (Montessori is not just for preschool). Ironically, though it was developed at the beginning of the last century, Montessori is a framework of lifelong learning and human development that, as education researcher [Barry Zimmerman](#) states, "includes conditions for fostering academic responsibility that are consistent with current psychological research."

Can [Common Core](#) proponents claim that?

No. But, ironically, Montessori proponents can claim that a fully-implemented Montessori curriculum "[not only meets new national requirements, but often exceeds them.](#)" Montessori has always had high expectations for children.

Frankly, it doesn't even appear that Common Core can teach children to take responsibility for their own learning - a key competency for 21st century success. In a recent NPR news story, a reporter describes a Common Core math lesson wherein the teacher instructs the children to count with her, allegedly "[shifting the responsibility of learning and teaching onto the students.](#)" How does a structured environment wherein teachers (or in some cases computers) are constantly telling students what to do and when to do it teach students to learn on their own?

And if "a knowledge economy runs not on machine power but on brain power - the power to think, learn, and innovate" - how do standards stuffed inside a factory framework teach students to think creatively so they can innovate?

Innovation and creativity require constant learning both individually and collectively through collaboration - collaboration that is, as Robert Reich states in [The Future of Success](#), "informal, unplanned, [and] serendipitous."

In a factory system focused on efficiency, there is no time for organic, serendipitous collaboration. In fact, such collaboration goes against the grain of a factory model in which every student is supposed to learn solely from the teacher. And after years of a "no talking" regime, which sometimes extends even to the lunch period, our children's

natural instinct to share knowledge and collaborate, which has been viewed as unruly behavior and "cheating," is suppressed. Additionally, any attempt at collaboration within the factory model is likely to be contrived and controlled as evidenced in the same NPR article cited earlier wherein the reporter describes how the teacher "[turns up the engagement a couple of notches and instructs the students to talk to the classmate next to them.](#)" If we have to instruct students to collaborate, how will they know how to navigate that process on their own as adults where it occurs informally, unplanned, and serendipitously?

Research shows that specific school characteristics foster creativity. Learning and Teaching Scotland (now [Education Scotland](#)), the organization responsible for Scotland's national school curriculum development, recently commissioned a review of 210 research and policy articles published between 2005 and 2011 related to fostering creativity in schools. It found that four school features promote creativity: 1) students have control of their learning and ownership of the work; 2) the physical environment is varied as children can work indoors, outdoors, and at locations outside of school; 3) students have flexible use of their time; and 4) students can work at their own pace without pressure. All of these characteristics together describe a Montessori school. The factory framework, however, doesn't allow for most these features as children are grouped by age, are expected to get through the same amount of material at the same time, and are told what and when to learn.

The bottom line is that any reform stuffed inside the 20th century factory framework won't prepare our children for success in this century.

So why don't we just give our children Montessori?