



Building a 21st Century U.S. Education System

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CHAPTER 19

The Meek Shall Inherit the Public Schools: Who Will Be Left Behind in the Learning Economy?

Chad Wick

Travel with me, if you will, into the public education system of 2025. When we arrive, we find no schools and no school days. No textbooks, lesson plans or grades. Even no teachers and no students.

Have we arrived at a future where public education has disappeared? Not at all. We've come to a place where education has changed so radically that we recognize almost nothing about it – a system where learning is dispersed throughout all kinds of places and activities, where people of all ages learn together, and where learning is individualized and dynamic.

In this view of the future, a wholly new system of learning has arisen in response to trends we see at work in the world today. School is no longer defined by place and time, and education is no longer a one-dimensional transfer of knowledge from teacher to student. Instead, children and adults are guided through a constellation of learning experiences intricately shaped to their individual abilities and interests by a diverse team of content experts, learning coaches, cognitive specialists, professional mentors and other master learners.

Rather than the industrial-era model of institutions manufacturing graduates whose diplomas signal that they are prepared to be productive workers, the future education system might more closely resemble a brokerage firm or clearinghouse. It could function as a brokerage in that families would rely on its learning experts to help them choose among a huge array of commercial and nonprofit as well as public providers of education services. It might be a clearinghouse or community center for a host of services that answer children's physical and emotional needs as well as their academic ones. Or it could take a shape that is so far outside current models for the delivery of service that it is beyond our imagining. For example, just 50 years ago we had the first televisions – who at that time could have imagined what a video iPod® would look like?

This forecast of a completely new paradigm for public education is far from a certainty. But I am convinced that nothing less will suffice to meet the challenges presented by a world where perhaps the only boundaries are geographical.

A Map of the Future

My call for a radically different approach to education is based on more than idle speculation. Many of us at KnowledgeWorks Foundation recently have engaged in a kind of intellectual time travel – a lengthy exploration into how our world is changing. We collaborated with Institute for the Future (ITF), a Palo Alto, California-based think tank specializing in identifying and interpreting the trends shaping our future for many of the world's largest companies to produce a forecast for public education in the next decade.

The resulting “Map of Future Forces Affecting Education” for 2006-2016 is a comprehensive and startling look at what learning may look like, just in the next decade. (The map is available online at www.kwfdn.org/map.) In a larger sense it is in some respects a sobering picture – no one welcomes a future where daily life is uncertain and volatile, where even those in developed economies suffer chronic illness, where megacities sprawl and extreme climate events threaten land, infrastructure, and lives.

But the forecast is not relentlessly grim. Nor is it hopeless. We see extraordinary possibilities from a new connectedness arising out of the technology that so easily links humans across the globe, and we expect a growing awareness of the common good to shape our interactions. In an environment where information tailored to our needs can reach us wherever we are, the possibilities for education will expand in ways none of us could have predicted even a few years ago.

The challenge for educators and education activists inherent in this forecast is the need to learn about the trends shaping our world and respond in ways that move beyond the tinkering and patching that has marked so much of education reform in recent years. We must ourselves become forces shaping the future if we are to preserve the values of public education and ensure that the benefits and opportunities in this new world are distributed fairly.

It is a challenge we at KnowledgeWorks Foundation are taking on. Because our work focuses mostly on the urban poor, we find ourselves grappling specifically with the difficult questions of how the future will arrive in disadvantaged neighborhoods. While it is easy to imagine many students and families flourishing in a learning economy rich with educational opportunities, we worry that those opportunities will not be available to children whose families are not prepared to play the role of informed and motivated education consumers.

We believe bold and courageous thinking is necessary to ensure that these children – the “meek,” if you will – do not inherit an antiquated and insufficient public school system. As Nobel prize winning physicist Kenneth Wilson says, this system can make the necessary changes “only if it stops trying to hold together a collapsing intellectual foundation and opens itself to a new paradigm — a system wide conceptual revolution that allows people to understand the new meaning of education itself.”¹

Three Key Trends

Before we can explore the future of the public education system, we must understand the context in which it will operate. Institute for the Future, which completed a careful and detailed analysis of current trends and where they are taking us, has helped us create a plausible forecast for the next decade.

Within that forecast, we’ve identified three changes that will be critical to the future of education. While literally dozens of factors will come to bear on how we teach the next generations, we believe these are among the most powerful.

A Learning Economy

One of the most significant changes facing teaching is that we are moving from a time when monolithic institutions delivered education in a “father knows best” manner to one where consumers seek out the information, skills, and experiences they need. We are calling this new commodity-based approach to education a *learning economy*.

Perhaps the best way to understand this change is to think of what happened to banks in recent decades. Not so long ago, bank customers conducted their business at neighborhood branches, and access to their money was restricted to banking hours. As ATMs and, later, online banking became available, customers were able to get cash, make deposits, and conduct other banking transactions when and where they wanted – and everything from the nearest gas station to hospitals and amusement parks became venues for banking.

In the same way, education is becoming a commodity increasingly shaped by consumer demands and delivered by many different providers. We see this in the growth in popularity of such things as tutoring services, teaching toys and computer games, brain-enhancing supplements and foods, and even educational vacations.

What’s more, advances in technology are breaking the traditional boundaries of time and place – making learning possible anytime and anywhere. The freedom we have gained from our desks through the use of cell phones, iPods®, PDAs, and other devices is just the beginning of this evolution. Eventually, even our physical environments will become learning tools, thanks to wireless connections, portable communications devices, global information systems, and applications that literally embed information into places and objects. For instance, students will be able to walk along a neighborhood street and learn, perhaps wearing glasses that flash messages about the architecture of each building or listening through a headset to an oral history of the neighborhood cued by the route the student follows.

Digital games also are reshaping learning. World-building and role-playing games like *The Sims* and *World of Warcraft* or cell phone games like *GoGame*, where players receive scavenger-hunt assignments on their phones, require teamwork, critical thinking, and problem solving. Serious games, those intended not only to entertain but also to educate, are engaging learners in new ways, creating new opportunities and strategies for teaching. *Second Life*, the internet-based virtual world, has already found its way into innovative learning environments.

Another factor creating this learning economy is the move toward personalization. People are rejecting mass-produced items and instead are active in creating their own worlds, whether through do-it-yourself home improvement, music downloads to create custom play lists, or entrepreneurship that allows them to be self-employed.

The specialized products and services created by this demand can be marketed inexpensively online, so retailers offer seemingly infinite inventory, splitting the mainstream market into innumerable different niches.

The demand for personalization will affect public schools as well. Parents who have learned to network and mobilize resources for other purposes will apply the same tech-

niques to seek the best education for their children. As we see today with the trend toward charter schools, home schooling, and online learning, parents will be more and more willing to construct their own education alternatives. Each student may navigate a custom education system, perhaps attending several different private and public “learning houses” rather than going to a single school building.

With consumers placing more and more value on education and the means to deliver that education expanding rapidly, the learning economy is robust and widely distributed. Education is breaking free of the traditional concepts of time and place, as well as the physical limitations of classrooms.

In short, schools no longer have a monopoly on organizing the process of learning.

Democratization of Learning

Our forecast also shows a set of strong trends that are creating movement toward democratization – of knowledge, of learning, and of the tools for creativity. One of the trends pointing in this direction is the emergence of grassroots economics, a “bottom-up” way of doing business. Whether it is the popular website YouTube allowing viewers essentially to create their own broadcasting networks or the free Linux computer operating system built by developers around the world, a trend toward shared resources is reviving the power of collaboration.

This trend is amplified by the ever-more-powerful technologies of connection. Information is easily shared around the globe, which means that anyone with a computer can create a movie or a music album or even software. It also means that educational material – including whole courses – is available online. Anyone can be a student and anyone can be a teacher.

As learners and educators increasingly experiment with sharing resources and new content providers emerge, teachers likely will take on new roles. The classroom teacher’s job likely will become “unbundled” to include an assortment of people who support learning, such as content experts, learning coaches, classroom coordinators, cognitive specialists, resource managers, and community liaisons.

Teachers’ roles will also change because the Industrial Age approach of transmitting knowledge will give way to methods that emphasize learning through experience. Instead of an instructor in front of the class handing down information, teachers will function more like master learners, extending the trend that already sees teachers moving from the “sage on a stage” model to the “guide on the side.”

This explosion of roles will attract a broader range of people into the learning profession, creating alternative career paths that may prevent teacher burnout and dissatisfaction. At the same time, learning will become more visible as students and teachers move outside the classroom, bringing greater respect and status to the profession.

We see the democratization of learning leading in some cities to the development of an urban learning commons where citizens treat their learning resources as a shared, critical resource that should be managed collectively. Everyone would have access, but, with col-

lective management, there would be enough for everyone. A city or society with this approach would treat learning as an essential component of innovation and would maintain and resource it accordingly.

These two major developments – the transition to a learning economy and the democratization of learning – together point toward a completely new education system. Classrooms and school days would be replaced by anytime, anyplace learning. Lesson plans and grades would give way to individualized learning schemes and flexible forms of assessment. Teachers and students would be transformed into a community of learners.

But this view of the future leaves unanswered some fundamental questions about whether education will serve the whole universe of learners. What's more, it does not take into account a third category of change forecast by our map of the future – changes that many will find difficult to consider.

Volatile Times

Our world is becoming an uncertain place, with our security, safety and sustainability threatened by extreme weather events, terrorism, political and economic upheaval, dwindling natural resources, impending pandemic illness, and social discord. The military uses an acronym to describe this chaotic condition: volatile, uncertain, complex, and ambiguous, or VUCA.

Evidence of a VUCA world isn't hard to find. Health problems are increasing, with chronic conditions such as obesity and diabetes on the rise. Increases in extreme weather, the possibility of pandemic illness such as avian flu, and pollution also threaten healthy life, especially for those living in dense urban centers – and more than half the world's population will live in cities before the end of this decade.

Stability also is threatened as the gap between rich and poor households grows, polarizing communities on issues of work, education, and urban development.

The shared social narrative that connected people in the past is dissolving as established institutions are replaced by new kinds of social groups. People connect with others with shared interests and values through interactive media such as blogs (online journals) and wikis (web pages that anyone can edit and change, such as Wikipedia), creating subcultures of like-minded individuals – a process that can be positive but also can create rigid belief systems and increase the divide between groups.

Social conventions also are evolving as multiracial, multigenerational, same sex, adoptive, and other kinds of households come together. One result of this social upheaval can be a strongly opinionated and segmented society, with more people holding fundamentalist views about complex problems.

These troubling developments signal new challenges for schools. More than ever, children will bring myriad mental, emotional, and health needs with them into the classroom. Schools may operate in changed circumstances, whether it be within gated communities or the confines of a public health quarantine. Educators may find themselves as arbiters in the struggles over social norms or caught between polarized segments of the population.

If further impetus for change in the education system is needed, the prospect of a VUCA world surely is more than sufficient to compel even the most reticent to re-examine their ideas of public schools.

Preserving the Core

In their book *Built to Last: Successful Habits of Visionary Companies*, James Collins and Jerry Porras discuss the yin and yang requirements for successfully meeting the future: preserving the core and stimulating progress.² Our study of the forces shaping the coming decade has persuaded me that this model is a good one. While I am convinced that we must be willing to overturn almost everything we have known as the public education system if this country is to meet the global challenges, I am steadfast in the belief that we also must preserve its core.

Public education was founded on a set of high ideals about advancing the public good, and I believe the ideals advanced by Thomas Jefferson and Horace Mann will be as vital to our future as they have been to our past. I'm not alone in that belief, either. While the reality of public education has in many cases fallen short of the original vision, a 2006 national poll from the Center on Education Policy shows that the public still supports its core mission. The most commonly cited reason that public schools remain important was "to give all children a chance to get ahead and level the playing field."

Simply put, our education system must continue to provide an opportunity to learn that is free to all – to act as an equalizer in our society.

Another ideal that should be preserved is providing the experience of diversity that can enrich and expand us. If we give up such experiences, we will have squandered opportunities to understand each other across the divides of social class, race, and national origin. As a country and as individuals, we will have become smaller.

Public schools also have an important role to play in socializing the next generation for the common good. While we must take care to value and respect the full spectrum of diversity, as a society we also must share some common understanding of our principles, expectations, and goals. Schools can and should be the place where the social contract comes alive.

Further, despite the benefits of virtual experiences, there still seems to be a need for a physical space that serves as a locus of community services and activities, provides a safe place for children, and defines and strengthens a neighborhood identity.

Shadows

The scenarios we've glimpsed in our travels into the future shine with possibilities, but also are marked by areas of shadow. It is important to pause for a moment and peer into those shadows – to ask ourselves how children without the means and wherewithal to find their way in the learning economy are doing in this brave new world.

The learning economy presents many more choices for where and how students get meaningful learning experiences. The downside of this also seems clear. As we move

through the next decade, parents with the resources and backgrounds to be adept at pursuing education options will become more assertive about seeking out the best experiences for their children – and if they follow trends established in recent decades, many of them will choose options other than public schools.

With a greater number of more enticing options to choose from in the future, even more families can be expected to move away from public schools. Who will be left? Students from the poorest families, those who can't provide such basics as transportation to suburban schools or a computer at home. Those from families unaccustomed to navigating bureaucracies to obtain scholarships or vouchers, much less tailoring an education from many disparate sources. Those for whom language is a barrier, and those whose dreams have been deflated by generations of stunted opportunity.

In short, the meek.

The children who are left to scabble after educational scraps will suffer disproportionately in this scenario. We have gone much too far down this road already, with a two-tiered system of schools that widens the gaps in performance and possibility between the poor and the affluent.

In extreme urban areas, the challenges of VUCA communities play out against a backdrop of poverty and pollution, making it even more difficult for students and their families to cope with uncertainty and upheaval.

Will the benefits of anytime, anyplace learning be available to underprivileged students? While in some ways the digital divide is narrowing as technology becomes more affordable – for example, cell phones are becoming a platform for Internet access – poor schools generally have the least and the oldest technology and teachers often lack the training to make full use of the resources they do have. Without the equipment and expertise to take advantage of the media-rich learning environment around them, poor students will trail behind in their interest in and the ability to use technology, in the critical-thinking and decision-making skills best developed by new applications, and in exposure to cutting-edge discoveries and information.

Personalized education has the potential to be of enormous benefit to all students if it is accurately tailored to each child's real abilities and needs, but here again students from disadvantaged backgrounds will be at risk. The ongoing controversies over the fairness of IQ tests and other evaluative tools attest to the fact that some standard curricula and standardized testing are so remote from the experiences of poor urban kids as to be completely irrelevant. Personalized education based on faulty evaluations could perpetuate bias or compromise potential.

Will educators who embrace the new roles teach in our poor urban schools? Will inner-city students profit from the expertise of these specialized teaching functions? If today's trends continue, the answer very likely is no. Teacher attrition in poor schools is 50 percent higher than in wealthier areas, with some 20 percent of teachers leaving high poverty schools every year. And while the federal No Child Left Behind Act aims to ensure that all schools have highly qualified teachers for core academic classes, no state had achieved that mark

by the end of the 2005-06 school year and states were required to formulate new plans to ensure that all classrooms had a highly qualified teacher and that those teachers are evenly divided between poor and rich schools.

Our map of the future shows a world where interests and opinions are fragmenting, and where it is economically feasible to satisfy the personal needs and desires of niche markets. Can a market operating according to these principles be counted upon to provide what our students need?

Will voters in this future still see education and learning as public goods, engines of opportunity, to be provided for all children? Or will the century-old compact on universal public education finally shatter? It is all too easy to envision a state where the function of “sorting” students, which the schools are only now and with difficulty discarding, goes underground, and students’ futures are once again largely determined by family wealth.

Distributing the Future

In a much-quoted comment, science fiction writer William Gibson has proclaimed, “The future is here. It’s just not widely distributed yet.”³ If those of us in education accept the challenge of making sure the benefits of a relevant and strenuous education are evenly distributed in the future, what are we to do?

We need to figure out a few places to start making decisions and taking actions now if we are to succeed. We might begin by addressing some of the most pressing issues identified by our forecast. First, the public learning system needs to adopt, teach and assess a new definition of skills. The map tells us that key skills for thriving in a VUCA world include readiness, resilience, adaptability, and networking. Simulation is one approach for teaching these skills, but it is time now for public schools not only to create and use simulations, but also to develop teaching methods that exploit the value and attraction of networking both virtually and in person.

Another way to redefine the skills needed by all students is to embrace the “21st century skills” advocated most effectively by the Partnership for 21st Century Skills. The Partnership offers a skill set that includes: core subjects, 21st century content, learning and thinking skills, Information and Communication Technology (ICT) literacy, and life skills.⁴

Some solutions seem both obvious and concrete, such as providing inexpensive technology to those who can’t afford it, perhaps through innovative approaches like the \$100 laptop, a flexible, durable, energy-efficient computer being developed for the world’s poorest children as part of the One Laptop per Child initiative. Supporting the development and distribution of such technology could help bridge the digital divide and revolutionize learning worldwide. Moreover, the public learning system must embrace “immersive media” and technologies of cooperation in order to engage Gen Z students, parents and teachers.

But technology isn’t the only answer. We must also look at ways to restructure public schools, the teaching profession, and our communities.

We must position schools better to help urban and poor families prepare for chaotic times. The national community learning center movement encourages public schools

across the country to become the modern-day equivalent of the village green. By including such things as health clinics, gymnasiums, and evening courses for adults, these schools are able to provide the whole spectrum of education and health services that disadvantaged students and families need in VUCA times. Every school must consider taking this whole-child – and whole-family – approach.

In answer to the public's call for more personalized education, we must expand efforts to create more intimate and adaptable structures for our schools. School buildings themselves will change, with facilities designed so that they can be easily reconfigured, able to morph in form and function to support diverse services. And teachers can and must be allowed to personalize instruction while also ensuring that students meet the standards defined around the new skills.

Efforts such as the small schools movement, where large anonymous high schools are divided into more personal schools, are already reforming schools into more responsive and flexible systems. Small schools are also pioneering the pedagogy to personalize instruction in the standards-based system of today.

As schools break out of traditional structures, new funding streams must be developed that do not rely on local districts and resident students.

We must find ways to ensure all students access to the full array of opportunities that are part of the new learning economy. For students whose families are not well equipped to navigate the complicated terrain of this new environment, we should provide guidance and assistance from other sources.

We must also support teachers and school leaders in this time of transition. Teachers' unions and school administrators will have to find new ways to work together as teachers' roles diversify and old structures no longer apply. Attention must be paid to developing meaningful long-term career paths that retain talented teachers; quality of life, salary differences, and other issues that discourage teachers from working in high poverty schools also must be addressed.

But far more important than any specific solution is the need to stimulate meaningful "out of the box" dialogue that can lead to real change. We must engage outside catalysts for change, recognizing that education is shaped by external forces. Educators cannot allow such discussions to be derailed by a resistance to outside input or by arguments over internal details.

We at KnowledgeWorks Foundation are offering as a tool to spark such discussion the "Map of Future Forces Affecting Education" that we produced with IFTF. Because the map distills and synthesizes the wider body of knowledge in a way that is new – and extremely provocative – it is a useful starting point for all of us involved in improving education to question our assumptions and stimulate new thinking. We have created an online forum for dialogue as a way to facilitate these important exchanges.

Movements toward change cannot be undertaken in isolation. Communities must come together to effect the large-scale changes that will be needed, bringing together business, government, educators, nonprofit and cultural organizations, faith-based groups, social

services, and families. We must form coalitions to advocate for children's developmental, social, emotional, and academic needs.

It is time for educators and all others concerned about the future to start thinking about public education in a new way. We must work together proactively to imagine and create a system of public education that takes advantage of the opportunities presented by the changing world, while adhering to the underlying values that still matter. In this new world, we will need to “learn by doing.” As we've seen, maybe the school will become a haven amidst disorder or a zone of health in a pandemic. Perhaps public schools and teachers will be one of many sources for education content, and will turn their attention to guidance and other activities to protect the most vulnerable students. Instead of computer games competing for students' attention, perhaps new games will teach students through simulation and problem-solving.

In the end, we must worry less about saving the public school as an institution, and more about harnessing the forces that are changing the world to take the education of our children to a whole new level.

The new form of public education must keep the needs of poor urban students – the meek – at the center of its creative vision.

Endnotes

1. Kenneth G. Wilson and Bennett Davis, *Redesigning Education: A Nobel Prize Winner Reveals What Must Be Done to Reform American Education* (Teachers College Press, 1994), 12.
2. James C. Collins and Jerry I. Porras, *Built to Last: Successful Habits of Visionary Companies* (HarperCollins, 1994, 1997), 80-90.
3. <http://en.wikiquote.org/wiki/Future>.
4. www.21stcenturyskills.org.

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