Beyond Schools: A New Foundation for Education in the 21st Century

by Gary L. Thompson[1] (originally published Texas Lyceum Journal, Fall 2006)

***Abstract**: Education is at a crossroads as our global economy and society undergo signifi- cant change. By shifting our thinking from institutions to individuals, Texas can be a true innovator as we go beyond schools and create a new foundation for education in the 21st Century. As the world flattens, so too must education. Linking this flattened system will al- low Texas to build a true talent pipeline that leverages our education assets in new ways and strengthens our future workforce and economic development.*

Introduction

Over the past two centuries, the notion of education in our society has gone through some radical changes, evolving to meet our needs as a country, a society and people. The most ironic change is that our locus of attention in education has moved to the institution and away from the individual, at a point when our global society is moving in the other direction.

As Texas continues to build a foundation for a robust and thriving 21st Century economy, our most valuable resource is the collective talent of our current and future citizens. From Houston to north Texas, from El Paso to central Texas, from the valley to the pan- handle, we have a truly robust citizenry capable of fueling our growth as a state. The skills, abilities and intellect of each of these citizens will be critical to our ability to compete nationally and globally.

For all of our innovations in biotechnology, nanotechnology, information technology and so many other disciplines, we have not moved beyond basic conceptions of how to assist our citizens gain crucial knowledge and skills through our education systems. We are certainly seeing interesting approaches to high school redesign, an increased focus on accountability and continued investments in not only research universities of the first class but greater access by all.

But, what if.... What if we took our eraser and wiped the blackboard clean? What if we as Texans said we are not just going to lead the United States as a growing and diverse economy but as a true innovator in education? What if we took a look at the incredible assets we have in our teachers, our universities, our community colleges and most importantly our people and said we will innovate here too? What if we reoriented our perception of what we have come to believe is the only way to approach education and learning and started fresh?

The goal of this article is not to add one more prescription or definition of the perfect school. Its goal is not to demand more funding. Its goal is not to advocate for or against accountability. Its goal is far simpler: it is to inspire us all to think differently. Its goal is to change our orientation away from the debate about our institutions and to focus back in on our core goals of building great Texans and an even greater Texas, of driving economic development and creating the talent pipeline that will allow us to achieve a truly literate and vibrant Texas.

As we move deeper into the 21st Century, the debate over schools, school reform and student achievement continues to follow similar themes from the 20th. This is a long-standing debate, and no matter who happens to win the argument, there will still be no winner. The new millennium requires new thinking to unleash the true potential of our kids and our future. We don't have any more time to waste.

Three core concepts provide a framework for moving beyond schools to a new foundation for education in the 21st Century. First, if the world is indeed flat, then we must think about how we flatten education. Second, education is not a linear process of grades but instead a pipeline of talent and learning. Finally, education is absolutely critical to unleashing the talent and skills in each of our current and future citizens and thus critical to the course of our ongoing economic development. If Richard Florida is right about the New Mega Cities[2], then we as Texans must link ourselves together in new ways to ensure that our talent is woven into our future economic development.

If the World is Flat, then how do we Flatten Education?

At the core of innovation is the ability to change one's perspective. One of the most fascinating concepts of *The World is Flat* is the reality that institutions, as we know them today, are irrelevant. With the flattening of the world, the factors of production and innovation can reorient and restructure themselves to any point on the globe and be successful. One part of that flattening is the increasing speed of communication and its de- creasing cost. The recent World Congress on Information Technology in Austin high- lighted Texas' role on this new global stage, and our ability to maintain our position in this flattened world will depend deeply on our education system at all levels and our in- vestments in them. As a state, we have just successfully completed an important special session on school finance, but as we think about funding, we need to acknowledge that in the end, we are funding education and not schools. These two starting points yield very different results. In the end, education is not about buildings, structures or institutions; it is about learning.

Part of the flattening that Thomas Friedman discusses is driven by the evolution of the Internet. When one thinks about the Internet, one typically thinks of a web browser and

its window into rapidly growing volumes of information. However, the Internet's real impact is not this singular narrow window onto the world; it is deeper, richer and more complex. The Internet is weaving diverse peoples all over the globe into new and evolving communities.

This broader notion of the Internet is also a powerful and disruptive tool that can be used to rethink the ways in which all of the components of an education system interact with each other. If the world is indeed flat, then how do we flatten education? If you deconstruct education, there are five critical pieces that are brought together to create a school at any level: content (i.e. books and other learning materials), curriculum (i.e. lesson plans and paths through the content), learning guides (i.e. teachers or professors), learning environments (i.e. schools, classrooms and college campuses) and methods for understanding the success of this process (i.e. tests, assessment, reporting and degree granting). Overlaid on these education processes is an administration system that spends the bulk of its time managing physical plant, staff and budgets rather than the ultimate success of the learning enterprise and the individual learners.

When one thinks about these learning components, it is interesting how these parts can be put together in a variety of different institutional structures. We have pre-K, primary and secondary schools, community colleges, technical colleges and universities. We have training programs and skill development and job retraining, yet, in the end it all comes down to education, talent and the desire to learn and make oneself better. If we can liberate ourselves from the strictures of structures, then we have the ability to harness the many investments we have made in education for a true 21st Century Texas.

The most powerful change that can occur in our thinking about education is to shift our perspective away from programs, processes, buildings and teachers and to acknowledge that all learning is indeed child-centered and more importantly, child-inspired. Our talented teachers already know this. We talk a lot about our kids, but usually, they are evoked as a proxy for some other argument or agenda. What if they were actually the focus of our attention? What if we actually started with them and concentrated on the best ways in which to structure the vast resources we have arrayed.

Education as Pipeline Rather Than Linear Progression of Grades

So far, we have had an interesting time at our blackboard. The pictures we are creating are quite intriguing: we have reoriented our thinking to conceive of education in an entirely new light, starting with the individual and considering a new, flattened world

of education. However, the untethering from our current conceptions of education has only just begun.

Our current education system reflects a factory model of thinking. The front end of the production line begins in kindergarten and continues through twelfth grade. For the sake of convenience, we break this system down into elementary, middle or junior and high schools. This is not unlike the old automotive industry that was vertically integrated with the massive assembly plants broken down into various components needed to assemble a vehicle. We all know that the automotive industry now spans continents and links together many specialized production requirements in a completely new global value chain. Our education system has built a network of schools that is focused on buildings, class- rooms, geographic boundaries and transportation requirements and this system also has inherent in it a network of classrooms that constrains the value of a teacher to the number of students in their classroom at any one time. It forces a duplication of spending, as it replicates everything from football fields to library materials to the administration needed to effectively orchestrate the education enterprise.

The Gates Foundation has taken some tentative first steps in reorienting the current education structure by advocating small schools.[3] However, they did not go far enough. It is my contention that we have not yet thought about the school of one. In the world of the Internet, the opportunity exists to laser-focus on individuals and through the aggregation of individual needs (i.e. MySpace, Facebook Digg), harness the collective power of these interactions and create whole new ways of capturing economies of scale.

School of One & The 21st Century Library Card

Let's assume for a moment that we have a school of one. The first step in building this new foundation would be to acknowledge what a child needs as they start their path of learning. What knowledge do they already have and what special skills and talents are inherent in them? We call that assessment today, but what if we made that assessment process truly dynamic and allowed the results to be owned by the child? The Internet al- lows us to build a sort of 21st Century library card. Instead of just being able to check out books, the student is now in control of much, much more. Their 21st Century library card could become their lifelong learning token. As they complete assignments or search out knowledge on their own, this learning token can begin to track their progress, under- stand their obstacles and report on their results.

As an educator or learning guide seeks to engage this student, the learner can choose to reveal their profile as they see fit and most importantly be in charge of their own

privacy and security (of course, for our younger students, the parents and/or guardians would be equal participants in this process). Within our current system, a teacher or learning guide can tap into these learning tokens and quickly assess where all of their learners are and then build a set of lesson plans that not only are better suited to the entire group but custom-tailored to each individual learner.

By viewing education as a pipeline, this new library card can be extended beyond primary and secondary education into college and truly assist in closing gaps. The biggest gap between college and kids is the gap between dreams and opportunity. The sooner we can create relationships between colleges, universities, professors, counselors and kids, the sooner the gaps begin to close. A new web of learning can be formed, and relation- ships can be built. A university or community college can look out into the state and see the future, the future students that will soon walk their campuses and inhabit their class- rooms. With all of the privacy and security that our new IT systems can create, profiles can be shared, and if the relationship is the right one, then identities can be revealed. The whole notion of a college application begins to evaporate, because the relationship between university and kid starts a whole lot sooner than a transcript and an application. This whole notion of a 21st Century library card is really what the whole Web 2.0 movement is all about, inverting the power equation and returning power to the individual. The institution is no longer a place for individuals; individuals linked together become the institution.

This approach to a 21st Century library card has even more power as you extrapolate the concept to the next layer of abstraction. Currently, millions of dollars are spent annually on what are known as student information systems. These student information systems track grades, tests and a variety of other data for the sole purpose of reporting on progress to a variety of stake-holders: the local school board, state and national legislatures and state and federal agencies. These systems are not only a large financial expense, but they are also a massive investment of time and resources by teachers, administrators and large bureaucracies that seek to collect these reports and then analyze the results. It is shocking in our technology-rich and Internet-driven world that we haven't moved beyond these rudimentary and disconnected tools. The fact that we have not is a function of the same hierarchical thinking that drives our schools and misses the point of our flattened world.

This is not to say that the goal of accountability is flawed but rather that the process is trapped in a hierarchical way of thinking that has not yet been liberated to accomplish its true goals in a rapidly evolving and interconnected world. If we eliminated student in- formation systems and moved to a new model of analytics driven by these library cards and learning tokens, we could actually learn more about our schools. Each 21st Century library card could be enabled with important meta-data about the holder, so

that the appropriate agencies could quickly look into the pool of learners in their city, state or the entire country and work through the data with a scope. The moment that a massive learning token system is put in place, the need for reports quickly evaporates, because the data is always available real-time. Included in this meta-data would be key authentication tags that would allow only the proper boards and agencies to have access to the necessary data at any level.

The power of this shift to flattened access to information has a number of positive consequences. At a systemic level, it means that we aren't waiting for quarterly or annual looks into accountability. At every moment of the school year and class day, we can know how we are doing, where we are succeeding and where we may need to intervene. Equally important is the fact that by removing the incredible administrative burdens of our current assessment systems, every component of our schools from learning guides to administrators to state and federal agencies can stop moving around data and submitting reports and refocus on education: the real reason these tremendous individuals pursued their passion for teaching in the first place.

The ripple effect of this 21st Century library card will permeate all levels of education, empowering students, liberating teachers and freeing our administrators to actively en- gage in the learning enterprise once again. It also forces us to move beyond our current system of grades and levels, because we now have the economies of scale necessary to look at individual learners and build our schools and classrooms around them. It pro- vides us with the foundation for a new period in education: adaptability.

The Adaptability Period

Patricia Graham, former Dean of Harvard's Graduate School of Education and Director of the National Institute of Education recently wrote a very informative tome, *Schooling America*, which carries the reader through a history of schools in the last century. It is clear that the schools we have today are not the schools with which we started this century. It is equally clear that our perspectives of schools and the needs they filled changed with the demands of the times. As we move deeper into this new century, we are clearly at another inflection point, which will yield a new foundation for education in the 21st Century. Dr. Graham artfully divides the past century into four "periods" of schools: Assimilation: 1900-1920; Adjustment: 1920-1954; Access: 1954-1983; and Achievement: 1983-Present. It is my belief that we are at the dawn of a fifth period: Adaptability.

We know that global forces are completely changing the competitive dynamics of many, if not all of our industries. Our ability to link together a global value chain has changed the playing field in industries as diverse as aerospace, automotive production

and information technology to name just a few. One industry, however, that has not changed is the education enterprise. It has not yet adapted to this new global reality, and it must, not just for the sake of our society and our ability to compete but also for the sake of the mil- lions of teachers, educators and other participants that are trapped in a system that is keeping them from meeting their full potential. Our inability to pay teachers what they are worth is in large part due to the current industry structure we have imposed on education. Our global economy is forcing us to adapt, and the Internet is giving us the tools to do it. The current debates about education are too limiting and must change course rap- idly, if we do not want to fall even further behind our new and emerging global competitors. If we can't let go of our current notions of education, we are simply rearranging the proverbial chairs on the Titanic. We must change the course of the ship and avoid the icebergs.

The new debate I am proposing is far bigger than vouchers and school choice, far different than intelligent design versus evolution, far deeper and broader than TAKS and TEKS; it goes to the core of education. Texas has the opportunity to lead in this new period of education; we can outline the contours of the Adaptability Period and truly build a model for life-long learning that looks at education as a pipeline and lays the foundation for individual and collective economic success.

Education and Talent are Fundamental Components of Economic Development

As Richard Florida eloquently highlights in The Rise of the Creative Class, "place has replaced the giant corporation of the industrial age as the central economic and social organizing unit of our time. Place is the factor that organically brings together the eco- nomic opportunity and talent, the jobs and the people required for creativity, innovation, and growth."[4]

Our place, the United States, is in a new global battle for talent. Changing global economics, combined with the aging out of the workforce of over 78 million baby boomers has put us on the edge of a massive talent crisis and the most dramatic threat to our economic security in over a century. This is not just about the transformation from an industrial society to an information age one. It is about a much deeper process of change to a global economy, based on talent. If we don't change our perspective, now, we are on the losing end of a basic arithmetic problem; not enough talent to fuel our economic engine.

Our place is Texas, and if Richard Florida is right, then the 25 million citizens that call Texas home are fundamental components of our economic future. As businesses make decisions about their launch and growth, it is the skills of our current and future citizens

that will determine where and how they do this. Although we instinctively know this to be true, it is this part of the pipeline that is the least connected. The question, then, is the connection between talent and education and how they both link to economic development.

To answer this question, we must return to our blackboard to chart this critical next step of connecting individuals to powerful mechanisms for learning, allowing them to explore their talents and passions, and then linking that pipeline to a vibrant and evolving work- force capable of both strengthening our current employers, attracting new ones and building a climate for innovation and entrepreneurial strength.

It is my belief that linking education more directly to future careers and the world of business does not mean that we must "track" our kids. The notion of tracking is but one more component of our previously hierarchical world view. It is my assumption that kids that are disconnected from their dreams and the opportunity to pursue them is exactly what is driving our worsening attrition rates from the 9th to 12th grades. This attrition rate ranges from .58 in both Houston and Dallas/Ft. Worth to .64 in the San Antonio MSA, compared to a national average of .72.[5]

We could get lost in a debate over the formula for dropout rates, but with 78 million baby boomers aging out of our work force, the bottom line is that we cannot economically afford to lose one more kid from our future work force. We must view each and every one of these students as a priceless gift and quite possibly the one who cracks the cure to cancer or figures out how we can travel beyond our solar system or perhaps is the next Mozart. The impact of this new world view means that we must begin to look at our investments in education, workforce development and economic development as a singular whole and no longer as independent components in disparate silos.

During my days on the eGovernment Task Force for Governor Bush, we realized that an important first step in the process of providing 24/7 electronic access to services was to build online resources and tools for as many critical functions as possible. Soon after our private partner began to build systems for renewing your driver's license or vehicle registration online, we realized that the issue was not just eGovernment but eGovernance. We realized that the users of Texas Online did not care which agency happened to manage a function but instead thought of eGovernment more like eBay or Amazon, Googling the necessary forms or licenses, regardless of which department or agency happens to deliver the government service.

The same is true of economic development, talent and education. The issue is not grades or degrees but core skills and development of talent. Again, this does not mean

that the only positive outcome of education is to prepare a student for a future career. Without a doubt, education is an important public good, and a literate society is fundamental to democracy. However, if attrition rates remain at their current levels, we not only will be short on talent for our future economic strength, but we will also be falling short on the goals of education laid out by our founding fathers. We cannot pick one goal without the other; we must achieve both, and by changing our perspective not only on education but its link to economic development, we can.

By extending the new education pipeline, discussed in the previous section, to the world of commerce, we can reengineer economic development and education simultaneously. The beauty of pipelines is that information can flow in multiple directions. What does this mean to our kids? It means that the many opportunities and careers that exist both now and in the future for Texas can become available to our emerging workforce, whether they are in high school, community college or university. Our entrepreneurs and innovators can dream about what doesn't yet exist. For many of our youth and disconnected workers, we must bring to bear the power of the Internet to expose them to the many opportunities that await their interests and skills.

By weaving together this new web of information, we can truly complete the circle and build a mechanism for lifelong learning. Even more important, it means that those kids that we are losing from the system can begin to build hope and relevance for their future. The final link in the puzzle is to allow the 21st Century library card to not only be a critical component of our new foundation for education but to be the ultimate link between lifelong learning and economic opportunity for our citizens. By building this connection between careers and skills, our "digital kids" can not only be building relationships with institutions of higher learning but learn how the skills they will gain will impact their dreams and future careers. As a result, our community colleges, technical schools and universities won't be one more disconnected component of an old hierarchical system but rather one more link in a flattened system of lifelong learning and talent development.

By understanding future opportunities, our "digital kids" can reconnect with the importance of education and instead of dropping out, begin to build a path to their futures. That path will not only lead to their own individual success, but it will collectively lead to a stronger Texas and a vibrant 21st Century economy.

Conclusion

Without a doubt, discussing education always evokes passionate emotions and debate. Each of us is the product of the system that we are discussing. High school and college

reunions are a function of the many friendships, relationships and memories that were built in pursuit of our own learning and our futures.

Suggesting a new foundation for education goes to the core of our history as individuals and as a community. A new foundation for education in the 21st Century does not mean that we must take away the important community aspects of our schools, that the high school football team is no longer or that teachers are bad. It does mean that we must learn how to separate these social functions from learning and achieve both within new structures, structures that are demanded by our rapidly evolving and flattening global economy.

Quite frankly, some great teachers are trapped within a model that is quite simply broken. The goal is not to create another program: this is about complete and systemic change! This isn't about more days in school or longer days; it is about changing the notion of what these school days are all about in the first place.

Footnotes

1. Mr. Thompson is a principal and founder of CLOUD, Inc. (www.cloudinc.org) that is developing the underlying technologies to make the vision in this Texas Lyceum article from Fall 2006 a reality.
2. Newsweek International, July 3-10, 2006 Issue.
3. Business Week, June 26, 2006 Issue, Jay Greene & William C. Symonds
4. Richard L. Florida, *The Flight of the Creative Class: The New Global Competition for Talent*, 2005, p. 161.
5. Workforce Report Card, Gulfcoast Workforce Board, June 2006, The Worksource