# Curt Johnson, Managing Partner, Education|Evolving

Civic Caucus, 8301 Creekside Circle #920, Bloomington, MN 55437

*Friday, January 8, 2010*

**Present:** Verne Johnson (Chair, phone); David Broden, Marianne Curry (phone), Jan Hively (phone), Paul Gilje, Dan Loritz, Tim McDonald, Jim Olson (phone), Bob White

**A. Context of the meeting** - As Minnesota works to resolve the present budget crisis and begins addressing the long-term imbalance of revenues and expenditures, focus will need to come down on the larger areas of spending in the state budget: Health and Human Services, K-12, Transportation and Higher Ed. Together these three budget items account for 79.5 percent of spending for the 2010-11 budget (see page two at: http://www.mmb.state.mn.us/doc/budget/report-pie/all-nov09.pdf ).

It is important then for the Civic Caucus to focus its efforts principally on these key areas. Today's discussion will address K-12, and touch upon higher ed. The original speaker was to be Clayton Christensen, Harvard Business School professor and author of a series of books about disruptive innovation. His most recent is *The Innovator's Prescription*, applying his theory of disruptive innovation to the health care industry. In 2008 he published with Curtis Johnson and Michael Horn *Disrupting Class*, illustrating how information technologies will remake the operations of primary and secondary school.

Christensen's work stemming from his 1997 *The Innovator's Dilemma* has been revered for some time. Steadily his scholarship and ideas have been informing efforts at redesigning the public sector, and public services, particularly through a collegial relationships with public policy organizations. Christensen could not make the conversation today, due to unforeseen personal circumstances, so Curt Johnson, who works closely with Christensen as co-author of *Disrupting Class* (2008), and partner at Education|Evolving, will visit with us in his stead.

**B. Welcome and introductions -** Welcome to Curt Johnson, managing partner of Education|Evolving ( www.educationevolving.org ) and President of Citistates Group ( www.citistates.com ). Curt has spoken to the Civic Caucus before.

As co-author of *Disrupting Class*, Johnson has now made approximately 40 speeches on the topic of disruption enabled by new technologies in the K-12 system.

As former director of the Citizens League and Chief of Staff to Governor Arne Carlson, Johnson has been involved in design work of public services for much of his career. Today he will give us the '20

minute version' of his talk for *Disrupting Class*, so that we have plenty of time-during and after-for discussion.

**C. Comments and discussion** -During Johnson's comments and in discussion with the Civic Caucus, the following points were raised:

**1. Disruptive, game-changing innovations occur periodically in all industries—** When Curt and Clayton Christensen talk about 'disruptive innovations,' they are discussing a theory that has been worked on by Christensen and other since the 1990's. A disruptive innovation is that which has the capacity to up-end an entire industry by remaking established processes. Mass-production automobiles disrupted the horse and buggy. Planes disrupted trains; solid-state radios and televisions upset vacuum tubes; computers replaced typewriters, and so-on.

Disruptive innovation stands in contrast to 'sustaining' innovations, which are the step-improvements required to improve, polish, and perfect existing products and services. Most innovations that occur on a product or in an industry are sustaining-making the existing product or service better or more efficient. But every so often a disruption occurs, with the introduction of a fundamentally new and different way of doing things. That is what is now under way in education.

**2. Disruptive technologies often emerge slowly among those not otherwise served well—D** isruptive technologies follow a now predictable path, regardless of the industry in which they occur. Their common point of entry is with what Christensen calls the 'non-consumers,' or those that are not served, or served well, by the prevailing technology of the day. Initial quality is often less a consideration for them than cost and convenience. "The first transistor radios," Johnson reminded the group, "had horrible fidelity. But they appealed to young people without much money, who didn't want to listen to rock music in their living rooms with their parents around; now they could head to the beach by themselves with their own radios."

Similarly, "Toyota did not enter the American car market with Lexus but something called the Corona (a cheap pile of metal with bad seats and a weak engine)." That car appealed to people for whom the alternative was no car at all. Notice today that Toyota is being threatened by Hyundai, with products that are less expensive and getting better every year; what next, the Chevy from China?

**3. Recognizing and understanding the change underway in K-12 education—** "We are seeing the exact same thing occur," Johnson said of tech-enabled disruptions, "in K-12." The non-consumers in public schools are most easily seen among those who have or are about to drop out. And this is a large pool. But upon closer inspection, the potential group of non-consumers becomes strikingly large: those seeking courses cut from schools in recent years; those seeking niche or advanced courses; home-schoolers; and students that are bored or otherwise uninterested and unengaged with traditional factory-model, teacher-centric schools. It's a market of considerable and growing size.

Disruptive technologies almost always bring a new business or operating model, with different cost structures. School, as it is traditionally arranged, is becoming economically unsustainable, in that it has always relied on constantly expanding revenue; revenues did expand every year, for a long, long time, until the fall of 2008. That upward trajectory of revenue may not resume under 21$^{st}$ century realities. K-12 may have seen, Johnson said, it's last real, new dollar. A caucus member observed that K-12 seems to be "the only information industry (he could) think of where the advent of digital

electronics has been cost-increasing, not cost-decreasing." That's because it was long treated as something to add-on, not a new platform to build on, Johnson said.

"It is important to get people to understand," Johnson said referring to the fundamental shift underway in K-12, "that something we are all very familiar with in other areas of life is now happening in K-12 and higher ed. We have got to get people see that connection."

"The pattern is consistent. A disruption begins by serving part of the market that is not presently being well-served." He cited the transistor radio, and solid state television. "They appeal on lines of affordability, and are usually not very good at first. But they get better and better, and eventually eat into the market share of the enterprises that once had the market mostly to themselves. Pick any industry you want, and you'll see the same pattern.

**4. An enterprise's culture can hinder its ability to change—** "There are three things that drive every enterprise: resources, processes (which form the 'culture' of organizations), and priorities. The resources cover cash, facilities, people, equipment - all indispensable. Processes and organizational culture are established by repeating the things that seem to work. They are what have made a company successful, but they can also restrain it from necessary change (think General Motors). "These are the assumptions no one questions, because everyone in the enterprise knows they are imbedded ways of doing things. But the culture that carries the enterprise along its trajectory of success can become a prison when external disruption suggests it's necessary to change those 'ways of doing things', "Johnson said. Priorities are the reasons enterprises do some things and not others, especially when there's a trade-off. It's because they value some things more than others." Those mini-computer companies that evaporated in the late 1980s were building machines their best customers needed and wanted; what would have Digital's customers done with a PC - with its slow Intel 280 chip and no memory? Nothing.

**5. Differences in education from the private sector?** —"Okay," a member said, "but K-12 is different than a company in private industry."

"Yes," Johnson agreed, "K-12 is layered in politics - from local boards to legislatures and governors. "And, it's also true that society has moved the goal posts for the industry over the past decade or so - shifting from K-12 as an 'access' industry to expecting K-12 to deliver 'achievement' for every willing young person."

"But the fundamental problem is that the system is stuck in a model made for the 20$^{th}$ century. It is premised on what Joe Graba and Ted Kolderie call the presumed 'givens' of education: that information is scarce and knowledge difficult to obtain, and that therefore a highly-trained adult must stand at the front of the classroom and profess to the students-'impart' learning. The obvious truth is that information is now easy to find; kids find it faster than adults. The model persists in assuming that knowledge should continue to be mashed up into subjects from which courses are organized, the content of which gets 'delivered' by a teacher through a phenomenon we call 'instruction,' and confirmed as received by students on some standardized test within a reasonable period of time."

"Teachers write things on a board (almost pre-Gutenberg); students write in tablets; information, as someone has put it, goes from teachers to students without passing through the brain of either. There's more: the model assumes that every kid can and will learn the same things in the same way

on the same day in the same place at the same pace. That doesn't happen. There are multiple types of intelligence, learning styles and paces of learning. But the model insists that the problem isn't the way school is organized, designed; but a 'performance' problem; so the solution is to demand more, get tougher, threaten sanctions. All this sustains a batch-processing, standardize-everything system. When the only rational response to differences in students is to radically personalize the learning opportunity - something that today is not only necessary but affordable."

**6. Newest learning technologies are much higher quality than their predecessors—** "See how the disruption is unfolding, as the first generation of education software and on-line efforts have moved from the primitive stage (when they barely mimicked the classroom experience) to nearly breath-taking quality. Think of what's emerging today as 3.0: more robust, more interactive, more differentiated by learning style, easier to assess. But the main difference is that it fits the way this generation learns; it's natural for them. It's not 'technology' to this generation; it's life. Why should they 'power down' at the portal of the high school, to go inside to 'watch teachers work?"

There are more than a dozen major firms now in this business, most with growth rates around 40 percent a year. Pretty soon that's going to produce a big number. And the on-line schools are getting larger and more numerous as well. Florida virtual school ( http://www.flvs.net/Pages/default.aspx ) has 77,000 students despite some roadblocks that lawmakers have created.

**7. Projected growth in on-line learning—** "The electronic/online is now becoming better that what most students are presently getting," Johnson observed. "We predict in the book that by about 2018 the majority of high school courses will be computer-based."

In every industry you can plot the velocity of this sort of change; its growth takes the form over time of what analysts call an S-curve. In the early stages (on the relatively flat entry point of the curve) complacency is the rule because change looks so gradual. But at some inflection point, it takes off like a rocket and people look around and say 'what happened.' That's about to happen in K-12.

**8. Importance of addressing achievement gaps—** "There is much talk, and rightly so, about the achievement gap between the lowest performers and the highest in our society. But I'd like to draw attention to the other achievement gap, which is just as important-the gap between our top students and global competition, and the gap between high-potential students and how they do now."

Johnson mentioned a story that his colleague Joe Graba sometimes tells, from his days as a biology teacher. "I'd know within a few days," Graba will say, "who in that class could be done with the material by Christmas time, but we'd make them sit through the whole year because we didn't have anything else for them to take after Christmas."

**9. Value of personalized learning—** "It is absolutely necessary," Johnson implored, "to personalize learning, if we are to reach the kids we're now losing." And now for the first time, because of digital electronics and the new school models they enable, this is possible.

There are concerns that electronics are too isolating, too atomizing. "But the MacArthur Foundation (and every subsequent study) has in fact found the opposite," Johnson asserted. They have found that information technologies enable an entirely new level, and new type, of social engagement. This is counter-intuitive. It is not only that new technologies are qualitative better, but they are

fundamentally different than anything we've seen before. Teachers affirm that they have a closer relationship with students on-line than they ever experienced in a traditional classroom.

**10. New technology's impact on number and range of options—** In addition to personalizing learning, new technologies will increase the number and range of options available to students and to parents. In order to incorporate the electronics that have become ubiquitous in the lives of young people and young adults, schools need to be designed differently.

**11. Rapid disruption in higher education—** The pace of disruption has happened faster in higher education, and its effects may be seen clearly. Most colleges now offer some online components. Capella University, based downtown Minneapolis in the Capella Tower, enrolls 31,000, with expectations for growth to 50,000 enrollment ( http://www.capellaeducation.com/news/assets edia_Fact_Sheet.pdf ). "And they don't have a football team," came a comment.

"The online growth in higher education is stunning," Johnson said. "Change will happen quicker in the public university system than private. We heard one high-ranking officer at the University of Minnesota say recently: 'I don't know what the University will look like in 2-3 years, but it won't look like it does now.' Things are changing, and the faculty isn't even aware. Their attitude is that these are problems for management."

"It is possible that only the elite colleges that are selling atmosphere or prestige and those that offer a really unique campus experience will survive even the next decade," Johnson said.

**12. Importance of public policy changes in supporting new technologies—** "What would be the best incentive," a member asked, "to get the integration of IT going at the most rapid rate?"

"This gets us into public policy," Johnson replied, "and the most essential step, the first step, is to open the system up. Make it possible for people to try things differently, and provide them with radical autonomy."

This has been the motivation behind Minnesota's major system reforms, since the '80's. Open enrollment, PSEO, Chartering, site governed district schools-each of these was a reform that provided more options to students, families, teachers, and importantly, those that wanted to start schools.

"We don't need to persuade people to change," Johnson said. "The world is changing, and young people will change it. They demand change in school."

**13. Where standards fit in personalized learning—** A member asked where testing fits into all this? "We need to have high standards," Johnson replied, "though if we have high standards then we cannot have high-stakes tests. If we insist on high-stakes tests, then we're destined to have low standards, because politics will not tolerate high rates of failure. As Bob Wedl, a colleague, says, "Uniform standards must be uniformly low."

**14. Limitations of standards—** This situation illuminates the fundamental flaw of the preoccupation with standards as a means for improving performance: Students do not learn from standards. "Testing can be very beneficial as formative assessments," Johnson commented, "but how we use it now is a distraction that devours resources and distorts the focus of the enterprise."

**15. Agenda for the Governor and Legislature—** A question: "What could the legislature do?"

"They can recover the capacity for Minnesota to be different-the bravery to be leading. We're going have to find every barrier to innovation and delete it. Provide incentives. Open the system in every way possible. Have confidence in parents to choose what is best for their students."

Do we have to look to the governor to lead that?

"You could make the argument we've stripped away much of the civic capacity to bring serious proposals from the outside," Johnson said. "This state has devolved to a place where nothing seems to happen unless the Governor initiates it. Kolderie makes the point that we're missing good ideas-we don't have enough substantive ideas to draw the legislature's attention."

**16** . **The notion of 'Separate space' is key, if we are to expect real change —**

Back to the design of the K-12 system, Johnson recalled a visit some Education|Evolving associates had a few years back with Bruce Dayton, of the former Dayton-Hudson Corporation and now Target Corp. "They could see how the department store model was declining, " Johnson said. Bruce Dayton remembers their conclusion that the department store was a "dying breed of cat." So they set up a separate enterprise to get the corporation into discount retailing. "The most important thing he said they did was not to have the new upstart retail chain report to the department store management." Those executives would have sucked the differences back into the standard department store business model (think Saturn and General Motors). "Remember, the most important things all this research shows is you can manage through disruption only through separate space and radical autonomy," Johnson said.

For an annotated illustration of the Dayton-Hudson/Target model for disruptive innovation, see the graphic here: http://thewrittenleague.googlepages.com/The-Target-Model.pdf .

"Where is this open sector in K-12?" a member asked. "Charter, district self-governed schools, and increasingly online," Johnson replied.

**D. Closing**

To close, the chair expressed special appreciation for Johnson's point that Minnesota needs to work to re-establish its leading position as a state.

A member closed with this fitting tribute: "We're so fortunate that Curt, a transplanted Texan, chose to come to Minnesota, and to stay here-especially with all the national work he does. When he became executive director of the Citizens League, right away he came in and could take a report of the League, read it in 10 minutes walking to the Capitol, and answer questions to a committee. He has been an asset to this state, and continues to be."