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21st Century Learning Inc.

A false narrative about our schools is spreading through the education community and the public at large. Apparently, with the turn of the clock and the dawn of a new century, our schools are suddenly inadequate. As Canadians for 21st Century Learning and Innovation articulates the issue, "public education in Canada must be transformed to position Canadians for success in the knowledge and digital age"[1]. The Partnership for 21st Century Skills puts it this way: "Every child in the U.S. needs 21st century knowledge and skills to succeed as effective citizens, workers and leaders." A common turn of phrase is that we must leave behind the "factory model" of schooling and embrace the technological change of the new century.

A peek beneath the surface reveals that the drive for change and the changes sought are not new, necessary or unique, but in fact familiar — cost cutting, privatization, and restructuring public education around technology.

Despite the promises, 21st Century Learning will not bring "success". The crisis of "factory schooling" is manufactured. And the proposed solution — radical technological transformation — has the potential to damage our schools while diverting public money to corporate profit.

The drive for change

The 20th century was marked by two world wars and many crises, but among its relative success stories was the fantastic spread of educational opportunities to broad classes of people through the establishment and expansion of public education systems. Replacing patchworks of private and parochial schools, governments invested in a project of mass schooling and expansion of higher educational institutions, often both publicly funded and publicly administered.

The project was in fact so successful that many of those ruling elite in the business world who supported universal public education came to regret its success. Along with mass literacy came another consequence: serious political challenges to the status quo, and in particular to the interests of free marketeers. Increased access to university and the intellectual fervour surrounding socially progressive movements nurtured more critical thinking and questioning authority than those in power anticipated.

The post-war period was in many ways the high water mark for public education. There was stable and growing funding. Class sizes were reduced. Progressive policies such as the inclusion of students with special needs were implemented. The teaching profession grew in stature as teacher salaries increased, teacher preparation programs lengthened and minimum qualification standards were set, improving the quality of teaching. There was room for experiments in teaching styles and methods in alternative schools.

Twentieth century schooling was far from monolithic. The "factory model" of the 1920's, designed to mimic the workplace and teach students to respond to bells, over time developed into liberal comprehensive schools. Some areas of the public education system truly radicalized and became campuses of dissent. In the wake of the civil rights movement, the Vietnam protests, the fight for women's equality and the gay rights movement came a questioning of commercialism and capitalism. Schools and universities were hotbeds for these discussions. By the 1970's the political right and big business were lamenting the crisis of too much free thinking.

Nowhere was this crisis for the ruling class better articulated than in the Powell Memo[2]. In 1971, Lewis F. Powell, a member of the board of 11 corporations, made a clarion call to his corporate brethren to create

new institutions which would shift the public discourse away from liberal and socialist ideas and back toward a free market ideology. Lewis lamented the widespread criticism of "the American economic system":

> The most disquieting voices joining the chorus of criticism come from perfectly respectable elements of society: from the college campus, the pulpit, the media, the intellectual and literary journals, the arts and sciences, and from politicians. In most of these groups the movement against the system is participated in only by minorities. Yet, these often are the most articulate, the most vocal, the most prolific in their writing and speaking.

Something must be done, Powell said, and big business needed to do it. Powell's memo provides a broad strategic plan: reorient public thinking through the development of scholars, speakers, speaker's bureaus, new textbooks, new curriculum, media influence, scholarly journals, books and advertisements. Leave no intellectual stone unturned in the drive to reorient mainstream views towards market based ideology.

In concert with Powell's memo was the development of the Chicago School — a group of academics at the University of Chicago already enraptured with free market everything — the fathers of neoliberalism. Milton Friedman, one of the neoliberal gurus, took on education specifically. His attack on public schools concludes thus:

> Government has appropriately been concerned with widening the opportunity of young men and women to get professional and technical training, but it has sought to further this objective by the inappropriate means of subsidizing such education, largely in the form of making it available free or at a low price at governmentally operated schools.

Acknowledging the requirement for state subsidized workplace training, but rejecting publicly funded and publicly administered schools, Friedman developed the concept of the school voucher–a mechanism for limited public subsidy of a private system:

> Government, preferably local governmental units, would give each child, through his parents, a specified sum to be used solely in paying

for his general education; the parents would be free to spend this sum at a school of their own choice, provided it met certain minimum standards laid down by the appropriate governmental unit. Such schools would be conducted under a variety of auspices: by private enterprises operated for profit, non profit institutions established by private endowment, religious bodies, and some even by governmental units.

While Powell's call to arms required massive corporate investment, the neoliberal project of the marketization of education carried with it the added benefit, from the corporate perspective, of opening a massive new opportunity to private enterprise. With education second only to healthcare in market size, the drive to make this market open for business was already on the radar of those corporations with the potential to profit, such as publishers and technology companies.

Initial attempts to reframe the public discourse on public education were not particularly successful. Pushing vouchers failed. Outright privatization failed. But the twenty first century has brought with it the first wave of success of the free marketeers to radically shift the dialogue on public education.

The 21st Century Learning web of influence

In keeping with the Powell method, a collection of think tanks, academics, senior bureaucrats, and corporations have developed a web of influence centred on a concept: 21st Century Learning.

The set of "non profit" and "charitable" foundations that use this moniker is sizeable. The degree to which the term has spread is breathtaking. A Google search yields over 10 million hits.

At the centre of this web are corporations. And the corporations most interested in funding such an initiative are those who will potentially profit — "knowledge sector" companies. Each of these companies devotes time, resources and "white papers" to the 21st Century Learning initiative: Apple, CISCO, Microsoft, Dell, Smart Technologies, AOL Time Warner, Pearson, Adobe, Blackboard, McGraw-Hill Ryerson, Nelson Education, Scholastic Education, and IBM, to name a few.

But to maintain credibility, a secondary layer of institutions and individuals play the primary role in disseminating the 21st Century Learning ideology to government and the public at large. This layer

consists of non-profit organizations funded by the corporations, consulting firms, university researchers backed with corporate grants and good old fashioned lobby groups. Neoliberal governments adopt the plans, and act as the interface to the public. Each has its focus — be it private delivery, radical transformation, skills curriculum or de-professionalizing — but each also complements the others. This second layer also includes "internal validators"— members of the educational community such as Superintendents, teachers and academics, who reinforce the ideas and lend credibility to what is otherwise a profit driven corporate agenda.

There are also mediating forces (such as teachers and parents) acting against many aspects of the corporate reform agenda. This results in both confused and contradictory messages.

The promise

There is no shortage of promises made to support 21st Century Learning. Key among them are:

- better student outcomes
- more student engagement
- student-centred or personalized learning
- improved instructional quality
- lower costs

A more detailed look at the proposed reforms reveals quite another picture.

The reality

In order to free money for new technology spending, 21st Century Learning schools must lower their public expenditures on existing, traditional forms of schooling. It is this aspect of 21st Century Learning that is so attractive to politicians and bureaucrats, who face ever diminishing budgets. 21st Century advocates argue that the new forms of schooling will be less expensive, even though they require initial spending on new infrastructure and technology products. Some strategies to lower existing costs through new models of 21st Century

schooling include: increasing the student-teacher ratio using technology (as mentioned above); replacing teachers with lower wage, less qualified workers; reducing physical space requirements by expanding the school day so that building are used for more hours and by increasing the schooling that takes place at home and in workplaces; and increased reliance on parents to provide instructional planning, support and teaching.

21st Century Learning aims to re-orient curricula towards labour market skills training. Existing curricula will be modified by adding "skills" and/or "competencies" to traditional "knowledge" curricula. Curricular components will include business oriented or workplace skills such as: entrepreneurship / innovation, financial / economic literacy, IT skills, and career skills. Curricula will be redefined and/or expanded to change the degree to which the purpose of education is work readiness as opposed to democratic citizenship.

Corporate interests see transformation as an opportunity to increase private delivery, control, and ownership of schools. This will happen through the increased use of information technology in a variety of areas, including: curriculum resources, lesson delivery, data driven school management, data driven testing and assessment, computerized feedback to students and parents, and computerized "personalization". Private control will take place with the increasing use of online and blended learning, because the technology platforms will built by the technology corporations, not school districts or teachers. Private parental control will increase with more home schooling and blended in school / home school models. Contracting out of actual teaching will take place with the use of online tutoring from private providers, who contract out the tutoring work, and the re-use of packaged video lessons such as the Khan Academy, which is effectively the contracting out of lecturing. 21st Century advocates will push for the elimination of school boards in favour of charter schools, which allow private control and ownership. This will be done under the guise of "choice", "creativity" and the need to "personalize". This may take the form of increased public funding to private schools, or with charities, foundations and corporations able to fund and/or own schools.

The details

Curriculum

Chief among those promoting the curricular re-orientation is the Partnership for 21st Century Skills (P21), with no fewer than a dozen corporate "partners" and a generous grant of matching funds from the U.S. Department of Education that provided the seed money to articulate 21st Century Skills. As P21 describes on their web site, these are: "Learning and Innovation Skills, which include creativity, critical thinking, communication, and collaboration; Information, Media, and Technology Skills, which involve effectively using, managing, and evaluating information from digital technology and communication tools; and Life and Career Skills, which include flexibility and adaptability, self-direction, teamwork, appreciation of diversity, accountability, and leadership."

The Partnership is clear that schooling is not simply for one's self, but rather to succeed in "work and life". Students with a 21st century education will "graduate better prepared to thrive in today's global economy." These work skills include "financial, economic, business and entrepreneurial literacy" as well as "learning and innovation skills" for "complex life and work environments". The factory model is no longer appropriate because we no longer work in factories. Instead, we need "systems thinking", "technology skills", "productivity and accountability" to function in these "complex life and work environments".[3]

Some of the changes to curriculum appear to be progressive, but actually are reactionary in nature. Consider, for example, critical thinking. There is no question that critical thinking should be a part of any school curriculum. But the 21st Century Learning agenda is redefining what critical thinking means. In the 21st Century Learning world, critical thinking is predominantly problem solving. When combined with innovation, creativity and entrepreneurship, one sees a picture of schools producing the ultimate capitalist citizens — the next Mark Zuckerman, Bill Gates or Steve Jobs. P21 articulates what the 21st century student should be able to do: "successfully face rigorous higher education coursework, career challenges and a globally competitive workforce".

What is missing is the other meaning of critical thinking — the ability to question a particular viewpoint and develop opinions, to see through propaganda, to understand bias.

The same re-framing is made with respect to citizenship. In a 21st Century Learning world, citizenship has been re-branded as "ethical citizenship" or even as "social responsibility". What is conspicuously missing from the 21st Century curriculum is democratic citizenship. In fact, one is hard pressed to find the word "democracy" in almost any of the publications, white papers, and speeches.

Technology

Not surprisingly, technology is almost always identified as a component of 21st Century Learning. But this isn't simply adding new technology to aid in the delivery of curriculum or to allow new teaching methods. It is not a matter of adding a few computer labs or replacing textbooks with eBooks. In the 21st Century Learning model technology defines the learning methods. It is absolutely backwards — rather than pedagogy defining if and what technologies are used, instead, it is technology driving the choices for learning. As such, it is fundamentally different than the type of technology integration we've seen in the past. It is also, ironically, antithetical to a student-centred or personalized approach because the technology is driving decisions, not student needs.

Whole books have been written on the degree to which technology should or shouldn't be in our schools, but we can consider just a few statistics to get a sense of where 21st Century Learning advocates would like to take us. A paper by CISCO provides a helpful chart documenting what media consumption Dutch teenagers do during an average day[4]:

The question CISCO asks is, "How can traditional modes of classroom instruction engage and inspire students when life outside the classroom has changed so dramatically? In 2007, teens in the United States spent 40% of their media time on cell phones, the Internet, and games, up from 16% in 1998. For many learners, class is the only time in their day when they completely 'disconnect.'" Rather than question how much is too much technology, this technology company wonders how we can increase the screen time of teenagers by filling in the one relatively screen free time — school. Meanwhile the Canadian Pediatric Society recommends a two hour screen time limit for children[5]. Significant social issues related to screen time include obesity, mental health and even changing brain chemistry for younger children.

Media Consumption by Percent
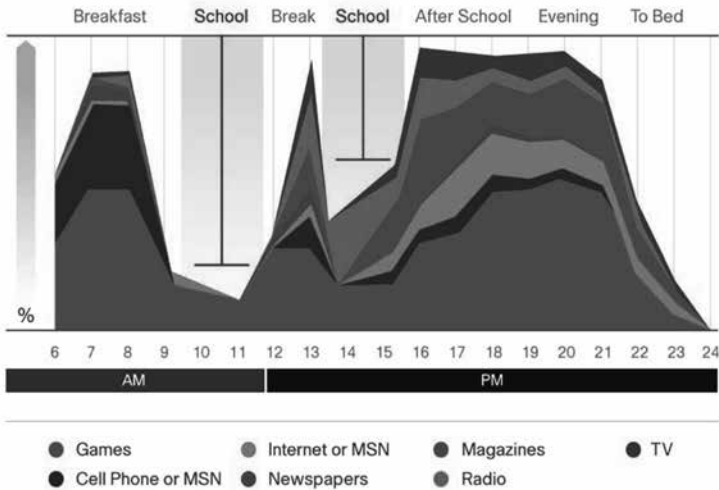
Source: Cisco 2007

To sell more IT products, the 21st Century Learning advocates create a need for those products. No longer should schools spend their resource and IT budgets only on textbooks and computer labs. Anytime, anywhere, collaborative, integrated, blended learning requires a massive infusion of new IT products.

Considering just one corporate player, Pearson, we see the objectives identified in this report written by Donald Gutstein for the British Columbia Teachers' Federation:

According to investment research firm Sanford Bernstein & Co., Pearson is pursuing three growth strategies. First, the company is investing in content and technology to increase its market share of the education industry. Second, the company is restructuring away from the FT Group and reinvesting the proceeds into the high-growth areas of emerging markets (Brazil, India, China, South Africa) and consumer —rather than publicly — financed education. The third strategy is new, and Bernstein predicts it will 'revolutionize how education is delivered to students around the world, starting with the United States.' It is an ambitious at-

tempt to further commercialize education by claiming its products and services will raise student and teacher performance while at the same time cutting spending. If successful, Bernstein argues, 'it would make every teacher and school student in the United States a potential customer' by 'personalizing education in U.S. schools through technology and best practices.'[6]

Pearson appears to have the U.S. government firmly in its corner with the launch of the 'Digital Promise' announced by the White House in 2011. Digital Promise, "will work with leading researchers, entrepreneurs, and schools to identify and spur breakthrough learning technologies that deliver the best results for students, parents, and teachers."[7]

Without doubt there is a place for technology in schools and classrooms. It is also likely that new technological developments can provide useful tools to enhance learning. Online and blended models certainly have a place to address issues such as geographic distance and schooling in small communities with few children.

What is troubling is that rather than a broad discussion about the potential new uses of technology along with the potential risks and pitfalls, the dialogue is one-sided and misleading.

Privatization

Knowledge and IT companies have two ways to profit from public education systems. The first is simply by selling more products to schools. The second is a structure where public school boards contract out educational and infrastructure services to private companies. Both are part of the 21st Century Learning corporate mandate.

The World Bank describes some of the ways public-private partnerships can be used within the education sector: "Private-Public-Partnerships can complement and enhance the role of the government in the provision of education. The task that each player can provide includes financial provision, pedagogical development, human resources development, service delivery, infrastructure, facilities management, among others. Furthermore, each partnership works in specific locations and markets. For these reasons, it is critical to investigate which are the appropriate roles of each stakeholder in the provision of education in the context of specific markets and locations."[8]

Technology companies are clearly interested in these models. CISCO states on their website, on the page entitled "Transforming education: Public private partnerships for education": "We believe that public-private partnerships will play an important role in the transformation of global education systems. CISCO leverages these types of partnerships to improve learning outcomes and promote socioeconomic development in communities around the world."[9]

The various non-profit lobby groups, with their corporate partnerships, also identify this theme. For example, C21 — the Canadian non-profit 21st Century Learning lobby group — identifies public-private partnerships in their list of goals for policy makers: "Foster private-public partnerships with the knowledge sector and other non-government organizations to meet the needs of students."[10]

Replacing teachers and increasing teacher productivity

Teachers are by and large the most expensive part of any school system. It is therefore logical that attempts to cost cut will involve reducing teacher time.

The most obvious is to increase the ratio of students to teachers. In a 21st Century Learning paradigm, technology is used to facilitate this process: online schools and classes replace face-to-face learning; blended online/classroom models allow a larger student load per teachers; online tutoring replaces teacher time with lower paid (and often contracted out) instructors. Another tack is to replace teacher work with other adults: involvement of parents through blended home / school models; replacement of teachers with paraprofessionals; even the use of volunteers in classrooms.

Sometimes, this is described as increased productivity. Just as technology has been used to speed up manufacturing processes, 21st Century Learning through technology has the potential to "speed up" learning or to increase learning productivity by increasing the number of learners to each teacher. As Daphne Koller, a Professor at Stanford University puts it: "As a society, we can and should invest more money in education. But that is only part of the solution. The high costs of high-quality education put it off limits to large parts of the population, both in the United States and abroad, and threaten the school's place in society as a whole. We need to

significantly reduce those costs while at the same time improving quality.

If these goals seem contradictory, let's consider an example from history. In the 19th century, 60% of the American work force was in agriculture, and there were frequent food shortages. Today, agriculture accounts for less than 2% of the work force, and there are food surpluses."[11] Daphne Koller is one of the founders of Coursera[12], a massive online course delivery system in which tens of thousands of students can take a university course at one time. She openly acknowledges that massive course delivery may not be equivalent in quality to face-to-face models, but without hesitation assumes there is simply no money to teach the masses: "Needless to say, few countries can offer university-level education for free. But as Internet access improves globally, online education is becoming a very real solution for students who might not have the prior experience needed to enroll in local colleges, who can't afford tuition, whose lifestyle does not permit them the leisure to attend classes in person, or who can't commute to schools far away from home."[13]

It is here that the contradictory nature of 21st Century Learning begins to show. On the one hand, cheaper and scaleable teaching with technology might be possible. But surely, the standardization and rote learning methods this requires will fail to produce "creative" and "innovative" students. Moreover, while cheaper teaching methods with technology might be available, it does not mean they are desirable or effective. Learning is not fertilizing and students are not corn.

The myth of personalization

Much of the hype of the 21st Century Learning centres around "personalization". Academics such as the UK's Ken Robinson lament that existing forms of schooling are restrictive and standardized — deadening children's innate sense of curiosity. At the opening keynote of a recent education conference, he said:

> Humanity is essentially based on the principle of diversity. We are hugely different in our talents, our passions, our interests, our motivations, and our aspirations. The irony is, our education systems are predicated on compliance and conformity, not on creativity and diversity. I believe

there are opportunities now, with new technologies as well — not only, but including new technologies — to personalize education for every student in the system. Sometimes I hear people say, 'Well you can't personalize for everybody. We can't afford that.' But I say we can't afford not to.'[14]

Personalization has a long history in the education field and encompasses a wide range of ideas including mastery learning, self-paced learning, and learning through multiple intelligences. It may involve student choice, student pacing, and even student selected learning objectives. However the term has been appropriated, particularly in the UK, to be more closely affiliated with computer mediated personalized learning. This causes considerable confusion in the 21st Century Learning world, as educators would likely provide a very different definition than technology companies.

The term was identified by David Miliband, then Minister of State for School Standards, in a well known speech in 2004 about UK education reform. The idea was further defined by British academic David Hargreaves who coined the nine gateways to personalized learning. But as the Alberta Teachers' Association points out: "The close association of personalized learning and new technologies has been a central strand since the inception of the idea, and is part of the all-embracing creed of technocrats looking to enter system level educational reform. Of note is that David Hargreaves was a former chair of the British Educational Communications and Technology Agency, which was the UK government's main partner in the strategic development and delivery of its information and communications technology (ICT) and e-learning strategy."

What does technology facilitated personalization look like? It is perhaps better described using the term 'adaptive learning', as it typically consists of a computer program which offers adapted learning pathways based on the student's test outcomes. Students begin with a test or assessment and the computer then develops a pathway of lessons and future tests according to the student's current abilities. More sophisticated models will also include different potential outcomes that the student may want to pursue. Nevertheless, to describe this as "personalized" is a misnomer. In any computer learning system, there are a fixed set of outcomes the program can teach, and there are a fixed set of potential pathways a student can traverse.

There are more sophisticated versions that incorporate questions and answers with peers, online discussion groups and other features designed to mimic an in-school experience. Nevertheless, true personalization begins with the person, not with the tool.

The myth of personalization is used to make the 21st Century Learning model attractive to parents and children. What could be better than a school system designed to accommodate every child's unique needs? Yet that level of personalization would take many resources and would not necessarily involve any technology. It would require smaller classes, more teachers and a greater range of educational programs in all schools. Adaptive technologies are not personalized learning. Adaptive and online education systems are used to scale instruction to large numbers of children, and although they may provide multiple pathways, they are by their preprogrammed nature restricted in scope.

Case study: New York City

What would 21st Century Learning look like in a school?

New York City's iZone schools are an excellent example, as they have already integrated many of the 21st Century Learning ideas into practice. These schools focus heavily personalization and technology use. Their website states: "The Innovation Zone (iZone) is a community of innovative New York City schools committed to personalizing learning. By meeting the needs, motivations and strengths of each child, students will be better prepared for success in K-12, college and career. Across the iZone, schools achieve personalization in a variety of ways based on which ideas, technology and tools work best for their school community."

At the iSchool, we see the disconnect between the promises and the reality of 21st Century Learning. The NYC Department of Education promises "personalizing learning to meet the needs, motivations and strengths of individual students". The reality is more computers and fewer teachers.

In this iSchool classroom, students are learning on laptops and with a teacher from another part of the city who teaches two groups simultaneously. This is because one school has no budget to offer a small class of Advanced Placement English. This is not a remote rural school

City Students Take Part in Virtual Lessons. NY1.[15]

with no access to transportation, but New York City, one of the most densely populated cities in the world. There is, apparently, no money for a teacher when there is clearly money for laptops, networking, and video conferencing. No doubt the companies supplying the technology are pleased: the budget for technology in New York City has increased from $300,000 to $7.2 million in a single year.[16]

New York's School of One offers another interesting example. At the outset, Mayor Bloomberg proudly stated, "The School of One [is] creating a 21st century classroom to meet the individual needs and learning styles of every student."[17]

Pearson, which provides much of the technology used, also proudly describes the program as a "case study" in their Leadership Summit Report: Activating Whole System Reform to Achieve Higher Order Results:

> After a 30 minute lesson, students move to an assessment task, the small groups and stations approach means that other types of staff can be used such as volunteers, student teachers, teaching assistants but the key teacher roles are reserved for teachers. If the student scores well enough they go onto another lesson, if not they go to guided practice which is delivered via computers. During the online practice students could be accessing an online practice program, a self-guided digital tutoring program or the services of Tutor Vista which provides access to online tutors.

But here is what one parent witnessed when she visited a School of One tour with Administrator Joel Rose:

...when I toured a School of One classroom about a year and a half ago, at a school in Chinatown, I found the opposite to be true. First, Joel Rose explained to the assorted visitors that because of the large class sizes in NYC schools, individualized learning was impossible to achieve without the use of technology: "No human being can meet all the needs of students in a class of 25, so something else has to be done to personalize instruction." …

We then entered a large room, converted from the school's library, with about one hundred 7th and 8th graders seated at tables, most of them staring at computers and doing multiple choice math problems. I watched as one girl, seemingly in a trance, looked at the screen, and hit A, B, C, D keys in turn, until she got the right answer to a multiple choice question and moved onto the next one. Sadly, no adult but me seemed to be paying any attention to this student to make sure she was trying to think the problem through.

There were also two or three small groups of students, sitting at smaller tables, with rather harassed looking teachers who were trying to teach math, but allowed to spend only about ten to 15 minutes together before time ran out and a signal was made for the students to move back to computers, or to another group led by a different teacher.

Rose explained that in the room, there were four certified teachers, two college students, and three high school students staffing the room, though it was hard to discern this. He said that each teacher specialized in teaching 25% of math skills, and every student was assigned to particular groups or math problems by means of an algorithm, calculated the night before, based on his or her performance from the day before.

But what I saw was not personalized instruction and engagement, but many confused and somewhat dazed students, and much disruption, with kids bumping into each other during abrupt scheduling changes, as they moved around the crowded room at the same time.

Rose also explained how the students also had access to "virtual" tutors through their computers; but I didn't see any sign of this. When I asked him where these virtual tutors were located and what their credentials were, he said he didn't know, but they lived somewhere in the United States and had been provided by contractors.[18]

The Canadian connection

The network promoting 21st Century Learning is global. Canada has its own domestic lobby groups. We also have several provincial governments and educational organizations promoting this version of education reform.

C21 Canada is one centralized hub of 21st Century Learning advocacy. They describe themselves:

C21 Canada is a national, not for profit organization that advocates for 21st Century models of learning in education. The goal of C21 Canada is to witness an accelerated pace of 21st competencies, instructional practices, and digital resources and services being integrated into Canada's learning systems. C21 Canada is a unique blend of national education associations and knowledge sector businesses united in their belief that 21st Century models of learning must be adopted in public education on an urgent basis to position Canadians for economic, social and personal success in the high skills, knowledge and innovation based economy.[19]

Like the U.S. counterparts, they are funded primarily by business: Dell, EF Educational Tours, IBM, McGraw-Hill Ryerson, Microsoft, Nelson Education, Oxford University Press, Pearson, Scholastic Education, Smart Technologies; as well as two non-profit groups: the Canadian School Board Association and the Canadian Education Association.

Their discussion document, Shifting Minds: A 21st Century Vision for Public Education in Canada provides insight into the Canadian version of the 21st Century Learning web.

Despite its claim that "Canadians would prefer to see a national learning vision founded on Canadian values and principles"[21] the content is remarkably similar to what has been articulated in both the U.S. and the UK.

There is the promotion of 21st Century "competencies" which include: creativity, innovation and entrepreneurship; critical thinking; collaboration; communication; character; cultural and ethical citizenship; and computer and digital technologies.

"Radical transformation" is envisioned as "core elements of public education that must undergo elements of transformation. This systemic change must be strategic and focused to be successful." It includes curriculum overhaul, changes in pedagogy, modifying the learning environment, changing school governance structures and citizen engagement.[22] Within each of these systemic changes, we find: "anytime, anywhere learning", "personalized learning opportunities" for "all students", a commitment that "on-line learning, blended learning and virtual schools must be pursued as viable and relevant options to meeting the needs of many learners", and "assistive technologies to support the diversified needs of learners must be ubiquitous."

And despite the previously claimed need to support "Canadian values", the paper suggests, "School Leaders must model 21 Century skills in daily decision making, develop school improvement plans reflecting 21st Century learning goals and support procedures and practices which promote the shift in mindset required to achieve 21 Century learning in school."

It is early days, but a few provincial governments are already embracing the 21st Century Learning mantra. British Columbia, for example, is proposing the adoption of a new BC education plan[23], whose principles clearly "align" with those of 21st Century Learning. The plan apparently originated in back room discussions after Valerie Hannon, of Global Education Leaders Program, presented at the BC School Superintendent's conference in 2009[24]. From there, a paper developed by the Premier's Technology Council reinforced the idea of "a vision for 21st century education" in BC[25]. The preamble describes the purpose of the report: "This special report highlights a vision of education in the 21st century. As a result of our research, we believe that our system must transform to properly serve the citizens of a knowledge-based society." Unsurprisingly, we see the same themes: personalized learning, online and blended learning, more technology.

The true face of 21st Century Learning

The radical transformation that 21st Century Learning advocates want is not value neutral. The base of the 21st Century Learning network is composed of the "knowledge" companies that fund and promote its ideals. It is ultimately their interests that will be served.

When 21st Century Learning Inc. reaches our schools, the consequences will be not the creativity and critical thinking that are promised, but rather corporate profits and corporate ideas.

The 21st Century Learning project is extensive in its goals and has the potential to significantly privatize many aspects of public education. In essence, the "secret agenda" is to replace a public service with a publicly subsidized private education marketplace, or what I term a P4 — public purse, private profit. This is exactly what Milton Friedman argued for.

> **The 21st Century Learning project is extensive in its goals and has the potential to significantly privatize many aspects of public education. In essence, the "secret agenda" is to replace a public service with a publicly subsidized private education marketplace, or what I term a P4 — public purse, private profit. This is exactly what Milton Friedman argued for.**

Children, parents, teachers and the public have everything to lose with this model. In the worst case scenarios, excellent, comprehensive neighborhood schools with a wide variety of face-to-face programming will be replaced with overcrowded, technology based schools with significant public money going towards corporate profits.

Corporations like to make citizens believe that our interests are the same: that people benefit when corporations are successful. But in most instances, corporate interests and the interests of citizens wanting a strong, equitable, publicly funded and publicly controlled education system, are in conflict.

Excessive technology is not better for learning. Fewer teachers is not better for students. Overnight radical transformation is not a sensible way to address the issues that do exist with our current school

systems. Turning schooling into primarily job preparation centres will not produce a highly educated, active and democratic citizenry. Computers will not personalize education.

21ˢᵗ Century Learning should be seen for what it is: a highly effective corporate lobby campaign. Citizens, teachers, students and parents should reject it. We have nothing to gain, and everything to lose.

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ENDNOTES

1 Canadians for 21ˢᵗ Century Learning and Innovation (2012). "Shifting Minds: A Vision and Framework for 21ˢᵗ Century Learning in Canada" [Press release]. Retrieved from http://www.marketwire.com/press-release/shifting-minds-a-vision-and-framework-for-21st-century-learning-in-canada-1708614.htm

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