Perspectives in Practice

BRITISH COLUMBIA PUBLIC SCHOOL EMPLOYERS' ASSOCIATION

# Employment in Transformational Times — or Change as Usual?

*Perspectives in Practice* is a series of briefing notes to promote discussion on select employment matters at issue in the K-12 public education sector. Each ends with a question to get the conversation started. Let us know what you think at contact.us@bcpsea.bc.ca.

Are we living in a transformational time — a period in history that will be looked back on as ushering in changes as profound as those of the industrial revolution? Or are we simply living in a time of change as usual?

It's true that every generation believes it is witnessing a time of significant and profound change and, in this regard, we are no different from our ancestors.

Yet it can also be argued that we are on the cusp of a new era, resulting from exponential advances in science and technology, new understandings of how we learn, and greater opportunities for interconnection between people, countries, and economies on a global scale.

Consider the pace of change. The past decade has seen the rise of China and India as dominant players in the world economy. Twenty years ago, few people had heard of or used the internet. Now, 1.5 billion people are online, 50 percent of the world's population have a cell phone, and new technologies are enabling us to connect with each other in ways we couldn't have imagined, giving us access to more information than ever before.

Looking ahead, the pace of change will only accelerate. In a report on the challenges of the next decade, McKinsey & Company argue that the period to 2020 will be one of "enormous transformation," marked by the pressure to increase productivity in developed countries, continued and rapid advances in technology, and the rise of the middle class in the world's poorest countries (it predicts an increase in gross domestic product (GDP) per capita "five times faster in emerging economies than in OECD[1] nations"). As the report summarizes, "the forces driving the emergence of this new world — juggernaut population trends; truly global markets for

[1] Organisation for Economic Co-operation and Development, http://www.oecd.org/pages/0,3417,en_36734052_36734103_1_1_1_1_1,00.html.

goods, services, labour, and capital; and unceasing innovation in fields ranging from cell phones to cell biology — are too powerful to be denied."[2]

We're also facing profound challenges as a planet, including the dramatic issues of climate change, the need to find alternative non-carbon sources of energy, and the impact of shifting demographics on everything from health care to economic productivity.

We are witnessing a movement from an industrial-based economy to a globally interconnected knowledge-based economy. In the last decade, some 85 percent of new jobs created in the US fell into the category of knowledge worker, requiring complex skills in information analysis, problem solving, and creative thinking.[3] What are the implications of this shift? And what does it mean for the way we educate our children?

## Public Education in a Time of Transformation

While our education system is not static, many of its defining characteristics are holdovers from a much earlier age, reflecting the values of a society and culture that no longer exist. Consider the typical school calendar with two months off in the summer, a feature designed to meet the needs of a largely agrarian society, but of little relevance to most students today (and indeed, many studies point to students' loss of knowledge and skills as a result of an extended break).

Schools adopt a standard curriculum based on discrete subjects such as mathematics, science, and English, with few opportunities for interdisciplinary learning. Students are often assessed and rewarded for their knowledge of content, rather than their understanding or their ability to synthesize information, think critically, or collaborate productively with others.

As the 21st Century Learning Initiative Platform summarizes:

> Current education systems were designed with assumptions about the development of human capabilities and learning which are now being systematically revised in the light of new research. Designed to serve the needs of an earlier age, these systems are limited by the technology of the classroom, instruction, uniform progression, and prescribed knowledge. Perversely, these limitations inhibit our ability to see radical alternatives based on new understandings about effective learning. Organized around the ideas of the factory and mass production, most current school programs are incompatible with our emerging understandings that learning must be active and that people learn in different ways, and in a variety of places. While most teachers are dedicated and hard working, honestly striving to provide young people with a

[2] McKinsey & Company, "What Happens Next? Five Crucibles of Innovation that Will Shape the Coming Decade," June 29, 2010, p. 5, https://alumni.mckinsey.com/alumni/default/public/content/jsp/alumni_news/20100629_Global_Forces.jsp.
[3] Ibid, p. 9.

> good education, their capacity to tap into new ideas is frustrated by these outdated arrangements.[4]

We are currently preparing students for jobs that don't yet exist, using technologies that haven't been invented. The children entering kindergarten in September 2011 will be retiring in 2071. We cannot predict what technologies they will be using, the range of jobs they might hold, or the specific skills they will need to live up to their potential and contribute their unique talents to the broader community.

# Perspectives on the Need for Transformational Change in Our Classrooms

What — if any — changes are needed in our classrooms?

In BC, there are two dominant perspectives on this issue. The first, articulated by the writers of the Premier's Technology Council report and others, argues for the need to make significant changes to our education system in light of the transformational change happening in our world. The second perspective, most often represented in articles and reports published by the BC Teachers' Federation (BCTF), questions the motives behind the call for transformational change.

## Transforming the System

The Premier's Technology Council December 2010 report, *A Vision for 21st Century Education*,[5] argues that BC's public education system must shift to meet the needs of a changing world:

> The fabric of a knowledge-based society is built around individuals with the ability to use information and continuously adapt to a rapidly changing globe. If BC is going to remain competitive, it must have an education system that ensures everyone, regardless of socio-economic background, is able to participate in such an increasingly demanding, knowledge-based society. Although some steps have been taken in this direction, the province needs to address the issue with greater urgency to create change that is truly transformational.

This perspective was echoed by Deputy Minister of Education James Gorman at a meeting of the BC School Trustees Association (BCSTA), who stated that with "demographic shifts, declining enrolment, struggling economy, [and] increasing health care costs," there are widespread concerns among parents, employers, and post-secondary institutions about

[4] The 21st Century Learning Initiative, www.21learn.org/site/archive/the-21st-century-learning-initiative-platform.
[5] Premier's Technology Council, *A Vision for 21st Century Education*, December 2010, http://www.gov.bc.ca/premier/attachments/PTC_vision%20for_education.pdf.

"competitiveness, changes in use of technology, and the ability of our education system to keep up."[6]

The Premier's Technology Council report broadly identifies the skills our students will need to develop, the elements of the system that will need to be transformed, the shift in roles that will need to occur, and the system-wide changes required.

The report outlines the following skills and attributes that young people will need to succeed in the upcoming decades:

- functional numeracy and literacy
- critical thinking and problem-solving
- creativity and innovation
- technological literacy
- communications and media literacy
- collaboration and teamwork
- personal organization
- motivation, self-regulation, and adaptability; and
- ethics, civic responsibility, and cross-cultural awareness.

These skills and attributes are not new, of course, and our students have had (and will continue to have) many opportunities to develop them over the course of their education. The writers of the report believe, however, that "the combination of technology and access to information that underpins a knowledge-based society means that these skills need to be applied in different ways and supplemented with new skills in order for students to become full participants in a knowledge-based society."

The writers believe that successful 21st century education will be rooted in personalized learning, as opposed to "mass education." Under this vision, students will acquire a solid foundation of skills and then "explore an educational path that is best suited to their interests, their capabilities and their chosen future."

This vision of what has been called "21st century learning" or "personalized learning" represents a shift from delivering a set of broad, uniform learning outcomes and courses throughout the pre-K to 12 education program to creating environments for learning that are increasingly student-initiated, self-directed and interdisciplinary, and that are facilitated by the teacher and co-planned with students, parents, and teachers.

Rigorous learning requirements would continue to be the core of the education program; students would be expected to develop specific skills as outlined above, and they would be required to develop knowledge in various subjects and disciplines. However, with personalized learning there is increased emphasis on competencies. Learners will develop these competencies by applying their skills and knowledge in new, often interdisciplinary, situations.

[6] Summary Report: Meeting of Board Chairs, Branch Presidents, Provincial Councillors and Ministry of Education, Friday, October 22, 2010, www.bcsta.org:8080/docushare/dsweb/Get/Document-64194/2010-10-22_Ministry_Meeting_Summary.pdf.

The shift away from more traditional models of education also represents a shift to the individual learner. This shift is underpinned by the belief that students should be engaged participants in their learning. Knowledge is still transferred from teacher to student, but there would be many more opportunities for inquiry-based learning, either independently or in collaboration with other students, teachers, or members of the community.

For this to occur, the public education system would need to be transformed into a place of active, discovery-based learning. The authors of the Premier's Technology Council report envision a system that incorporates:

- a flexible educational path that incorporates integrated, project-based or problem-based approaches to learning
- a blended system that combines face-to-face learning, online learning, and learning outside the classroom
- access to technology that supports learning and teaching
- open access to information systems; and
- constant feedback and assessment.

Such a system would affect the roles of students, teachers, and parents. For example, the early years of a student's education might look quite similar to what's in place today. But as students move through the grades, they would take on greater levels of responsibility for charting their own path. This might involve seeking learning opportunities both within and outside the classroom, and it would certainly incorporate technology as a tool to help them access information, connect with experts and advisors, and collaborate with classmates. In step with this, teachers would see their role shift to becoming more of a coach or guide helping students pursue self-directed learning.

This shift to personalized learning will have implications for where learning occurs (certainly in a school, but also in the community), how it happens (less direct instruction, and more interaction and collaboration), the spaces where it happens (re-thinking school spaces so that collaborative learning can take place), the time when learning happens (project-based work does not always conform to rigid timetables), and the pace of learning.[7]

Ultimately, personalized learning is grounded in the belief that when students are engaged, they will succeed. Student engagement does not only happen when a student has a particularly inspirational or charismatic teacher, but when a student has the opportunity to immerse him/herself in material that is relevant to them and when they have a greater say in how they might demonstrate their skills and mastery of a subject. In this regard, learning needs to be "deep (reflective, metacognitive, beyond course requirements), authentic ('real-world' contexts, meaningful to students' lives), and motivational (task/goal oriented, inspires students to further learning)."[8]

[7] Charles Leadbeater, *What's Next? 21 Ideas for 21st Century Learning*. July 10, 2008, http://www.innovationunit.org/images/stories/whats_next_-_21_ideas_final.pdf.
[8] Paul Hamlyn Foundation and the Innovation Unit, *Learning Futures: Next Practice in Learning and Teaching*, 2008, p. 9, www.phf.org.uk/downloaddoc.asp?id=212.

There are many details to work out. But the overall message of the Premier's Technology Council is that the current pace of change requires that our students have access to personalized learning opportunities so that students can "engage in issues important to them while learning the skills critical to participating in a knowledge-based society."

Finally, Charles Leadbeater, in his report *What's Next? 21 Ideas for 21st Century Learning*, argues that making the shift to personalized learning is crucial for meeting social challenges: "The most effective way to close the attainment gap and reduce inequality would be to ensure education engages the least motivated 30 per cent of the school population. A relationship that sustains personalised learning is not the enemy of social justice but the route to achieve it."[9]

## Questioning the Need for Change

Is there really a need for reform? A different perspective on the need for change is voiced most often in research papers and articles published by the BCTF, emphasizing the importance of stepping back to question the motivations and intentions behind the push for personalized learning.

For example, in his discussion paper, "21st century learning — Widening the frame of focus and debate,"[10] Charlie Naylor argues that the BC government is "late to the discussion" on 21st century learning" and "well behind many BC public-school teachers, whose twenty-first century learning initiatives have been either thwarted by government policies or consistently ignored by government and ministers."

Naylor argues that educators' abilities to incorporate the inquiry-based constructivist approaches advocated by 21st century learning have been compromised by a lack of funding, system accountability measures, and a focus on large-scale testing. He writes that "these funding and accountability measures tend to reduce constructivist approaches because they increase class size and teacher workload while also increasing pressure on teachers to teach to the test."

Naylor also questions the intent of those advocating for widespread change. He suggests that the emphasis on 21st century learning focuses on means rather than ends — that rather than proposing "radical change of teaching and learning approaches to fit within new economies and new technologies" we should first ask what kind of world we would like to create and "then build approaches within education systems to create such a world."

He wonders whether the current proposals for innovation are motivated solely to meet the needs of a "newly-emerging dominant class of knowledge-economy multi-national corporations and high-tech companies, where de-schooling reflects outsourcing, and where privatization and

[9] Charles Leadbeater, *What's Next? 21 Ideas for 21st Century Learning,* July 10, 2008, http://www.innovationunit.org/images/stories/whats_next_-_21_ideas_final.pdf..
[10] Charlie Naylor, "21st century learning — Widening the frame of focus and debate," BCTF Research, January 2011, http://bctf.ca/uploadedFiles/Public/Issues/21CL/21CL-DiscussionPaper.pdf.

technology-based learning offer rich rewards for the likes of Microsoft, Cisco, Apple, and others."

Naylor asks us to reframe and widen the discussion of 21st century learning to take into account the skills our students need to help build a more just society, both locally and globally — one that considers environmental, social justice, and sustainability issues.

Other writers also question the motives behind the call to implement new ways of schooling, teaching, and learning. In the March 2011 issue of *Teacher* magazine, Jane Turner writes that "when educational change is afoot, it usually has more to do with undermining an already tremendous school system, encouraging privatization of public services, and cutting real dollars out of the budget so they can be spent elsewhere rather than making improvements to public education."

Similarly, teacher-on-call Tobey Steeves also sees the rhetoric of 21st century learning as masking "a concerted attempt to align British Columbia's education system with a neoliberal capitalist world view."[11] He criticizes the Premier's Technology Council report for its implicit assumption that the primary function of education is to prepare students to meet the needs of employers and address current and future skills shortages in the workplace.

His critique focuses on:

- the business backgrounds and motivations of those involved in the two major advocacy groups for 21st century learning: the Partnership for 21st Century Skills and the 21st Century Learning Initiative
- the belief that an educational program cannot truly be student-centred if its ultimate objective is to create a workforce for the future
- the absence of additional financial support for the education system
- the failure of proponents of 21st century learning to acknowledge the professional autonomy of educators or to provide increased funding for professional development; and
- the lack of detail around what teacher-facilitated, student-directed study might look like in practice.

This suspicion of the motives behind the calls for 21st century learning is echoed by a Lower Mainland school trustee, who muses that "there's also a huge potential for the term to be hijacked and used as cover for something else."[12]

[11] Tobey Steeves, "British Columbia's Neoliberal Folly: Critiquing the Push for '21st Century Skills'," December 2010, page 2, https://docs.google.com/viewer?a=v&pid=explorer&chrome=true&srcid=0B_IkV1vG4xBvNjU1Y2Q4YmYtZjFjNi00MDQzLWJkZjItZGRkNThjMTk5MjQ3&hl=en&authkey=CNTrsucH

[12] Lexi Bainas, "Province mulling big changes for high school?" *The Citizen*, October 20, 2010, http://www2.canada.com/cowichanvalleycitizen/news/story.html?id=b580d2fb-3b48-42f0-8505-06dcba3b6de8.

## For Reflection and Discussion:  Implications for Employment

For illustrative and discussion purposes, put the notion of *change* on a continuum...at one end transformational — a period in history that will be looked back on as ushering in changes as profound as those of the industrial revolution — with the other end representing change more incremental in nature. Where would you place a mark to indicate your perspective on change? Does the nature and pace of change have employment implications?

What area(s) of employment should be the primary area of focus? For example, if you were able to tackle this area, the sector would go a considerable way in meeting the challenges that change presents us.