

# Education for a *Changing World*

**Charles Ungerleider** suggests that four attributes of school curriculum are essential to address students for whom the promise of education has been largely unfulfilled.

**E**ducation for a changing world has become a theme for educational reform in many jurisdictions. Its principal argument is that because the present system was designed at a previous time, it cannot possibly meet the needs and challenges of today's students. To some our strong, stable educational system must become more nimble and flexible to meet the needs of what is typically referred to as 21<sup>st</sup> century learners to enable them to take advantage of the unknown opportunities and jobs that may be available in the future.

While I am sympathetic to the argument that our schools should continue to evolve, the direction that seems to be favoured by those using the term 21<sup>st</sup> century learning or learners seems misguided in its emphasis on preparation for future employment and its belief that there is a set of technology-related skills that everyone must have. I believe that employment is an important dimension of productive citizenship, but seeing elementary and secondary schooling primarily through that lens is a mistake.

Looking back at the transition to the 20<sup>th</sup> century, it is doubtful that anyone could have predicted the events and developments that would unfold in its first 20 years. Given her age, one might have anticipated the death of Queen Victoria, but who would have predicted the articulation of quantum theory, or the Russian Revolution? The development of an inexpensive camera might have been predicted as a natural step in the evolution of photography, but who knew that Picasso would introduce Cubism or Einstein would develop his theory of relativity? It might have been inevitable that Robert Peary or someone like him would reach the North Pole in the first 20 years of the 20<sup>th</sup> century, but it is doubtful that anyone could have predicted the invention of plastic, the Chinese Revolution, or the assassination of the Archduke Franz Ferdinand and its aftermath.

We should not try to prepare the next generation for a specific set of circumstances, since we are unable to predict even with modest accuracy what the future will hold. We would serve our society well if our schools ensured that the next generation possessed a strong foundation in reading, writing, and numeracy; possessed strong communication skills – writing, speaking and listening; was disposed to treat others with respect; had the ability to work co-operatively with

others; appreciated and acted upon the values and principles that make us human; understood Canada and could appraise its limitations and strengths; and could exercise a critical intelligence that was adaptable to circumstances unforeseen.

To those ends the school curriculum should exhibit four attributes:

1. It should be meaningful, enabling students to connect what they learn in class with their lives outside of school.
2. Students should be challenged by the curriculum to reach beyond previous boundaries in knowledge and experience.
3. The curriculum should stimulate students' curiosity, prompting them to want to know more.
4. It must challenge students to think deeply, to invest mental effort in their learning, and make connections across disciplinary boundaries.

Our understanding of teaching and learning has increased dramatically, allowing us to enumerate principles that should guide the design of curricula for 21<sup>st</sup> century learning. 21<sup>st</sup> century curricula should:

- contain multiple examples of the same concepts to help learners to broaden and deepen their conceptual understanding (conceptual breadth and depth);
- make provision for learners to engage in activities that prompt them to build upon prior domain knowledge (scaffolding);
- make provision for learners to reflect upon their own learning (meta-cognition);
- engage learners in events and phenomena that occur where they live (contextual sensitivity);
- engage learners in issues and problems that they are likely to encounter in living their lives (authenticity);
- engage learners in issues and problems that affect the world beyond their experience and setting to develop a global perspective (world mindedness).
- encourage collaboration among learners (collaborative learning);

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- prompt learners to actively demonstrate what they know and can do (competency based learning);
- make connections among disciplines, between the area of study and communities, and among learners (disciplinary connectedness);
- make provision for differences among students (adaptive);
- encourage learner-initiated action (learner agency);

The pedagogy that complements the curriculum should teach students the conceptual frameworks that enable a critical engagement with mathematics, science, the social sciences, literature and the arts. Acquiring a conceptual framework for a discipline is the foundation of scholarship, and independent and critical thinking.


The argument of the advocates for 21<sup>st</sup> century learning that the education system was designed long ago for conditions that no longer exist creates the image of an inflexible and largely unchanged system. It must be said that in at least one significant respect there has been educational reform to meet the challenges of the 21<sup>st</sup> century. The image conveyed of a static or stagnant system is at variance with the realities of contemporary education and its evolution over time.

Our public schools enrol students whose challenges excluded them in the past. The population of students is much more ethno-culturally and linguistically diverse than in previous generations. At the same time as the student population changed, the educational attainment of the Canadian population increased. The diversity extends to special needs students, many of whom did not survive childhood, were invisible, or attended segregated schools where their intellectual and social development were compromised.

The school programs and opportunities available to my generation of students were limited. There were no opportunities for students to earn credit at both the secondary school levels and at

the post-secondary school level simultaneously (dual credit). Nor were there opportunities to pursue a focussed major to explore more deeply what that major had to offer (high skills majors). French immersion was a nascent program choice, available in few places to few students.

With a curriculum that exhibits the four attributes I enumerated above, we may be better able to address the students for whom the promise of education has been largely unfulfilled – those for whom the outcomes of schooling have been pre-determined by who they are and the conditions prevalent in the communities in which they live. Aboriginal learners are among the most visible members of that group, but by no means the only members.

If the attributes that I advocate for schooling were exhibited, all students would benefit – especially students whom the system has failed. Achieving better outcomes for all students is the best investment a society can make for its future. Our schools should continue to change, but in a direction that places emphasis on meaningfulness, challenge, curiosity, and disciplined mental effort. 

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