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**Widescale Opposition to Alberta Government's
Retrogressive Science Curriculum**

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Should Be Scientific Literacy**

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Alberta's ruling United Conservative Party (UCP) recently released a draft of a proposed new Alberta elementary school curriculum. Educators and many others are heavily criticizing the draft for its inappropriate content, its reactionary political bias, the fact that some of it was plagiarized

from a U.S. site, and for numerous other good reasons. Over 25 (out of 61) Alberta school boards, including Edmonton and Calgary, are refusing to pilot it. On April 15, the Alberta Teachers' Association called for the UCP to stop work on the draft until a rewrite and review can take place.



Certainly, the UCP draft is a major fail and deserves all the criticism it is receiving. At the same time, in the current era, solutions are what is needed. Thus, the key question is, "What should the curriculum be?" Integral to this is the question "What should the aim of the curriculum be?" That is a very broad question indeed so as a science educator of long experience, I am limiting myself here to discussing what might be the aim of the science curriculum.

The current pandemic has once again emphasized the importance of scientific literacy. Most people are relying on the expertise of experienced scientists such as infectious disease specialists as their source of reliable knowledge about COVID-19, how it spreads, how dangerous it is, what to do about it, and so on. This approach is sometimes sarcastically contrasted to the unsavoury option of relying on the social media rantings of some random crank.

If scientific literacy is the main goal of science education then what is it? At one time, it simply meant being in possession of a large number of established scientific facts, e.g., knowing that viruses are living organisms that cannot reproduce without a host cell. This older conception limited the acquisition of scientific literacy to accumulating somewhat disjointed bits of scientific knowledge, similar to preparing for a science-oriented quiz show.

More recently, scientific literacy is being more broadly defined. In this approach, the key is to link science with the student's (and teacher's) lifeworld. There is much more emphasis on the importance of an understanding of science by those who will not pursue science-related careers. The basic aim could be summed up as shaping informed, socially responsible, competent citizens who can deal more effectively with the science-related social problems that face us all, e.g., the pandemic.

What might be some of the attributes of such a scientifically literate person, fostered over a period of time? They might include the following, applied of course to specific areas of science content: bases conclusions on evidence, distinguishes experts from the uninformed, is aware of how science is done and how its findings are validated, distinguishes science from pseudoscience, can analyze and process information, recognizes that scientific knowledge is reliable but can change, can distinguish knowledge from opinion, and so on.



Certainly, scientific literacy still includes understanding scientific knowledge. It is quite impossible to address a science-related social issue without having the relevant knowledge. For example, dealing with the issue of the efficacy of wearing masks to limit virus transmission clearly requires some knowledge of how viruses travel. At the same time, acquiring the scientific knowledge alone is not enough.

Besides scientific knowledge, the other very important aspect of scientific literacy is knowing about

the distinguishing characteristics of science itself, a topic often called "the nature of science," particularly how science is "done." This is because accepted scientific knowledge is ultimately based on evidence from reliable scientific studies. Those studies must stand up to critical scrutiny, e.g., regarding methodology, controlling of variables, conclusions drawn, and so on.

Further, scientific claims must be evaluated both in terms of the validity of their content and their relevance (or not) to the issue. Also, while students need to learn to exercise some intellectual independence in evaluating scientific claims, it is difficult to avoid at least some dependence on the views of scientific experts, even when said experts might disagree. Inquiring into what those reasons might be is another aspect of scientific literacy.

While reliable scientific knowledge comes ultimately from scientific research studies, most exposure to such knowledge comes through popular media rather than scientific publications. Popular media can be unreliable, as anyone familiar with social media knows, so students must be both scientifically literate and media literate. Also, everyone must take into consideration their own confirmation bias which is the tendency to favour information confirming one's already-held beliefs.

Focusing science curriculum on scientific literacy provides an overarching purpose and framework. It links science to students' lifeworld and is in harmony with the current ethos and practice of science. For a long time, the approach to science curriculum improvement has been simply to update the subject matter of the traditional scientific disciplines. Instead, what is needed is to create a curriculum that focuses on the utilization of science for the common good, on a science that is not just for a select few but rather for the benefit of all of society.

Widescale Opposition to Kenney Government's Draft Science Curriculum



The demand that the people of Alberta have a say in curriculum development has gone viral. At last count, more than 38,600 Albertans have joined the group Albertans Reject Curriculum Draft. The draft curriculum has been denounced by Indigenous peoples, Francophone organizations, and tens of thousands of people. People are finding ways to get petitions signed despite the restrictions imposed by COVID-19 (the Alberta government does not accept online petitions), and speaking out with thoughtful and incisive comments. Many people are saying they will stand behind teachers who refuse to do harm to their students by teaching this curriculum.

The Alberta Teachers' Association (ATA) is calling for the Government of Alberta to stop all work on the piloting and implementation of the draft curriculum until an independent, open and full review and rewrite can occur.

The Association published full-page ads in daily newspapers across Alberta on April 16 to issue the call for a moratorium and to show support for school boards and teachers that decide not to participate in piloting.

The ATA said:

"Alberta's students and teachers require an appropriate and workable curriculum. The government is being told loudly and clearly that this curriculum is unacceptable. We now need the government to announce a stop to their implementation plans and to spell out a new way forward," said Jason Schilling, ATA president.

ATA president Jason Schilling says the Association supports school boards that have decided not to pilot this draft curriculum, and he calls on all school authorities to refrain from directing their teachers to participate in piloting.

He stated, "Teachers who believe this curriculum is unsound and potentially damaging to student learning have the professional responsibility and moral right to refuse to participate in voluntary piloting. The government and school boards must respect the decision of individual teachers to not participate in piloting."

Although the teaching profession is frustrated by being left out of the curriculum development process, Schilling says teachers are more than willing to assist the government with a rewrite that reflects their extensive expertise and knowledge.

"We are committed to supporting the development of a high-quality curriculum, and the ATA is prepared to work constructively in partnership with the Government of Alberta toward that end. It is the only workable path forward. We just need to be invited," Schilling emphasized.

The call follows the release of preliminary survey results showing that 91 per cent of teachers and school administrators are unhappy with the draft curriculum, with three in four teachers stating that they are "very unhappy." The survey also showed that 90 per cent of elementary school teachers feel uncomfortable about teaching the new K-6 curriculum, and 95 per cent of principals feel uncomfortable about supporting the curriculum in their school and community.

The ATA is directing parents and the public who are concerned about the draft curriculum to pledge support for the moratorium and review by visiting [curriculum \[thelearningteam.ca\]](https://thelearningteam.ca).

(Alberta Teachers' Association news release, April 15, 2021)

Quebec Teachers Hold One-Day Strike

Attempts to Secure a Negotiated Collective Agreement

Quebec teachers, 73,000 members of the Federation of Education Unions and of the Quebec Provincial Association of Teachers, affiliated with the Quebec Labour Congress (CSQ) held an overnight strike that began at midnight and ended at 9:30 am on April 14. Lively demonstrations were held in the early morning outside many schools throughout the province. The CSQ has announced that the next strike action will be on April 27, lasting several hours.

Teachers demands include reduced class sizes, support for students with special needs, adequate funding for classrooms, equitable access to distance teaching, learning and technology, re-evaluation of testing and assessments, that the safety of all be ensured in the context of COVID-19 and

beyond, and solidarity with all frontline workers, to name a few.



In response to the strike action, the school service centres (formerly French School Boards) and English Montreal School Board filed an application to the Administrative Labour Tribunal (TAT) challenging the legality of the April 14 strike, alleging it was abusive. They withdrew their application the day before the strike and announced that teachers must be present in schools at 9:31 am to conduct online learning. Parents were informed the day before the strike that online learning would be administered.



Confusion among parents as to how to support the teachers was evident. It was not clear if the abrupt switch to online learning was an initiative by teachers to reduce the impact on a lost day of learning or a pressure tactic by the school boards against the strike action. Many were discussing and circulating articles on the morning of the strike that stated that the online learning program was an anti-strike initiative put in place at the last minute by school boards. Some parents decided not to have their child attend the online learning program to support the teachers.

The last minute shenanigans of the school boards is unacceptable. They knew for two weeks that the strike was planned but they demanded teachers be ready to give classes online at a moment's notice. Online learning is a tool to combat the pandemic, not strike actions. The pandemic is making it even more difficult for information to be transmitted. Mechanisms to support the teachers, access information and take action while respecting safety guidelines is key. A petition is being circulated called We Are Drawing the Line to Redefine Education. [Click here](#) to sign and share.

The teachers are waging a crucial battle for the quality and integrity of public education. All out to support this fight!



(Photos: CSQ)

Website: www.cpcml.ca Email: office@cpcml.ca