

Acknowledgement

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Overview

Context

The need to prepare students for a fundamentally different world has come to play a central role in statements of educational priority around the world. Rapid changes in technology, environmental fragility, urbanization, income and wealth inequality, globalization, and geopolitical challenges present education systems with new challenges and opportunities to prepare students. Policy-makers and educators are questioning whether the current educational systems can respond adequately to the challenges characteristic of this century, or whether a fundamentally new model is needed (Bolstad, Gilbert, & McDowell 2012; Government of Ontario, 2016; Phillips & Schneider, 2016). One of the main responses to this century's educational challenges is the development of global competency frameworks implemented through competency-based approaches to education.

The focus on global competencies stems from recognition that the role of education goes beyond graduating students who are academically prepared. The Organisation for Economic Co-operation and Development (OECD) stated that, in essence, teachers are trying to answer two key questions to prepare students for today's world: (1) what competencies (skills), attitudes, knowledge, and values will students need to thrive and shape their world? and (2) how can educational systems ensure that every student develops these competencies effectively?¹ The work accomplished by the Council of Ministers of Education, Canada (CMEC) on global competencies since 2016 has focused on answering the first question. This framework endeavours to answer the second.

This reference framework, which is nonprescriptive, maps out broad directions

for the integration of global competencies in education and helps policy-makers, school leaders, educators, and communities in provinces and territories to include global competencies in education. The global competency development effort in education is relatively new. This voluntary reference framework can be used to inform discussions taking place in some governments. The research shows that meaningful integration of global competencies into curricula involves more than simply adding on more content or replacing old content. It also requires changes, leadership, and participation at all levels of the systems—including, among others communication with parents, students, and other stakeholders; learning (and unlearning) of classroom teaching; instructional design; assessment; relationships between teaching, management, and professional staff; leadership; and system evaluation. It means adopting a whole-systems approach to the transformation and developing specific tools to better meet stakeholders' specific needs.

The framework refers to seven domains of change. They do not prescribe a path forward. Instead, they are focus areas to be considered for implementing a system of global competencies. Each domain in this document is developed in a worksheet format to help provinces and territories assess their current status, strengths, and priorities for progress. Each section offers a description of the domain, its key points, reflective questions, a table to guide self-assessment, and an area for provinces and territories to consolidate their reflection and assessment.

The document concludes with an initial action plan template to help provinces and territories map out their priority areas for action as they move toward system transformation in integrating global competencies.

As the reader will see in the following descriptions, there are multiple understandings and uses of the terms *global competence*, *global*

¹ Organisation for Economic Co-operation and Development (OECD). "The future of education and skills: Education 2030." Position paper, 2018.

competency, competency, and competency-based education in the literature. From the authors' perspectives, a "competency" is a related set of skills, knowledge, and dispositions. A *global competency* is a competency that relates globally to the educational experience (i.e., crosses all curricula), is global to the learner (i.e., draws upon and informs all of the individual's learning) and is also global to citizenry (i.e., enables effectiveness across the globe). In the literature, however, a global competency often indicates a cross-curricular competency. Because *competence* is the result of acquiring a competency, global competence refers to being in possession of global competencies. Finally, *competency-based education* is a system that focuses on competencies as educational aims that can be reached and assessed in a variety of ways, settings, and time frames. The focus on competencies as the common goal shifts attention away from "time on subject" or process of instruction as the organizers of educational systems. In the literature, this shift in focus is widely varied within the label of "competency-based education."

CMEC's global competencies

In 2016, the ministers of education at the 105th CMEC meeting articulated six broad global competencies. Building on strong foundations of numeracy and literacy, global competencies at CMEC are a pan-Canadian effort to prepare students for a complex and unpredictable future with rapidly changing political, social, economic, technological, and ecological landscapes. These competencies, as defined by CMEC (2017), are an overarching set of attitudes, skills, knowledge, and values that are interdependent, interdisciplinary, and leveraged in a variety of situations both locally and globally. They provide learners with the abilities to meet "the shifting and ongoing demands of life, work and learning; to be active and responsive in their communities; to understand diverse perspectives; and to act on issues of global significance" (p. 1). They include and are defined as:

- **Critical thinking and problem solving**—addressing complex issues and problems by acquiring, processing, analyzing, and interpreting information to make informed judgments and decisions. The capacity to engage in cognitive processes to understand and resolve problems includes the willingness to achieve one's potential as a constructive and reflective citizen.

Learning is deepened when situated in meaningful, real-world, authentic experiences.

- **Innovation, creativity, and entrepreneurship**—the ability to turn ideas into action to meet the needs of a community. The capacity to enhance concepts, ideas, or products to contribute new-to-the-world solutions to complex economic, social, and environmental problems involves leadership, taking risks, independent/unconventional thinking, and experimenting with new strategies, techniques, or perspectives through inquiry research. Entrepreneurial mindsets and skills focus on building and scaling an idea sustainably.
- **Learning to learn and to be self-aware and self-directed**—means becoming aware and demonstrating agency in one's process of learning, including the development of dispositions that support motivation, perseverance, resilience, and self-regulation. It involves belief in one's ability to learn (growth mindset), combined with strategies for planning, monitoring, and reflecting on one's past, present, and future goals, potential actions and strategies, and results. Self-reflection and thinking about thinking (metacognition) promote lifelong learning, adaptive capacity, well-being, and transfer of learning in an ever-changing world.
- **Collaboration**—involves the interplay of the cognitive (including thinking and reasoning), interpersonal, and intrapersonal competencies necessary to participate effectively and ethically in teams. Ever-increasing versatility and depth of skill are applied across diverse situations, roles, groups, and perspectives to co-construct knowledge, meaning, and content, and learn from and with others in physical and virtual environments.
- **Communication**—involves receiving and expressing meaning (e.g., reading and writing, viewing and creating, listening and speaking) in different contexts and with different audiences and purposes. Effective communication increasingly involves understanding both local and global perspectives, societal and cultural contexts, and adapting and changing using a variety of media appropriately, responsibly, safely, and with regard to one's digital footprint.

- **Global citizenship and sustainability**— involves reflecting on diverse world views and perspectives and understanding and addressing ecological, social, and economic issues that are crucial to living in a contemporary, connected, interdependent, and sustainable world. It also includes the acquisition of knowledge, motivation, dispositions, and skills required for an ethos of engaged citizenship, with an appreciation for the diversity of people, perspectives, and the ability to envision and work toward a better and more sustainable future for all (CMEC, 2017).

These global competencies are closely aligned with the competency frameworks that the provinces and territories have prioritized in their education systems.

The provinces and territories are at various stages of progress with respect to their own competency frameworks. It is anticipated that the descriptions of the CMEC pan-Canadian global competencies will evolve as the provinces and territories work to integrate them into curricula, pedagogy, and assessment. The evolution and integration of these global competencies will also be shaped by and reflective of Indigenous knowledge, perspective, languages, and histories (CMEC, 2017).

Literature review

The development of the Pan-Canadian Systems-Level Framework on Global Competencies started with an extensive international and Canadian review of the literature that focused on the trend toward global competencies and competency-based education. The review also examined the system transformation undertaken by several education systems referenced in the literature and/or Canadian provinces and territories that provided reports and documents describing efforts to integrate global competencies into their systems. For the purpose of the literature review, competencies were considered sets of knowledge, skills, attitudes, and values associated with growth in the cognitive, interpersonal, and intrapersonal domains (e.g., citizenship, creativity) and that feature prominently in the discourse regarding preparing students to thrive in a globally connected, technology-intensive world. The resulting literature review identified seven common domains of change that form the basis of the Pan-Canadian Systems-Level Framework on Global Competencies.

Education system transformations reviewed

A number of education systems around the world have gone or are going through the process of integrating global competencies into curricula and/or adopting a competency-based approach to education. The international examples were identified in the literature as exemplars of system-wide integration of competency-based education and/or global competencies integration efforts. They are presented here alphabetically. Canadian efforts are also presented here. The examples were provided by representatives from Canada's provinces and territories to highlight the progress made in their system-level transformations. They were also highlighted in the literature as exemplars of global competency integration.

International examples

Finland

Often acknowledged as being one of the top education systems in the world, the Finnish education system has been called “a shining light in Europe for proponents of competency-based education” (Bristow & Patrick, 2014, p.14). Today, Finland stands out as a top scorer on PISA (Programme for International Student Assessment) exams. The country’s educational systems have undergone considerable reform over the past 40 years, focusing on personalized learning, equity, lifelong learning, and investment in the capacity of educators to support this learning (for example, through mandatory, state-financed master’s degrees for teachers). Additionally, students’ knowledge and ability are assessed through various evaluations that focus on evidence of progress in a variety of areas including work skills and behaviour. A strong push for self-assessment, which aims to help students become aware of their learning progress and take responsibility for it, manifests most prominently in upper secondary school where students learn in self-directed, self-paced programs.

New England states

Sturgis (2016) describes the efforts of Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont to convert to competency-based education. Connecticut’s transition is in process, with superintendents leading the charge and communities pushing for better preparation for both college and work. Maine, which started the transition in 2007, introduced legislation in 2012 that called for a proficiency-based diploma and a supporting system of standards. As a state, Massachusetts has not introduced competency-based education but several schools are building capacity in this direction. The Carnegie unit (a time-based credit) was replaced in New Hampshire in 2005 with a competency-based credit. School structures and assessments were made subject to minimum standards in 2013. The first state diploma that was proficiency based was initiated in Rhode Island in 2003. Diplomas cannot be received without at least one performance-based assessment. Finally, Vermont’s Board of Education introduced personalized learning and a proficiency-based diploma in 2013.

New Zealand

In a significant departure from traditional detailed curriculum documents, New Zealand’s Ministry of Education released a single document in 2007

providing a framework for all curricula from years 1 to 13. The work of developing detailed curricula was a local/school matter from that point on. New Zealand’s schools are the most autonomous in the OECD (Bristow & Patrick, 2014). Five key competencies—managing self, relating to others, participating and contributing, thinking, and using language, symbols, and texts—were introduced at that time. Weaving “international capabilities” (New Zealand Education’s label for global competencies) into the key competencies was underway by 2013 (New Zealand Ministry of Education, 2014).

Scotland

Scotland focused on four cross-curricular “capacities” or overarching learner outcomes (successful learners, confident individuals, responsible citizens, and effective contributors) in three subject areas (literacy, numeracy, and health and well-being). These were seen to be the responsibility of all staff when it developed its Curriculum for Excellence (Scottish Executive, 2006; Education Scotland, 2018). Formulated in the early 2000s, the curriculum was launched in 2010 and remains in the process of being implemented. Although the Curriculum for Excellence does not focus on global competencies, nor does it take a competency-based approach, its cross-curricular approach, learner-centred pedagogy, emphasis on formative assessment, and acknowledgement of teacher discretion make it a relevant example for this systems review.

Canadian examples

British Columbia

In 2011, British Columbia became an early Canadian adopter of core competencies, called communication, thinking (including creative thinking and critical thinking), and personal and social competence (including positive personal and cultural identity, social awareness and responsibility, personal awareness and responsibility) (Walt, Toutant, & Allan, 2017). These are defined as the “intellectual, personal, and social and emotional proficiencies that all students need to develop in order to engage in deep learning and life-long learning” (British Columbia Education, 2018, p. 1). Each of the core competencies is accompanied by profile descriptors and illustrations that show how students can demonstrate them. Student self-reflection is core to the assessment process. Educators support students in self-assessment, encouraging them to take ownership of their own competency development.

Referring to its approach as “concept-based” and “competency-driven,” BC Education aims for deep understanding and the ability to perform. Areas of learning are linked to “big ideas,” core competencies, curricular competencies, and content.

Alberta

Alberta’s current curriculum promotes development of the following competencies: critical thinking, problem solving, communication, managing information, collaboration, creativity and innovation, cultural and global citizenship, and personal growth and well-being. Future curricula will continue to promote these competencies.

Within the current curriculum, educators can access a number of resources that assist them in identifying aspects of a competency that are evident within learning outcomes, learning activities, or assessments. Competency descriptions, indicators, and examples describe how competencies may be expressed within the context of Alberta’s current Kindergarten-to-Grade-12 programs of study. Clear descriptions provide an overview of each competency’s key features. They holistically describe attitudes, skills, and knowledge associated with each competency. Competency indicators identify specific aspects of a competency that are transferable across subject areas or contexts.

Alberta Education is currently developing a Kindergarten-to-Grade-12 provincial curriculum in six subject areas in both English and French. In this future curriculum, educators will be able to access similar supports and resources but through a new interactive tool designed to help teachers plan and implement learning opportunities. Alberta Education introduced a new draft Kindergarten-to-Grade-4 provincial curriculum that incorporates the acquisition of competencies into learning outcomes, facilitated by the digital platform called new LearnAlberta (new.learnalberta.ca). This platform supports continuous improvement of curriculum and allows teachers to interact with the curriculum in ways they have never been able to before. Within new LearnAlberta, information regarding competencies, literacy, and numeracy is easier to access, connect to learning outcomes, and use in planning for student learning experiences.

Manitoba

Manitoba currently incorporates literacy and communication, problem solving, human relations, technology, and Indigenous perspectives into curricula. Learner outcomes relevant to the CMEC global competencies are developed across a wide range of curricular areas, such as math, science, social studies, physical education, and health. In addition, education for sustainable development is integrated throughout the K–12 curriculum including revisions in technical vocational education, starting from broad cross-curricular learning outcomes and translated into subject-specific learning outcomes. The province also incorporates the CMEC global competencies in an optional Grade 12 course called Citizenship and Sustainability (Manitoba, n.d.). Manitoba Education and Training has begun research on comparing the content and language of various global competency models. The province may just be at the beginning stages of incorporating global competencies, but it has recently experienced successful system change in Education for Sustainable Development (ESD). Arguably, ESD is “in essence, and by definition, education for the 21st century” (Bell, 2016, p. 2), and therefore may be very aligned with global competency efforts. The framework entitled “A Domain Framework for Whole System Approach to Education for Sustainable Development” helped guide schools and school divisions toward taking a whole-system approach to ESD. With respect to global competencies, Manitoba currently has many pockets of activity in which schools and districts are testing a variety of global competency and 21st-century learning approaches (e.g., CMEC’s competencies, Michael Fullan’s 6C competencies, sustainable living, and social justice) (M. Macauley, personal communication, March 19, 2018).

In addition, and in relation to broader system change, Manitoba has introduced the K–12 Framework for Continuous Improvement which emphasizes coherence, capacity building, data-informed decision making, and shared responsibility for student achievement².

Saskatchewan

Renewed curricula in Saskatchewan address the six global competencies outlined in the CMEC Pan-Canadian Systems-Level Framework on Global Competencies through the Broad Areas of Learning and the Cross-curricular Competencies.

The broad areas of learning encompass the desired attributes for students and describe the knowledge that they will achieve throughout their K to 12 schooling. These attributes include:

- a sense of self, community, and place;
- the capacity to be lifelong learners; and
- the capacity to be engaged citizens.

The cross-curricular competencies are four interrelated areas involving understanding, values, skills, and processes that are considered important for learning across all areas of study. These competencies are intended to be addressed in each area of study at each grade and include the development of:

- thinking;
- identity and interdependence;
- literacies; and
- social responsibility.

Renewed curricula focus on students using inquiry to construct their understanding of subject-area concepts. Frameworks that help to support the development of financial literacy, sustainable development, and treaty education are also reflected in Saskatchewan’s renewed curricula.

A curriculum advisory committee is being established and will consider areas of priority for curriculum development and renewal, schedules for development, and larger foundational items for curricula and programming for Grades 1 to 12, including graduation requirements. Global competencies may be considered as part of their work.

² K–12 framework available at <http://www.edu.gov.mb.ca/k12/ssdp/framework.html>.

Ontario

In 2016, Ontario published a discussion document entitled “Towards Defining 21st Century Competencies.” The purpose of the document was to “provide a focus for discussions among ministry and external education, policy, and research experts about how best to shape provincial policy to help students develop the 21st century competencies they need to succeed” (Government of Ontario, 2016, p. 3). Since the publication of this document, the province has identified transferable skills that support the pan-Canadian competencies defined by CMEC.

Quebec

At the beginning of the 21st century, Quebec undertook a major reform of its educational system with a focus on the development of global competencies as part of the Quebec Education Program (QEP). The QEP makes reference to nine cross-curricular competencies. These competencies are grouped in four categories:

- *intellectual competencies*: to use information, solve problems, exercise critical judgement, and use creativity;
- *methodological competencies*: to have effective work methods and use information and communications technology (ICT);
- *personal and social competencies*: to construct one’s identity and cooperate with others; and
- *communication-related competency*: to communicate appropriately (Gouvernement du Québec, 2001).

Quebec has a comprehensive policy to support the integration of these competencies across curricula. Its Education Act mandates the inclusion of cross-curricular competencies in student report cards (differentiated by level).

In 2017, the province unveiled a new education policy, “Policy on Education Success: A Love of Learning, a Chance to Succeed,” that focuses on the education process from early childhood to adulthood and aspects of the learning environment that helps learners succeed. A key part of this policy’s vision is to implement several actions (orientations) to ensure that education environments are inclusive, focused on success for all, and work with communities to support students to be civic-minded, creative, competent, responsible, open to diversity, and fully engaged in social, cultural, and economic life in Quebec (Gouvernement du Québec, 2017).

Newfoundland and Labrador

Newfoundland and Labrador is at the beginning stage of system transformation. In July 2017, the Premier’s Taskforce on Improving Education Outcomes released a series of recommendations to guide the development of a provincial Education Action Plan (Kirby, 2017). The Education Action Plan was released in June 2018. Several recommendations focus on student mental health and wellness, which support the competency of learning to learn and be self-aware and self-directed. The goals in the Education Action Plan are connected to the broader system of education where the arts, physical education, science, literature, reading, and twenty-first century learning flourish. As an example, a revision of the social studies curriculum is placing greater emphasis on the competency of global citizenship and sustainability (Kirby, 2017).

Northwest Territories

A 10-year Educational Renewal and Innovation Framework, Directions for Change (2013), is in the process of being developed, piloted, and (to a certain degree) implemented. This comprehensive framework includes a wide range of initiatives to renew education in Northwest Territories. As outlined in this framework, the key outcome for education is that each student is supported to become a capable person. The term capable person, as referenced in Northwest Territories Education, Culture and Employment’s Dene Kede—Education from a Dene Perspective (1993), refers to the competencies people need to help them have integrity in their relationships with themselves, the land, other people and the spiritual world. Key to this concept is one’s relationship to the land (i.e., the environment and its sustainability) and one’s relationship to one’s self and each other (i.e., responsible citizenship).

To meet the goal of becoming a capable person, the Northwest Territories has outlined five “key competencies”—interpret and express meaning; nurture who you are and become who you want to be; contribute to live well together in this interconnected world; negotiate change and challenge; and engage with ideas and respond to their complexities—that support students in meeting this overarching objective. The five key competencies are part of the renewal and innovation framework, as are “foundational statements” (e.g., a positive sense of identity is actively supported) and the government’s commitments to education. The changes proposed in the framework are significant and

wide reaching, addressing all aspects of the educational system as well as its relationships to other systems.

Nunavut

Nunavut began its education-reform process when it became a territory in 1999. Similar to Northwest Territories, Nunavut’s education system has captured the cultural history and values in its competencies by consulting with Elders and other community members. The consultations aligned with a competency approach in that Elders advocated for “doing” over only “knowing.” They insist that “real learning has to demonstrate real capacity.” Nunavut’s education framework refers to the overall goal of “creating an able human being.” Its education system and curriculum are based on eight Inuit Qaujimajatuqangit (IQ) principles. Using these Inuit concepts, Nunavut Education has identified competencies and mapped these to other competency sets (e.g., Qanuqtarunnarniq captures Alberta’s critical-thinking, problem-solving, decision-making, and creativity and innovation competencies). The competencies are woven into Nunavut’s four K–12 curriculum strands:

- Nunavusiutit (social studies/history/heritage/culture/land programs/environmental science/entrepreneurship)
- Iqqaqqaukkaringniq (math/science/technology)
- Uqausiliriniq (language arts/fine arts/communication)
- Aulajaaqtut (health/wellness/leadership).

Experiential learning is emphasized throughout, and assessment includes the demonstration of the competencies in practicum settings.

Domains of Change

Education in global competencies demands learning that focuses more on process—thinking, problem solving, innovating, creating, building/scaling, learning, self-reflecting, collaborating, and engaging—than on content. Their development supports deep learning (i.e., transferability of learning) and vice versa and aims to equip students with the necessary tools to adapt to diverse situations and become lifelong learners. System-level transformation supporting global competency integration needs to focus on an iterative process that builds and grows as it develops and transforms.

Change of this kind is complex and calls for intentionality and careful design. There is no clear “right” way to proceed or road map to follow. However, there are many ways of organizing the components of the education system that need to be considered in making the change. From the research on what others have done or are doing, seven domains of change were identified:

- Aspiring to change: philosophy, intentions, and outcomes
- Situating change: understanding context and starting points
- Shaping change: leadership
- Owning change: governance, accountability, and engagement
- Making change: policy, curriculum, instruction, and assessment
- Enabling change: capacity building, relationship building, infrastructure, and resourcing
- Continuing change: evaluation, and improvement.

A number of international and pan-Canadian examples were reviewed to support the development of this framework (see section on education system transformations reviewed). Each example of the change process was intentional and planned. Each aspired to improved educational approaches to better prepare students for a changing world through iterations of different approaches to integrating global competencies in education. The examples used various change models and approaches (e.g., Fullan, 2010; Intel Education, 2017; Microsoft, 2018; Mourshed, Chijioke, & Barber, 2010), some more formalized

than others, but all explicitly dealing with several common elements related to managing change (e.g., leadership, policy, curriculum, outcomes, capacity building, etc.) in a system to become more competency focused. These elements have been summarized as domains of change within this framework. The seven domains do not belong to any particular change theory, model, or approach. Rather, the domains reflect the variety of areas of focus seen across change models that can be focal points for the integration of global competencies.

These domains form the basis of the framework and a starting point for policy-makers, school leaders, educators, and communities to consider as they develop their own plan for integrating global competencies into their education systems. Whereas the domains appear to be sequential, they are not linear. Provinces and territories often work on multiple domains simultaneously. No domain is isolated; all are interconnected. Each domain influences the other; province and territories considering system transformation should consider each domain separately and in relationship to each other.

The following worksheets will support provinces and territories with this process. The framework concludes with an action-planning template that provinces and territories can use to integrate their reflections and assessments made for each domain. The action plan provides the basis to support provinces and territories in building a strategy for moving forward.

Aspiring to Change: Philosophy, Intentions, and Outcomes

The integration of global competencies in education is aspirational, future-oriented, and rooted in new understandings of education and society.

This domain focuses on what change is needed and why. It defines the vision for what is fundamentally different about the education system once the change has been made. All change approaches benefit from a coherent philosophy, but aspirational ones, such as that underpinning the development of global competencies, demand a set of values and rationales that will pull people toward a preferred future. Change can be difficult, and stakeholders such as students, educators, parents, and employers need compelling reasons to make the effort. These reasons can be varied and are often reflective of stakeholders' culture, realities, and priorities. For example, Fullan argued that “closing the gap [between high and low achievers] has profound multiple benefits for both individuals and for society as a whole” (2010, p. 15). Of three components of Quebec Education’s “mission of schools,” one is “to socialize, to prepare students to live together in harmony” (2017, p. 25), a statement that makes it clear that schooling goes beyond traditional academic subject matter. Alberta Education’s (2016) principles encourage “diverse ways of experiencing and understanding the world” and “diverse ways of developing and demonstrating learning” (p. 13), both indicating a broadening of educational goals and approaches. Northwest Territories Education, Culture, and Employment’s (2018) vision for education includes specific statements about culture-based learning and connecting learning to the community where it takes place—ideas that resonate with its citizens.

Although having a philosophy and vision may seem like the first step, in reality these more often emerge from other domains of change referenced in this framework. Rationales can emerge from citizen input, educational research, changing environments, ongoing evaluation, and advancements in pedagogy. For example, Northwest Territories’ vision referenced in the “Education System Transformations Reviewed” section emerged via input from and the philosophy of Indigenous Elders, findings from educational research, and a political context in

which Indigenous government partnerships are being pursued (NWT Education, Culture and Employment, 2018). This interplay of domains in shaping vision, direction, and outcomes is evident in all change efforts. Fullan’s notion of a “small number of ambitious goals” (2010, p. 21) emerged from evidence, context, and community input, as did British Columbia’s emphasis on student-centred learning, Finland’s aspirations for highly educated teachers, New Zealand’s trust in local decision making, and Scotland’s focus on effective contributors.

Key points in aspiring to change domain

Philosophy

- A coherent yet iterative philosophy can be a springboard to guide the transformation.
- Global competencies are more than a set of competencies, skills, knowledge, and attitudes. Underpinning them is a set of principles speaking to the roles and priorities of education within a changing world context. This pushes education systems to reconsider their own education philosophies within this context.
- Governments, school boards, and schools wanting to integrate global competencies into their education systems will need to analyze the distinctions, if any, between their own education philosophy and the broader philosophy imbued in global competencies.
- The philosophy underpinning the transformation will need to be mindful of the cultural, political, demographic, and social environments in which the change is occurring.
- In the spirit of reconciliation, the philosophy of transformation must ensure that the integration of global competencies into education systems respects and is compatible with the cultural values, perspectives, and world views of Canada’s Indigenous peoples.

Intent

- Critical questions that education systems need to ask when considering the change are: what do we want to do differently and what is our vision of a preferred system?
- In setting its future orientation, education systems need to consider the emerging needs of stakeholders and communities.

Outcomes

- Outcomes of the intended change should be considered early and throughout the transformation process.
- Outcomes are measurable statements that form part of the evaluation plan for the system's transformation.

Reflective questions

What is our vision for the change?

What do we want to do differently?

What outcomes do we want to see as a result of change to our system?

In terms of this domain, what do we see as our strengths and what are our opportunities for progress?

Stages of implementation in aspiring to change

The table below outlines specific indicators that help provinces and territories assess their progress in terms of “aspiring to change.” Review each of the indicators and identify your province or territory’s current position. This will also give you a sense of where you want to be in terms of your next steps for action.

Table 1. Implementation stages for aspiring to change

Components	Indicators of progression		
	Starting	Developing	Embedding
Philosophy	An analysis of the differences between the current education philosophy and those underpinning global competencies is made.	An educational philosophy statement supporting the integration of global competencies has been co-created with all identified stakeholders covering cultural, political, demographic, and social aspects.	A co-created educational philosophy statement has been shared with and endorsed by key stakeholders.
Intent	A discussion document outlining the need for the change to global competencies has been developed that clearly outlines the need for change and considers the emerging needs of the community.	The discussion document has been shared with all key stakeholders and is used to initiate reflective discussions that support the development of the intent, vision, and values of the change.	A framework for the integration of global competencies is developed that is reflective of stakeholder and community future needs.
Outcomes	Outcomes of the intended vision for the system’s transformation are co-created with the identified stakeholders.	Intended outcomes are built into the overall system-transformation evaluation plan and shared widely with stakeholders.	System-transformation evaluation report shows that the intended outcomes are being met based on indicators.

Priority Actions

Given the answers to the questions above, and your assessment of where your province or territory is in terms of “aspiring to change,” list two or three priority areas for making progress.

Areas for progress

1. _____
2. _____
3. _____

Situating Change: Understanding Context and Starting Points

An important goal of fostering global competencies in students is to develop a deep understanding of the cultural, political, demographic, and social environments that surround students locally and globally. This context must also be considered throughout the transformation process.

Change in the public sphere needs to account for the context in which change is taking place. Understanding the cultural, political, professional, demographic, and social environments in which change is occurring helps create and communicate the vision/philosophy, adjust the pace of change, and assess and reassess the starting point of change (a continuously moving target) (e.g., Batras, Duff, & Smith, 2016). Cultural norms need to be considered and ideally integrated, especially when ideas for the proposed changes come from other systems (Kuipers et al., 2014). For example, Quebec’s use of the phrase “educational childcare system” and its relationship to the province’s family policy (2017, p. 11) recognizes the social context of significant provincial support for families, a context in which Québécois likely take great pride.

Situating the change is critical to its engagement and mobilization. Fullan (2010) argues that there is no way of achieving whole-system reform if the vast majority of people are not working on it together. That can be achieved only when the “vast majority” come together with agreed-upon values and vision. In other words, the ability to get large numbers of people to work on something together is greatly enhanced if this work aligns with their context.

Another cornerstone of understanding context is recognizing the strengths within a system so that they can be retained and mobilized in the new paradigm. A province or territory with high levels of expertise and dedication among its educators, for example, will be well-served to build on this capacity. Proceeding as if the expertise does not exist would not only be wasteful but it would also set back change efforts by creating resentment and resistance among educators and their allies.

The starting point for change is in the effort to understand the context, and it is no less important at very granular levels than it is at

system-wide levels. Involving and engaging all players in the system across multiple domains of change is critical. Whether the action is to “encourage interdisciplinary work,” “recognize the value of traditional instructional approaches when they are done well,” “involve parents, students, and teachers in determining guidelines for safe accessibility to the Internet,” “co-develop alternative rubrics,” “engage school board members and key stakeholders in policy design,” or “capture and share the excitement and energy occurring in successful schools” (Milton, 2015, p. 17), the assumption is that strength, capacity, and energy form the starting point.

Key points in situating change

Understanding the context

- The cultural, social, economic, environmental, political, geographic, and demographic contexts shape the process of transformation throughout—how it is communicated, created, developed, received, timed, and assessed.
- There are many contextual issues to consider at provincial/territorial intersystem (e.g., the relationships between the K–12 system and the postsecondary system), and intrasystem (e.g., the relationship between the government, school boards, and teacher associations) levels.
- Mapping the system’s strengths/assets as well as its challenges is critical to the change process. Capturing and integrating what works well can support and strengthen the new paradigm.

Reflective questions

What key stakeholder groups need to be consulted?

What are the cultural, social, economic, environmental, political, geographic and demographic considerations that will impact the vision for the system transformation?

What intra/intersystem contextual issues will influence the change process?

How will the situational context of our province/territory be embedded in our implementation plan?

In terms of this domain, what do we see as our strengths and what are our opportunities for progress?

Stages of implementation in situating change

The table below outlines specific indicators that help provinces and territories assess their progress in terms of “situating change.” Review each of the indicators and identify your province or territory’s current position. This will also give you a sense of where you want to be in your next steps for action.

Table 2. Implementation stages for situating change

Components	Indicators of progression		
	Starting	Developing	Embedding
Understanding the context	Stakeholders that are critical to understanding the cultural, social, economic, political, geographic, environmental and demographic context are identified and invited to meaningfully contribute to the articulation of the global competencies and the vision and framework of the system’s transformation in support of global competency integration.	Defined global competencies reflect the input of stakeholders and the cultural, social, economic, political, geographic, environmental and demographic context of the community where they are developed.	Stakeholder contributions are recognized throughout the change process. Stakeholders report that they see themselves as co-creators of the system transformation.
	Inter- and intra-system contexts are considered and integrated in the overall implementation plan.	Stakeholders that represent organization sin the inter- and intra-system context are informed and invited to contribute to the implementation plan.	An implementation plan involves inter- and intra-system stakeholder input and their role in executing the plan is clearly defined.
	An asset map of the system’s strengths relative to the integration of global competencies is made.	An asset mapping guide and/or set of training courses that support districts, boards and schools to assess their strengths in relationship to the integration of global competencies is published and/or delivered and made readily available to districts and schools.	Strengths of the system are recognized by stakeholders across the system and districts and schools are using the asset mapping guide and/or training courses to develop their own strengths-based action plans for the integration of global competencies.

Priority Actions

Given the answers to the questions above, and your assessment of where your province or territory is in terms of “situating change,” list two or three priority areas for making progress.

Areas for progress

1. _____
2. _____
3. _____

Shaping Change: Leadership

There is great potential for global competencies to transform society and shape the future of Canada and the world. This requires leaders at all levels in education systems to work collaboratively toward a common vision and across all domains of change.²

Leadership is a pivotal component of the change process. Education systems that have undergone reform or are currently in the change process point to the need for leadership, and research shows that it can take many forms. Phillips and Schneider's (2016) review of Idaho, Utah, and Florida's shifts to competency-based education reinforces that leadership is crucial and can also start at various places. Leadership also evolves over time. As the direction of change stabilizes (e.g., made evident by legislative change, in many cases), then a clearer pattern of leadership distribution follows. Mourshed, Chijioke, and Barber, for example, found that leadership gradually devolves toward the "front lines" of education (2010).

In Canada, the leadership dynamic appears to be iterative but similar across provinces and territories. Although this is not documented clearly in the literature, reform ideas regarding the need for and direction of change emerge from thinkers and policy-makers in the province or territory's ministry (who have been influenced by academics, school superintendents, principals, teachers' associations, and others) who either push upward for change or find opportune moments to suggest change when questioned. At the political level, ministers and other elected officials will declare a need for change, but this declaration has already been informed by the work of ministry officials. By the time the public sees or hears about change, especially system change, the government, and particularly the minister responsible for education, is the one calling for change as well as for consultations regarding change. At this point, leadership flows from the political level to the ministry level to leaders within stakeholder groups (e.g., school boards, superintendent associations, teacher's associations), who look for leadership in their constituencies (e.g., school principals).

In short, leadership of reform may look from the outside as if it flows from the top down but it is far more back and forth than appearances suggest. Whereas this multi-directionality means more opportunities for synergy, the multiple hand-off points in this distribution of leadership also means having strategies in place for ongoing reciprocal communications.

Key points in shaping change

Leadership models

- Leadership is essential in any intentional change process.
- Leadership can come from all levels—across many, if not all, domains of change.
- Leadership for system reform is more of a reciprocal relationship than a pure top-down or bottom-up path.

Communication

- Communicating a coherent message across leadership levels is vital to the change process.
- Ongoing reciprocal communication is grounded in true partnerships and collaboration throughout; it is open and transparent.

Capacity building

- System change is supported by strong and sustained political and ministry leadership that embraces moving forward (e.g., changing the Education Act, as in Quebec).
- Ministries of education and superintendents support leadership at all other levels.
- Leaders are actively identified and engaged at all levels and across stakeholder groups.

² The word leader in this context is used broadly and can mean both official and unofficial leaders across the education system. This could range from those at the top of the system (e.g., premier and ministry of education officials) to those at the bottom (e.g., principals and teachers). Leaders can also be identified from those in the community who have an interest in the development of student global competencies (e.g., Elders and employers).

Reflective questions

What leadership strategies and facets work best for our province or territory?

Are there promising practices that we can draw upon?

How will we build on our strengths and encourage leaders from all stakeholder groups to take on leadership roles?

How do we ensure that consistent and coherent communication about the changes is given and received?

In terms of this domain, what do we see as our strengths and what are our opportunities for progress?

Stages of implementation in shaping change

The table below outlines specific indicators that help provinces and territories assess their progress in terms of “shaping change.” Review each of the indicators and identify your province or territory’s current position. This will also give you a sense of where you want to be in your next steps for action.

Table 3. Implementation stages for shaping change

Components	Indicators of progression		
	Starting	Developing	Embedding
Leadership model	Active research has been conducted to understand the preferred/effective models of leadership specific to a province or territory.	Preferred leadership models selected in the starting phase are used across the system with the system’s leaders (superintendents, principals, etc.).	Leadership models shift to continuous improvement and change. An alternating dialogue between leadership at the top and bottom is observed by leadership at the top and bottom.
	Leaders at all levels are identified across and within systems.	Leaders work together with stakeholders to create a common vision/framework and a set of global competencies that are tailored to the province or territory’s social, economic, and cultural environment.	The province or territory’s global competency framework is promoted and used across the system.
Communication	A communication strategy for connecting and distributing key documents and messages is developed. Mitigating miscommunication is considered in the strategy.	Leaders across the system receive targeted and timely communications.	Common and coherent messages about the system change are relayed by leaders throughout the system.
Capacity building	Leaders at the top actively encourage leadership from all levels and across stakeholder groups. Teachers (leaders of their own classrooms) are trained in global competency integration and are encouraged to shape and adapt the competencies to the context of their schools and classrooms.	Preferred leadership models are converted into programs and resources for leadership development that are delivered in a variety of ways for all levels of leadership.	Leaders at all levels are competent in their leadership roles and continue to hone their leadership abilities.

Priority Actions

Given the answers to the questions above, and your assessment of where your province or territory is in terms of “shaping change,” list two or three priority areas for making progress.

Areas for progress

1. _____
2. _____
3. _____

Owning Change: Governance, Accountability, and Engagement

To make systems-level change happen, stakeholders, especially educators, need to buy into the change.

Governance is closely aligned with leadership. Governance refers to formal systems and structures that create or endorse decision-making authority and tends to be used to describe the formal responsibilities of leaders to make decisions. A school principal, for example, is both a leader for change and the formal local decision maker in the school. In systems-level change, leadership should be distributed across and within all levels of the education system and governance will follow in many cases. Formal systems can be used to decentralize decision making while keeping the ultimate authority in place. The relationship between different levels in governance structures should be reciprocal rather than purely top down to encourage collaboration in decision-making processes. A practical example of this can be seen in Quebec Education’s governance principles which include “subsidiarity,” or the decentralization of processes and decision making. This principle allows a traditionally centralized responsibility to be distributed while leaving the ultimate authority centralized.

Accountability in the literature tends to refer to the outcomes associated with attempting to live up to governance decisions and the consequences of achieving or not achieving the desired outcomes. For example, a school principal may follow a governance decision related to the management of attendance. The principal is not responsible for the decision but is accountable for the way in which the decision is executed and the results of that form of execution. Accountability need not be associated with punishment or rewards—accountability, especially in the literature on competency-based education, is tied to continuous improvement. Vermont, for example, developed an accountability system for continuous improvement in which all schools have been identified as needing improvement. The intention was to destigmatize the label of improvement and send a message that improvement is universally needed and continuous (Patrick et al. 2018). Here, accountability moves

away from “rank and punish” systems based on single variables (e.g., grades) toward empowering stakeholders to get the information and support they need to better help all students succeed.

Engagement fits in this domain because it addresses the conceptual/emotional side of ownership. Just as competencies possess a dispositional or willingness element (Hipkins, 2010), effective change processes require particular attitudes and motivation. Most change models refer to engagement or buy-in as necessary for effective change. To obtain engagement from stakeholders such as students, teachers, principals, parents, communities, or employers, two main approaches emerge in the literature: (a) communicate/educate regarding the need for change and (b) gather meaningful input from those to be engaged (e.g., Intel Education, 2017; Milton, 2015; Phillips & Schneider, 2016; Sturgis, 2016). These approaches are often done in tandem (e.g., combining presentations with input sessions). The Canadian provinces and territories reviewed for the development of this framework have combined public and specific audience forums (e.g., with parents or employers) to inform stakeholders and gather feedback. Some have gone to great lengths to engage particular groups to ensure their voices are heard. Nunavut Education (2007), for example, included in-depth consultations with Inuit Elders and community members and included their language and concepts throughout the curriculum. Some grow their “engaged” audience by building upon earlier and ongoing change efforts. Manitoba Education and Training combined their global competencies system-level change efforts (e.g., a whole-system approach to Education for Sustainable Development, and K–12 Framework for Continuous Improvement) with specific initiatives such as the Sustainable and Education Academy and Manitoba Education for Sustainable Development Working Group. Initiatives such as these enable Manitoba Education to iteratively gather stakeholder input and test ideas.

Engagement in these cases tends to be built from the ground up, with Manitoba Education facilitating the process.

At the front lines of implementation, educators, of course, are key players and their engagement and support are essential for system change. The provinces and territories furthest along with integrating global competencies, British Columbia, Alberta, Ontario, and Quebec, all have processes in place that ensure educators are communicated with and their input is sought. Educators there are also active contributors to curriculum and assessment design and testing.

- Broad representation from education stakeholder groups is encouraged within the consultation and engagement process.
- Those sitting on the fence and resisters to change want to be and should be consulted about their needs in the transformation. Progress can continue in the midst of consultations (i.e., listening to dissenting views does not necessarily mean bringing all change to a full stop).

Key points in owning change

Governance

- Governance is about determining and recognizing who has the authority to make decisions.
- As leadership distributes throughout the system, the system of governance follows.
- A central authority tends to remain even when governance is decentralized.

Accountability

- Accountability tends to focus on those who own the change both legally and morally.
- Accountability is tied to improvement.
- Fullan's (2010) "intelligent accountability" shifts accountability toward increased empowerment and working together for change.
- The approach to accountability will have an impact on stakeholder engagement.

Engagement

- Engagement is the conceptual and emotional side of ownership in system-level transformation.
- Communication and gathering meaningful input are critical. People not only need to be "in the know" about the change but also need to feel that they are part of shaping it.
- Identify change agents—those already engaged; those who have influence not because of position; and those who can bridge disconnected groups. An open invitation to participate allows change agents to come forward and identify themselves (Milton, 2015).

Reflective questions

Who has the authority to make decisions in our system?

Who are the change agents in our system?

Who does not endorse the vision for global competencies and how do we work with them to meet their needs?

How do we ensure that stakeholders are helping to shape the changes to the system?

In terms of performance measures, how do we make our system less punitive and more collaborative in approach (e.g., moving from poor performers as the focus to focusing on everyone working on some aspect of development and change)?

In terms of this domain, what do we see as our strengths and what are our opportunities for progress?

Stages of implementation in owning change

The table below outlines specific indicators that help provinces and territories assess their progress in terms of implementing the changes associated with “owning change.” Review each of the indicators and identify your provinces and territories’ current position. This will also give you a sense of where you want to be in your next steps for action.

Table 4. Implementation stages for owning change			
Components	Indicators of progression		
	Starting	Developing	Embedding
Governance	Those who have the authority to make decisions about the system change at all levels of the system have been identified.	The distribution of governance has widened from a few individuals to many stakeholders at all levels of the system.	Governance has been purposefully and meaningfully distributed.
Accountability	Those accountable for the change in public education have been identified.	Accountability no longer focuses on poor performers within the system but rather supports and legitimizes a collaborative approach to working together across all levels of the system for change.	Accountability for global competency development in students and young adults has extended to more stakeholders in and across the system (e.g., postsecondaries and employers). For example, employer groups have incorporated global competencies in performance-management systems.
Engagement	Change agents from a variety of communities and background are identified not by their position but by their capacity to influence.	Open invitations to participate in the development of the transformation are extended to all.	A diverse group of organizations and stakeholders is actively involved in the system-change development, implementation, and growth.
	Possible tipping points are identified to support greater engagement and collaboration (e.g., teachers are actively involved in the development of the transformation).	Those who are sitting on the fence and those who are resisting the change are invited to share their needs and ideas.	Change moves forward with a significant majority of stakeholders actively involved.
	Effective communication channels (e.g., Web sites, social media, e-mail, print media) for specific stakeholder targets are identified.	Communication methods reach targets and effectively communicate a coherent message.	Stakeholders say that they have been informed, and they understand and actively promote the system changes.

Priority Actions

Given the answers to the questions above, and your assessment of where your province or territory is in terms of “owning change,” list two or three priority areas for making progress.

Areas for progress

1. _____
2. _____
3. _____

Making Change: Policy, Curriculum, Instruction, and Assessment

This domain is where most system-level transformations focus. It can therefore become the place where the change process gets stuck—especially when the other domains are not considered.

The “making change” domain name refers to the actual changes that occur in the educational system. Four key areas common to all educational systems fit in this domain: policy, curriculum, instruction, and assessment. Each is briefly reviewed from the perspective of system change.

Policy

The literature reveals that key areas to consider in policy development are sequence and engagement (consistency with global competencies and competency-based education principles are assumed).³ See the “owning change” domain for the importance of engagement in the change process; sequencing is reviewed within this domain. “Top-down” reform, in which legislation and policy are the stimuli for all other changes, can and has worked in some regions. Policy in these cases has created the conditions under which successful reform can occur (Intel Education, 2017). Policy can follow immediately after leadership to set the stage for all other change or it can be the pivot point to change. It can also remove barriers to reform and to sustain desired changes (Phillips & Schneider, 2016; Sturgis, 2016). Policy, however, does not guarantee change. Conversely, different regions have also initiated change well before or in the absence of associated policy. These cases show that change can occur without policy.

³ Policy is not universally seen as critical to system reform. For example, the word *policy* is rarely used in Fullan’s (2010) “All Systems Go,” a comprehensive description of educational system change methods. To Fullan, policy does not seem to be important in and of itself. Rather, it codifies elements of the new system that are important. He cites Barber and Mourshed’s three critical components of policy: “(1) getting the right people to become teachers, (2) developing effective instructors (including leaders who can do this), and (3) ensuring every student performs well” (Barber and Mourshed in Fullan, 2010, p. 89).

Curriculum

There are many ways to thoughtfully approach a shift toward global competencies in education and this work will require careful design within curriculum-development processes. Simply overlaying global competencies on existing curricula as an addition will almost certainly fail. In this scenario, every teacher is responsible for global competencies and no teacher is. The global competencies are advanced sets of abilities that draw upon knowledge, skills, competencies, and attitude; they need to be taught differently than “content” knowledge alone. This affects how curricula are developed, recognizing that the nature of long-standing approaches to curricula structures and development can immediately work against the development of global competencies.

Recommended changes to how curriculum is developed to fully adopt global competencies include:

- Make theory of knowledge and learning explicit (Milton, 2015).
- Focus on the key or “big” ideas within each academic discipline (Milton, 2015).
- Limit outcomes or expectations to these “big” ideas (Milton, 2015).
- Embrace interdisciplinary learning (Milton, 2015) and know that everything that occurs within the school or in connection with the school contributes to the development of global competencies (i.e., there is nothing that is “extracurricular” when it comes to global competencies).

The literature review’s analysis of a range of Canadian provinces and territories, countries and American states attempting to integrate global competencies suggested that Nunavut seemed to be the example with the most visibly integrated core or global competencies with traditional curricular areas. Nunavut Education’s

(2007) description of its Inuit *Qaujimaqatugangit* Education Framework makes it very clear that the set of core competencies (e.g., *Avatimik Kamattiarniq* or global environmental stewardship) is the fundamental aim of the system, and that curriculum strands (e.g., *Iqqaqqaukkaringniq*—math, science, analytical thinking, technology, practical arts) serve these competencies.

Pedagogy

The central pedagogical features of competency-based education inclusive of global competencies are personalized, student-centred, and student-directed learning; authenticity and significance of the learning experience to support greater learner engagement and motivation; strengths-based starting points; learning embedded in context; the use of assessment for learning purposes; self-evaluative; flexible; inclusive of many “teachers” (e.g., peer teachers, Elders, employers); and experiential (e.g., Alberta Education, 2016; Bristow & Patrick, 2014; Nunavut Education, 2018; NWT Education, Culture & Employment, 2018; Patrick et al., 2018). This kind of approach is often set against the polarized view of the “sage on the stage” where the teacher transmits knowledge to the learner.

It is highly likely that strong educators in Canadian provinces and territories already make every effort to incorporate the central pedagogical features listed here. Recognizing the expertise of Canadian educators, it will still be a significant adjustment for most to adapt to a more personalized, student-led approach, with or without structural changes. For many, this will be a significant shift away from traditional classroom instruction toward a pedagogical approach that focuses on more than academically preparing students.

Assessment

Assessment related to global competencies is meaningful to students, contributes to their learning, is based on criteria rather than comparison, is often student-led, is individualized, and can rely on multiple forms of evidence (e.g., Bristow & Patrick, 2014; Patrick et al. 2018). An emphasis on formative assessment, with students engaged in the process, relates and therefore contributes to the development of the

competencies (e.g., critical thinking, self-directed learning). Education systems may still engage in system-wide summative assessments (e.g., Programme for International Student Assessment [PISA]) that provide information about student learning which, in combination with other data sources and in local context, contributes to informed decision making regarding educational programming and priorities.

Assessments of global competencies should include cognitive, social-emotional, and behavioural dimensions, and occur in a variety of contexts from student portfolios, profiles, work placements, experiential learning, projects, research initiatives, papers, presentations, observations of behaviour, and (self) reports. According to Nunavut Education, assessment must be authentic, “grounded in real life experiences. Students need to participate actively in connecting the learning outcomes from the curriculum to their personal realities. Effective assessment must be real as well as developmentally and culturally appropriate” (Nunavut Education, 2008, p. 23).

Key points in making change

Policy

- Sequence of and engagement in policy is critical to sustainable system change.
- Policy can create conditions for change or be a pivot point to change.
- Change can occur without policy.
- Policy does not guarantee change.

Curriculum

- Overlaying global competencies on existing curricula will fail.
- Interdisciplinary approaches are particularly effective.
- Guiding principles: Curricula must clearly articulate the criteria for the development of the competency; focus on the key ideas within each learning area; limit the required outcomes to those key ideas; configure learning areas to serve global competencies; and recognize that the development of global competencies happens everywhere in the community in addition to school.

Pedagogy

- Global competency instruction is personalized, student-centred, hands-on/experiential, and strengths-based.
- In this context, the teacher becomes a facilitator of learning and recognized opportunities to learn are present in multiple contexts inside and outside of the school (e.g., schools, community, family, workplaces).
- Global-competency approaches to learning require a significant shift from traditional pedagogical/instructional approaches.

Assessment

- The assessment methods in this context focus on improving student learning based on criteria.
- Assessment is predominantly formative rather than summative.
- Student-led assessments and student-teacher co-developed criteria for assessments are prominent.
- Assessments include cognitive, social-emotional, and behavioral dimensions, and include but are not limited to: portfolios, experiential learning, practicums, profiles, projects, research initiatives, reports, presentations, observations of behaviour, and self-reports. Assessments should be grounded in practical, real-life contexts, allowing students to connect learning outcomes to their personal realities.

Reflective questions

What is the strategy for the integration of global competencies in the curricula? How will the global competencies be embedded in learning?

What are the guiding principles for curriculum development supporting the integration of global competencies?

Who will develop and guide professional learning in global competencies?

What is the assessment plan for the competencies? How will assessment approaches differ?

In terms of this domain, what do we see as our strengths and what are our opportunities for progress?

How to build school capacity for global competency-based instruction?

Stages of implementation in making change

The table below outlines specific indicators that help provinces and territories assess their progress in terms of “making change.” Review each of the indicators and identify your province or territory’s current position. This will also give you a sense of where you want to be in your next steps for action.

Table 5. Implementation stages for making change			
Components	Indicators of progression		
	Starting	Developing	Embedding
Policy	Policies within the system have been reviewed to assess alignment with competency-based education. Analysis of what policies may be needed to achieve the intended change has been completed.	Policy to support the transformation has been adopted.	Policies are regularly evaluated to ensure that they respond as well as possible to the change and the integration of global competencies.
Curriculum	Curricula across K–12 have been reviewed with a lens toward integrating global competencies.	Curricula are in the process of redevelopment.	Curricula have been redeveloped to integrate the development of global competencies using the following guiding principles. Curricula must clearly articulate the focus on the key ideas within each learning area; limit the required outcomes to those key ideas; configure subjects to serve global competencies; and recognize that the development of global competencies happens everywhere in the community (not just the school).
Pedagogy	The required competencies to facilitate the development of global competencies have been compared to existing pedagogical approaches to pre-service and in-service teacher training.	The new requirements of instruction/assessment and the ways in which they contrast with existing approaches have been communicated in differentiated ways through a suite of products and services to specific target audiences (e.g., principals, secondary teachers, elementary teachers, students, parents, and employers).	Pedagogical training that supports global competency education is fully integrated into pre-service teacher-preparation programs and faculties of education generally. It continues to be fully endorsed by education associations (e.g., associations of teachers, superintendents), is built into supervisory methods, and is understood by parents, employers, and other stakeholders.
Assessment	Assessment methods and strategies for global competency development are researched, analyzed, and presented for review across stakeholder groups so that a general approach to assessment can be developed and presented conceptually to educators.	Guides and materials are created and disseminated that help educators convert global competency-assessment approaches into action.	The assessment approaches are part and parcel of the criteria-based assessment processes used by teaching staff.

Priority Actions

Given the answers to the questions above, and your assessment of where your province or territory is in terms of “making change,” list two or three priority areas for making progress.

Areas for progress

1. _____
2. _____
3. _____

Enabling Change: Capacity Building, Relationship Building, Infrastructure, and Resourcing

Change efforts need human, educational, infrastructure, and financial support. Perhaps most important is the capacity building of teachers/ educators and educational leaders.

Capacity Building

Canadian educators are among the strongest in the world. Their training, professional learning, and front-line experience have largely been within the context of subject-based instruction. Accordingly, educator capacity will need to be a central focus in the transition to competency-focused education. The nuances of personalized learning, individualized assessment, the ability to assess student capacity for competency development, student-led learning, integration of technology, authentic learning, and other pedagogical approaches described across the other domains of change (see specifically “making change”) will need to be learned and/or enhanced.

Capacity building will need to include peer-support systems, mentorship, clinical supervision by administrators, and more. Patrick and colleagues (2018) point out that professional judgment is at the core of competency-focused teaching, and that policy, training, supervision, and other supports need to assist with this judgment. By supporting teachers to engage in collaborative inquiry, education systems can build capacity by empowering them to inquire and learn together. By addressing obstacles, and encouraging and supporting collaboration within schools,⁴ education systems can empower teachers to take leadership over their own professional development and enable them to develop and adapt context-specific strategies to

meet the needs of students in a changing world (Schnellert and Butler, 2014).

Another key element of capacity building, as Hipkins (2010) notes, will involve helping teachers “unlearn” concepts and practices they have been encouraged to practice for years in order to shift from current approaches to competency-focused education. This is particularly important in provinces and territories where staff and administrator turnover is high and where these individuals come from “other” educational experiences and philosophies.

Canadian provinces and territories have strong examples of capacity-building supports. British Columbia has a series of communications for teachers that provide profiles, examples, and illustrations to support core competencies development. The resources include frequently asked questions (FAQs), videos, booklets, updates, and more. Alberta has made useful resources for educators available on-line (ARPDC, n.d.) as has Ontario.⁵ Ontario also offers resources for enabling collaborative inquiry in schools (Government of Ontario, 2014).

The capacity of educational leadership will also need to be developed on a number of fronts. Administratively, personalized learning and assessment can create challenges that are outside of many educational administrators’ repertoires. Leaders will need to ensure that they have the ability to clearly communicate the changes to teachers, parents, employers, and others and be able to manage the shift in each stakeholder’s expectations. Educational leaders will need to grasp the full intent and vision of global competency integration, inspire staff with the benefits of this vision, support staff as

⁴ Schnellert and Butler (2014) outline four conditions for supporting collaborative inquiry for the development and adaptation of teaching practice: structural supports (which allow time and space for teachers to collaborate); cultural and social/emotional supports (which support an environment in which participants feel valued and have trust); learning and process supports (which give educators access to the resources they need); and teacher ownership/agency (which allow educators to become engaged and take leadership over their own professional development).

⁵ Innovation in Action, available at http://www.edugains.ca/newsite/21stCenturyLearning/innovations_video.html.

problems arise, and engage other stakeholders in the process of helping students learn regardless of who might be “teaching.” By way of example, British Columbia’s Ministry of Education has developed, in collaboration with a host of other organizations, a leadership framework with 19 common competencies for educational leaders (BC Education, 2017).

Relationship building

The engagement of stakeholders in the change process was addressed in the “owning the change” domain. In the “enabling change” domain, the focus is on establishing system-to-system relationships in a more formal, structural way. Owning change is about emotional commitment; building relationships in “enabling change” is about formalizing and documenting commitment between systems.

There are many systems that should be considered in the vision of lifelong global competency development (pre-school, adult literacy, and language learning, senior citizen programs). For example, the postsecondary education system and the system(s) of employers/industries within a province or territory will be important partners in the shift toward competency-based education because many students will eventually be making the transition to either (or both) of these systems, and both serve as important spaces for learning in life after secondary education. The heart of global competency-based education is to support students to have the ability to not only make sense of the world around them but to have the competencies to thrive in it. Therefore, the goal of global competency integration must be broader than its integration and development in public education. Relationships need to be developed and/or strengthened across all these systems and across multiple stakeholders (e.g., nongovernmental organizations, employers, families, community organizations, Elders, etc.) so that the changes adopted by the public education system are supported, encouraged, and extended.

Infrastructure

The physical infrastructure supporting learning global competencies was referred to in the

literature. “In several schools [that were moving to more competency-focused learning], learner-centered pedagogy was being considered not just as new learning spaces were designed, but also as old spaces were redesigned” (Bristow & Patrick, 2014, p. 12). Traditional bricks-and-mortar schools are likely not going to disappear, but their internal shape and relationship to other facilities will change as global competencies are embedded in the system. The “where” of learning is important, and the physical learning environment cannot be ignored. Neither can virtual spaces. Virtual spaces and the equipment that can be accessed in these spaces—tablets, computers, smartphones, and more—are increasingly becoming pivotal elements of educational infrastructure (e.g., Milton, 2015).

Resourcing

As Fullan (2010) points out, resourcing change efforts does not mean throwing money at problems. He argues that too much resourcing can in fact distract from the aims and lead directly to worse educational outcomes. On the other hand, insufficient resourcing can slow or halt progress. Given this possibility, resourcing of everything discussed thus far needs to be considered and addressed. This resourcing ranges from appropriate remuneration for educators to obtaining technology that is appropriate to the need.

Required funds need not all come from a single source. Stakeholders can contribute funds and/or in-kind resources, recognizing the difficulties of ulterior motives or conflicts of interest. Further, one-time funding is of limited use. There is little point in purchasing technology, for example, without the funds to maintain or upgrade it (e.g., Intel Education, 2017).

A particularly important element of resourcing relates back to leadership and engagement. If stakeholders such as teachers see that appropriate (in their eyes) funding is not being provided for the change effort, every other element of the change effort may be undermined. Innovation funds provide special remunerations and reliable core funding for ongoing elements.

Key points in enabling change

Capacity building

- Educator capacity is critical in the shift to competency-based education.
- New and existing teacher orientation is critical.
- Building the capacity of educational leadership is needed.
- The heart of system change is ongoing, on-the-job, competency-based, personalized, professional learning.
- Proven supports to capacity building include: peer supports, coaching, supervision by senior staff, administrators, professional development, and virtual assistance.
- Unlearning of existing approaches may be required.
- Communications should reinforce that the development of global competencies is everyone's business.

Relationship building

- Global competency development extends beyond the K–12 system and should include bridges to postsecondary education and employers.
- Employers can be allies to the public system in the “doing” part of competency development.
- Outreach to other systems that will have a role in lifelong global competency development (pre-school, postsecondary institutions, industry etc.) is critical to the overall success of system change. Developing relationships with the broader community is also critical.

Infrastructure

- The construction and set-up of physical and virtual spaces need to be considered in the system's transformation.
- Standards for learning environments introduced by the Canadian Library Association Framework for school library learning commons may be an important reference for this work (CLA 2014).

Resourcing

- Funding needs to be strategic.
- Resources do not need to come from only one source. Stakeholders may contribute within the context of clear ethical guidelines.

- Partnership may allow the system and schools to move forward with the changes and innovate in global competency-based learning.
- One-time funding may be of limited use.
- Resourcing needs to be sufficient across the system.
- Innovation funds can support stakeholder engagement and inspire educators to find ways to “push the envelope” within funding constraints.

Reflective questions

What do new and existing teachers need in terms of their own professional development to support global competency-based learning? What types of competencies will educators need to address the transition?

What are the best practices in setting up positive learning environments for global competency development?

What do schools most need to make this happen?

How do we strengthen connections throughout our systems to support lifelong global competency development?

What partnerships may be possible to support our implementation and innovation plans?

What are the possible sources of funding to support the system change and to push innovation forward?

In terms of this domain, what do we see as our strengths and what are our opportunities for progress?

Stages of implementation in enabling change

The table below outlines specific indicators that help provinces and territories assess their progress in terms of “enabling change.” Review each of the indicators and identify your province or territory’s current position. This will also give you a sense of where you want to be in your next steps for action.

Table 6. Implementation stages for enabling change			
Components	Indicators of progression		
	Starting	Developing	Embedding
Capacity building	<p>An inventory of the strengths and gaps of in-service capacity-building initiatives and structures is complete.</p> <p>Existing teacher-training programs for pre-service teachers and professional learning courses for in-service teachers are assessed to determine the extent to which they are competency based and support competency-based education.</p>	<p>A comprehensive strategy and program for in-service capacity building has been developed.</p> <p>Teacher-training programs for pre-service teachers are being redeveloped to be competency based and support competency-based education instructional approaches.</p> <p>Professional learning courses for in-service teacher training that are competency based and support the integration of competency-based education and global competency development have been identified or are in development.</p>	<p>The in-service capacity-building strategy is being implemented, evaluated, and adapted at all system levels.</p> <p>Competency-based teacher-training and professional learning programs are in place to support teachers to experience competency-based training and adapt and contextualize it into their practice as educators.</p>
Relationship building	<p>Potential active allies/ change agents in the postsecondary education (PSE) and employer/industry systems are identified.</p>	<p>Outreach tools and processes to support active partnerships with PSE systems and employer / industry groups have been developed.</p>	<p>PSEs have embedded global competencies into curricula and are recognizing these in incoming applicants.</p> <p>Several key employers have embedded global competencies into work role descriptions and training programs and recognize these in the hiring and progression processes.</p>
Infrastructure	<p>Existing infrastructure initiatives (both within system and external) are researched to identify best practices in developing positive learning environments (both physical and virtual) for global competency development.</p>	<p>Standards for global competency learning environments have been developed.</p>	<p>Standards are integrated and assessed on an ongoing basis throughout the system.</p>
Resourcing	<p>An analysis of existing funding programs and existing resources across the system has been completed.</p> <p>Potential partners and sources of funding have been identified.</p>	<p>A comprehensive resourcing strategy incorporating system-wide resourcing initiatives and processes as well as tools/ strategies by which stakeholders can obtain funding has been developed.</p> <p>Potential partners are approached to support efforts to innovate in the space of global competencies.</p>	<p>Stakeholders at all levels see the system and its components as being adequately resourced in fair and ethical ways.</p> <p>Partners are coming onboard to resource elements of the system change.</p>

Priority Actions

Given the answers to the questions above, and your assessment of where your province or territory is in terms of “making change,” list two or three priority areas for making progress.

Areas for progress

1. _____
2. _____
3. _____

Continuing Change: Evaluation and Improvement

The point of an experiment is not to arrive at a predetermined end point, to prove or disprove anything, but to deliver a poem that reveals much about the process taken.

John Barton, Canadian poet

To some, a possibly discouraging feature of the change process across the seven domains of change is that it has no clear end point. To others, this may be why education will always remain vibrant and engaging. It is imperative that progress toward the intended outcomes established in the “aspiring to change” domain as well as the processes used in the attempt to reach these outcomes are evaluated (Bristow & Patrick, 2014). There is clearly an overlap with governance issues here, but evaluation is best seen in the same way students should experience assessment—as contributing to learning. Systems need to “reduce fear of failure by increasing opportunities for experimentation and learning from the results” (Milton, 2015, p. 17). As with students, educators and policy-makers need to see the connections between their systems and subsystems’ processes and outcomes so that they can meaningfully manipulate processes to reach the outcomes they desire.

The danger of evaluation efforts is that they can be used for only punitive accountability reasons, as Milton (2015) describes, and therefore become an obstacle to improvement. If educators are treated in the same manner as students—as learners who want to improve and who will improve given appropriate feedback and support—evaluation can be a key contributor in system transformation. Program evaluation should therefore focus not on predetermined outcomes that are based on previous understandings of success in teaching, but instead on outcomes as they relate to the processes, and contribute to the improvement of these processes rather than simply highlighting failures.

Key points in continuing change

Evaluation and improvement

- Evaluation of outcomes supports the change process, linking processes to outcomes and informing continuous improvement.
- Evaluation assumes that everyone at all levels in the system can learn and grow.
- A cultural shift may need to happen to ensure that evaluation is seen and experienced across the system as positively contributing to learning rather than punitively shining a spotlight on shortcomings. This mirrors the approach taken with student-assessment approaches in competency-based education.

Reflective questions

What is our plan for evaluation?

Are outcomes linked to processes?

How do we position evaluation as supporting learning and growth across the system? What cultural shift needs to be made?

In terms of this domain, what do we see as our strengths and what are our opportunities for progress?

Stages of implementation in continuing change

The table below outlines specific indicators that help provinces and territories assess their progress in terms of “continuing change.” Review each of the indicators and identify your province or territory’s current position. This will also give you a sense of where you want to be in your next steps for action.

Table 7. Implementation stages for continuing change			
Components	Indicators of progression		
	Starting	Developing	Embedding
Evaluation	A comprehensive evaluation plan that accounts for the entire system and all subsystems has been developed.	The purpose, intent, and process of the respective components of the evaluation plan are distributed to, explained to, and understood by stakeholders at all levels.	The evaluation plan is adopted with commitment at all levels and the understanding that evaluation supports professional learning, practice, and continuous improvement. The evaluation results reflective of local indicators are used for system and practice improvements.
Improvement	Change agents, influencers, “improvers,” and innovators are identified and their approaches and practices are inventoried.	Educators and administrators are driving innovations and improvements and understand the value of evaluation in providing them with meaningful feedback to inform and enhance their practice.	Improvements and evaluation processes are seen as a core component of education: the responsibility of all and benefitting all. Resources are allocated to support evaluation and improvement processes.

Priority Actions

Given the answers to the questions above, and your assessment of where your province or territory is in terms of “continuing change,” list two or three priority areas for making progress.

Areas for progress

1. _____
2. _____
3. _____

Initial Priorities

Taking into account where you are strong and where you want to make progress, what are your priorities for action? Review your priorities for action that you recorded across all the domains of change. Note them here and use this template to assist your initial system-change planning for global competency integration. You will notice as you proceed with implementation that

“initial priorities” in each domain are all you can meaningfully work with. Planning too far ahead in any single domain is not possible because the plans are dependent on the progress of the other domains. This template helps you check in with the progress of all the domains so that you can continuously set and reset “initial priorities” for each domain.

Domain	Stages of implementation	Priority actions	Desired outcomes	Time frame	Resources needed	Possible partners	Lead(s)
Aspiring to change	Philosophy	1.					
	Intent	2.					
	Outcomes	3.					
Situating change	Understanding the context	1.					
		2.					
		3.					
Shaping change	Leadership model	1.					
	Communication	2.					
	Capacity building	3.					
Owning change	Governance	1.					
	Accountability	2.					
	Engagement	3.					
Making change	Policy	1.					
	Pedagogy	2.					
	Assessment	3.					
Enabling change	Capacity building	1.					
	Relationship building	2.					
	Infrastructure	3.					
	Resourcing						
Continuing change	Evaluation	1.					
		2.					
	Improvement	3.					

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Pan-Canadian Systems-Level Framework on Global Competencies

Building on strong foundations of numeracy and literacy, global competencies at CMEC is a pan-Canadian effort to prepare students for a complex and unpredictable future with rapidly changing political, social, economic, technological, and ecological landscapes.