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IMAGINING
CANADA'S
FUTURE



LEVERAGING KNOWLEDGE FOR 21ST CENTURY TEACHING AND LEARNING

Insights and opportunities for knowledge
mobilization and future research

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EXECUTIVE SUMMARY

Global trends confirm that 21st century learning is about developing the capacity and motivation to create, understand, interpret and communicate knowledge. It is about training for versatility and the ability to contribute that knowledge to increasingly complex, nonlinear issues. Central to today's teaching and learning are inquiry-based and student-centered approaches and techniques shaped by networks, collaboration, technology and design.

The exploration of new ways of teaching and learning is one of six future challenge areas identified in the Social Sciences and Humanities Research Council (SSHRC)'s [Imagining Canada's Future initiative](#), which positions the social sciences and humanities as essential in addressing the complex societal challenges facing Canadians over the coming decades.

Beginning in January 2015, SSHRC launched a series of activities, engaging researchers, sector leaders and graduate students in pursuing deeper clarity on emerging ways of teaching and learning to meet the needs of a rapidly evolving society and labour markets.

This report highlights some of the key findings and shared themes from this initiative, drawing from knowledge synthesis studies, workshops, forums and roundtable discussions. It is intended to inform and promote further engagement by diverse stakeholders and decision-makers on key insights from the humanities and social sciences into the future of learning and teaching, while also helping to guide future scholarly inquiry in areas where research gaps have been identified.

Among the findings detailed in this report:

- **Traditional teaching and learning techniques are challenged in a technology-mediated environment.** The new paradigm requires a balanced approach to the acquisition of foundational knowledge, stimulating deeper learning and fostering 21st century competencies.

- **New technologies can increase the access to—and flexibility of—learning, while also bridging the gap between knowledge and community.** New e-learning approaches, however, present opportunities and challenges for learners and teachers alike. Collaborative teaching and peer-to-peer interventions in distributed learning, while beneficial, are not always intuitive.
- **Appropriate teacher training and tools, flexibility and incentives support educators at all levels in immersing themselves in innovative, student-centered and collaborative approaches.** This approach, in turn, is essential to teaching the key competencies necessary for today's knowledge economy, from civic engagement to spatial reasoning and data literacy.
- **Applying a diversity lens to teaching approaches is integral to achieving successful learning outcomes.** This is important when considering, for example, discipline-specific academic literacy among ESL learners, collaborative teaching methods for K-12 students with special needs, and initiatives to foster perseverance in science, technology, engineering and mathematics (STEM) among women and minority groups.
- **A better understanding is needed on what constitutes “culturally relevant” programming and delivery methods.** Indigenous knowledge and perspectives must be integrated into culturally-relevant learning and research strategies, to the benefit of learners, their families and their communities.
- **More research on experiential learning is needed to develop better pedagogical, curricular and educational policy.** While postsecondary institutions are employing experiential and other out-of-classroom learning approaches to provide better career options and to enhance discipline-specific, core and soft skills, there are uneven study, evaluation and engagement across disciplines. Some voice the need to balance experiential learning with traditional classroom learning, while others speak to the need to better understand and explore the links between the two.

Overall, the majority of these findings call for better linkages to support learning across jurisdictions and disciplines—building a better foundation for using theory and research to guide teaching and learning, and vice versa. It is time to open these pathways.

SSHRC invites researchers and stakeholders from all sectors to examine these and other social sciences and humanities insights, and to continue exploring new ways of teaching and learning, for the benefit of Canada and the world.



HARNESSING KNOWLEDGE: NEW WAYS OF TEACHING AND LEARNING

Faced with the specific knowledge base and skill set required for 21st century prosperity, Canada, like many other countries, is focusing critical attention on its education system, in terms of pedagogy, structure and delivery, from K-12 through postsecondary education.

Fresh insights are emerging, both in the research community and in other sectors, on new—and potentially, more effective—methods of teaching and learning to support an innovative, resilient and diverse society. These approaches are influenced by an evolving discussion around outcomes, as the pedagogical focus moves from acquiring isolated, discrete skills (“learning outcomes”), to nurturing the learner’s capacity to understand, adapt and apply knowledge and concepts (“learner outcomes”), to establishing broader *competencies* integrated and measurable within individual fields or professions.

The exploration of new ways of teaching and learning is one of six future challenge areas identified in SSHRC’s [Imagining Canada’s Future initiative](#). Over the past decade, SSHRC has invested nearly \$270 million in education-related research projects. Supporting some 3,700 grants and scholarships, this represents approximately eight per cent of SSHRC’s overall research funding.

SSHRC’s Imagining Canada’s Future initiative illuminates the potential contributions of the social sciences and humanities research community to address the complex challenges facing Canadians over the next 20 years. It does so by encouraging research preparedness, informing decision-making, and expanding cross-sector collaboration and partnerships for research and training.

CURRENTLY, THE SIX FUTURE CHALLENGE AREAS ARE:

1

What new ways of learning, particularly in higher education, will Canadians need in order to thrive in an evolving society and labour market?

2

What effects will the quest for energy and natural resources have on our society and our position on the world stage?

3

How are the experiences and aspirations of Aboriginal Peoples in Canada essential to building a successful shared future?

4

What might the implications of global peak population be for Canada?

5

How can emerging technologies be leveraged to benefit Canadians?

6

What knowledge will Canada need to thrive in an interconnected, evolving global landscape?

The breadth of resources, perspectives and areas of inquiry covered by the future challenge area on new ways of learning necessitated a broad synthesis of the current state of knowledge; this would include assessing and evaluating its overall quality, accuracy and rigor, and identifying knowledge gaps.

To achieve these objectives, SSHRC launched a [Knowledge Synthesis Grant](#) funding opportunity in January 2015. Its goal was to mobilize research knowledge within the public, private and not-for-profit sectors. [Twenty projects](#) were selected, ranging from studies of experiential learning and the unique needs of Aboriginal learners, to digital literacy skills, STEM curriculum and the development of soft skills. A number of projects included interdisciplinary approaches and new data analysis techniques—such as complexity theory.

The Knowledge Synthesis Grant opportunity was complemented by a range of activities across Canada. A May 2015 [workshop](#) provided networking opportunities among the grant recipients and with a range of field leaders in academia, non-profits, industry and government. Insights from the 20 synthesis projects were also shared at a national forum in November 2015. Held in collaboration with the [Federation of Social Sciences and Humanities](#), the forum was attended by 170 researchers and educators, as well as policymakers and business and community sector leaders. Presentations from guest experts were complemented by breakout discussions moderated by senior leaders from organizations including the Canadian Society for the Study of Education, MITACS, Indspire, Actua, the Information and Communications Technology Council, Universities Canada and the National Arts Centre.



Please visit [this URL](#) for a video of graduate students highlighting the benefits of collaborative and inter-disciplinary research. *CAGS roundtable hosted at Queen's University, April 21, 2015.*

Given its focus on higher education, SSHRC also invited the Canadian Association for Graduate Studies (CAGS) to organize a national dialogue with graduate students. The students were asked to share their expectations and inspirations for 21st century learning, as well as to discuss the five other future challenge areas.

More than 300 graduate students at 28 universities across Canada participated in the dialogues. Participants expressed their views on Canada's education system. They called for a breaking down of silos among disciplines, institutions and across all sectors of society. Many stressed the importance of more collaborative and inquiry-based learning, supported by new technologies to foster critical problem-solving skills and encourage greater innovation. The dialogues are documented in [reports prepared by CAGS and the host universities](#).

“It is important to bring the university to the people and to bring people to the university - to create a relationship, they said. That kind of bridge opens the way for lifelong learning.”¹

This document illustrates how humanities and social sciences research is being mobilized to advance our understanding of a number of complex issues that are shaping the country's education system and innovations in learning and teaching.

The report begins with key conclusions drawn from the knowledge synthesis reports. Fulsome accounts of the findings—as well as identified knowledge gaps to help guide future work—are detailed in the synthesis reports. The individual reports are available from the researchers responsible (contact information is provided in the section below).

The second part of this document focuses on insights and cross-cutting themes emerging from the knowledge syntheses and thematic stakeholder conversations convened by SSHRC in 2015, on the forces shaping Canada's teaching and learning landscape.

¹ Canadian Association for Graduate Studies, *Imagining Canada's Future: Summary of Roundtable Discussions with Graduate Student Researchers*, October 26, 2015, 4.



A key objective of the Imagining Canada's Future initiative is to stimulate national dialogue on key issues facing Canadians, while also encouraging partnerships and innovative collaborative efforts to connect research insights and talent with sectoral organizations.

SSHRC invites you to connect and participate on this and other future challenge areas. To find out more about the ways in which humanities and social sciences researchers are contributing their knowledge, talent and expertise to advance Canada's prosperity and quality of life, please visit www.sshrc-crsh.gc.ca/imagining.

An interactive art installation at SSHRC's Fall Forum drew together multi-sector outlooks on the future of Canadian education.





KNOWLEDGE SYNTHESSES: KEY FINDINGS

The list of knowledge synthesis projects is organized in alphabetical order, by principal investigator. It includes the researcher's contact information and where available, a link to the full report.

A transdisciplinary review of research into spatial reasoning

CATHERINE BRUCE, TRENT UNIVERSITY

Spatial reasoning, the ability to make sense of objects and space, and to mentally insert ourselves in a situation to solve a problem, is vitally important for people of all ages. Despite strong correlations with academic and career success and the likelihood to enter and succeed in professions related to science, technology, engineering and mathematics (STEM) and the arts, geometry and spatial reasoning are scarcely addressed in Canada's grade school mathematics curricula. A complex network analysis maps current disciplinary studies in spatial reasoning and assesses where links are beginning to be forged, and where more are needed with the field of Education.

Enhancing key digital literacy skills: Security, information privacy, and information ownership

JACQUELYN BURKELL, WESTERN UNIVERSITY

In today's increasingly data-driven society and labour market, modern organizations require significant expertise in information management to respond to the privacy and security of information in their care and control. There is a current gap and increasing demand for digital competencies related to information privacy, security, and copyright/ownership in Canada. To ensure adequate human and technical skills and organizational practices, multi-faceted digital literacy training is needed to develop future information managers/leaders. [Full Report](#)

Teaching in French immersion and in Canadian Francophone minority communities: The challenges and their repercussions on teacher training

MARTINE CAVANAGH AND LAURENT CAMMARATA, UNIVERSITY OF ALBERTA

A review of teaching in French immersion and Francophone minority communities point to a number of different and common challenges to optimizing learning outcomes and promoting francophone language and culture, in the context of changing social and intercultural realities. Building cultural identity is a central focus of Francophone minority programs, while French immersion programs are primarily concerned with providing English speakers access to a bilingual program. There is very little research on the role that teacher training and pedagogy play in meeting the teaching challenges within both environments. [Full Report](#) (in French only)

Aboriginal workplace integration in the north

KEN COATES, HEATHER HALL AND HAYLEY HESSELN, UNIVERSITY OF SASKATCHEWAN

For many years, governments, industry and Aboriginal communities have significantly invested in workforce training, professional development and upgrading, and employment-based skills preparation, with the shared goal of encouraging greater Aboriginal participation in the market economy. Despite these efforts, the same barriers and best practices have existed since the 1990s. Change has been slow due to weak collaboration as well as systemic policy and funding issues. More importantly, research has shown that barriers to education and labour market development begin to arise in early childhood and have cumulative affects throughout adolescence and into adulthood. Successful outcomes require a holistic approach that fully supports the learner, their families and their communities with quality and culturally-relevant programs and delivery methods. [Full Report](#)

“Soft” skills are hard: A review of the literature

WENDY CUKIER, RYERSON UNIVERSITY

There is wide agreement that “soft” skills are deemed essential employment skills across sectors, however there is little agreement on how to define these skills. There is also a misalignment between employers and educators and graduates, on the demand as well as expectations and perceptions of the soft skills that graduates across all disciplines possess. In addition to greater collaboration, clearer and consistent assessments, new training strategies and learning models, and addressing biases related to diversity are critical to developing these essential skills.

Focusing on Science, technology, engineering, mathematics (STEM) initiatives in K-12 education: STEM education in Canada

ISHA DECOITO, WESTERN UNIVERSITY

According to the international Programme for International Student Assessment, students in many countries, including Canada, have not demonstrated significant gains in math and science between 2003 and 2013. A national overview of initiatives seeking to generate more interest in science, technology, engineering and math (STEM) and their impact within K-12 education, which plays a foundational role in future studies and career choices, suggests a growing imperative for research and policy in this area, as well as a vibrant STEM-based network community.

Canadian postsecondary education and Aboriginal peoples of Canada: Preparation, access, and relevance of postsecondary experiences

FRANK DEER, UNIVERSITY OF MANITOBA

Preparation, access and relevant experiences - key ingredients for developing an innovative, sustainable and diverse labour market - have been missing within Canada’s growing Aboriginal student population, resulting in low labour market participation, economic marginalization, and poor quality of life. It is essential that Indigenous knowledge and perspectives be integrated in a reasonable manner into postsecondary education curriculum and research to ensure experiences are relevant to Aboriginal learners and their families and communities. [Full Report](#)

Organizational models for the most effective services to encourage student access, retention and success for learners with disabilities or those with special needs

FRANCE DUBÉ, UNIVERSITÉ DU QUÉBEC À MONTRÉAL

Provincially-legislated organizational models, critical to providing services to students with disabilities or special needs, vary widely across the country and are increasingly the responsibility of schools. A review of models across 15 countries underlines the use of heterogeneous vs. homogeneous classes, small group tutoring, and workplace transition initiatives as key strategies to encourage access, retention and success of learners. Professional development and pedagogy support are essential to fostering these emerging collaborative learning models. [Full Report](#)

Strengthening deeper learning through virtual teams in E-learning: A synthesis of determinants and best practices

MARTINE DURIER-COPP, DALHOUSIE UNIVERSITY

E-learning has transformed traditional ways of learning in higher education, and its flexibility is fundamental to increasing accessibility and fostering a lifelong learning society. However, Canada is trailing behind innovative efforts of other countries in postsecondary and workplace e-learning training. Understanding the social component of learning is a key factor of e-learning success, which impacts motivation, critical thinking and reflection, deeper learning, and knowledge mobilization. Context, behaviour and resources are fundamental drivers within a proposed e-learning framework for effective e-learning delivery models and virtual team practices.

Conceptualizing and evaluating transformative environmental education: Nature-based citizen science as a platform for experiential learning and collective action on climate change

CHRISTOPHER LEMIEUX, WILFRID LAURIER UNIVERSITY
AND MARK GROULX, UNIVERSITY OF NORTHERN BRITISH COLUMBIA

While citizen science exhibits considerable potential as an experiential model of environmental education, there is currently little empirical evidence within on the ground citizen science projects on climate change to suggest that nature-based citizen science is promoting transformative learning in the area of climate change. Importantly, this does not imply that transformative learning is not possible or that it is not already taking place in this context. More research to bridge the science / social science divide and targeted program evaluation studies are needed. In particular, there is a need for studies that partner evaluation specialists with scientific scholars who are leading citizen science programs.

Global learning in a Canadian context: A knowledge synthesis

ROBERTA LEXIER AND MELANIE RATHBURN, MOUNT ROYAL UNIVERSITY

Industry, government and universities in Canada frequently identify global citizenship as an important outcome of education; however, there are great discrepancies across universities in their understanding of what it means and how it can be achieved. The report puts forward a framework to enable institutions to develop explicit definitions and to consider the complex and interconnected processes of developing global citizenship within strategic plans, as well as ways to evaluate their efforts.

Enhancing the academic literacy skills of English-as-a-second-language adult students in health professional education

LILLIE LUM, YORK UNIVERSITY

The ability to read and communicate clearly in writing in the health workplace is critical to the professional advancement of the individual and the effectiveness of their profession. The importance of teaching students how to write in academic programs is well documented, but much less is known about how to improve the writing ability of the English-as-a-second-language (ESL) learner. While there are promising practices that can be applied to promote academic literacy of ESL students, including discipline specific and reflective writing and cross-curriculum writing assignments, more research is needed to address the unique learning needs of ESL students. [Full Report](#)

Interaction between students: An impediment to distance education or path to success?

CATHIA PAPI, TÉLUQ

While distance education has significantly expanded and improved access to postsecondary education over the last 20 years, student perseverance and quality of learning remain problematic. Peer-to-peer interactions have shown to produce positive learning outcomes in e-learning when students engage in authentic learning experiences. However, most distance learners at the postsecondary level do not seek out interactions with peers. Increased teacher training in pedagogical uses of media-based interaction devices as well as greater communication of challenges and benefits of these exchanges appear to be key strategies to enhance the impacts of postsecondary distance education.

What is the potential of Mobile Learning Technologies (MLTs) and their applications to support the needs of Indigenous learners in Canada?

SIOMONN PULLA, ROYAL ROADS UNIVERSITY

The adoption of mobile learning to enhance e-learning has grown exponentially across the globe. This includes increased use within Indigenous communities. Research shows, however, that Canada lags in its adoption of mobile learning innovations for Indigenous education. Case studies on mobile learning in Canada show promise of integrating its portability, low cost and versatility into culturally-relevant teaching modalities for Indigenous peoples. A comprehensive approach that includes the development of mobile-assisted language learning; access to affordable and reliable 21st century connectivity infrastructure and technology; and a greater alignment of indigenous pedagogy and approaches to education that link theory and practice will increase the potential for urban, rural and remote Indigenous communities and learners in Canada to benefit from these learning technologies. [Full Report](#)

Management of the arts and culture: Something borrowed, something new ...

WENDY REID, HEC MONTREAL

Postsecondary arts and cultural management studies and training have seen tremendous growth in the last 15 years, as well as new insights from a “creative industries” perspective. Since their inception, these programs have had to balance the paradox of values found in the arts and management fields. To ensure effective training of flexible and creative arts managers, arts management teaching texts need to be better informed by research on complex and pluralistic organizations, entrepreneurship and innovation, and international applications. [Full Report](#)

Leveraging peers in the school-to-work transition for women in STEM

BRIAN RUBINEAU, MCGILL UNIVERSITY

Progress integrating women into science, technology, engineering and mathematics (STEM) studies and careers has stalled over the past 15 years in Canada. To help surmount obstacles faced by women during school-to-work transitions, new ideas and interventions grounded in peer social processes are needed. Universities and employers can look to new evidence-based policies and opportunities, such as team projects and study groups and near-peer recruitment approaches, which go beyond traditional educational delivery methods and leverage peers to promote women's successful transition to and persistence in STEM careers.

The digital textbook in the postsecondary context: Learning strategies, new learning methods, potential and limits

GHISLAIN SAMSON, UNIVERSITÉ DU QUÉBEC À TROIS-RIVIÈRES

A review of the integration of digital textbooks at the postsecondary level examines how educators and students are using formatting functions and what added values they offer. While there is consensus on their functionalities, teaching and learning strategies, and conditions to achieve their potential in postsecondary education, literature on the pedagogical efficacy of e-textbooks is contradictory. Research is limited to perceptions and attitudes towards digital textbooks; Empirical research is needed on real learning applications, the views of educators, and institutional resources and support for educators.

Strategies and best practices for data literacy education

MICHAEL SMIT, DALHOUSIE UNIVERSITY

We are a data-rich society, and all sectors are struggling with making the best possible use of the volume of data available to them. In addition to the deep technical expertise needed, analysts agree there is a need for a data-literate workforce, and that this need is not currently being met. An assessment by a multi-disciplinary research team of existing strategies and best practices for teaching data literacy provides a clear definition and list of key competencies, and a systematic approach to data literacy education, predominantly at the undergraduate level. [Full Report](#)

Community service-learning (CSL) in Canadian higher education

ALISON TAYLOR AND SHAUNA BUTTERWICK, THE UNIVERSITY OF BRITISH COLUMBIA

The significant growth in course-based community service-learning (CSL) programs and activities in Canadian postsecondary institutions since the 1990s has been mirrored by the growth in scholarly literature and practitioner resources in North America. Institutions are using CSL as an innovative pedagogical approach that helps students integrate theoretical and practical knowledge and helps develop more critically engaged citizens. Nevertheless, more research on CSL in Canadian postsecondary education is still needed to inform program design and activities, ensure relevance and clarity of purpose, and acknowledge diversity. [Full Report](#)

Bridging the theory /practice divide: Experiential learning for a critical, people-centred economy

JANICE WADDELL, RYERSON UNIVERSITY

Despite its rapidly expanding use by postsecondary institutions as an integral strategy to bridge the divide between the classroom and the working world, a lack of evidence remains on whether experiential learning channels theory and practice, broadens career prospects and contributes to the development of students' critical thinking skills. A study of community services-based fields reveals that uneven disciplinary engagement, a lack of common definitions and outcomes assessments, and an overemphasis on a small number of experiential learning methods are key challenges to enhancing teaching pedagogies, curricula and educational policy. [Full Report](#)



THEMATIC INSIGHTS ON NEW WAYS OF TEACHING AND LEARNING

Building on the outcomes of the knowledge synthesis reports, the following eight themes were identified as key areas of interest for stakeholder discussions on the state of teaching and learning in Canada. Collectively, these themes illustrate the benefits of connecting social sciences and humanities researchers with potential users of their research, to exchange ideas and explore opportunities for future collaboration.

Here we outline some of the connecting ideas, preliminary policy and practice recommendations, and research gaps drawn from the knowledge synthesis reports and dialogue with researchers, practitioners and policy-makers throughout 2015.

To obtain more information on the findings included in the reports, and details on both current and proposed knowledge mobilization activities, please contact the lead investigators. You can also contact [SSHRC](#) directly, or consult our [Awards Search Engine](#), to identify and connect with other SSHRC-funded researchers for insights on these critical issues.





THEME: Accessible and culturally-based Aboriginal education

“To successfully prepare [Aboriginal] adults for the workforce, changes are required in early childhood education to stimulate learning and the desire to learn by crafting culturally relevant programming and delivery methods, and by providing quality education in communities.”²

Indigenous people represent Canada’s fastest growing population, but continue to face cultural and socio-economic challenges that impact their education. A review of the literature points to the absence of a critical approach to Aboriginal training, with gaps in understanding how current postsecondary education models are impacting the respective learning experiences of First Nations, Métis and Inuit peoples. In the context of skills training and workplace development strategies, while there is little critical academic literature, there exists a growing body of government and non-government-authored reports and studies.

Cross-sector discussions strongly acknowledged the importance of integrative, holistic and culturally relevant policies and programming for learning and skills training, from K-12 through postsecondary education. With a strong dual focus on language and the building of meaningful long-term partnerships, a number of insights can help lead to successful learning and employment outcomes for Aboriginal learners, their families and communities.

Some key insights:

- **Holistic policies for positive outcomes.** Integrative approaches are essential to successful outcomes in Aboriginal education. Education policy is directly related to health and wellness, which influence the ability and desire to learn, and to labour market and economic development. Collectively, these forces contribute to the well-being of Indigenous peoples. Aboriginal education policy should therefore address multiple barriers to skills training and workforce development programs, including socio-economic and systemic issues, the lack of essential skills and appropriate program content, and lack of stakeholder collaboration.
- **Connecting with family and community.** Aboriginal culture and family support systems are shown to be strong markers of success among Aboriginal students. Family influences are a main factor in the decision to pursue postsecondary education and providing ongoing support and motivation. Challenges of preserving identity and the lack of connection within Western-based PSE cultures are key barriers for indigenous learners. Informal learning, experiential learning and strong community involvement can facilitate postsecondary enrollment and completion.
- **Listening and learning through language.** Language is an important dimension to ensuring culturally-relevant indigenous learning, both in terms of its preservation, revitalization and its use in instruction and learning. While the needs of different Indigenous peoples must be considered, we can also draw lessons and educational strategies from studies addressing challenges of ESL students in achieving discipline-specific literacy.

² Ken Coates et al., “Aboriginal workplace integration in the north” (SSHRC knowledge synthesis grant final report, November 2015), iv.

- **Relevant curricula for diverse communities and contexts.** A better understanding is needed on what constitutes “culturally relevant” programming and delivery methods. An openness to integrating different curricular options to meet different diverse indigenous community needs is essential; community assessments can be valuable in this regard. For example, some institutions are involving Elders and connecting learning outcomes to community development. Although the Aboriginal teaching population is still very small, their voice is increasingly strong and being heard. Greater recruitment of Aboriginal educators would help further integrate indigenous ways of learning into the curriculum.
- **Advancing education on-line.** As seen in other countries, enhanced digital connectivity and integration of online and mobile initiatives can bypass costly infrastructure development, providing opportunities to develop culturally-relevant learning materials and language learning tools. These methods could explore the diverse learning needs of students in rural, northern and remote areas, who are less likely to attend postsecondary schools, and where linguistic and social nuances may be remarkably different from those of large urban centres.

“Nothing is sweeter than the sound of your own language” – Indigenous student contemplating continuing post-graduate studies in a culturally-relevant context³

SSHRC’s Aboriginal Research Statement of Principles and related resources, including its definition of Aboriginal research, support Aboriginal research and talent and ensure that SSHRC-funded initiatives include indigenous perspectives, knowledge, methodologies and approaches.

³ Frank Deer, Director of Indigenous Initiatives & Assistant Professor, University of Manitoba; quote shared during SSHRC Imagining Canada’s Future National Forum, November 16, 2015.





THEME: Students going global

“A shared understanding of how our education system discusses global citizenship is necessary to help better shape the experiences students have, to ensure the evaluation of university programs is possible and effective, and to create alliances among industry, government, and universities to enhance their development of individuals as global citizens.”⁴

Over the past decade, institutions, industry and different levels of governments have prioritized and developed strategies towards building global citizenship. There is greater understanding and discussion, particularly at the postsecondary level, of the substantial benefits to sending Canadians abroad to both contribute to and gain from global knowledge and perspectives, as well as from the richness brought to classrooms, the labour force and society when Canadian institutions welcome international students. Nevertheless, studies show that Canada still lags both in developing a strong study-abroad culture and in attracting international students for meaningful learning experiences. Some key challenges facing both Canadian and international students include prohibitive costs, lack of language proficiency, safety concerns and worries over social integration of international students in Canada.

Despite these challenges, Canada maintains great potential to play a leadership role in international education. In order to better engage students with the globalized world and economy, and to address some of the documented barriers, postsecondary institutions must consider how institutional policies and modes of teaching and learning can reflect the new global reality.

Some key insights:

- **Finding common ground.** Postsecondary institutions have unique conceptions of what ‘global citizenship’ means and how it is achieved, compared to K-12 and provincial governments. Even within institutions, definitions vary, with some more specific or detailed than others. Institutional policy requirements—such as making international or intercultural activities a mandatory learning outcome—are needed to help understand the value of and foster greater global citizenship. Evaluation of the effectiveness of such strategies is needed to ensure policy intentions align with learning outcomes goals.
- **Integrating global into local.** Through a number of measures, Canadian postsecondary institutions can better integrate international students and maximize learning experiences. Examples include providing opportunities for integrated housing, blended group assignments, and integrating international student perspectives and international case studies within learning approaches.

⁴ Roberta Lexier and Melanie Rathburn, “Global Learning in a Canadian Context: a Knowledge Synthesis” (SSHRC Knowledge Synthesis Grant Final Report, November 2015), 1.

- **Clearing literacy pathways for ESL academics.** Adequate curricular strategies are needed to promote the acquisition of academic literacy skills for postsecondary ESL students. Findings within health-related fields, which can be applied to other disciplines, point to the need for more coherent admission criteria and reliable language level indicators. Greater collaboration with writing centres and faculties facilitate discipline-specific needs of postsecondary education students.
- **Vital global skills and competencies.** Building interpersonal and intercultural sensitivities are among the critical “soft skills” competencies needed in our global economy. Because of the way soft skills are learned, many segments of the population lack access to the training and mentorship needed to develop such skills. Cultural bias may also play a role in the definition and assessment of soft skills. Applying a diversity lens to soft skill building is therefore critical.
- **Leveraging online experiential learning.** Innovations in online teaching and experiential learning can play a prominent role in supporting global citizenship goals, and can be supported through techno-pedagogical training of teachers and instructors. Examples include using virtual classrooms to foster meaningful and low-cost exchanges between refugees and Canadian classrooms, and the use of online platforms to foster connections between Canadians and international and ESL students.





THEME: The potential of experiential learning

“Community Service Learning initiatives can promote critical thinking and civic responsibility if they are carefully organized, have clarity of purpose, are relevant to students’ professional futures, address the emotional dimensions of students’ learning, and provide guided reflection.”⁵

There is growing recognition of the significant role of experiential learning in contributing to a learner’s acquisition of the competencies necessary for 21st century life. An active dialogue is taking place on how best to deliver these hands-on, student-centred learning approaches that involve ongoing reflection with a focus on developing socially-minded citizens. The lack of common definitions and empirical evidence on outcomes in terms of contributions to transformative learning is underlined, as well as uneven engagement amongst disciplines. A focus on diversity was underscored in discussions, as well as the need for both top-down and grassroots approaches and incentives to allow experiential models to innovate and flourish. Anticipation for these learning models was weighed with calls to maintain balance with traditional approaches and to ensure approaches are contextualized.

Some key insights:

- **Clearer meanings and metrics.** There is confusion among the various terms and goals related to experiential learning, which can range from co-op programs to community-building exercises or semesters abroad. Experiential models can even seem to be at odds with other forms of learning innovations such as digital or online education. In addition to clearer definitions, better outcomes metrics are needed to support the extent to which this type of learning bridges the gap between theory and practice, broadens civic engagement, enhances career prospects, and contributes to the development of critical thinking skills. Particularly in the area of environmental education, partnering evaluation specialists with scientific scholars in leading citizen science programs could be a powerful means of encouraging transformative learning.
- **Uneven disciplinary engagement.** A number of disciplines lack scholarly research on experiential learning, while the research that has been conducted is fragmented. While essential in fields such as social work, it is less so in other fields, each shaped by different cultural norms and values. More forums are needed to share best practices.
- **Fostering community partnerships.** Both student and community-initiated learning and research can be fostered through central coordinating units of institutions to help ensure community partners are not overburdened. Additional relationship-building measures can include greater recognition of performance measures, flexibility for contextualizing initiatives and longer-scale initiatives beyond semester boundaries. Interdisciplinary or inter-institutional approaches can also help foster community partnerships.

⁵ Alison Taylor et al., “Community Service-Learning (CSL) in Canadian Higher Education” (SSHRC Knowledge Synthesis Grant Final Report, November 2015), 1.

- **Finding a middle ground.** Institutional or government levels can provide much needed support with scope and infrastructure, however they risk de-contextualizing experiences and limiting specific learning and relationship-building that locally-embedded bottom-up approaches offer. Middle-ground approaches allow the benefits of top-down approaches to be modified to support smaller, more directed approaches by faculty, students or community groups.
- **Responsive to diversity.** There is a need for educators to address diversity when designing Community Service Learning and other experiential learning. By acknowledging diversity with a focus on the position of students in relation to communities and on healthy and safe dialogues, educators can engage students from various backgrounds and help bridge classroom theory with hands-on learning. These models can help communities like Canada's indigenous population explore and affirm aspects of their own identity while facilitating academic success.

“Requests for partnership should not be uni-directional, from university to community offices ...requests can come from communities too. More than just transactional relationships, authentic partnerships occur when both communities and campus collaborators share goals and activities equally.”⁶

- **Not the pinnacle of higher education.** Experiential learning and classroom-based learning need to be integrated to ensure the foundations of knowledge-building in traditional educational settings are utilized and valued. Balancing experiential learning with research-led pedagogy should also be considered in helping develop critical thinking and new insights that enable innovation and better solutions.

⁶ David Phipps, Executive Director, Research & Innovation Services and York University; comment at SSHRC Imagining Canada's Future National Forum, November 16, 2015.





THEME: Access and innovations in K-12 learning

“There are inspiring examples worldwide. In particular, these include models for co-teaching and reorganizing the classroom during the school year. The responsibility for teaching learners with difficulties or special needs is shared by the team. We must also enhance the interaction between learners. This requires of teachers both openness to criticism and the capacity for teamwork. A culture of change is needed, and this happens through a change in practices.”

A number of innovations taking place in K-12 education are placing greater emphasis on building essential 21st century competencies. For example, new pedagogical approaches, such as inquiry-based and collaborative models, lead to deeper forms of learning in order to foster the creative and critical analytical thinking skills necessary to solve complex problems.

While studies show that teachers worldwide value these pedagogical approaches, the models themselves are not significantly reflected in teaching practice. Voices call for institutional and policy flexibility as well as an openness by parents to allow for exploration and innovations leading to transformative changes in our learning culture. Greater collaboration and more emphasis on pedagogical training are needed, as are curricula adjustments. Insights highlight collaborative teaching and peer learning, as well as valuing diversity as central approaches to meet the needs of diverse and special-needs students.

Some key insights:

- **Building evidence-based bridges and flexibility.** To enact change in policy and teacher training, educators, researchers and policy-makers need to better communicate and share knowledge. Unions should be involved in key dialogues as well. Researchers are called to explore greater interdisciplinarity and build bridges with policy-makers. In order to foster the use of pedagogical innovations that support 21st century learning, parents, educators, administrators and provincial decision-makers need to be more open and flexible to allow risk-taking by both students and educators.
- **Teaching together.** Collaborative teaching approaches are showing great promise as beneficial delivery models that support all types of learners, with and without learning challenges. They require greater planning, communication and trust among teachers. Still emerging, collaborative pedagogical strategies and policies require more research and assessment on their efficacy and outcomes. Professional development support is also critical to help educators develop approaches and content.

⁷ Julie Bélanger, keynote address at SSHRC national forum; co-author of the 2013 OECD teaching and learning international survey (TALIS), a survey of teachers and principals in 34 countries and economies around the world.

- **Three cheers for peers.** A number of synthesis studies pointed to the underestimated role and value of peers in our learning processes. Peer-focused organization models can support access and success for example, of K-12 students with special needs or disabilities and graduate e-learning students through virtual teams. Studies show at-risk students succeed better in heterogeneous environments and greatly benefit from peer-group tutoring. Other studies found peers are the most influential group in encouraging students, particularly girls, to persevere when choosing studies and careers in STEM areas.
- **Sharing solutions within Canada's French education programs.** Meeting the objectives of French immersion programs as well as teaching in French minority communities is particularly challenging as student populations increasingly include students whose first language is neither French nor English. The impacts of these societal and intercultural changes on teacher training and the ability to ensure satisfying learning outcomes need attention. Teaching results and strategies within these two contexts suggest solutions that could be shared across education programs; for instance, French immersion approaches could be useful for French language acquisition for allophones in French minority communities, or teaching strategies for reading and writing in French minority communities could inform the pedagogy for French immersion teachers.
- **Thinking outside the box.** Geometry and spatial reasoning are not very present in the Canadian mathematics curriculum at the elementary level. Spatial reasoning, the ability to recognize and mentally manipulate the spatial properties of objects and relations among objects, is vitally important for people of all ages. Greater knowledge-sharing and understanding is needed of the strong correlations among spatial reasoning abilities, academic success and career choice, and of their impact on student success in STEM-related professions and other fields. Collaborative research is needed, as well as a greater flow of information across various education related fields and other disciplines, to inform teaching and learning practices.





THEME: Disruptive technologies and the future of PSE

“Technology has been recognized as a driver in lifelong learning, including skills upgrading, continuing education and contextualised learning.”⁸

Technological advances have led to significant disruptions in teaching and learning. Novel use or combinations of existing products and services, or game-changing technologies will continue to transform society and education over the next 20 years. These innovations, in addition to further disruptions linked to increased global mobility, are changing the way we learn and teach and how we think of education itself and its organisation. Some refer to it as a learner-centered system, while others call it an “Uber-ization” of education.

The syntheses, which focused primarily on postsecondary education and continuous learning, provide insights on how distributive or distance learning models, enabled through advances in technology, intelligent software, and multi-media, provide increased access, flexibility and choice as well as challenges for both learners and teachers. Virtual social connections and the role of educators and teacher training are identified as essential factors to optimizing e-learning experiences and outcomes. However, e-learning and techno-pedagogical models and supports such as e-textbooks still lack consensus on their efficacy.

Some key insights:

- **Connections remain important.** Peer connections in e-learning experiences are shown to influence motivation, endurance, deeper learning and critical self-reflection. Although many distance learners express indifference towards them and are challenged by an unnatural process with uncertain benefits, findings show that these social interactions are a critical success factor for e-learning. Student expectations and practices of collaborative learning are enhanced when educators better inform them both of the benefits and challenges of peer connections.
- **Virtual teams on the rise.** Drawing on the context, behavioural characteristics and resources of workplace virtual teams, deeper learning and better student outcomes within an e-learning context can be achieved through such means as intentional course design and techno-pedagogical training of e-learning instructors. Though more research is needed on efficacy, virtual teams in postsecondary graduate studies offer the promise of providing a greater sense of responsibility and increased participation among students in education programs as well as a reduction in status inequalities.
- **A view to e-learning outcomes.** With gaps in empirical research on actual applications and contradictory findings, the pedagogical efficacy of e-learning is not yet fully known. Studies on e-learning focus more on improving current experiments rather than efficacy. Little focus is placed on institutional support, recognition and investment on the use of mobile or e-textbooks. However, according to some studies socio-demographics including age, gender, education levels, as well as technological capacities, are key factors that impact their efficacy.

⁸ Martine Durier-Copp et al., “Strengthening deeper learning through virtual teams in e-Learning: A synthesis of determinants and best practices (SSHRC Knowledge Synthesis Grant Final Report, November 2015), 11.

- **Advancing leadership in e-learning through policy.** Canada is well-placed to be a leader in the field of e-learning given its strong information and communication technologies (ICT) and robust telecommunications infrastructure, significant accessibility, and a well-educated population; however, Canadian postsecondary institutions and workplace training lag behind in e-learning. E-learning in Canada is described as “loose, uncoordinated and fragmented.” More coherent cross-jurisdictional and institutional e-learning initiatives could help channel e-learning contributions to social and economic development.
- **Training the trainers.** Rapid technological changes are influencing the creation of new pedagogical approaches. Professional development for instructors is critical to build techno-pedagogical capacity and competencies, to support changing roles and expectations brought about by technology and optimizing new delivery models for authentic and collaborative learning.

“Despite this strong foundation, evidence is mounting that Canada is starting to trail behind the efforts of other countries in this very important sector.”⁹

- **The promise for deep learning lies ahead.** Forum participants discussed the security risks and ethical issues of integrating robotics, cybernetic organisms or cyborgs, virtual reality and artificial intelligence into our societies and learning environments. They also pointed to the promises of interactive and deep learning by technology that can communicate and gauge the emotional responses of learners.

⁹ Durier-Copp, *Strengthening Deeper Learning*, 11.





THEME: Improving Canadian students' digital literacy

“Being digitally-literate in the 21st century means going beyond the ability to access a computer and having knowledge of facts or practices; in the digital age, literacy is about learning how to access technology and creating knowledge through it.”¹⁰

In recent years, the collection, analysis, storage, sharing and use of data has increased dramatically in all sectors. Analysts estimate that in 2012, 90 percent of the world's data had come into existence within the previous two years.

Amidst a growing skills gap among data specialists, the sheer volume and variety of available formats is challenging organizations and individuals alike, particularly as they recognize the value of data in informing better decision-making and fostering innovations vital to Canada's social and economic well-being. It is also raising important legal and ethical questions on issues related to information security, privacy and ownership.

Central to digital literacy is critical thinking and problem-solving, applying creative and cross-disciplinary approaches for knowledge creation. Knowledge syntheses explored the demand and gaps in such critical competencies, national standards and postsecondary learning methods related to data literacy education in Canada, which remains inconsistent across sectors and not systematically or formally addressed at the postsecondary level. A review of information management literacy within the workplace focussed on critical gaps and strategies to build competencies in information privacy, security and ownership.

Some key insights:

- **Addressing critical information management gaps.** Surges in data collection and use have fueled an ever-increasing need for organizations to ensure adequate governance and risk management of information privacy, security, and ownership. These elements of information management literacy, which include both technical and human dimensions that intersect with economic, legal and social issues, are very challenging to teach. Multifaceted and comprehensive training of core competencies is required across all education levels and workplace training, to address training gaps and ensure organizations are well-equipped with these competencies.
- **The starting point – the undergraduate curricula.** While workplace training and more specialized post-graduate programs are essential to building data literacy, they cannot on their own address the deficits in data analysis skills. The best place to instill core principles and explicit course content in data literacy is at the undergraduate level, where the overarching goal is to equip students with essential, transferable and globally-competitive skills. Cross-disciplinary collaboration with data specialists and working with librarians are useful ways to bridge the knowledge gap for students and faculty alike.

¹⁰ Stephen Downes, Keynote address at SSHRC National Forum; Lead, Learning and Performance Support Systems, National Research Council and a co-founder of the Massive Open Online Course (MOOC).

- **Teaching tools and techniques.** Diverse and creative postsecondary teaching tools and practices can assist educators to teach data literacy across disciplines. Examples include hands-on learning to focus on mechanics and practice, module-based learning to achieve learning outcomes in a systematic way that builds confidence, and project-based learning with real world, experiential applicability to bridge theory and practice. Technological tools such as e-portfolios or flipped classroom techniques can also support digital skill building. Further research is needed to evaluate and scale the implementation of such approaches.
- **Connecting across sectors.** A number of syntheses uncover the differences in expectations and perceptions of key competencies demanded by industry and those provided by graduates, including such digital competencies as information literacy and computational thinking. With leadership from the academic community, broad consultation and collaboration between educators, organizations and institutions is necessary to design data literacy curricula that meet the goals of all stakeholders.

“Data literacy is the ability to collect, manage, evaluate, and apply data, in a critical manner... Critical thinking is a foundational skill for 21st century thinking and data literacy.”¹¹



(Smit et al., Strategies and best practices for data literacy education, 42)

¹¹ Mike Smit et al., “Strategies and best practices for data literacy education” (SSHRC Knowledge Synthesis Grant Final Report, November 2015), 24.).



THEME: Bridging the diversity and gender divide in STEM

In the context of innovation, economic growth and competitiveness agendas, increasing the number of graduates in science, technology, engineering, and mathematics (STEM) areas has been prioritized within Canadian and provincial innovation strategies over the past decades. Despite policy intentions and a number of efforts across Canadian provinces and institutions, the inclusion of women and minorities in STEM fields has remained stagnant. Systemic challenges within the postsecondary system and professional environments, including cultures of meritocracy that ignore the cultural and social biases that hamper the success of under-represented groups, are not easily addressed.

Nevertheless, researchers and sector leaders are pursuing initiatives that reject this plateauing of women pursuing studies in STEM fields as simply reality; new ideas and models have yet to be tried to promote women's interest and support transitions to careers in these areas. They include the impacts of enhancing spatial reasoning in mathematics curricula starting at the primary education level, greater focus on peer-to-peer or near-peer interactions, and gender or cultural-neutral interventions within postsecondary education and the workplace. A call for more cohesion among STEM initiatives across various levels of the education system and studies in Canada seeks greater involvement and benefits for all stakeholders, including young female and other under-represented students.

Some key insights:

- **Making the case and space for spatial reasoning.** Spatial reasoning enables students to access complex ideas in non-traditional ways and is an excellent predictor of future school and career success in STEM fields and in the arts. It is also an effective strategy to mediate and overcome learning disadvantages associated with lower socio-economic status and limited vocabularies. Enhancement of spatial reasoning in K-12 mathematics curricula should be accompanied with professional development and best teaching practices across disciplines, to ensure efficacy and access to those fields by under-represented groups.
- **Fostering females in STEM through friends.** The role of peers in social and societal outcomes has yet to be understood. Leveraging peers is a novel way to promote women's transitions from school to work in STEM fields. University-based approaches can include peer-to-peer interactions through project teams and study groups, and favouring more goal-oriented activities over head-to-head competition. Examples of employer-led initiatives include establishing near-peer recruitment initiatives that reflect the organization's diversity goals, social mentoring of new hires, and hiring more than one person from any one university to support performance, social integration and persistence of female hires or from under-represented groups.
- **Gender-neutral for gender-equal.** Whenever possible, institutions and employers are recommended to support females breaking into STEM fields using gender-neutral approaches: they invite less resistance than 'women-only' policies and allow processes already taking place in a gender-unequal manner to be formalized. For example, in male-dominated sectors, formalizing mentorship across the board extends social integration benefits to women and other minority groups.

- **Greater cohesion across initiatives.** Over the past decade, significant engagement and partnerships including educators, industry, government and not-for-profits have supported the promotion of STEM initiatives. A number of policy and academic studies across Canada point to successful approaches and techniques, including cognitive psychology teaching methods, the use of robotics with young children, and afterschool programs for young women at the high school level. A centralized, online STEM network united under a national strategy would help bring together and foster greater knowledge sharing among researchers, practitioners, parents and students.

“Students engage in far more frequent and consequential interactions with their peers than role models precisely at the time when they are contemplating and planning their futures.”¹²

¹² Brian Rubineau, “Leveraging peers in the school-to-work transition for women in STEM” (SSHRC Knowledge Synthesis Grant Final Report, November 2015), 1.





THEME: Building and sharing innovation through the arts

“Managing projects with small budgets, against tight deadlines, in an environment of uncertainty, being creative, “thinking outside the box,” [...] This is exactly what employers are looking for and that’s what art students have developed! They are perfectly trained in this sense.”¹³

Art plays a substantial role in our lives. Art links us to our human condition, allowing us to explore meaning within our lives. It holds therapeutic value for our health and well-being, and fosters social cohesion by bringing communities together in both formal and informal settings.

From early learning through postsecondary education, the arts provide a unique context to developing essential 21st century skills. This includes abilities to visualize, create, transform, prioritize, and extract meaning and essence—all vital within a knowledge economy increasingly demanding of its workforce greater innovation and creativity. Teaching creativity and innovation has become a major interest in business schools and is being applied through new teaching and learning methods across other fields. However, the foundation that arts education provides for essential skills development is not accessible to all K-12 students.

Some key insights:

- **Fostering potential and passion with greater accessibility.** As arts education at the K-12 level is privatized in some provinces, young students no longer have equal access to actively participate and benefit from the arts. In some cases, due to a lack of specialized arts teachers or diverse offerings, there is only passive learning as teachers who are not necessarily trained in the arts are challenged to transmit the artistic passion needed to maximize students’ creative and artistic potential.
- **Transformative connections through technology.** The role of art is changing with the use of new technologies and networks. Digital learning tools allow for larger audience exposure and participation, and greater connection between communities and institutions. Through technology, creative arts are also promoting hybrid education initiatives that merge art with science and many other fields, leading to transformative impacts on our learning environment. To exploit the enormous potential for collaboration, sharing best practices and increased flexibility within institutions is needed to explore and integrate digital teaching approaches into curricula.
- **Connecting knowledge with community through art.** The “democratization”, or moving, of art outside of formal institutions has sought to increase access and allow us to re-imagine critical social, economic and political issues. Art and design has tremendous knowledge mobilization potential to both foster co-production and exchange of knowledge with communities, and to better communicate research findings to society by making information more compelling and applicable to daily life.

¹³ Renaud Legoux, Associate Professor, HEC; comment at SSHRC Imagining Canada’s Future National Forum.

- **Safeguarding disciplinary values and specificities.** Since the introduction of the field of arts management in the last century, keeping arts management programs separate from mainstream management faculties is an important factor. Doing so helps arts managers balance and manage the conflicting values and paradoxes inherent to both disciplines. Such a “loose coupling” approach allows collaboration and fields to be enriched while safekeeping key disciplinary values and specificities. With the development of the creative industries, there is continuing pressure for arts management programs to become part of a larger conceptualization of the creative industries.
- **Teaching insights from the creative industries.** Recent policy and research focus on creative industries have provided new perspectives on how management in cultural fields should be researched and taught. Creative industries combine all creative crafts and disciplines and sectors into one field of study, breaking down long existing silos between arts and culture. Although entrepreneurship has become a more prominent pedagogical focus, there are no teaching texts on the creative industries. Insights need to be made applicable and accessible for other disciplines, including arts management, to benefit and help bridge arts and cultural industries.

“Cross-disciplinary ways of working and knowledge transfers are at the heart of the concept [combining creative arts with technology, business and social media] and key to its growing success.”¹³

CAPTURING PERSPECTIVES ON NEW WAYS OF LEARNING THROUGH ART



Art installation created by Madeleine Co., a Toronto-based art collective reimagining social issues through experiential storytelling and multimedia art. [See video on the installation.](#)

Top 5 areas of interest: Aboriginal learning, transformative learning, inclusion and diversity, learning outcomes, experiential learning

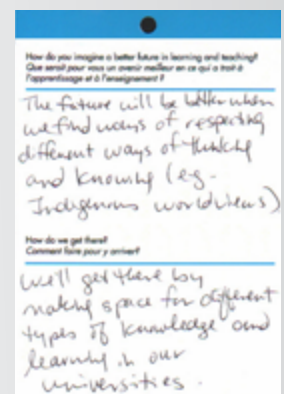
20 YEARS FROM NOW...

Q: Are you hopeful about the future of learning and teaching in Canada?

A: Hopeful/Very hopeful

Q: Are you hopeful about your impact on the future of learning and teaching?

A: Very hopeful



¹³ Inessa Chapira, OCADU graduate student. Innovating Canada's Higher Education: report on CAGS roundtable hosted at OCAD University, April 8, 2015, 31.



CONCLUSION: SHAPING A BETTER FUTURE FOR TEACHING AND LEARNING

Social sciences and humanities research is fostering a deeper understanding of the knowledge, delivery mechanisms and outcomes of the Canadian education system needed to support and sustain an innovative, resilient and diverse society. Building better linkages, whether across or within disciplines and sectors, is central to realizing a better future for learners and teachers. Greater flexibility will also drive innovative approaches to foster the development of critical skills and competencies.

This report summarizes the key findings emerging from SSHRC Knowledge Synthesis Grants on new ways of teaching and learning. It also identifies several areas where improvement is necessary for better learner outcomes for students. Where Canada has demonstrated strength in research capacity and expertise, greater efforts to mobilize knowledge may be taken to inform policy and practice. In areas of knowledge gaps and weakness, opportunities to support new research questions may be pursued.

SSHRC encourages the research community to review these findings closely, and to consider leveraging new funding opportunities for knowledge mobilization and future research, including seeking out partnership opportunities, as appropriate. Our exploration of this future challenge area has generated tremendous interest among the research community, as well as by research users in the public, private and not-for-profit sectors. We will continue monitoring SSHRC-funded research in this area, while we also look for ways to better connect research knowledge and expertise with Canadians.

We invite you to participate in our national dialogue on all six [future challenge areas](#). Through partnerships and innovative collaborative efforts, together we can leverage new and promising opportunities for research, training and knowledge mobilization. Together, we can build a better tomorrow for all Canadians.

Research for a better tomorrow.

SSHRC'S [Imagining Canada's Future](#) initiative positions the social sciences and humanities as essential to addressing complex societal challenges facing Canadians over the coming decades.

About SSHRC

The Social Sciences and Humanities Research Council (SSHRC) is a funding agency of the Government of Canada. Through research grants, fellowships and scholarships, we support research that provides key insights on the social, cultural, environmental and economic challenges and opportunities of our ever-changing world.