NORQUEST COLLEGE

# REIMAGINE

## Higher Education | NorQuest 2030

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# INTRODUCTION

**"Thinking about the future allows us to imagine what kind of future we want to live in and how we can get there."** – Marina Gorbis

Disruption is upon us. Higher education no longer teeters on the precipice of disruption; it has arrived and with more to come. We are experiencing unprecedented competition from businesses outside the higher education sector, the COVID-19 pandemic has accelerated our expectations of virtual learning, and the exponential pace of technology in nearly all industries is well documented. Additionally, we face the continuous need for employers to keep the skills of their workforce current, the related demand for personalized learning, and the changing workplace untethered from time and place. Although far from complete, this list alone places exceptional demands on our college to stay relevant and, in fact, to know what relevance will mean in three, five, and ten years into the future.

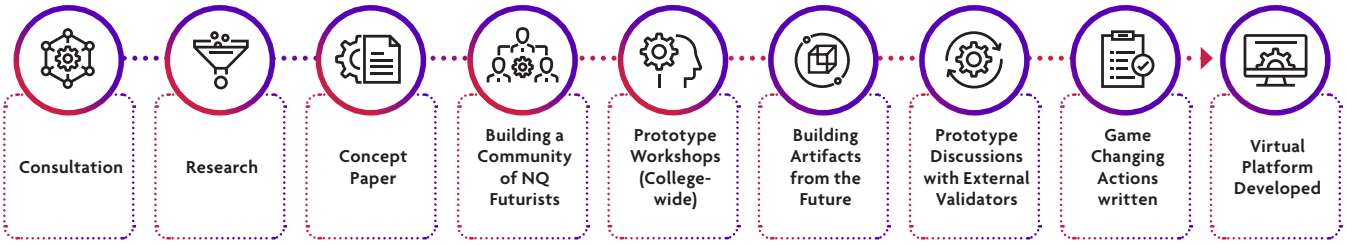
Can we accurately predict NorQuest's future? For instance, 2020 seems a clear example of a year consisting of events few saw coming. Marina Gorbis, Executive Director of the Institute for the Future, cautions: "if somebody tells us they can predict the future, don't believe them" (Gorbis, 2019). Reimagine Higher Education, the work you have before you, is not about predicting the future; it is about building possible futures for NorQuest College in 2030. In order to remain competitive and to thrive, NorQuest needs to determine how to differentiate ourselves from other learning opportunities and how to create a strategic advantage. We will need to see the future coming.

Predicting the future is impossible, but seeing the future coming or, put another way, tracking signs of possible futures as they arise, is the true work of this project. We will respond to signals that our **Desired States 2030** are progressing as we hope, and if they are not, we will pivot accordingly. Our deep purpose tells us that NorQuesters are ready to do just that. NorQuesters *don't settle*, instead

> We're constantly seeking better ways, better ideas, better solutions. We respect traditions but don't let old ways of doing things get in the way of doing the right thing, the best thing. We constantly create new things and don't let barriers get in the way. We're fearless when it comes to doing things that serve our purpose of changing lives for the better.

We will not sit back and wait for the future to happen to us. Reimagine Higher Education is a clear and compelling way forward, a chain of insights we identify and will act on, as articulated in our **Game Changers.**

## PROJECT PLAN




## HOW WE GOT HERE

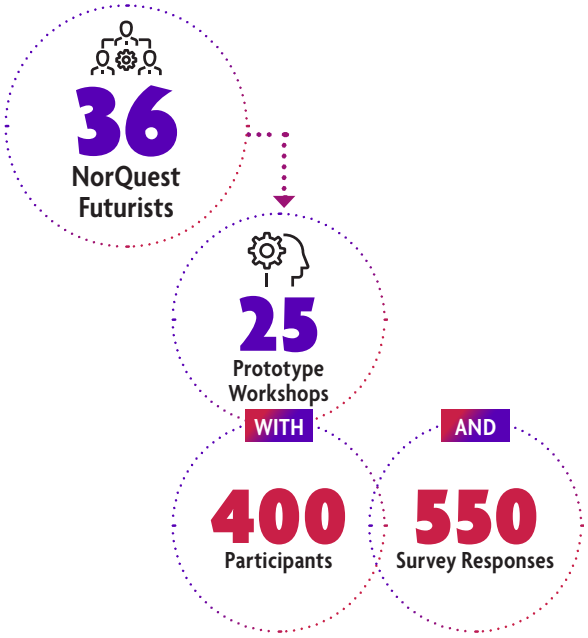
In fall 2019 and spring 2020, we held conversations across the organization with 650 NorQuesters, students, and external industry advisors about what they thought our future held. We heard a lot about:

- The changing role of technology, and how faculty needed to be supported by experts through the change
- The increasing needs for our students to learn "soft skills" or "professional skills"
- The changing role of credentials
- Globalization
- Lifelong learning and continuous "upskilling"
- Accessibility of education and cost of education
- Students wanting to work to help solve global issues
- Industry advisors encouraging us to take risks and move beyond traditional ideas of what higher education could be or could accomplish

From these consultations, our research on global forces, as well as trends in education and beyond, we developed our Concept Paper. The **Concept Paper** was designed as an invitation to build on, to say "Yes and ...," and to ask "How might we?" To make this a comprehensive approach, we took the Concept Paper back out to the College community to test and refine the vision. We built a community of **36 NorQuest Futurists** who hosted over **25 Prototype Workshops** with 400 faculty, staff, and students to gather feedback and refine the Desired States. In addition, we received 550 survey responses from students and alumni.

The NorQuest Futurists and other College members built **Artifacts from the Future** to give tangible examples of what 2030 could look like in our Desired State. We also spoke with business and community thought leaders in Alberta for their insights and advice on how to future-proof NorQuest College. We called this step **Prototype Discussions with External Validators.**

This process led to the development of our first set of **Game Changers,** which we will focus on for the next few years while monitoring progress and changes in trends. The refinements and changes based on our College-wide discussions have been captured in this paper: Reimagine Higher Education.



# EXECUTIVE SUMMARY

Reimagine Higher Education is the visionary and foundational work for strategic planning in the Academic portfolio at NorQuest College. This work establishes **External Forces, Desired States, and Game Changers** that will help us move towards our vision by 2030.

## External Forces

External Forces are key drivers of change that we must monitor and to which we must respond. The questions posed by our External Forces highlight the wicked problems facing higher education as we embark on a path to 2030:

- **COVID-19** – How might we leverage the disruption created by the pandemic?
- **The Unstoppable Rise in Tuition Costs** – How Might NorQuest graduate students with an education + a job/career + debt-free?
- **Go Pro Early** – As non-traditional educational service providers disrupt higher education, how might NorQuest provide a pathway to a job that comes with a college credential?
- **Mental Health** – Given the expected rise in requests for support, how might NorQuest continue to deepen our understanding of diversity and inclusiveness to support flourishing individuals, respect difference, and develop shared values?
- **Climate Change** – How might NorQuest develop a climate action plan, sustainability policies, and include climate action in its strategic plans?
- **Accessibility** – How might NorQuest proactively increase accessibility for our students with disabilities??
- **Demographics** – How will demographics influence higher education in 2030?

## Desired States 2030

Not to be confused with daydreams of utopia or achieving perfection, Desired States are visions for the future based on current trends and forecasting. A Desired State is about building out an idea or goal to work backwards from in order to create a pathway to this future. Our 11 Desired States are a set of ideas drafted to be fluid and adapted as progress is made or not, and as trends and technology change.

Our Desired States are narratives set in 2030, exploring what NorQuest now looks like and how we have evolved over the last decade. Often the Desired States relate to each other and overlap; sometimes they may contradict. Each section includes current trends that continue into 2030 and signals of change or real-life examples that are explored within the topic:

- **The Role of Faculty**
- **The Rise of Alternative Credentials and Continuous Learning**
- **Leader in Indigenous Peoples' Education**
- **Science, Technology, Engineering, Arts, and Mathematics (STEAM) Programming**
- **Artificial Intelligence**
- **Augmented and Virtual Realities**
- **Open Educational Resources (OER)**
- **Global Alliance**
- **Gamification**
- **Post-NorQuest: Our Learners at Work**
- **Anti-Racist Organization**

Each Desired State is designed to be a stand-alone document, to be pulled out and discussed individually. The **External Forces** and **Desired States** were used to build our **Game Changers.**

## GAME CHANGERS

Game Changers are the ideas and innovations we need to begin now—addressing today's challenges as well as bringing us closer to our Desired States. They provide focus so we can make progress towards our goals.

These Game Changers overlap with one another, with projects already in progress, and with work we need to do in order to remain relevant and to become the college we aspire to be.
At the heart of each Game Changer is relationship and belonging.

Our Game Changers:

- **Connected Teaching:** We heard from NorQuesters that "community is our classroom philosophy." Here, "connected teaching" refers to instruction in a connected space, which could include digital technologies to support personalized learning, blended, and competency-based learning. Connected teaching also recognizes the importance of educators connecting with each other as experts.
- **Learning Communities:** NorQuest students are community builders, and we will enhance their opportunities to grow this skill through further connection with stakeholders, with College governance, and with the co-creation of their learning experience.
- **Assessment of Learning:** In order to remain relevant in this new landscape of learning and to better serve our learners, we must create or enhance assessments that support competency-based education instead of the ability to recall. We believe that if we get assessment right, NorQuest will thrive even as the landscape of the educational sector continues to shift radically.

## NEXT STEPS

It is time to shift from "storyteller to engineer" (Johnson & Suskewicz, 2020). The work we have completed together moves forward, establishing our academic plan to 2030 and guiding the ongoing development of our Game Changers in two-year cycles. We will be tracking our progress toward our Desired States and scanning for signals of change, adjusting and course correcting in response to our findings.

Reaching toward our Desired States for 2030 will be exciting, inspiring, and challenging. We will have hurdles to jump and mountains to climb over the next decade. Yet, as NorQuesters, we believe anything is possible with the support, and in support, of our community. This is because

> At NorQuest, we transform lives, and when we do that, we transform communities, we transform the world, we transform the future. We create a true global community—a place of belonging—right here at NorQuest.

**The future is created through the actions we take today. Let's create the future together.**

### Further Reading

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# EXTERNAL FORCES:
## COVID-19

**External Forces are a selection of key drivers that are outside NorQuest's control but must be monitored as we continue to build our Desired States for 2030.**

**DIFFERENTIATOR/DISRUPTER:**
**How might we leverage the disruption created by the pandemic?**

The COVID-19 pandemic has changed the way that NorQuest, and the world, operates. As of this writing, it is clear that there will be no return to the old "normal." The ways in which people connect, live, move, learn, and work have been dramatically altered. This global disruption has presented opportunities for innovation, but also required difficult adaptation.

The pandemic has accelerated trends that were already unfolding in higher education. It has also challenged connections we have traditionally relied on like our campus. Below, we flag a few of the areas which have been most impacted so far. We will continue to monitor the impacts and after effects of COVID-19 in the years to come.

### ONLINE LEARNING

The COVID-19 pandemic has forced many educational institutions to close their doors and send students home. This new reality has set the stage for online learning and new technology to change current education practices for administrators, students, and faculty.

*Accelerated Trends:*

- **Mentor-to-protégé:** People will embrace platforms that connect them with teachers, experts, and mentors in their quest to learn new skills (TrendWatching, 2020).
- **Virtual experience:** "Online education is increasingly seen as a scalable means to provide courses to an increasingly nontraditional student population. Faculty must be prepared to teach in online, blended, and face-to-face modes" (EDUCAUSE, 2020, p. 11). Learning online will gain desirability and legitimacy, while digital experiences become a genuine status currency (TrendWatching, 2020).

### CAMPUS EXPERIENCE

NorQuest will need to articulate its intentions for the online campus experience. We will thrive if we enable movement between physical and digital learning: "the institutions that thrive postpandemic will be those that understand how humans cross the boundaries between the physical and digital—and back again" (Aoun, 2020). Eventually, our off-campus experience will be different but not worse than on campus. On-campus experiences will be increasingly reserved for high-impact learning activities.

*Accelerated Trend:*

- **Virtual experience:** NorQuesters understand our physical campus to be only one of the multiple platforms we use to build community and to connect with others. As Aoun argues, creating a vibrant online campus is fully possible if we "embrace online platforms, not just a hastily assembled, short-term replacement for classes, but long-term expansions of classroom instruction, campus life, and off-campus learning (Aoun, 2020).

### INTERNATIONAL STUDENTS

International students seek new ways to enhance their knowledge and skills. NorQuest will remain one of the leading institutions with a large international student population in spite of the challenges posed by the COVID-19 pandemic.

Demand for our programming continues to grow in international students and our efforts to support them are ongoing.

### ALTERNATIVE CREDENTIALS

Long before COVID-19, students and professional workers were looking for new ways to enhance their knowledge and skills. COVID-19 has disrupted work and school, heightening the need for training while blocking access to in-person education.

*Accelerated Trend:*

- **Alternative credentials,** such as micro-credentials and badging, will create more opportunities for people to gain specific skills in a shorter period of time and at a more affordable cost (Deegan & Martin, 2018). NorQuest's approach to alternative credentials will help generate space for new learners seeking accessible, inclusive, workforce-ready credentials that get them into the workforce faster.

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# EXTERNAL FORCES:

## The Unstoppable Rise in Tuition Costs

**External Forces are a selection of key drivers that are outside NorQuest's control but must be monitored as we continue to build our Desired States for 2030.**

**DIFFERENTIATOR/DISRUPTER:**
**How might NorQuest graduate students with an education + a job/career + debt free?**

### IF WE DO NOTHING

Like death and taxes, the annual tuition increase has come to seem inescapable. Student resistance ebbs and flows depending on the times; institutions and governments hold one another responsible. If NorQuest does not disrupt its pricing model, it is certain that our tuition and fees will continue to rise along with the rest of the sector as they have for the last roughly 30 years. The causes are multiple and subject to interpretation; however,

> "[the] major driver of rising tuition is changes in the way universities are funded. Starting at the end of WWII, the Canadian government stepped up its supports to universities, initially for veterans and then more broadly. As a university education became associated with upward mobility and a place in the middle class, steadily rising enrolment was matched by increased government funding (RBC Economics Research, 2018, p. 2).

Rising costs could be stymied by a return to government investing in education at levels not seen since the 20th century:

> "By the mid-1970s, provincial governments were directly paying for 75% of the cost of university education, requiring in some years that 8% of total provincial spending be directed to colleges and universities, supported by generous transfers from the federal government. The trend began to reverse in the 1990s as a fiscally challenged Ottawa put transfers on the chopping block. That prompted a sharp decline in overall expenditures per student and a rapid and sustained increase in university tuition costs (RBC Economics Research, 2018, p. 2).

Although a robust higher education funding model fuelled by government funding is a change NorQuest would theoretically embrace, it is unlikely that we will see a full return to this level of funding given the challenges Alberta's economy faces. Instead, the first half of the 2020s will be characterized by fiscal constraint as "Advanced Education faces numerous cuts in 2020 and beyond. The share of funding generated by post-secondary institutions is supposed to increase to 48% by 2022–23 (from 43% in 2018–19). At the same time, overall post-secondary funding is decreasing" (McIntosh & Hussey, 2020). Just how high will tuition be by 2030?

In 2016, Canadian undergraduate students were paying 45% more in tuition than in 2006, while in Alberta, tuition increased by 21% in the same period. In 2019–20, Canadian undergraduate students were paying 47% more in tuition than in 2006–07; in Alberta, tuition increased by 20% in the same period. Both Canadian and Albertan tuition dipped since 2018 (5% and 2%, respectively) (Statistics Canada, 2021) but are on the rise again.

Just as many students will continue to seek out a degree, many will also continue to pay the ever-increasing high tuition. Why? As noted by RBC Economics Research, one reason Canadians continue to accept rising tuition costs is because "it pays" to go to college or university; particularly relevant to NorQuest is RBC's finding that "[s]ince 2000, the average income of people with a non-university, post-secondary qualification rose the fastest of any educational group" (RBC Economics Research, 2018, p. 3). There are other reasons for accepting a value proposition that includes high tuition. For example, status has long played a role (for some) in the selection of post-secondary institution. Consumer trend firm, TrendWatching, concludes that in 2020, "consumers will continue to embrace many forms of status" but then goes on to caution that consumers will "pursue status via new, more enlightened models of consumption that reimagine, or even invert old attitudes and priorities" (TrendWatching, 2019). We anticipate that many of our potential students will be willing to call on other educational providers and services to supply affordable or free higher education.

### WHY WOULD WE PRICE LIKE HUMANS?

TrendWatching identifies **Pricing Pandemonium** as a megatrend or a slow-moving shift driving consumer behaviour and affecting millions of people across continents, demographics, and industries (TrendWatching, 2020b).

Pricing Pandemonium is the result of the changing expectations consumers hold around pricing now that they have access to goods and services from all over the world and easily accessible tools to aid comparison shopping.

More importantly for NorQuest is the related demand for Human Pricing, which is defined as sympathetic or empathetic pricing models that include "flexible and imaginative discounts that help ease lifestyle pain points, *lend a helping hand in difficult times* [emphasis added], or support a shared value" (TrendWatching, 2014). The desire for empathetic pricing can come across as entitlement, charity, or as not "paying one's dues." However, we must remember that students, like consumers in general, are seeking "more enlightened models of consumption" across the board (Trend-Watching, 2014).

Increasingly, students will refuse to take on enormous, upfront debt in order to complete their studies. **Students will look for employers, educational providers, and post-secondary institutions that will help them gain an education and a job or career while allowing them to remain debt free.** In addition, the market is increasingly awash with businesses ready to accommodate them. How might NorQuest harness Pricing Pandemonium to the mutual benefit of our students and the College?

## IT IS ALREADY HAPPENING

For many years, students have done what was once the unthinkable: en masse they have stopped buying the textbooks assigned to them by their instructors. Surveying students revealed that students "have delayed purchasing textbooks; sixty-five percent elect not to purchase the textbooks; fifty percent choose majors based on the textbook prices; and thirteen percent have considered dropping their courses due to textbook prices" (EDUCAUSE, 2020, p. 27). Students are looking for a more "enlightened model" of textbook purchase. Colleges, universities, and governments have responded to the call and have begun to provide this model in the form of open educational resources (OER) and zero textbook cost (ZTC) programs.

Shifting expectations and demands for empathetic pricing are evident in the recent bids students have been making across North America for post-secondary institutions to recognize the unique challenges COVID-19 presents for students. These consumers make a distinction between the institutions' challenges and their own, and they expected this recognition to come in the form of tuition discounts for the Fall 2020 term. A recent Global News report quoted an Edmonton student: "We're hoping the university will reconsider and support students when they need it most," [emphasis added] says student Ajay Gill (Pratap, 2020). Students have undertaken similar actions across Canada and the United States, asking for decreases in tuition and fees or protesting planned increases, moving ahead in spite of the pandemic.

Students are making an argument for empathetic pricing based on their belief or fear that the educational value or experience is compromised by going online. Arguably, these disputes will be addressed as online offerings improve and the pandemic resolves. However, a more lasting sentiment in the minds of students may be that colleges and universities are guilty of pushing forward their own needs and agendas in a time of crisis (or in general) without recognizing the struggle their students are facing. A Dalhousie student, distressed by the university's plan to continue to implement its tuition increase schedule despite the pandemic, expresses this view. As Global News reported,

> "[s]ome students, like Margaret Purkiss, expected the university to go the opposite direction. "I was generally expecting a tuition decrease [emphasis added], if anything," she said. "I didn't expect they would increase tuition, so shock was definitely my first reaction" (Thomas & Benjamin, 2020).

Purkiss expected compassionate pricing so much that she was shocked to hear that an increase was in the offing instead. In the same article, another Dalhousie student, Erica Seelemann, remarks: "Forcing students to pay money that they don't have to continue a degree that they can't afford doesn't work." To students, the pricing model and value proposition feels broken when it cannot account for their individual circumstances or for hard times.

Given all the financial pressure NorQuest faces in its funding model, how can we demonstrate to students that we price like humans? In other words, how can we show that we care about one of students' most pressing concerns: gaining an education that leads to sustainable work without taking on crushing debt that will haunt them for a decade or more?

## HOW MIGHT NORQUEST GRADUATE STUDENTS WITH AN EDUCATION + A JOB/CAREER + DEBT FREE?

Alternatives to high-cost, upfront pricing models will continue to proliferate in the education market. NorQuest will need to incorporate aspects of these disrupting inspirations or be left behind. These are a few examples:

### Income-Sharing Agreements (ISAs)

As reported in NorQuest's *Update 2019: Supplement to Environmental Scan 2018*, "under ISAs, students do not pay tuition during their program. Instead, they agree to pay a fixed percentage of their earnings after graduation for a fixed number of years. Payments begin when students start earning a minimum salary. Because it is earnings percentage-based, payment sizes scale with earnings. Higher earners pay more over the fixed payment period than low earners. High earners will pay considerably more than they would with a traditional loan, which balances out losses from low earners (Johnson, 2019; Kirkwood, 2019)" (Boucher & Goble, 2019).

### No-cost no-debt Degrees@Work

In 2015, Strayer University launched its Degrees@Work program. Describing itself as "revolutionizing higher education," Degrees@Work partners with employers to offer employees no-cost, no-debt college degrees. Certainly Strayer University has not avoided controversy over its many years of operation. However, other examples exist of companies going beyond reimbursement of professional development and tuition assistance to provide education directly or through a partner; for example, the Starbucks College Achievement Plan, which is offered in partnership with Arizona State University, and the Amazon Career Choice Program, which prepays for certain programs and holds classes on the worksite. Increasingly, employers are the avenue to higher education.

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# EXTERNAL FORCES:

## Go Pro Early

**External Forces are a selection of key drivers that are outside NorQuest's control but must be monitored as we continue to build our Desired States for 2030.**

**DIFFERENTIATOR/DISRUPTER:**
**As non-traditional educational service providers disrupt higher education, how might NorQuest provide a pathway to a job that comes with a college credential?**

The post-secondary sector is increasingly facing competition from companies other than traditional higher education providers. Established competitors to the post-secondary sector now include Google, Amazon, Microsoft, Coursera, Udacity, edX, iTunes U, Capella University, and Duolingo to name but a few of the most prominent. The ability to leverage massive platforms, existing brand recognition, and years of online product delivery mean these companies are well positioned to disrupt higher education by making it easier, cheaper, and faster for students to gain credentials. For instance:

> Amazon's approach exposes multiple weaknesses in the traditional academic delivery model, including a) the availability of high-quality, nonacademically sourced learning and training experiences, which are b) responsive directly to the needs of the employer and c) sufficiently qualitative to meet their needs and gain general respect while d) being delivered at a lower cost (Lederman, 2019).

These factors place new educational providers like Amazon in an ideal position to edge out the traditional educational sector.

Employers will increasingly need to be added to this list of new educational competitors. Across every industry, employers are facing the need to constantly upgrade their employees' skills and enhance their knowledge in order for their business to remain competitive and effective. In 2019, Brandon Busteed predicted that the biggest disruption to higher education would be "instead of *going to college to get a job,* students will increasingly be *going to a job to get a college degree*" (Busteed, 2019).

Pointing to a range of employers offering degrees as a benefit or as apprenticeship pathways that waive credentials, Busteed explains:

> The path has always been assumed as linear: first, go to college and then, get a good job. But what if there was a path to get a good job first—a job that comes with a college degree? In the near future, a substantial number of students (including many of the most talented) will go straight to work for employers that offer a good job along with a college degree and ultimately a path to a great career.

Busteed goes on to predict that nearly one-third of students will choose this path because they see it as a better model for achieving success in the workplace. Citing a Kaplan University Partners–Quest Research study he led, Busteed points to those who are "ambitious and debt averse" and those who are "college hesitant and debt averse" as most likely to embrace this model (Busteed, 2019).

Closely examining all our competition, from within and outside the higher education sector, will be a critical step for NorQuest in shaping how we serve our markets best in the future. NorQuest has always prioritized workforce relevance as central to its mission. We know our students seek pathways to sustainable work and often are ready to start their careers sooner rather than later. Addressing the known customer pain points of paying up front and in carrying large debt could lead NorQuest to implementing a number of bold initiatives to assist our students with financing their education. Ongoing consideration of the effectiveness and range of platforms we use to reach customers will also be important. Rethinking how we partner with employers and non-traditional education providers could also lead to new opportunities.

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# EXTERNAL FORCES:
## Mental Health

**External Forces are a selection of key drivers that are outside NorQuest's control but must be monitored as we continue to build our Desired States for 2030.**

**DIFFERENTIATOR/DISRUPTER:**
**Given the expected rise in requests for support, how might NorQuest continue to deepen our understanding of diversity and inclusiveness to support flourishing individuals, respect differences, and develop shared values?**

Mental health on campuses across Canada continues to be a friction point affecting the success of post-secondary students. The National College Health Assessment survey found that within the last 12 months, one in four students reported being diagnosed or treated for anxiety, and one in five students reported being treated for depression (Health Campus Alberta, 2019).

Our college is committed to deepening our understanding of diversity and inclusiveness to support flourishing individuals, respect differences, and develop shared values. Our learners are born in 114 different countries, and more than 78 languages are spoken on campus. Of our credit learners, 831 self-identify as Indigenous (First Nations, Métis, or Inuit), and 713 of our learners have used disability services over the past year (NorQuest College, 2021). LGBTQ2S+ employees and learners are valued members of our college community. Our learner population continues to grow, and the anticipated growth is great. We serve 21,162 learners, and that number is expected to increase significantly over the next decade (NorQuest College, 2021).

NorQuest's data for 2017–18, shows that the top student mental health concerns were anxiety and stress, adjustment and acculturation, depression, and academic concerns. Forty-two learners were at significant risk for suicide or self-harm (Student Wellness, 2017–18).

Many of our learners have struggled and sacrificed to study at NorQuest College, and we must continue to work to provide holistic supports to help them achieve their dreams. Some learners have or continue to face the effects of systemic racism and colonization in all areas of their lives. As noted in First Peoples, Second Class Treatment:

As noted in *First Peoples, Second Class Treatment:*

> Racist ideologies continue to significantly affect the health and well-being of Indigenous peoples, cutting across the social determinants of health, impacting access to education, housing, food security and employment, and permeating societal systems and institutions including the health care, child welfare and criminal justice systems (Allan & Smylie, 2015).

Research has shown that Indigenous people often strategize how to deal with racism prior to seeking medical attention or avoid seeking medical support (Allan & Smylie, 2015). For black youth in Canada, Statistics Canada data highlights that although 93.9% of black youth surveyed indicated they would like to obtain a university degree, only 59.9% believed they would succeed in getting one (Statistics Canada, 2017). This is in stark comparison to the rest of the survey respondents, 82.4% of whom indicated they would like to obtain a university degree, versus 78.8% who believed they would achieve one (Statistics Canada, 2016).

In addition, an increase in traumatic world events such as COVID-19 could have potential lasting effects on the population. In conjunction with the Canadian Mental Health Association, Ipsos Public Affairs conducted a poll that found "67% of Ontarians agree that the mental health impacts of COVID-19 are going to be serious and lasting" (Ipsos, 2020).

As noted, our learner population continues to grow and is expected to increase to 40,000 by 2025. Beyond 2025, we also anticipate that we may have more learners at NorQuest who have been displaced because of climate change (Bassetti, 2019). With an increase in the number of learners, we also expect the demand for mental health supports to grow.

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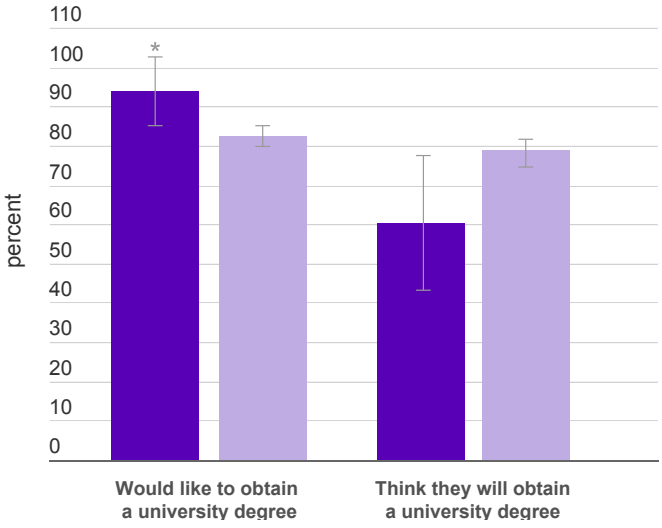
## Level of Educational Attainment Expectations and Aspirations Amoung the Population Aged 15 to 25 years, Canada, 2016




* significantly different from the rest of the population ($p < 0.05$)
Source: Statistics Canada, General Social Survey (Canadians at work and home), 2016.
Reprinted from *Canada's Black population: Education, labour and resilience*, by Statistics Canada, 2020. https://www150.statcan.gc.ca/n1/pub/89-657-x/89-657-x2020002-eng.htm

# EXTERNAL FORCES:
## Accessibility

**External Forces are a selection of key drivers that are outside NorQuest's control but are required to be monitored as we continue to build our Desired States for 2030.**

**DIFFERENTIATOR/DISRUPTER:**
**How might NorQuest College proactively increase accessibility for our students with disabilities?**

Canada has a tradition of advocating for people with disabilities on the international stage. For example, Canada ratified the United Nation's Convention on the Rights of Persons with Disabilities (CRPD) in 2010 and joined the Optional Protocol in 2018 that allowed Canadian citizens to make claims to the United Nations Committee on the Rights of Persons with Disabilities (Government of Canada, 2019b; Bach & Kerzner, 2019). Canada is increasingly becoming a nation that demands that the public and private sectors, including educational institutions, provide accessible services to people with disabilities.

The Canadian Charter of Rights and Freedoms and the Canadian Human Rights Act have long protected people with disabilities from discrimination. As federal and provincial governments began to understand inclusion in a more sophisticated fashion, legislation was developed that specifically outlined rights for people with disabilities. More recently, we are seeing a shift away from prohibiting discrimination toward legislating accessibility. For example, the landmark Accessible Canada Act, passed in 2019, empowers the federal government to develop regulations that will proactively identify and remove accessibility barriers in areas that fall under federal jurisdiction. Accessibility Minister Carla Qualtrough explains:

> The Accessible Canada Act will fundamentally change the way the Government of Canada addresses disability issues in our country. This legislation will help improve the lives of millions of Canadians with disabilities by proactively identifying, removing, and preventing barriers to inclusion. I am beyond thrilled that, thanks to the unwavering support and tireless advocacy of the disability community, we are on our way to realizing a truly barrier-free and accessible Canada (Government of Canada, 2019a).

Provinces are also following suit. Ontario, Manitoba, Nova Scotia, British Columbia, and Quebec have, or are developing, legislation that mandates inclusion through accessibility. A central element of this legislation is a focus on accessible web content through the adoption of Web Content Accessibility Guidelines (WCAG) 2.0 standards. The federal government and seven provinces, including Alberta, have confirmed their commitment to WCAG web content (Government of Alberta, 2010; Government of British Columbia, 2014; Government of Manitoba, 2019; Government of Newfoundland and Labrador, n.d.; Government of Nova Scotia, 2018; Government of Ontario, 2016; Gouvernment du Québec, 2012). Ontario, which tends to be the leading province in terms of accessibility, has declared that all web content created by public sector organizations and nonprofits or businesses with more than 50 employees must comply with WCAG 2.0 standards (Government of Ontario, 2005).

The trend toward proactively adopting the WCAG 2.0 standard offers NorQuest the opportunity to widen its market presence. Applying these principles to our VR, AR, and Artificial Intelligence Desired States will allow us to create an inclusive digital learning environment. In fact, research has suggested that access to accessible learning technology can be very beneficial to English as a Second Language (ESL), international, and Indigenous students (Kuhn, 2019).

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# EXTERNAL FORCES:
## Climate Change

**External Forces are a selection of key drivers that are outside NorQuest's control but must be monitored as we continue to build our Desired States for 2030.**

**DIFFERENTIATOR/DISRUPTER:**
**How might NorQuest develop climate action plans+ and sustainability policies, and include climate action in its strategic plans?**

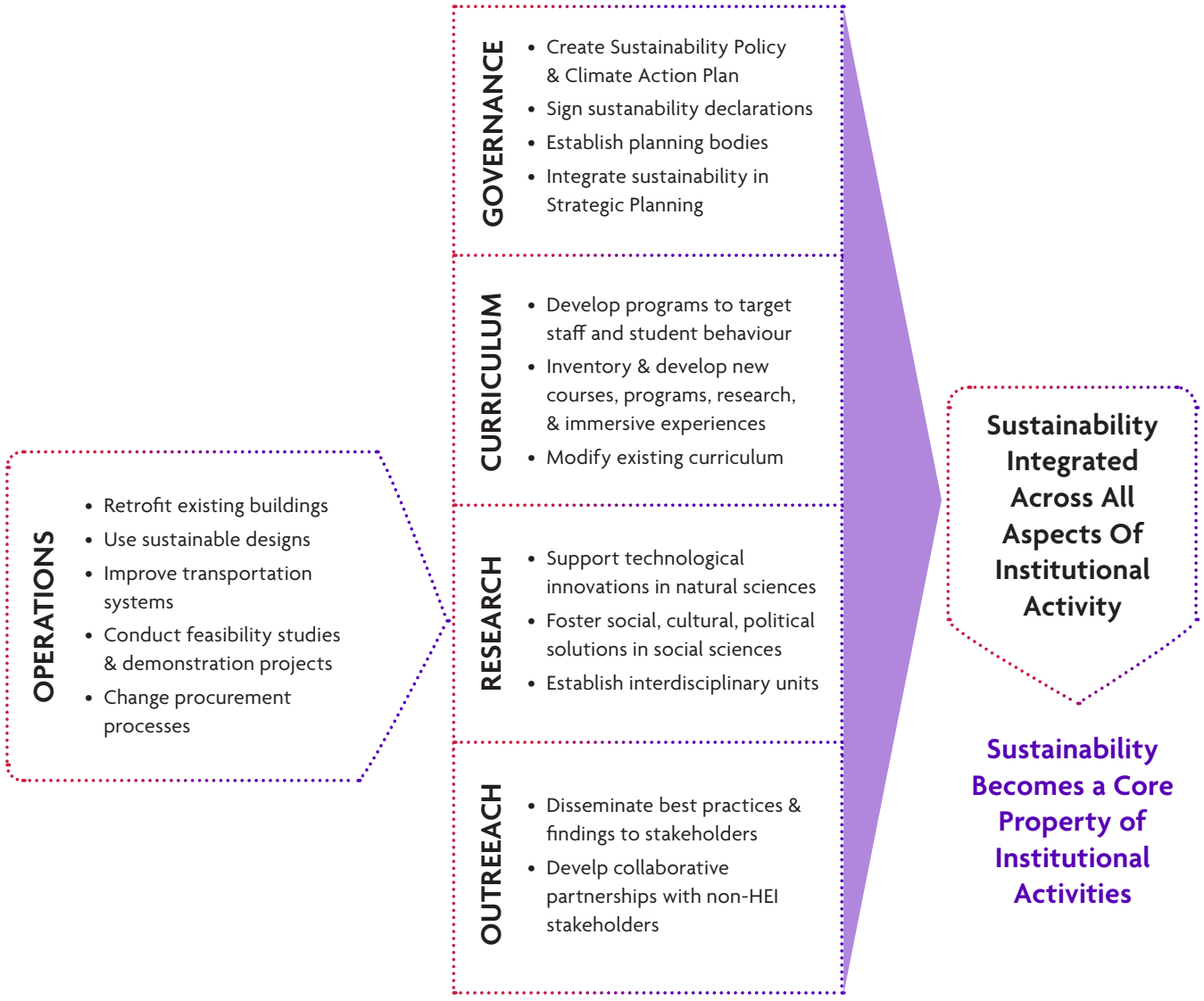
In 1968, the Stanford Research Institute (SRI) first warned of the impacts of rising CO2 levels that could bring about climate changes if left unrestricted. Over 50 years later, the impacts of delay and the denial of climate change have created long-term and, in some cases, irreparable damage (Wiles, 2018). NASA's Global Climate Change resource reports that global climate change is already observable in the environment and that, as predicted by scientists in the past, the loss of sea ice, accelerated sea levels, warming of the oceans, and extreme weather events are now occurring. Impacts to individual regions vary; some face more frequent wildfires and heatwaves, longer periods of drought, or increased intensity and duration of tropical storms. The ability of individual regions to mitigate or adapt to the changes varies depending on their different societal and environmental systems (NASA, 2020). Additionally, the United Nation's Intergovernmental Panel on Climate Change warns that all of this will "get worse by 2030" with "the next 10 years [being] crucial for any efforts to slow" rising temperatures (McFall-Johnsen, 2019).

> "Scientists have high confidence that global temperatures will continue to rise in the decades to come, largely due to greenhouse gases produces by human activities" – NASA Global Climate Change

We can't turn back the clock, but we can take action now. UNESCO suggests that educators have a key role in helping children and adults understand scientific consensus, climate change impacts, and potential solutions. They suggest that sustainability should be integrated into every aspect of school life and that students should be empowered with the knowledge they need to fight the global climate change crisis and adapt to its impacts (UN News, 2020). Post-secondary institutions play a central role as part of the international response to climate change and in developing solutions. NorQuest has embraced social responsibility as core to the work that we do, but we have not focused on sustainability, the impacts of climate change, or our role in climate action.

Research into climate change policies at higher education institutions across Canada has found that although nearly half of those institutions sampled (44%) did have some form of climate-related policy, those policies focused disproportionately on operations and physical campus environments, with few addressing research, curriculum, community outreach, or governance (Henderson et al., 2017). As suggested by the Sustainability and Education Policy Network (SEPN), post-secondary institutions "working to improve climate action in their post-secondary institutions should integrate sustainability across all aspects of institutional activity—governance, curriculum, research, community outreach, and operations—so that sustainability becomes a core property of institutional activity" (Henderson et al., 2017). This includes the development of climate action plans, sustainability policies, and the inclusion of climate action in strategic plans. In order to meet the climate challenges of 2030, all NorQuesters—including all staff, faculty, management, custodial and food services, community stakeholders, executive, and students, among others—need to be engaged to define what climate action and sustainability mean to NorQuest. This work could result in a NorQuest climate action plan, sustainability policies, and public goals and metrics being included in our Strategic Plan.

## Beyond Operations
## Whole Institution Sustainability Approaches




**TAKE ACTION.** HEIs WORKING TO IMPROVE THEIR RESPONSES TO CLIMATE CHANGE SHOULD INTEGRATE SUSTAINABILITY ACROSS ALL ASPECTS OF INSTITUTIONAL ACTIVITY IN CLIMATE ACTION PLANS, SUSTAINABILITY POLICIES, & STRATEGIC PLANS.

Source: Henderson, J., Bieler, A., McKenzie, M., & Chopin, N. S. (2017). *Climate change and the Canadian higher education system: An institutional policy analysis.* Sustainability and Policy Education Network (SPEN). https://sepn.ca/resources/infographic-climate-change-canadian-higher-education-system/

## Beyond Operations
## Whole Institution Sustainability Approaches

Despite the considerable challenges of cultural inertia and political resistance, a number of institutions in Canada have developed more sophisticated policies that go beyond reducing carbon consumption and emissions and engage more holistically with climate change.

| Domain | Sustainability Approaches | Policy Examples |
|---|---|---|
| Governance | • Sign sustainability declarations such as Talloires & Halifax Declarations<br>• Develop planning bodies to assess emissions and consumption<br>• Create Sustainability Policy and/or Climate Action Plan<br>• Integrate sustainability in Strategic Plans | Queens' University (2010) Sustainability Strategic Framework<br>Red River College<br>Royal Roads University |
| Curriculum | • Develop programs to modify staff and student energy consumption behaviours<br>• Inventory climate change-related courses, programs, and research<br>• Develop climate action courses and immersive experiences<br>• Integrate climate change into existing curriculum | University of Ottawa (2014) Action Plan for Reducing Greenhouse Gas Emissions Annual Progress Report<br>University of Saskatchewan (2012) Climate Action Plan |
| Research | • Encourage research focused on natural sciences or technological solutions<br>• Foster social sciences and humanities research to address social, culturla, and political solutions<br>• Develop interdisciplinary research units | University of Calgary (2010) Greenhouse Gas Emission Reduction Plan |
| Community Outreach | • Disseminate best practices and research findings to stakeholders<br>• Partner with stakeholders outside of higher education institutions | University of Saskatchewan (2012) Climate Action Plan |
| Operations | • Retrofit existing buildings with more efficient technologies & incorporate sustainable design in new construction (e.g., LEED)<br>• Improve transportation systems<br>• Identify GHG emission sources<br>• Conduct feasibility studies & demonstration projects<br>• Procure renewable and sustainable energy sources | University of British Columbia (2006) Sustainability Plan<br>Dalhousie University (2010) Climate Change Plan<br>Simon Fraser University (2011) Carbon Neutral Action Report |

Source: Henderson, J., Bieler, A., McKenzie, M., & Chopin, N. S. (2017). *Climate change and the Canadian higher education system: An institutional policy analysis.* Sustainability and Policy Education Network (SPEN). https://sepn.ca/wp-content/uploads/2018/09/PSE-Climate-Change-Research-Brief-FINAL-2018-08-14.pdf

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# EXTERNAL FORCES:
## Demographics

**External Forces are a selection of key drivers that are outside NorQuest's control but must be monitored as we continue to build our Desired States for 2030.**

**DIFFERENTIATOR/DISRUPTER:**
**How might we anticipate where demographics will influence higher education by 2030?**

Despite sharing a border with the United States and many overlapping influences on the future of education, Canada has its own data and trends that affect the direction of higher education. It is important that we pay close attention to the role Canadian and Albertan demographics will play in shaping NorQuest. What opportunities might we find in the highlights listed below?

### HIGHLIGHTS

- Non-permanent residents and immigrants make up 82.2% of Canadian population growth.
- Domestic student enrolment numbers peaked in 2013–14 for colleges.
- Most Generation Z students say their top stressor is financial concerns.
- Generation Alpha's ease of use with technology from an early age suggests that these students will expect quick and instant results to fulfil their desires and will show impatience if hindered.
- Alberta is the province with the youngest population in Canada.
- Despite decreased employment in the energy sector since 2015, Alberta's post-secondary participation remains low, at 17%.
- Male representation in Alberta post-secondary enrolment has dropped from 2016–17 onward.
- The top three program bands that have been consistent for international student enrolments from 2015-16 to 2019-20 in Alberta have been "Physical, Natural & Applied Sciences," "Languages, Social Sciences, Arts & Humanities," and "Business" (GOA, 2021b).
- Between 2006 and 2016, the Indigenous population (First Nation, Métis, and Inuit) increased by 37.1% in comparison to the non-Indigenous population, which increased by 22.3%.
- Population projections suggest a 25% growth in the Indigenous population from 2020 to 2030.
- With the increase in the Indigenous population, attainment levels in post-secondary education are also rising for Indigenous students. Total headcount (unique learners) enrolments for Indigenous students, in both full-time and part-time studies in Alberta, increased steadily from 2015–16 to 2019–20.
- Top program bands for Indigenous students include general "All Program Bands" followed by "Languages, Social Sciences, Arts & Humanities programs (GOA, 2021a).

### CANADA

As of July 1, 2019, Statistics Canada estimated Canada's population at 37,589,262, rising 531,497 from the year before, making Canada one of the G7 countries with the highest growth. Non permanent residents and immigrants make up 82.2% of that growth despite births and deaths (17.8%). The median age is 40.8 years, with 16% of the population 0 to 14 years old and 17.5% over the age of 65 (Statistics Canada, 2019).

The large representation of non-permanent residents and immigrants in the population also reflects the demographic increases in post-secondary education. The election of United States President Donald Trump and the United Kingdom's Brexit have influenced the increasing number of applications from international students looking for quality education in more stable political environments such as Canada (Harris, 2017).

### STUDENT REPRESENTATION

Overall, student enrolments in Canadian public colleges and universities increased in 2017–18 for the third successive academic year, going up by 1.9% from 2016–17, with more than 2.1 million enrolments. International students contributed to the majority of this increase with more than 40,014 (15.6%) enrolments, while domestic student enrolments increased by 3,081 (0.2%). Although international students came from more than 200 countries in 2017–18, over 50% of international student enrolments were from China (28.1%) and India (22.8%).

About 1.7% of international students were enrolled in distance learning or foreign campus programs offered by post-secondary institutions in Canada. Enrolment growth for international students was more prominent in colleges, with over 30.3% increase from the year before, mostly attributable to students coming from India (+18,870) (Statistics Canada, 2020b).

In 2017–18, international students were seeking to study at a bachelor-level or higher (67%) compared to college-level diplomas or certificates (33%), with more men (158,454) studying abroad in Canada compared to women (137,055). Men were likely to choose "Business, management and public administration" (28%), "Architecture, engineering and related technologies" (25%), and "Mathematics, computer and information sciences" (12%), whereas women were likely to choose "Business management and public administration" (30%), "Social and behavioural sciences, and law" (14%), and "Humanities" (13%) (Statistics Canada, 2020a).

With declining provincial funding and higher operational costs, many post-secondary institutions increased tuition to cover their monetary gap, with tuition revenue rising to $13.7 billion from $8.1 billion between 2007–08 and 2016–17. Although tuition revenue came from both domestic and international students, domestic enrolment numbers peaked in 2013–14 for colleges and universities. This has resulted in many post-secondary institutions increasing their efforts to attract international students (Usher, 2019). The surge of international student enrolments over the years has boosted post-secondary institutions' revenue significantly, especially as those enrolments rose 123% from 2007–08 to 2016–17.

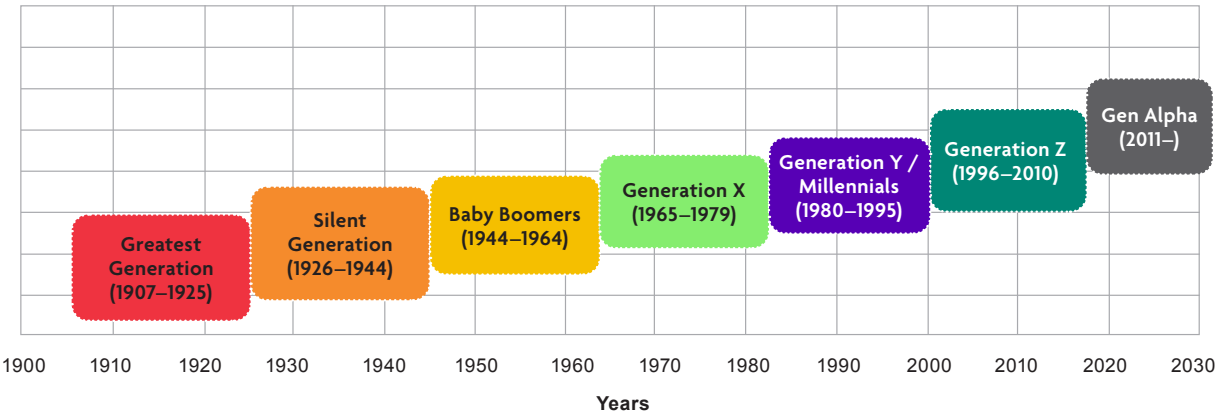
With substantially increased numbers of international students coming to Canada for the quality of education, there are growing concerns about the inability to provide the necessary services to support them, including housing, class size, and English language upgrading, especially as this may be the first time many students have left home to live independently. The rising costs and tuition for international students has been another concern, with some students trying to reduce their expenses by getting jobs. Additionally, with the focus of post-secondaries on attracting international students to compensate for diminished funding, there are concerns that domestic applicants are being displaced (Maru, 2018). Furthermore, the reliance on international student revenues may leave Canadian institutions panicking to find ways to switch their focus back to domestic students and local communities in time to recover if international enrolments drop, as the COVID-19 pandemic has demonstrated. Institutions are now asking themselves how they might win back domestic students so that student representation in higher education is more proportionate.

## GENERATION Z (GEN Z)

Understanding Generation Z and their expectations of higher education is critical to attracting and retaining these learners. Born between 1996 and 2010 (ages 11 to 25 as of 2021), Generation Z is the group of students currently in the education system and just entering the workforce. They are influenced by and were born into an age of technology; they are at home in a "hyper-connected world." Social media and smartphones play a major role in their lives, and they have been using mobile devices and accessing the internet since early childhood. Generation Z is also characterized by their desire to avoid debt (unlike their parents), so much so that they yearn to know more about finances. They are likely to have a savings account early in their lives, preferring to use debit cards and, of course, mobile banking (Kasasa, 2021).

When it comes to higher education, Gen Z's focus is on preparing for their careers, and their preference is to have a good job with an organization that is attentive and provides opportunities to their employees. Lyons and Schweitzer (2019) recently reported on their results from a survey of Gen Z students across Canada in 72 colleges and 69 universities.

## Generational Chart




Note: Generational cutoff dates vary between sources and is not an exact science. Most have drawn an analytical endpoint between Millennials and the following Generation Z as between 1994 and 1996, and between 2011 and 2015 as the start of Generation Alpha. For the purposes of this chart, generational dates are in the middle of that range, following Kasasa's generational breakdown (Kasasa, 2021)

Out of the 28,416 respondents, the majority were domestic students (91%), while the remainder were international students (9%). The main reasons students continued their studies in post-secondary education were for good employment opportunities, for career/job preparation, to increase knowledge in their academic area, because it felt like it was a logical step, to explore some interests, and to get a general education and acquire skills. The reasons for choosing their institution included the institution's reputation, the quality of programs offered, the proximity of the institution to their homes, a specific program offered, and the opportunity for an internship and/or co-op program. Over 50% said their plans after graduation were employment (51% for university students and 72% for college students). When searching for a career or job after graduation, especially if it was their first career or job, they were looking for a workplace environment that was healthy and offered a work–life balance, good co-workers, interesting work, good management, job security, and opportunities for advancement and development. Additionally, delayed graduation seemed to be favourable in colleges based on student responses—within one year (69%), within two years (58%), within more than three years (69%), and other (67%). Most respondents said their top stress was finances (Lyons & Schweitzer, 2019).

## GENERATION ALPHA

After Gen Z comes Generation Alpha. Analysts say that members of Generation Alpha "are or will grow up to be the best-educated generation ever, the most technologically immersed, the wealthiest, and the generation more likely than any in the past century to spend some or all of their childhood in living arrangements without both of their biological parents" (Pinsker, 2020). Because of Generation Alpha's ease of use with technology at an early age, they will expect quick and instant results to fulfil their desires and show impatience if hindered.

Another characteristic of Generation Alpha is racial diversity. Elwood Carlson, a professor of sociology at Florida State University and a demographer, said that Generation Alpha "will have a high share of children with foreign-born parents and children who are foreign-born themselves, representing more countries around the world than previous generations" (Bologna, 2019). Their exposure to diversity means that they are more accepting of people from different backgrounds and cultures. In addition, they may also experience economic inequality, coming from different economic backgrounds, and choose to be in the education system longer while entering the workforce later and living with parents at home (Bologna, 2019).

## ALBERTA

Alberta, similarly to Canada in general, has seen population growth. As of July 1, 2019, Statistics Canada estimated Alberta's population at 4,371,316, an increase of 0.47% over the second quarter, just slightly lower than the national rate of 0.48%, but considered the "highest second-quarter population growth in the past five years" (GOA, 2019). This increase in population was mostly attributed to immigration (0.29% international migration) and a natural increase of births minus deaths (0.17%), with a small gain from non-permanent residents in the second quarter. The year-over-year growth was 1.64% overall and above the national level (1.43%), with 40,725 new permanent residents (GOA, 2019).

At an average age of 38.3 years (July 1, 2019), Alberta is still the province with the youngest population in Canada: "relative to the national population, Alberta's population is composed of greater proportions of children and working-age persons, and a smaller proportion of seniors" (GOA, 2019). Working-age population is considered to be between the ages of 15 and 64 years, with 68% making up Alberta's population in 2019 and seniors (age 65 and older) making up 13.3% (GOA, 2019).

Within the working-age group, there also has been constant growth of baby boomers' children going into post-secondary education (Usher, 2019). However, Alberta has always had a low participation rate of around 17% for post-secondary, which can be attributed to high-paying employment in the energy sector. Although jobs in that sector have become scarce since 2015, the participation rate has remained the same (GOA, 2021a). Those that chose to pursue post-secondary education, in particular from 2015-16 to 2019-20, were in the age range of 18 to 24 years, followed by ages 25 to 34 and 35 to 44, respectively. It is interesting to note that there has been an increase in student enrolment numbers for those over the age of 55 with a small drop between 2018-19 and 2019-20 from 3,126 to 2,935. (GOA, 2021c).

## STUDENT ENROLMENTS

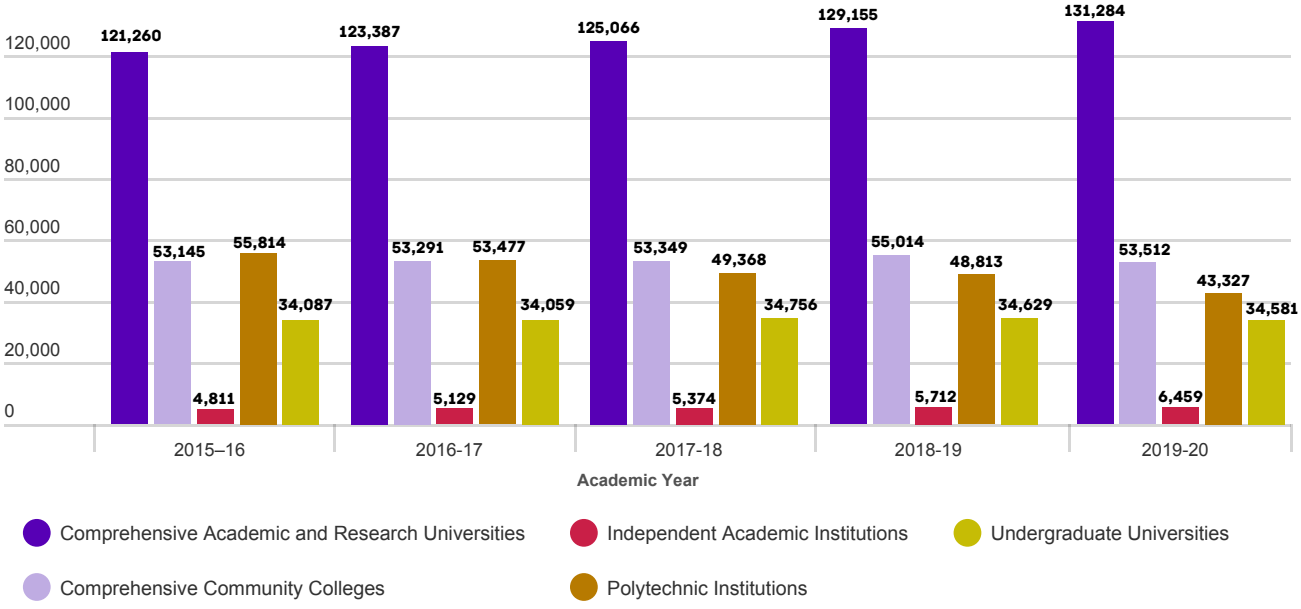
Based on the Government of Alberta (GOA) Learner and Enrolment Reporting System (LERS) data, total headcount (unique learners) enrolments for students, including both full time (FT) studies, have increased continuously from 2015-2020 with numbers over 135,000 - 264,286 (2015–16); 264,899 (2016–17); 263,495 (2017–18); 268,910 (2018–19); and 152,411 (2019-20) (GOA, 2021c).

Comprehensive academic and research universities saw an increase in enrolment since 2015–16, while comprehensive community colleges and independent academic institutions increased before dropping in 2019-20. On the other hand, polytechnic institutions saw a decrease 2015–16 onwards, and enrolment headcounts at undergraduate universities have fluctuated. Below is a breakdown of each institutional sector from 2015-16 to 2019-20 (GOA, 2021c).

Since 2015–16, FT student headcount enrolments for Alberta post-secondary institutions steadily increased each year and was favoured, whereas PT fluctuated with a decrease to 112,374 from 120,466 between 2018-19 and 2019-20 (GOA, 2021c).

Many students opted to obtain a degree, followed by non-credential programs. Non-credential programs included Academic Upgrading, Adult Basic Education, Integrated Training, Occupational, Open Studies, Professional Development, Second Language Learning, and University Transfer. When choosing between a certificate and diploma, students preferred diploma programs, whereas certificates were preferred prior to 2016-17 (GOA, 2021c).

## Alberta Student Headcount (Unique Learners) Totals




Data source: Government of Alberta (GOA). (2021c). H*eadcount enrolment within the Alberta post-secondary education system: System headcount enrolment within the Alberta post-secondary education system.* https://open.alberta.ca/dataset/system-wide-headcount-enrolment-within-the-alberta-post-secondary-education-system/resource/87c53ba3-9a1d-457e-9ddd-7ec64d4d8b9e

Note: "A unique count of learners that are enrolled. This count is unique to each level reported, and summing up multiple values to 'combine' values may lead to double counting, as students can be counted in multiple rows. Totals and subtotals listed within the document are true unique counts and have accounted for any duplication" (GOA, 2021c)

Aside from enrolling in general "All Program Bands" (GOA, 2021c), the top program band students chose to enrol in was consistently "Languages, Social Sciences, Arts & Humanities." Previously, "Trades & Technologists programs followed behind "Languages, Social Sciences, Arts & Humanities" from 2015–16 to 2016–17, but starting in 2017–18, students opted for "Health Sciences" and "Physical, Natural & Applied Sciences" instead (GOA, 2021c).

In looking at the gender representation of students enrolled in Alberta's post-secondary institutions from 2015-16 to 2019-20, females have a strong representation, and the number of female students has been increasing with each passing year, whereas male representation dropped from 2016–17 onward. With institutions now providing options beyond just female and male identities on their enrolment information forms, there has been a significant increase in students identifying as "other gender"; however, there has also been an increase in those who opt not to disclose their gender (GOA, 2021c).

**Alberta Student FT and PT Headcount Totals**

| Academic Year | FT | PT |
|---|---|---|
| 2015–16 | 135,016 | 129,270 |
| 2016–17 | 140,041 | 124,858 |
| 2017–18 | 144,129 | 119,366 |
| 2018–19 | 148,444 | 120,466 |
| 2019-20 | 152,411 | 112,374 |

Data source: Government of Alberta (GOA). (2021c). *Headcount enrolment within the Alberta post-secondary education system: System headcount enrolment within the Alberta post-secondary education system.* https://open.alberta.ca/dataset/system-wide-headcount-enrolment-within-the-alberta-post-secondary-education-system/resource/87c53ba3-9a1d-457e-9ddd-7ec64d4d8b9e

**Alberta Student Headcount for Credentials**

| Credentials | Academic Year | | | | |
|---|---|---|---|---|---|
| | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 |
| Certificate | 49617 | 45248 | 40312 | 38448 | 30954 |
| **Degree** | **116246** | **120240** | **123627** | **126802** | **130157** |
| Diploma | 39475 | 40488 | 41237 | 42867 | 44111 |
| Non-Credential | 68783 | 68632 | 68438 | 71302 | 70149 |

Data source: Government of Alberta (GOA). (2021c). *Headcount enrolment within the Alberta post-secondary education system: System headcount enrolment within the Alberta post-secondary education system.* https://open.alberta.ca/dataset/system-wide-headcount-enrolment-within-the-alberta-post-secondary-education-system/resource/87c53ba3-9a1d-457e-9ddd-7ec64d4d8b9e

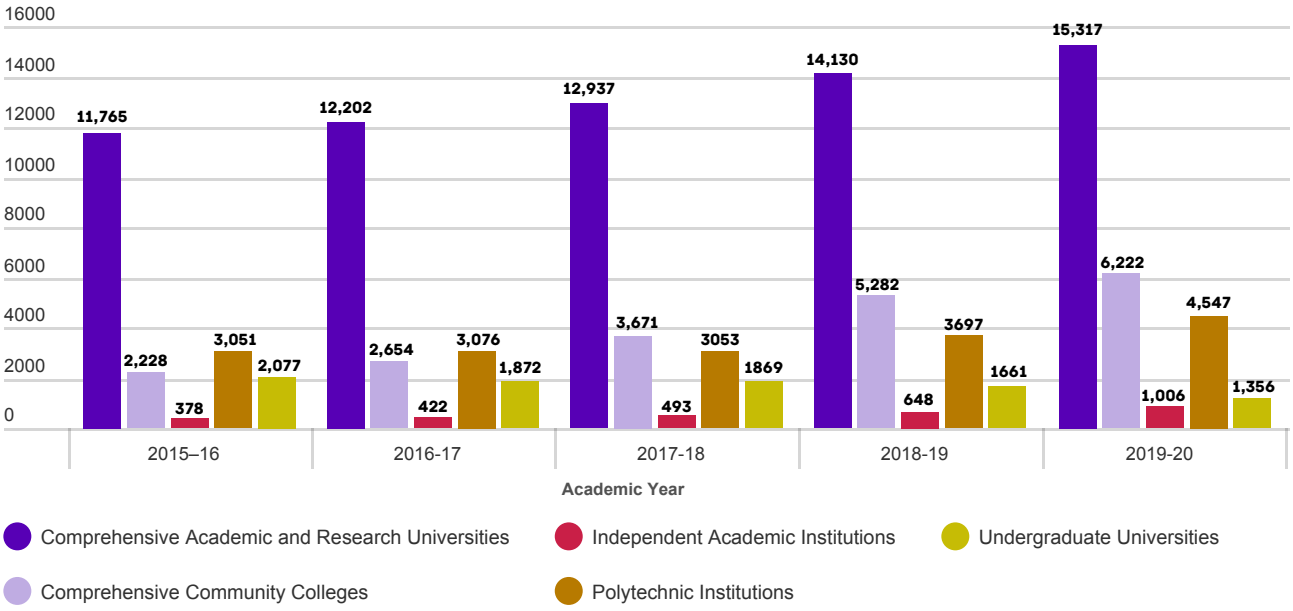
## INTERNATIONAL STUDENTS

International students have played a vital role in helping the yearly revenues of many Alberta post secondary institutions. In 2017–18, 6% (18,798) of Canadian international students came to Alberta to study (GOA, 2021b). Total headcount enrolments (unique learners) for international students (both FT and PT studies) in Alberta have increased steadily over the past five years: 19,231 (2015–16); 20,031 (2016–17); 21,842 (2017–18); 25,228 (2018–19); and 28,246 (2019-20) (GOA, 2021b).

Comprehensive academic and research universities, comprehensive community colleges, and independent academic institutions have seen international student enrolment rise, with the majority in universities. Polytechnic institutions have seen fluctuations from 2015-16 to 2017-18 before an increase in enrolments. On the other hand, enrolments in undergraduate universities have slowly decreased between 2015-16 to 2019-20. Below is a breakdown of each institutional sector for international student headcount enrolments (GOA, 2021b).

Similar to the rest of Alberta, the ages of international students have been consistent from 2015-16 to 2019-20 with the largest numbers being between 18 and 24 years of age, followed by ages 25 to 34 and 35 to 44, respectively. These students are predominately male, and most international students come to study general "All Program Bands" (GOA, 2021b) but, with it being an exception, over the past five years, the top three program bands have been consistent for international students: "Physical, Natural & Applied Sciences," "Languages, Social Sciences, Arts & Humanities," and "Business" (GOA, 2021b).

### Alberta International Student Headcount (Unique Learners) Totals




Data source: Government of Alberta (GOA). (2021b). *Headcount enrolment within the Alberta post-secondary education system: International headcount enrolment within the Alberta post-secondary education system.* https://open.alberta.ca/dataset/system-wide-headcount-enrolment-within-the-alberta-post-secondary-education-system/resource/5776c043-d497-45bb-acb4-f63293443043

Note: "A unique count of learners that are enrolled. This count is unique to each level reported, and summing up multiple values to 'combine' values may lead to double counting, as students can be counted in multiple rows. Totals and subtotals listed within the document are true unique counts and have accounted for any duplication" (GOA, 2021b).

## INDIGENOUS STUDENTS

Indigenous populations continue to grow rapidly in Alberta, in part as more people identify as Indigenous. Demographers have labelled this "ethnic mobility" because, in the past, individuals did not formally identify themselves as Indigenous but do so now and might be the first to do so in their own families (one or more generations). In 2016, there were an estimated 258,640 Albertans who identified as Indigenous, with 32.4% residing in Edmonton. Moreover, between 2006 and 2016, the Indigenous population (First Nation, Métis and Inuit) increased by 37.1% in comparison to the non-Indigenous population, which increased by 22.3% (McMillan, 2018).

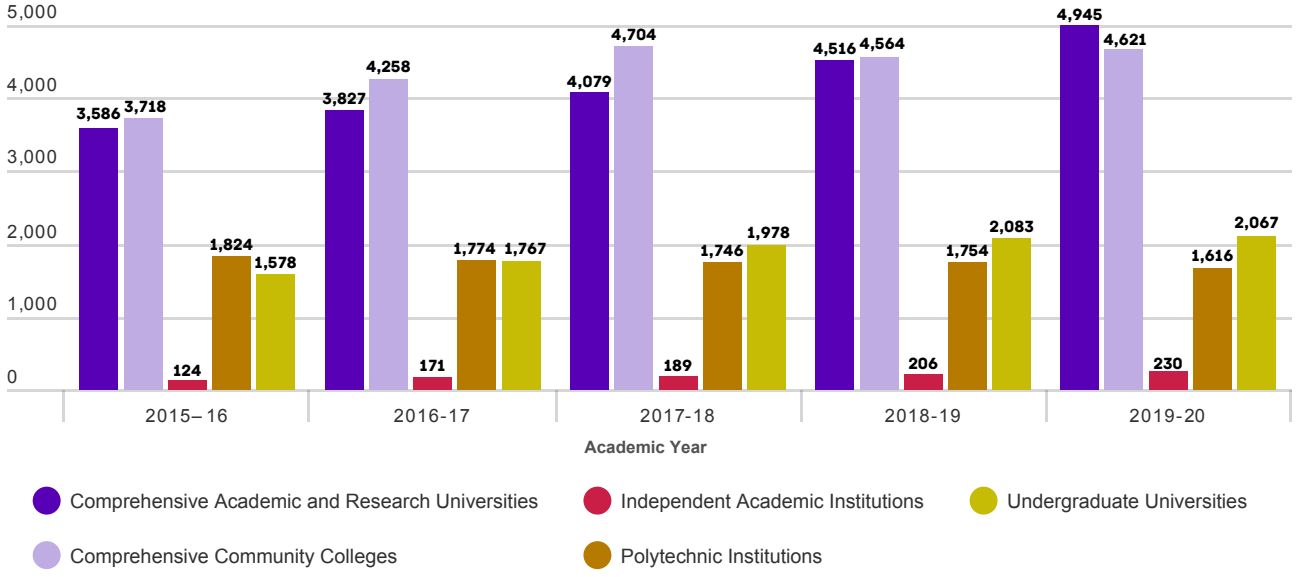
With the increase in the Indigenous population, attainment levels in post-secondary education are also rising for Indigenous students. Total headcount (unique learners) enrolments for Indigenous students in both FT and PT studies in Alberta have increased consistently between 2015-16 to 2019-20: 10,683 (2015–16); 11,644 (2016–17); 12,543 (2017–18); 12,951 (2018–19); and 13,282 (2019-20) (GOA, 2021a).

Comprehensive academic and research universities, independent academic institutions, and undergraduate universities have seen a rise in Indigenous student enrolments from 2015-16 to 2019-20 with a slight drop in undergraduate universities in 2019-20, whereas comprehensive community colleges and polytechnic institutions have seen fluctuations in numbers. Both comprehensive academic and research universities and comprehensive community colleges have seen the highest and similar numbers of Indigenous students. Below is a breakdown of each institutional sector for international student headcount enrolments (GOA, 2021a).

Since 2015-16, Indigenous students' preference has been towards non-credential programs, followed by degree programs. However, in 2019-20, the preference was reversed.

Many Indigenous students enrolled in general "All Program Bands" (GOA, 2021a), but aside from that category, the top program band students chose to enrol in from 2015–16 to 2019–20 was "Languages, Social Sciences, Arts & Humanities." Their second choice was either "Trades & Technologists" programs, or "Preparatory & Basic Upgrading" programs between 2015-16 and 2017-18. However, starting in 2018-19, their second pick changed to "Preparatory & Basic Upgrading" followed by "Health Sciences." Just as the rest of Alberta and its international students, the largest numbers of student representatives were between 18 and 24 years of age, followed by ages 25 to 34 and 35 to 44, respectively. From 2015–16 to 2019–20, more than half of Indigenous student enrolments were females, and their number has been steadily growing, from 6,746 (2015–16) to 8,934 (2019–20) (GOA, 2021a).

### Alberta Indigenous Student Headcount (Unique Learners) Totals




Data source: Government of Alberta (GOA). (2021a). *Headcount enrolment within the Alberta post-secondary education system: Indigenous headcount enrolment within the Alberta post-secondary education system.* https://open.alberta.ca/dataset/system-wide-headcount-enrolment-within-the-alberta-post-secondary-education-system/resource/4501ded1-9908-4d0f-8ee7-c131f9d1a992

Note: "A unique count of learners that are enrolled. This count is unique to each level reported, and summing up multiple values to 'combine' values may lead to double counting, as students can be counted in multiple rows. Totals and subtotals listed within the document are true unique counts and have accounted for any duplication" (GOA, 2021a).

| Alberta Indigenous Student Headcount for Credentials | | | | | |
|---|---|---|---|---|---|
| **Credentials** | **Academic Year** | | | | |
| | **2015-16** | **2016-17** | **2017-18** | **2018-19** | **2019-20** |
| Certificate | 2428 | 2326 | 2256 | 2198 | 1883 |
| **Degree** | **3458** | 3776 | 4072 | 4538 | 4965 |
| Diploma | 1660 | 1803 | 2082 | 2007 | 2089 |
| **Non-Credential** | 3475 | **4094** | **4536** | **4674** | **4862** |

Data source: Government of Alberta (GOA). (2021a). *Headcount enrolment within the Alberta post-secondary education system: Indigenous headcount enrolment within the Alberta post-secondary education system.* https://open.alberta.ca/dataset/system-wide-headcount-enrolment-within-the-alberta-post-secondary-education-system/resource/4501ded1-9908-4d0f-8ee7-c131f9d1a992

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## Desired State 2030

# THE ROLE OF FACULTY

NORQUEST COLLEGE

**This Desired State is a vision for the future based on current trends and forecasting. It is a narrative set in 2030, exploring what NorQuest now looks like and how we have evolved over the last decade.**

Faculty at NorQuest have the highest satisfaction rate among colleges in Canada. Faculty onboarding and professional development focuses on inclusive and applied approaches to learning, open pedagogy, technology-enhanced learning, including augmented reality (AR) and virtual reality (VR), open educational resource development, and applied research.

At NorQuest, the learning process is student driven. Through a partnership with a global technology company in 2024, a powerful and accessible learning platform allows faculty to seamlessly integrate various technologies to create meaningful learning experiences within highly adaptable learning environments. With the help of artificial intelligence and data providing real-time evidence of learning, faculty create customized lessons and guide learners in ways that maximize their individual learning behaviours and patterns. Artificial intelligence (AI) teaching assistants are available 24/7 to respond to student inquiries about course content as they prepare for their next learning session. Using AR/VR, faculty create engaging learning experiences that reflect relevant work landscapes and evaluate student performance based on outcomes and competencies.

> **"As Learner Advocates, we are ready to step up and support students, individually and collectively. We show compassion, accommodate difference, identify learners at risk, help students to access NorQuest resources and supports, and empower learners as citizens and aspiring professionals. We use technology in teaching to allow for a more inclusive environment which gives agency to all learners and ensures access to tech tools is not a barrier"**
>
> *Role of Faculty Futurist Team*
> *Farah Akhtar, Rasoul Aliakbari,*
> *Justine Light and Jeff Kuntz*

In 2020, the Skills of Distinction, which reflect the essential skills, abilities, and attitudes that NorQuest promotes in its programs and culture, influenced the transformation of teaching and learning. Resilience, inclusion, and new ways of thinking are built into every program as skills and competencies. The traditional classroom has been enhanced by technology-abled collaborative gathering spaces blending virtual environments with various technologies to bring real-world situations and challenges to the everyday learning environment. Knowledge and experiences are freely shared and discussed among groups of learners in ways that foster democratized learning, belonging, and storytelling.

It is common for classes to engage with curriculum in technologically enhanced ways, such as in a virtual classroom where the instructor leads learning sessions and workshops. Learners have the opportunity for career and community exploration and exposure through community service learning (CSL), work-integrated learning (WIL), and cultural experiences as they begin their academic journey. Supported by their instructors, students are mentored by their peers and work together in transdisciplinary teams directly with community and industry partners to solve real-world challenges. Knowing the quality of NorQuest learners, community partners are eager to engage with students to help solve small and large industry challenges. Through these working partnerships, learners build relationships with community and industry that remain following program completion as volunteer opportunities or employment. Foundational learners can even meet program admission requirements for the next stage of their learning through this program.

Curriculum is developed around outcomes and competencies, and learners are assessed using formative and summative methods that are highly integrated with real-world situations and challenges. Faculty use a wide variety of formative assessment strategies to give timely and developmental feedback to their students and to gain insight into student progress and their own teaching practice. Summative assessments measure less than 10% of learning outcomes and are now designed as authentic performance and competency demonstrations in real and virtual environments, gauging what learners know and can do, rather than being high-stakes exercises used to find out what students cannot remember or recall. Peer review is a critical component of assessment, and all programs have integrated peer review as part of formative and summative assessments. Students are attracted to NorQuest because of the robust prior learning assessment and recognition (PLAR) processes that measure and recognize competencies from work and previous NorQuest learning experiences.

## SCENARIOS

Danny is a faculty member in the Academic Pathways program and the lead instructor in the Math program. They teach classes of learners enrolled in the innovative high school–level math course, which is offered online in an anytime format. Their learners subscribe monthly to this competency-based course to upgrade and refresh their math skills for entry into post-secondary programs.

> **"I believe that mentors/instructors can play a very important role in shaping the future of student(s) and co-creating learning with instructors as mentors is beneficial for (this) future."**
>
> *NorQuest Student, Anonymous*
> *From the Reimagine Higher Education Survey*

Nadie is a student in the flexible, anytime math course and her goal is entry into the Pharmacy Technician program. Instructors from Pharmacy Tech worked with Danny and the team to develop a list of math competencies required for entry into Nadie's program. This means Nadie is not required to take an entire series of high school math courses but can focus on the math skills needed for her future profession. She can build a set of microcredentials in high school–level math that indicate to the Faculty of Health and Community Studies that she is ready for their program.

Danny is available to provide feedback on and formally assess the customized, project-based portfolio that Nadie is creating. This portfolio will demonstrate her math competencies within the context of being a pharmacy technician and prepare her for work placements. Danny also provides one-on-one instruction whenever Nadie is struggling with achieving a particular competency. This may be simply providing an alternative explanation of a concept or may involve suggesting the study of other competencies to provide a stronger foundation.

Rashmi is a faculty member in foundational learning. She specializes in designing authentic communication scenarios in a virtual reality (VR) lab dedicated for English language learners. Time in the VR lab allows learners to practise the skills they have been studying in communication settings that match their work and settlement goals. Rashmi facilitates the VR language lab sessions and has access to thousands of different simulations to meet the needs of instructors and learners. Following the VR simulations, Rashmi provides detailed feedback to individual learners about their progress, strengths, and areas to work on.

NorQuest College instructors also use the dedicated VR language lab for professional development activities. This includes opportunities to engage and build new skills with new technologies in a virtual classroom. Moreover, the Colborne Institute has created customized workshops and training to support the nationally recognized work NorQuest College has undertaken in the area of anti-racist education and inclusive workplace cultures.

Shayan teaches in NorQuest's newly launched Farming Skills program. His course equips students with farming literacy, so they can operate as managers in Canada's agricultural sector.

Shayan has implemented augmented reality in his teaching. He uses Moodle to teach farming theories, while enhancing this students' farming skills through augmented reality. The learners experience how to drive a tractor, harvest canola, make apple cider, and other farming skills. Students can learn from anywhere, and less commuting means a reduced carbon footprint. Shayan and NorQuest have reached agreements with farms around Edmonton to offer students practica after these learners have completed both the theory portion of the curriculum and the skills training via augmented reality.

Also, Shayan and NorQuest are now reaching out to the United Nations Food and Agriculture Organization (FAO) to apply for funding to expand this innovative teaching program beyond the College to countries around the world.

Jaden is a faculty member at NorQuest College in a post-secondary certificate/diploma business program. This morning, she is meeting virtually with a nonprofit agency in South America to continue planning a student project for next term. The nonprofit agency has partnered with NorQuest to develop OER resources to support global market learning outcomes. In return, students will work collaboratively with the agency to build a new business strategy. In this program, students also contribute to co creating resources by developing scenarios and wikis for future learners. Through this course, students gain valuable employment experience working on projects that require planning, research, collaboration, communication, digital literacy, and teamwork. Students are developing competencies and skills that are highly valued by employers.

Down the hall is Dennis, a nurse teacher in the Practical Nurse program. Dennis works part-time at NorQuest as a contract instructor specializing in gamification and remote teaching, and he works part time at a local health facility. He is leading a virtual lab for students preparing for their first health practicum experience. In the VR lab next to Dennis, Samir leads the Day Home Provider students in their work-integrated learning to demonstrate their competencies in a virtual day home or daycare environment. Samir facilitates the virtual reality lab to prepare students for a real-life field experience or in lieu of a field experience.

Students participate in multiple complex learning scenarios in technologically enhanced simulation environments and demonstrate competencies such as nursing or childcare skills, listening and verbal communication, reporting, setting priorities, and making decisions at critical points in care. Following completion of the scenario, Dennis and Samir lead their respective groups through a debriefing session where students provide constructive peer-to-peer feedback designed to build communication, negotiation, and conflict resolution competencies. Scenarios are based on real experiences as these scenarios are co-created with students who recently completed a health practicum or WIL placement. These students contribute to learning by providing context for their own mistakes and giving insight to our instructors to be able to anticipate decision-making skills by the students.

Jaden, Dennis, and Samir are working together on an applied research project that focuses on building inclusion and resilience competencies in first-year post-secondary students. Students from across College programs commit to a 12-week research experience and receive a NQ Research digital badge when the project is completed. In this project, students use various social media platforms to communicate and connect with students at other post-secondaries working on the research project. Students share resources and learn to analyze data, and collaborate in small teams to achieve project deliverables. Together they created the micromodule units required for students to participate in this research experience, which builds competency in collaboration, time management, digital communication, and introductory data analysis.

## TRENDS

- Students as co-creators
- Personalized learning
- Faculty as facilitators
- Mentor-to-protégé
- Virtual experiences
- Professional skills
- Gamification

## SIGNALS OF CHANGE

- The Cognitive Projections team at the University of Alberta, led by Dr. Martin Ferguson-Pell, collaborates with researchers to create highly engaging interdisciplinary learning experiences for students in medicine, rehabilitation medicine, and dentistry. Using VR, students can practise for high-stakes OSCE exams, teach patients about dental care, and learn to speak with media.
- Steven King from the Hussman School of Journalism and Media created a virtual 3D version of his classroom, which allows his students to "walk around the classroom" and work in groups. He uses the environment to teach storytelling.
- Ortensia Norton teaches in the Early Learning and Child Care (ELCC) program at NorQuest College, and her class has a large percentage of international students. To develop belonging and a shared understanding among peers, Ortensia has the students share stories of their hometowns using Google Earth. Through storytelling, students develop a sense of belonging and a common understanding of their histories, and develop connection through shared experiences.
- Stef Black's article, "Facilitating students to be co-creators of their learning and teaching: a Scottish sector insight," explores current practices popular in the Scottish higher education sector, which institutions and student associations use to enhance partnership and enable students to co-create their educational experience, particularly in the evaluation of their learning and teaching.

## FURTHER READING

- The *Intelligencer* article, "The Coming Disruption," discusses predictions about cyborg universities monopolizing higher education.
- Roger Baldwin's article, Technology in Education, highlights technology's impact on education and the changing role of the professor.
- Teachonline.ca explores the emergence of new pedagogies, asking: What is the new pedagogy of online teaching at scale really like? What does engaged learning look like in this new environment? How can online learning produce outstanding learning experiences?
- Royal Bank of Canada Senior Manager, Research, Andrew Schrumm suggests that the future of post-secondary education is on campus, online, and on demand.
- Video Interview and article by Ken Steele, featuring Dr. Jenni Haymann, Chair of Teaching & Learning at Cambrian College, discussing HyFlex learning, which was already in place at NorQuest prior to the COVID-19 pandemic.

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## Desired State 2030

# The rise of **ALTERNATIVE CREDENTIALS AND CONTINUOUS LEARNING**


NORQUEST COLLEGE

**This Desired State is a vision for the future based on current trends and forecasting. It is a narrative set in 2030, exploring what NorQuest now looks like and how we have evolved over the last decade.**

NorQuest is a known leader in continuous learning. Learners choose NorQuest for its holistic, student-centred approach and fully customizable, accessible education. Adult learning and continuous lifelong learning is the norm and is understood to be more than continuing education. People expect to upskill, reskill, and change careers throughout their lives. Learners and workers must adapt, learn new skills often, and consistently embrace new technologies to move and stay ahead in their careers (Pichette, 2019). NorQuest is a leader in lifelong learning in Alberta, and learners return often to NorQuest to update their skills, preferring programs that are shorter, flexible, and affordable. Success in the ever-changing economy of the 2030s depends on a learning experience that is "as much about developing knowledge and skills for a specific career as it is about learning how to learn; and developing transferable skills (like communication, problem solving, and initiative) and an appetite for learning that will position learners to develop new skills and knowledge, as needed, later on" (Pichette, 2019). Formal credentials are less vital in 2030 than demonstrating competency and relevance. On-demand learning at NorQuest is popular, with stackable badges, micromodules, courses, and programs that are easily buildable and transferable, and seamlessly ladder into other programs at post-secondaries and private organizations across Alberta, Canada, and throughout the world. Learners in both traditional credentialed programs and on-demand programming add to their education experiences at NorQuest through targeted work-integrated learning opportunities linked to their specific career goals, and they create global connections through participation in alliance model educational experiences. (For more information on the alliance model, see the Global Alliance Desired State)


Alberta's post-secondary participation has increased steadily, with more and more learners upgrading their skills every few years. Employers encourage their employees to keep improving their knowledge and skills to keep pace with the evolution of technology and the economy. Education is a larger employer benefit in 2030, and employers who do not supply ongoing learning opportunities for their workers often lose quality talent to their competitors. NorQuest partners with employers to provide specific job-skill training relevant to their industry, as well as providing their employees access to NorQuest's educational subscription service. Similar to other leasing, renting, or subscription services such as Coursera or Netflix, NorQuest offers an online education library of modules and courses that learners can take with an annual or monthly payment. With increasing demand for online learning, this service supports lifelong learners who wish to independently upskill or reskill competencies, and employers buy annual or biannual subscriptions that are included in their employee benefits package. The subscription service allows learners easy access to microcredentials, digital badges, and online assessments (EDUCAUSE, 2020) to support professional development or help students prepare to enter the workforce (Johnson, 2019).

NorQuest places a high value on the experience of its alumni. Graduates are invited to take online workshops to prepare themselves for College teaching experiences. Alumni guest instructors are paid in "points," and they can bank points to redeem for continuing education and networking opportunities. This currency is highly valued by alumni and their participation in virtual and on-campus learning experiences is invaluable to current students.

Rather than a traditional resumé, workers in 2030 require a profile that highlights their skills, tools, and competencies, and demonstrates experience in a range of job categories and industries. Frequently, workplaces use a model that pulls together small, transdisciplinary, autonomous, and flexible teams, whose profiles display the needed skills and competencies, to unite, work, and then disassemble to go on to other assignments (Cheremond, 2019). Demonstrating mastery of skills is as important as traditional credentials, such as a degree, for many employers seeking to fill gaps in their workforce (Cheremond, 2019). NorQuest's learning platforms and credential registry provide students and lifelong learners with an online portfolio to showcase their NorQuest Skills of Distinction, competency attainments, digital badges, skill mastery, and credentials to potential employers. Skill-tracking technology and adaptive learning technology used at the College helps learners to show their accomplishments, store learning data to determine where they are on their educational journey, and create personalized learning experiences. NorQuest's partnership with platforms such as Workbay is another avenue through which our learners acquire and advertise their skills and competencies. The Workbay platform links recruitment, skill building, and career navigation into one system that can be delivered online or offline to connect learners and job seekers directly with employers, career counselors, career pathways, and real jobs (Workbay, 2021).

Demographically, the needs for lifelong learning are expansive and contribute to the increase in part time, personal interest, and on-demand skill development learners. NorQuest is responsive to an increasingly global workforce, offering newcomers to Canada opportunities to upskill, gain Canadian work experience, and add qualifications to the education and work experiences they received outside Canada. The focus on applied learning using real-life work scenarios and work-integrated learning aligns theory and practice and allows learners, especially those new to Canada, to build strong industry connections.

> **"We are seeing more roles fulfilling different aspects of the workplace in response to the changing economy, downsizing, etc. To be adaptable in a role without having to take a year of schooling because you need one specific course to add to your credentials to be a prospective employee would get people into the workplace faster and without as much debt. This in turn may even encourage more people to seek out schooling."**
>
> *NorQuest Student, Anonymous*
> *From the Reimagine Higher Education Survey*

NorQuest's approach to learning, with stacked badges, microcredentials, and traditional credentials, allows these learners to quickly and seamlessly apply previously gained competencies and move across credit and non-credit programming to reach their career goals. With technological and medical advances, those at or nearing traditional retirement age face longer lifespans, and some are not yet ready, financially or intellectually, for retirement. They are returning to NorQuest to upgrade their knowledge and skills to re-enter the workforce or to change careers. Others, who have decided to retire, are choosing NorQuest to take microcredentials and non-credit courses and programs to keep learning and challenging themselves. The youngest generation in the workforce, "Generation Z," are between the ages of 20 and 34 in 2030 and, with their high-tech and hyperconnected upbringing, have entered the workplace with new sets of behaviours, expectations, and preferences. Members of the hard working Gen Z are active learners and see education as a pathway toward career advancement and employment security. Averse to acquiring student loan debt, Gen Z learners frequently choose to self educate or seek unconventional education platforms. Those registered in traditional credential programs take longer to complete and graduate from their programs (Lyons & Schweitzer, 2019), preferring to work and pursue education part-time to avoid student debt. Many sign up for NorQuest's educational subscription service as independent learners or through their employers to upgrade and acquire new competencies. Those pursuing a credential take advantage of NorQuest's stackable badges and microcredentials to custom build their credential, fill their skill gaps, and ladder to further post secondary programs. Additionally, NorQuest has seen an increase in enrolments from learners in "Generation Alpha". The Alpha learners, born after 2011, are growing up to be the best-educated generation ever, as well as the most technologically immersed and wealthiest (Pinsker, 2020). These learners expect quick and instant results, and their appetite for knowledge is fulfilled by NorQuest's dual credit programs and other partnerships with secondary schools and school boards. Alpha learners can take the same assortment of credentials, badges, competencies, and courses while at secondary school, preparing them for a variety of careers and building easy pathways to continue onto post secondary education. NorQuest provides programs that are flexible and adaptable to the ever-changing economic, social, and political environments that we live in and directly responds to the needs of our learners at multiple life stages.

## HOW DID WE GET HERE:

With technology and an ever-changing socio-economic landscape, NorQuest has adapted to and embraced change. Increasingly, workers are seeking affordable, accessible, and on-demand learning options to support their ability to meet the changes in the workforce, such as the "gig economy" (EY Ernst & Young, 2018). The traditional full-time program structure, from one to four years long, has failed to meet the need for continuous education to respond to rapidly changing industry needs (Mrig & Sanaghan, 2018), giving rise to new models of learning and new types of credentials. Alternative credentials, such as microcertificates and badging, have become popular and helped generate space for new learners. Additionally, we have witnessed the fast growth of online learning platforms. There were over 101 million students worldwide using the massive open online course (MOOC) platform in 2018. The top five MOOC education providers included Coursera (37 million users), edX (18 million users), XuetangX (14 million users), Udacity (10 million users), and FutureLearn (8.7 million users) (Shah, 2018). In Canada, fully online student enrolments increased by roughly 10% annually from 2015 to 2020 (EDUCAUSE, 2020).

The United States saw competency-based education programs expand from 20 in 2012 to over 500 by 2018, and short-term credential offerings expand by 65% from 2002 to 2014 (Boucher et al., 2018). Prior learning assessment and recognition (PLAR), competency-based learning, and 12 week intensive digital "bootcamps" became core elements of customized learning (Boucher et al., 2018). Research showed that alternative credentials could even drive an institution's revenue. In UPCEA & Pearson, "73% of education institutions confirmed that alternative credential programs are pivotal to their future success" (DMI, 2018). It was also reported that the global alternative credentials market would increase by 32% in 2021 (DMI, 2018). In 2018, Coursera forecasted that alternative credentials would generate $140 million dollars in their revenue by the end of that financial year (Shah, 2018).

Alternative credentials were explored at NorQuest as a way to meet this demand for rapid, affordable credentials in industry-defined competencies (Deegan & Martin, 2018). The Business Development area launched NorQuest's first digital badge through a badging pilot in 2020 to learners in select non-credit courses. The objective of this pilot was to develop the technical infrastructure and processes for issuing badges in order to better understand how NorQuest could maximize value for learners and employers. NorQuest expanded upon this pilot and invested in a three-year project to explore alternative credentials, such as badges, micromodules and microcredentials, open educational resources (OERs), and technological enhancements to curriculum. Key to this project was drafting the governance structure, process, and definition framework for badging and microcredentials and building capacity and sustainability within faculties to carry this work forward. Microcredentials were identified as a means to support Alberta's economic recovery and to ensure that Albertans had the education and the skills they needed for high-demand jobs (Government of Alberta, 2020). NorQuest worked with post-secondaries across Campus Alberta and Advanced Education to create a common understanding and a cohesive microcredential ecosystem that provided learner pathways within and among post secondaries so that students could continue to upskill, reskill, and acquire new credentials. Ultimately, this endeavour helped NorQuest to rapidly develop alternative credentials and to remain competitive in the market.


Even with the rise of credentialing innovation and advanced credentials in our rapidly changing economy, in his book, *The Future of University Credentials: New Developments at the Intersection of Higher Education and Hiring,* Sean Gallagher argues that university degrees will continue to be at the top of the credential chain (Potash, 2016). Offering "stackable" options helps create multiple pathways for learners to fully customize their learning experience and build their own credential from microcertificates that ladder all the way to advanced degrees. NorQuest followed models such as Udacity, which created an online credential program that focused on a skilled-based education and technical training called "nanodegrees." Udacity built their curricula with industry leaders like AT&T, Facebook, Google, Salesforce, and GitHub. Nanodegree students enrolled in a program based on their own skill and experience levels, such as beginner, intermediate, and advanced (Morell, 2019). NorQuest re-examined existing programs and created new programs within a competency framework that easily allowed our programs to be stackable and offered as alternative credentials. NorQuest has leveraged new educational technologies and mobile platforms to engage learners in ways that are most convenient to them and to educate as well as entertain. Our stackable credentials and pathways models allow learners to complete their goals in highly customizable ways. Some learners start in smaller competency options, such as non credit training or micromodules, and build on their learning over time to create a credential. Other learners start immediately with a larger stack (macrocredential) of learning options, such as a traditional certificate or diploma program, and add on specialized competency badges and WIL partnerships to support their learning before laddering into programs at other post-secondary institutions and private corporations.

## TRENDS:

- Pricing pandemonium
- Personalized learning
- Alternative credentials
- Lifelong learning
- Subscription-based education
- Personal branding
- Gig economy
- Democratization of education and adoption of open source solutions

## SIGNALS OF CHANGE:

- "We Working" is a philosophy that involves designing small, flexible, autonomous teams that act and dismantle as assignments change (Cheremond, 2019).
- Udacity's nanodegrees are a new model of lifelong learning accelerated by changes in technology. Nanodegrees offer unique "compact, flexible, and job-focused credentials that are stackable throughout your career" with "hands-on courses by industry, a capstone project, and career guidance" (Shen, 2014).
- The stackable microcredential model at Humber College in Ontario offers microcredentials that combine to earn full credentials such as certificates and diplomas.
- The Credential Registry is "a cloud-based library that collects, maintains, and connects information on all types of credentials, from diplomas to apprenticeships and from licences to PhDs" (Credential Engine, 2018).
- The Learning Record Store is "a data store system that serves as a repository for learning records collected from connected systems where learning activities are conducted" (GrassBlade, 2020).
- eCampusOntario leads education-industry collaboration through microcertification for faster workforce development and job placement (eCampusOntario, 2020).
- "Go Pro Early" is a model where students choose to enter the workforce without first attaining a post-secondary credential. These students value work experience and are looking for employers that will allow them to work while also attending post-secondary. Post-secondary education is an employee benefit in this model and is used to attract and retain top talent and upskill existing employees (Busteed, 2019).
- Non-traditional education providers, such as IBM, Microsoft, and Google, are now creating and endorsing alternative credentials and disrupting traditional authority in higher education (Fain, 2020).

## FURTHER READINGS:

- The United Nations Educational, Scientific and Culture Organization's study on digital credentialing and education in 2030 looks at credentialing trends and the implications for the recognition of skills globally.
- The Degree Rules, for Now, by Paul Fain, highlights a new trend among HR leaders toward skills based hiring and acceptance of alternative credentials versus traditional post-secondary credentials.
- Ray Schroeder's article, Subscription Rather Than Tuition, discusses the trend of subscription as a business model for higher education disrupters such as Coursera and LinkedIn Learning.
- The ICDE Working Group's report on The Present and Future of Alternative Digital Credentials (ACDs) discusses how alternative digital credentials, based on workplace-relevant skills and competencies, will challenge the relevance of traditional university transcripts and credentials.
- The report, Demographic Shifts in Educational Demand and the Rise of Alternative Credentials, as researched by Jim Fong, Peter Janzow, and Dr. Kyle Peck, explores the critical role that alternative credentials play in higher education and their importance for academic institutions' future success.
- The Rise of Alternative Credentials, by Patrick Brothers, discusses the "new normal" for students, who will demand different learning opportunities and credentials, both traditional and alternative, at different stages in their lives and careers.

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## Desired State 2030

# LEADER IN INDIGENOUS PEOPLES' EDUCATION

NORQUEST COLLEGE

## This Desired State is a vision for the future based on current trends and forecasting.

> **"I'd like to imagine way more students, way more Indigenous students coming to our college. At the same time, way more Indigenous people working in our college, both instructors and administration...We need to bring in more instructors because here in Edmonton and in the surrounding Indigenous communities, we do have a lot of educated native people who could be instructors. If we imagine 2030, I'm hoping that there will be like five times more Indigenous people (at NorQuest)."**
>
> *Elder Delores Cardinal*
> *NorQuest Resident Elder*

### The following is an excerpt from NorQuest College: Leader in Indigenous Peoples' Education by NorQuest College Indigenous Relations & Support

The history of Indigenous peoples resistance to western and Eurocentric education has a long, protracted, and painful history. Over the last four centuries, Indigenous peoples have resisted colonization, assimilation, and the destruction of traditional knowledge, knowledge systems, languages, cultures, ways of knowing and being, and family and governance systems—to name only a few. Indigenous peoples have held constant the understanding that our knowledge, and knowledge systems, are the key to upholding and maintaining our distinct and unique identities and rights as the First Peoples of what is now known as Canada and that a resistance to mainstream Western education plays an important role in transmitting traditions, values, and beliefs, as well as epistemological approaches to learning, and doing that will strengthen our communities-of-origin and ensure this generation, and seven generations to follow, will have the knowledge they need to be successful at home, in school, in community, and in society as a whole.

Important in this process is the powerful role that post-secondary education, or higher learning, plays in the lifelong education of, by, and for Indigenous peoples.

Up to this point, universities have operated as sites of "de-indigenization," where the academic canon has asserted one "truth" and one "knowledge" based on European understandings of knowledge itself (Gaudry & Lorenz, 2018). As a result, universities and other sites of higher learning perpetuate the oppression of other knowledge systems as equally important or valid, especially those that are not based on scientific and evidence-based knowledge. In the process, other ways of knowing and knowledge have been delegitimized and marginalized as invalid and, therefore, untrustworthy as a knowledge source. However, Indigenous knowledge and knowledge systems have long asserted their equal status and have played a significant role in the development of a knowledge base within Canadian Western society and other societies around the world. As the movement to deconstruct and decolonize Western post-secondary education progresses, Indigenous peoples and communities work alongside academic administrators to Indigenize curriculum, where Indigenous knowledge, beliefs, values, and ways of knowing are woven into existing curriculum, and to create safe spaces for all forms of Indigeneity to be expressed.

Following the TRC Calls to Action in 2015, a significant amount of work has been done to Indigenize the academy in this way; however, and as Gaudry and Lorenz (2018) have asserted, most institutes of higher learning appear to have "lost enthusiasm" for structural changes beyond mere Indigenization. It is this site of tension where the most opportunity exists to blend the long asserted desire to make education accessible, inclusive, responsive, and relevant to the lived realities, visions, and needs of Indigenous communities themselves, while also reimagining sites of higher education where Indigenous and non Indigenous peoples could co-exist without interference or subordination of one another in the process of educating future generations of Canadian and Indigenous citizens.

It is through this lens that Indigenous peoples' education is reimagined at NorQuest College.

> **"I truly believe that it will offer many good things, not just for Indigenous people(s) but for everyone. It will be a large step in reconciliation and something not many other post-secondaries are doing."**
>
> *NorQuest Student, Anonymous*
> *From the NorQuest Reimagine Higher Education Survey*

## HOUSE OF LEARNING: INDIGENOUS PEOPLES CENTRE OF EXCELLENCE

It is recognized that if reconciliation is to be achieved within post-secondary education, a radical departure from the status quo is necessary. Moreover, it is also recognized that the current approach to "Indigenization" may, over time, also become a tool of "de-Indigenization" as enthusiasm, resources, and focused attention by the institution shifts to competing priorities, resulting in a return to a normalized order of things. In that regard, as a means of "undoing colonialism," which is the outcome of the process of decolonization," it is necessary to create, and co-create, the conditions for a resurgence of Indigenous education that is designed, governed, and delivered by Indigenous peoples, for Indigenous peoples.

As the Treaty described, and as our ancestors have long reiterated, the original spirit and intent of the Treaties was to describe how, and in what ways, Indigenous and non-Indigenous peoples would co-exist as partners in all facets of a shared existence including, but not limited to, lifelong learning. In that regard, a House of Learning where Indigenous peoples education would operate and co-exist in ways that support global knowledge exchange, and where Indigenous peoples' knowledge and knowledge systems are prioritized and the development of knowledge is based on the identified needs, priorities, and aspirations of Indigenous peoples and communities.

> **"(It) is very important to keep history alive in each generation. We cannot forget where we come from"**
>
> *NorQuest LINC Student, Anonymous*
> *From the LINC Reimagine Higher Education focus group*

The positioning of Indigenous peoples, knowledge, and knowledge systems as equal disrupts the dominant power structure that subsumes all other knowledge systems as subordinate. In doing so, governance of knowledge, and what constitutes knowledge, becomes a shared responsibility, with each partner determining their respective paths forward. This also asserts the understanding that co-existence does not mean "in opposition to" but rather "in relation to"—a principle understanding and way of knowing being practised by Indigenous peoples since time immemorial.

The transformative nature of co-existence as partners in a Treaty-based model of partnership cannot be understated, nor can the understanding that the process of decolonization "implicates and unsettles everyone" (Tuck & Yang, 2012). In that regard, we move forward with the view that the vision for the future expressed here, within the context of decolonization, is not symbolic, nor is it, as Tuck and Yang express, a metaphor. Further, we also wish to emphasize that while we are "reimagining" a future, the precise nature of what a decolonial possibility in post-secondary education looks like remains unclear. What Tuck and Yang (2012) make clear, however, is that "we will find out the answers as we get there, in the exact measure that we can discern the movements which give [decolonization] historical form and content" (Fanon, 1963, in Tuck & Yang, 2012).

## TREATY-BASED MODEL OF PARTNERSHIP

As previously mentioned, a Treaty-based model of partnership—based on Treaty principles—recognizes that Treaties are living agreements where, in the case of higher learning, partners (Indigenous and non Indigenous administrators) would operate around a global knowledge base and exchange, where partners would "relate through a treaty to serve the students and community collectively" (Gaudry & Lorenz, 2018). The underlying principles are based in the original Treaties themselves where "the parties maintain a relationship of peace" (Cardinal & Hildebrand, 2000) and the "third irrevocable undertaking of the treaty was the agreement to create a perpetual family relationship based on familial concepts … where the rules and laws governing what is called Wahkohtowin … that prescribe and proscribe conduct" (Cardinal & Hildebrand, 2000).

The House of Learning will embody the concept of a "dual structure" envisioned and articulated by Gaudry and Lorenz (2018):

1. **Indigenous Knowledge Circle** (Gaudry & Lorenz, 2018)
- Elders/Knowledge Keepers are the centre of the governance model and serve as the leaders of the Indigenous Knowledge Circle

**2. Faculty of Indigenous Peoples Education**

- Indigenous peoples lead the development of diploma and certificate programs that respond to the needs, aspirations, and visions of Indigenous peoples and communities in the areas of
  - Indigenous Studies / Business/ Environmental Stewardship
  - Indigenous Early Learning and Care / Social Work
- These certificate and diploma programs will significantly advance the TRC Calls to Action in the five Legacy areas of (1) Health, (2) Education, (3) Child Welfare, (4) Justice, and (5) Language and Culture.
  - The "undoing of colonialism" will be the primary focus of program development and will provide critical education into the foundations of how colonialism is embedded within and across professions, and in what ways these can be decolonized to unravel the internal colonialism (Tuck & Yang, 2012) within schooling in particular.

**3. Land-Based Learning, Languages, and Cultures Institute**

- Building on the experience and expertise of Indigenous leadership and other knowledge holders at the College and the community as a whole, the House of Learning would establish an institute for Land-Based Learning, Languages, and Culture.
- The Land-Based Learning would offer experiential learning and land-based experiences in local Indigenous teachings through Indigenous pedagogy. Students and learners in Land-Based Learning programs will have an opportunity to learn traditional life skills and ancestral teachings of local Indigenous language and culture while synthesizing knowledge, skills, and abilities that are taught by Elders, Knowledge Keepers, and Indigenous educators and scholars.
  - The land-based philosophy is based on a "good way of life" through sacred teachings, ceremonies, and songs that have been passed down from generation to generation. Natural law and traditional teachings incorporate how to live off, care for, and protect the land.
  - Students are immersed in traditional and contemporary worldviews of the seasons and through holistic teachings and activities.

**4. Indigenous Fine Arts Institute**

- Indigenous art and expression, in all its forms, is a site of exponential resurgence by and for Indigenous peoples. As the known history of colonialism attests, Indigenous self-expression and the preservation of Indigenous ways of knowing and being that are transmitted down to current and future generations were disrupted through various legal mechanisms (the Indian Act) and through assimilation processes such as Indian residential schools. However, and despite colonial imposition, Indigenous peoples have preserved our ways of life, including art and expression. However, the resurgence of Indigenous art, fine art, and other forms of expression have become an important site of resistance, renewal, and resurgence among Indigenous peoples and communities. At present, one post-secondary institution offers Indigenous fine arts options for Indigenous learners within Treaty 7 territory. With the vast proportion of Indigenous communities located within Treaty 6 and Treaty 8 territories, there exists an opportunity to establish a fine arts institute to support, preserve, and advance Indigenous knowledge of fine arts traditions.
- Programs could include certificates and diplomas, as well as advanced diplomas, that incorporate local Indigenous knowledge in fine arts, as well as incorporating knowledge about curating and presenting public collections, entrepreneurship, and leading a small business in Alberta.

**5. Centre of Excellence in Indigenous Training to Employment**

- The Alberta Indigenous Construction Career Centre (AICCC) serves as a leader in the provision of comprehensive supports and services to unemployed, and underemployed, Indigenous job-seekers in the city of Edmonton. Since its inception in 2015, the AICCC has served more than 6,000 Indigenous people and is widely recognized as a critical source of employment supports and services. However, the AICCC is government funded and, as such, has outcomes tied to the directions of government vis-à-vis Indigenous people. In that regard, decolonizing training to employment would involve a movement away from traditional funding and government oversight regimes that delimit Indigenous self-determination and autonomy in setting the direction and outcomes, and in meeting the needs and aspirations of Indigenous job-seekers.

> **"There is potential in education on Indigenous people, but not only history. They want to see what is going on in Indigenous Communities right now. Has it gotten better in terms of lifestyle, in terms of jobs, in terms of funding for our Indigenous students to continue their education? They learn a lot about residential schools, but a lot of students ask - what is happening now in the community? There needs to be more education on that as well."**
>
> *Elder Delores Cardinal*
> *NorQuest Resident Elder*

Through that lens, a renewed framework for training to employment would focus on developing relationship-based partnerships with industry and employer partners that focus on shifting the landscape of Indigenous peoples employment from "last hired, first fired" and "purely surge capacity labour" to core workers who occupy central, long-term positions within and across industry.

## FURTHER READING

- NorQuest College: Leader in Indigenous Peoples Education (2021)
- Blair Stonechild's 2006 book, The New Buffalo: The Struggle for Aboriginal Post-Secondary Education in Canada, published by University of Manitoba Press.
- Alan Pence and Jessica Ball's 2006 book Supporting Indigenous Children's Development: Community-University Partnerships, published by UBC Press.
- Charlie Angus's 2015 book, Children of the Broken Treaty: Canada's Lost Promise and One Girl's Dream, published by University of Regina Press.

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## Desired State 2030

# SCIENCE, TECHNOLOGY, ENGINEERING, ARTS, AND MATH (STEAM) PROGRAMMING

NORQUEST COLLEGE

**This Desired State is a vision for the future based on current trends and forecasting. It is a narrative set in 2030, exploring what NorQuest now looks like and how we have evolved over the last decade.**

At NorQuest, our focus on incorporating inclusive worldviews and integrating arts into traditional science, technology, engineering, and math (STEM) programming has been a contributing factor to increasing the number of Indigenous peoples, women, and gender-diverse individuals taking these courses. NorQuest College has been recognized globally as a leader in Indigenous education, youth programming, STEAM activities, and land-based learning. Like all programs at NorQuest, every STEAM program is accessible to learners with disabilities and also incorporates inclusive (non-Western) worldviews, which has attracted new learners internationally.

STEM used to be a male-dominated educational field. In fact, Statistics Canada data from 2016 indicated that women made up only 34% of STEM bachelor's degree holders and 23% of science and technology employees aged 25 to 64 in Canada (Wall, 2019). NorQuest set a goal during the development of our STEAM programming to increase the number of women and gender-diverse learners in the field, and it is working—50% percent of our students in NorQuest STEAM programs are women. Our 1000 Women fundraising campaign continues to support women in our STEAM programs by providing fully funded diplomas to those facing barriers to education.

> **"Early math skills and technology has shaped my view on what is key to doing well and excelling in my studies. (It has) opened my perspective in how to utilize my time at college and (understand) the other opportunities that NorQuest is offering me."**
>
> *NorQuest Student, Anonymous*
> *From the NorQuest Reimagine Higher Education Survey*

Many of our students chose NorQuest after either completing a microcredential, which could ladder into a diploma, or attending STEAM summer programming. This summer programming is a partnership between NorQuest and Indigenous communities to share STEAM education with Indigenous youth in the Edmonton region. With sustainable funding and true partnerships with Indigenous communities, these programs have been successfully engaging many Indigenous students to participate in post-secondary STEAM studies.

The STEAM programs at NorQuest emphasize process-based learning to guide students in developing inquiry, collaboration, and communication skills. The programs facilitate cross-disciplinary thinking so that students learn to synthesize information and knowledge across multiple disciplines and different levels leading to creative and innovative solutions (Madden et al., 2013).

## HOW DID WE GET HERE?

A few major factors have led to NorQuest's success, including understanding trends and addressing the changing needs of the workforce. Professional skills (formerly known as soft skills) were a perceived gap in graduates' skills. In 2019, RBC's *Humans Wanted* report stated: "An assessment of 20,000 skills ranking across 300 occupations and 2.4 million expected job openings shows an increasing demand for foundational skills such as critical thinking, coordination, social perceptiveness, active listening, and complex problem solving" (Royal Bank of Canada, 2018).

At the same time, Statistics Canada's *Canadian postsecondary enrolments and graduates*, 2017/2018, indicated that 26% of students were enrolled in STEM programming, and enrolments had risen by 46% in mathematics, computer, and information sciences over four years (Statistics Canada, 2020). The top three jobs increasing in demand globally were data analysts and scientists, artificial intelligence and machine learning specialists, and big data specialists (World Economic Forum, 2020). Despite the enrolment trend across Canada, Indigenous learners were still underrepresented in STEM education, and well-paying STEM jobs. It was also clear that the Indigenous perspective was still lacking in the development of STEM programs in Canada (Magon, 2020), and curriculum reform was an important part of improving educational outcome of Indigenous learners (Cooper, 2021).

The problem and the opportunity were both clear. In order to satisfy the needs of the community as well as current employers, NorQuest College needed to take a new approach to traditional studies and future-proof our students. That's why our move toward STEAM added creative thinking, applied arts, and inclusive worldviews—including indigenous perspectives and land-based learning—to our programs at NorQuest, filling the gap identified in traditional STEM studies. Arts can provide students with reasoning ability, intuition, perception, imagination, inventiveness, creativity, analytical, and problem-solving skills. These skills are key elements to achieving STEM objectives (Ruppert, 2006; Segarra et al., 2018; Sousa, 2018; Vilorio, 2014).

> **"Skills such as remote teamwork, flexibility, future-focused thinking, independent work habits, skills in researching and monitoring future growth trends (are always important)."**
>
> *Member of a NorQuest Program Advisory Committee (PAC), Anonymous From the Reimaging Higher Education Survey*

STEAM has become a way of learning at NorQuest, with arts and sciences infused into programming across the institution, giving students an opportunity to apply a holistic approach to solving real-world problems. As we built new STEAM programming in collaboration with industry, we also designed our courses with microcredentials in mind, so students could test the programs through individual courses that ladder into a certificate or diploma. Based on global employment trends, the first example was the Data Analyst microcredential, which could ladder into our Machine Learning Analyst diploma program. Many of the courses and microcredentials could also be combined into our new Build Your Own Credential option. Through our partners, we offer students the chance to explore work-integrated learning and community service learning, which has them think through how they most want to contribute to world. Which challenges do they hope to impact? Which problems do they want to help solve?

Consultation with students in 2020 highlighted that many of the problems students want to help solve, through their education and careers, transcend traditional disciplinary boundaries and are broad in scope; for example, climate change, the energy transition, and poverty (NorQuest College, 2020). All these problems require innovation, critical thinking, inclusive thinking, and great communication skills.

In 2021, NorQuest's Advancement Team launched a new fundraising campaign to provide fully funded diplomas women in STEM/STEAM education. NorQuest programs, including Energy Management, Environmental Technician, and Machine Learning Analyst were the first to be supported by the campaign. The campaign was exciting and successful because of NorQuest's goal to remove structural barriers to women who have the interest, but not the means, to receive STEAM-related education. This funding opportunity for students helped build NorQuest's credibility and brand within STEAM education and served as a launchpad to the future of work for learners.

## 2020 TRENDS

- Professional skills
- Purpose-driven organizations
- Alternative credentials

## SIGNALS OF CHANGE

- Stanford d.school is a centre for innovation, with teams of students coming together from Stanford's seven schools to work on real-world problems in one project-based class.
- SparkPath is a new approach to career discovery, which uses a challenge mindset to flip the traditional method of education and career planning so that it is based on real-world challenges rather than job titles. SparkPath helps students figure out how they want to contribute to the world.
- Indigenous education within STEAM:
  - The University of Alberta's I-STEAM Pathways
  - Mount Royal University's Aboriginal Science & Technology Education Program (ASTEP)
  - The SIX NATIONS-Actua, Canada's leading science, technology, engineering, and math (STEM) youth outreach network, in partnership with the Six Nations Polytechnic STEAM Academy, is providing local Indigenous high school students with a unique for-credit, on the-land-camp program in Indigenous communities across Ontario.

## FURTHER READING

- The Education Commission of the States' brief, Policy Considerations for STEAM Education, explores how to educate students for the future economy by incorporating core STEAM educational practices and policies.
- NorQuest College's 1000 Women movement in 2021 is focusing on supporting women in STEM.

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## Desired State 2030

# ARTIFICIAL INTELLIGENCE


NORQUEST COLLEGE

**This Desired State is a vision for the future based on current trends and forecasting. It is a narrative set in 2030, exploring what NorQuest now looks like and how we have evolved over the last decade.**

At NorQuest College, personalized learning is not just a buzzword. Here, education is curated to students' needs and personalized by individual students to suit their learning preferences. This curation and personalization is made achievable through data analytics and the use of artificial intelligence technologies.

As the funding model for post-secondary institutions in Alberta and across Canada began to change from provincially subsidized education to student-paid education, NorQuest College needed to figure out how to create a competitive advantage. While post-secondary institutions across North America talked about personalized education, at NorQuest, we wrote it into our pedagogical approach and institutional philosophy.

> **"Technology and e-learning are the future of education. The use of AI, VR, and robotics will make study(ing) more fun and engaging for everyone."**
> *NorQuest Student, Anonymous*
> *Reimagine Higher Education Survey*

## HERE'S HOW IT WORKS:

When a student is admitted to NorQuest, they work with an artificial intelligence (AI)–based navigator to outline their pathway, or "Quest." Sage, our virtual companion and Quest Navigator, helps each student determine goals and outlines credential and badging opportunities, as well as community involvement or volunteer opportunities that allow them to reach their goals. What sets NorQuest apart from other institutions is its holistic commitment to the learner, and each student's "Quest" reflects this in their goals. For example, Rahna is a pharmacy technician student with a very clear goal to work as a hospital pharmacy technician. Although this is her main "Quest," she has also identified goals of reducing stress (especially during exams) and improving her verbal English skills in groups. Sage helps Rahna articulate this into SMART goals and assists her to build a plan that includes a stress-reduction support group led by the Centre for Growth and Harmony, an exam success workshop by the Learning Centre, and volunteering to do small group tours at a local museum. Sage also works as a connector, booking meetings with different areas of the College, such as Student Advisors, International Advisors, and the Office of Student Judicial Affairs

Using artificial intelligence across our online systems, including our learning management system (LMS), we are also able to track which learning materials are confusing or not relevant for students by following student interactions with their "textbooks"[1] and by using the camera to read students' facial expressions while they are completing homework (Frank, 2019). By tracking behavioural data, our systems are able to provide new examples, switch to video materials, or open a chatbot with Sage—who is also an educational assistant—to help students work through the materials and customize assessments based on gaps identified from learners' earlier assessments. Sage can then share this information with instructors so they can assess learning styles (verbal, visual, kinesthetic) and measure the effectiveness of lessons, teaching styles, and materials. It can suggest a student study schedule, what materials to study in which order, and provide feedback on strengths and weaknesses (Chan & Pawlina, 2020). Not only that, but for our students who are auditory learners, there is the option to listen to the materials instead of reading them. In additional to supporting choice for students, this approach has also made NorQuest a leader in inclusive education.

When NorQuest College first implemented the use of AI and data analytics, some faculty, staff, and students were skeptical of our use of big data and concerned that using artificial intelligence would eliminate teaching jobs (NorQuest College, 2019). The College administration worked with all stakeholder groups to walk them through the problems that artificial intelligence could solve and our commitment to ensuring fidelity to humans, meaning that human essence and consciousness were not superseded.

Instead of eliminating teaching jobs, AI has helped increase personalized education for students while reducing the number of repetitive questions and assignment clarifications that instructors received regularly (despite having the answers posted online). This freed up instructors to tackle some of the more challenging questions and regularly sit down to check in with students one on one—what instructors called "more meaningful work" (Neelakantan, 2020). Direct contact and connection with instructors is a strategic advantage still offered by NorQuest and supports our goal to become a leader in accessible education.

By extrapolating data from tests and assignments, Sage can suggest specific resources for students to get more help or self-directed reading (Neelakantan, 2020). It also helps our expanded curriculum development team to design courses differently. If Sage cannot answer a student's question, it is sent to the instructor, and instructors get reports on interactions with students as frequently as they request.

[1] The term "textbook" encompasses all our learning materials, including simulations and open educational resources (OERs).

Faculty and students were originally concerned with privacy and the use of big data on campus (NorQuest College, 2019). Studies in the US and UK suggested that "65% of consumers believe that AI would **destroy their privacy,** rather than improve it. However, at the same time, 63% of US consumers are interested in personalized recommendations, and 64% are willing to share data in exchange for personalized benefits such as automatic deals" (TrendWatching, 2018, p. 157). That is why early on, NorQuest consulted with leading data privacy professionals and created policies and procedures for the use of data in an unbiased way so that students felt more comfortable.

Students also have the option to opt out of Sage's support, but the majority of students do not for three reasons:

1. Sage answers questions at any time of the day, 90% of the time within 10 minutes (Rouhiainen, 2019).
2. When the program was first piloted, students who opted into the use of Sage were provided with a tuition rebate. This was an incentive to test out the system because Sage is only as good as the data it receives (Rouhiainen, 2019).
3. Students can customize Sage into the avatar of their choice, making Sage into a virtual companion to whom they feel a connection.

In 2020, NorQuest College developed a Machine Learning Analyst program. Students in the program contributed to developing Sage by working with experts in the field, consulting students, staff, and faculty, writing code, reviewing messages between students and Sage, and updating inputted data. One of the lessons they learned was the importance of addressing the lack of quality data, which led to the creation of processes to capture and clean up data (Morgan & Lowendahl, 2020). Although this approach helped students co-create their learning experience, it also provided our learners with work-integrated learning experiences in their field and got them ready to succeed from day one of their new careers.

The Quest Navigator becomes a permanent tool throughout a student's time at the College—a recruiter, navigator, teaching assistant, and mental health support. Sage has become emotionally intelligent and is programmed with medically accurate techniques to help students de-stress, deal with depression and loneliness, and stay active. It also successfully connects students to Universal Design for Learning (UDL) tools that suit a student's strengths. Even years after graduation, alumni connect with their Quest Navigator to enhance their resumés, prepare for interviews, build portfolios, and explore continuing education opportunities.

## TRENDS

- Personalized learning
- Gamification
- Ethics
- Virtual companions
- Virtual experiences
- Students as co-creators


## SIGNALS OF CHANGE

- Jill Watson is an artificial intelligence teaching assistant created by Georgia Tech professor, Ashok Goel. With 400 students and nearly 10,000 questions in one semester, Jill supported the human teaching assistants by answering student questions and had a 97% success rate.
- Woebot is an AI-enabled chatbot designed to help users learn about their emotions with "intelligent mood tracking." Psychologists at Stanford worked for 10 years to develop an AI enabled chatbot that uses cognitive behavioural therapy (CBT) to support individuals with anxiety and depression.
- Autism CanTech! (ACT!) is a program at NorQuest College that helps Autistic youth gain long-term employment. It takes an Autistic-centred approach to education for digital job skills, and combines supportive programming for participants and employers with career coaching and innovative assistive AI-based technology called RoboCoach developed by Technology North Corp.

- AdmitHub is a "nudge technology" that focuses on messaging and guiding students to meet key enrolment and retention deadlines. AdmitHub is an AI technology that has reached 2 million students, reduced "summer melt" by 22%, and answered 80% of messages from students.
- Baby X, from Soul Machines, is a biologically inspired digital infant research project. Baby X learns through traditional human modalities and combines CGI, cognitive linguistics, neuroscience, and affective computing to build a convincing artificially intelligent being.

## FURTHER READING

- Shailaja Neelakantan's article, Successful AI Examples in Higher Education That Can Inspire Our Future, explores how AI teaching assistants and recruitment supports may be a useful tool for post-secondary institutions in the future. However, the article also notes some of the challenges associated with these real-world examples, and the major issue is cost.
- IBM Research and Rensselaer Polytechnic Institute have developed a new classroom called the Cognitive Immersive Room (CIR), which simulates being in a restaurant to help students learn Mandarin. Read about it on the IBM Research Blog here.

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## Desired State 2030

# AUGMENTED AND VIRTUAL REALITIES

NORQUEST COLLEGE

**This Desired State is a vision for the future based on current trends and forecasting. It is a narrative set in 2030, exploring what NorQuest now looks like and how we have evolved over the last decade.**

Instead of buying and using textbooks, we use virtual reality (VR) headsets in some of our courses at NorQuest. Students can order a pre-loaded VR headset from the College, or if they have their own, they can upload our learning management system and gain access to course materials and open educational resources (OERs), including simulation-based educational exercises and assignments, as well as lectures. This technology includes accessibility features such as auditory input and feedback. Some content is also available using equipment that students have most often readily available—their smartphones! Through augmented reality (AR) and VR, NorQuest instructors have been bringing the real world into the classroom, providing educational experiences in virtual work environments. Our AR/VR technology has rendered all textbooks and print material used at the college accessible. By doing so, a major barrier faced by students with disabilities has been removed, and auditory learners are better able to apply themselves to their learning.

> **"With the exception of real-world learning, there is no better analogue to hands-on experience than extended reality and simulation. Providing learners with a realistic, risk-free environment to play, experiment, fail, and try again is an essential tool for 21st century education; virtual and augmented reality are key enabling technologies"**
>
> *Derek Kwan*
> *AR & VR Futurist Team Member*

AR/VR training is offered at NorQuest's Innovation Lab to help acclimatize students to the new technology. For programs that are virtual based or those that host some classes virtually, students can attend as an avatar, and the experience will be as though they were sitting in a room together with classmates. Although we have found that students really like face-to-face classes once a week, many want the option to work from home. Students who prefer to be on campus or who do not have access to a VR set also like coming to school and using our bookable VR and AR study suites to practise skills such as medication administration and public speaking, or to play language-focused games.AR/VR allows students with physical disabilities to fully participate in classroom activities without the challenges of a physical classroom. Students also have the option to submit digital stories created in AR and VR platforms instead of formal research papers. Exams can also be completed in VR because the full sensory immersion ensures high accountability and real time demonstration of skills and knowledge in a low-risk environment. These AR/VR scenarios and assessments help students prepare for the workforce and real-life challenges.

Many of our newcomer students are forced climate change migrants. Those who are not fluent or comfortable with English are our top users of the VR and AR study suites, using them to practise their oral communication skills using the language-training apps that NorQuest College developed and owns in partnership with a local simulation developer. We also use a translation service, which allows students to speak in one language and have it translated into another language in real time. This has helped improve collaboration with international institutions, workplaces, and work-integrated learning (WIL) partners for our students.

> **"It is sometimes hard to have in-person lessons...and if we have access to VR we can get a 'hands on' experience instead of just imagining it"**
>
> *NorQuest student, Anonymous*
> *Reimaging Higher Education Survey*

In preparation for WIL, students can practise realistic AR/VR-based scenarios—for example, lab experiments and social work or addictions and mental health role-play scenarios)—in a much safer environment. Students can observe physiological reactions to certain medications by going inside the human body to fully simulate any real-life medical situation. Studies have shown that people who receive VR training learn better and faster than those who are only shown video tutorials (MacGillivray, 2017). The College also leverages student experience and expertise gained in their programs by hosting the Alberta Student Virtual Reality Scenario Prize. In their graduating term, students can propose a VR scenario and win a tuition rebate if their proposal is selected for development.

Our Olson Centre for Health Simulation has been fully upgraded to include heat and scent technologies, augmenting the experience so students are well prepared to work under stressful circumstances. When these changes were first introduced, a key concern raised was how students might react to these intense and potentially traumatic experiences. With our campus Mental Health Strategy, we have supports for students both in person and virtually, as well as our AI companions, which can support the mental health needs of students with evidence-based medical advice. Students are also required to provide consent before participating in these high-stress scenarios.

## HOW DID WE GET HERE?

Prior to 2020, NorQuest started working on VR for health programs. Our first launched VR scenario was Insulin Administration, which won two Ember Awards and a 2020 Telly Award (NorQuest College, 2019; The Telly Awards, 2020). This recognition and our work to pivot alongside new trends encouraged us to continue to develop new AR and VR learning supports. In turn, we created a strategic advantage for NorQuest in the market by being an early adopter and expert in VR and AR learning experiences.

In 2020, NorQuest began a pilot program for the Virtual Health Technology Project. This project was just the beginning of what NorQuest has been able to provide virtually to students, faculty, and staff. The demand for these services has remained stable and helped to improve patient experiences, reduce wait times, and make health care more accessible by helping people "see" doctors without going to a clinic or hospital. A similar virtual system was also applied to NorQuest Student Services. Initiatives such as study skills development, money management assistance, career and employment services, time management assistance, and health and wellness assistance have all become available virtually to students.

NorQuest started incorporating AR and VR technologies to attract a broader international audience in early 2020. Available in a student's first language, virtual campus visits became a strategic way to connect to international students on a much wider scale by virtually transporting a prospective student to the middle of the NorQuest downtown campus, or even allowing them to join in on a class they may be interested in pursuing. Studies began to show that students who engage in virtual campus tours are twice as likely to enrol as those who do not (Soriano, 2017). The use of virtual tours also builds confidence for new students, in particular those from outside Edmonton, allowing them to navigate around campuses and Edmonton's downtown area, and learn about the history of Edmonton, Indigenous communities and lands, cultural hotspots, and more.

NorQuest has built strong partnerships to allow prospective students access to these VR tours—and if a student has a VR headset already, they can access these tours directly from the NorQuest website. These tours receive praise from students who struggle to make it to campus because of anxiety or a reliance on accessible transportation, such as DATS. Virtual tours are informed by a growing literature that explores the role that VR tours can play to support individuals who struggle with pathfinding. Consequently, the VR tours we developed have also proved to be essential wayfinding tools. The use of AR/VR at the college has enabled enhanced learner experiences with College services and retail experiences, such as the bookstore.

Incorporating AR/VR at NorQuest supports learning and improved outcomes for students because it not only makes learning even more fun, but it also encourages and drives engagement and provides unique experiences in comparison to other institutions. NorQuest recognized that AR/VR offered the potential to redefine what it means to offer inclusive and accessible education and has developed partnerships with technology companies to become a world leader in this area. These forward-thinking initiatives have afforded NorQuest a massive edge in recruiting students, including those with disabilities, as well as international students and Indigenous learners.

## TRENDS

- Virtual experiences
- Virtual companions
- Ethics

## SIGNALS OF CHANGE

- Virtual Reality for Reentry is a partnership among the Institute for the Future, the Engagement Lab at Emerson College, and the Massachusetts Department of Correction that helps prepare women in Boston to re-enter society after serving long-term prison sentences by using virtual reality and Futures Thinking tools.

- Google Expeditions is an app that incorporates AR/VR. VR lets people explore the world virtually, while AR brings abstract concepts to life, allowing teachers to guide students through collections of 360° scenes and 3D objects, and point out interesting sites and artifacts along the way.
- Mendel Grammar School in Opava City, Czech Republic, helps students in biology classes learn about the anatomy of the eye. The team working on this project employed a Leap Motion controller and specially adapted Oculus Rift headsets to provide an innovative way of learning anatomy.
- MacEwan Residence in partnership with Edmonton-based virtual reality company 3DScanExperts have produced a virtual reality tour that allows prospective students to experience exactly where they will be living.
- Serious Labs is an Edmonton-based company that uses virtual reality simulation and a library subscription model to provide safe, hands-on training and assessment technology for industrial, heavy, and access industries.

## FURTHER READING

- Marianne Stenger's article, 10 Ways Virtual Reality Is Already Being Used in Education, provides examples from virtual field trips to skills training to special education.
- NorQuest College and Dynacorp Media's Health Simulation provides an example of skill acquisition in a virtual reality environment.
- The Virtual-EyeCane system, being developed by the Hebrew University of Jerusalem, is helping blind people navigate and avoid obstacles.
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## Desired State 2030

# GAMIFICATION

NORQUEST COLLEGE

**This Desired State is a vision for the future based on current trends and forecasting. It is a narrative set in 2030, exploring what NorQuest now looks like and how we have evolved over the last decade.**

At NorQuest, gamification is seen to enhance learning and improve outcomes for students by making learning more fun, while also improving engagement and providing unique and engaging experiences in comparison to other post-secondary learning experiences. Like virtual learning, gamification has been tightly woven into the experience of NorQuest students in a multitude of ways.

> **"Failure is always an option. At least in gamification, it is. Gamification, a learning experience where the student is in the driver's seat to solve real-world problems with the option to fail, try again and level up using ingenuity and grit. Gamification teaches resilience, creativity and sends students into the workforce as problem solvers. Ready Player One?"**
>
> *NorQuest Gamification Working Group Alex Drummond; Jennifer Fernando; Sithara Fernando; Parveen Hundal; Derek Kwan; Maryna Siek; and Joan Wall*

Living our NorQuest value "We work at play and play at work," students regularly play and build games in the classroom (virtual or otherwise). Gamification is tightly woven into all NorQuest curricula, with students not only playing experiences designed by both instructors and other students, but also using the knowledge they have gained in their other courses to create small, gamified learning experiences for each other. Cloud gaming enables students to play digital experiences on nearly any device, from a mobile smartphone to a Chromebook to a high-end desktop PC. The game space is a place where learning and fun can occur; games made by students as well as commercial games offer opportunities for NorQuesters to connect with one another. Although playing games is deeply engaging for NorQuest students, key to the overall gamified learning experience is the opportunity for students to work collaboratively with one another to build board games, video games, and XR experiences in a transdisciplinary way.

A fundamental prerequisite to the experience is NorQuest's robust framework for gamification; it guides instructors in applying gamification in their curricula. The gamification framework has outlined a levelled approach to building gamified learning experiences such that the products that experienced designers and students produce are consistent. Low-level sophistication of gamified learning involves rewards systems such as points, badges, and leaderboards, while higher levels of gamified learning fundamentally change the learning experience through role play, choice-based decision making, narrative design, and innovative gameplay dynamics. At the highest level of gamification, students themselves are the creators of the learning experiences because NorQuest believes that one of the best modes of learning is to deeply think about how to teach knowledge, and then produce a didactic (and fun) learning experience.

Despite extensive use of gamification, not all of NorQuest's andragogy is game-based; it has become a key tool among other types of content creation, which still take many different forms, including writing, coding, video, and others. Gamification is simply a tool in the repertoire of all instructors.

Tying into the transdisciplinary STEAM approach and the highest level of the gamification framework, NorQuest students are able to work across disciplines to produce gamified learning experiences. These opportunities mean that NorQuesters are able to build practical knowledge in a variety of disciplines and to cross-pollinate expertise across a diverse body of learners. In addition, the best of these gamified learning experiences are carefully considered for inclusion in a student innovation prize, where students are connected to NorQuest business experts and entrepreneurial support to commercialize their gamified learning experiences. Some students even opt to create partnerships with local game developers to build out their learning experience products for a global market.

## HOW DID WE GET HERE?

We moved into game-based learning space following peer-reviewed research and our own market research. Our research found that games could introduce goals, interaction, problem solving, competition, and fun learning environments (Stenger, 2017). Even in 2017, game-based approaches were an emerging trend in higher education because games not only support learning in the form of an exercise, but they may also be used as a tool to evaluate learning (Stenger, 2017). In fact, 80% of students surveyed in February 2020 said that if given the opportunity, they would play a game instead of writing an essay as an assignment (NorQuest College, 2020).

> **""(It's) easy to learn when courses are turn(ed) into games"**
>
> *NorQuest ESL Intensive Student, Anonymous*
> *From the ESL Reimagine Higher Education focus group*

In order to build gamification expertise, NorQuest invested in exploring gamification through strategic pilots in the 2020s. One of these pilots was the Q Prize project, the "Art of Work." Through the Art of Work, NorQuest was able to pilot gamification within its Environmental Protection Technology curriculum. Other pilots occurred for business, where students were able to experience simulation of real meetings using artificial intelligence and gamified points systems and badging, which served to drive engagement by providing them with tangible indicators of progress. One key innovation was the gamification of "qualifications" and "experience requirements" for admission to programs. Prospective students are now able to play experiential games that test their real-world understanding of program prerequisites and interests. These games provide badges and stream students into learning experiences that are best aligned to their needs and career aspirations.

Importantly, NorQuest's foray into esports in the 2020s brought about a college-wide understanding of how games can be used to create affinity spaces, community, and opportunities to experience the full gamut of interactive digital media experiences. While esports were a high-profile medium for generating interest in the College itself, games became an important tool for recruitment by building a sense of cohesive community and making technology more accessible and inviting to existing NorQuesters and prospective students.

NorQuest also invested in a game development platform for instructors and students so that they could quickly build gamified experiences for one another. This platform took on a life of its own and has become a much-sought-after product, worldwide, for developing learning experiences.

Although the ramp-up to acquiring gamification capacity took a few years, the results for student engagement have been extremely valuable. Developing these gamified experiences meant that NorQuest not only had to invest in game development talent and build game-design capacity among its staff, but also had to establish key partnerships with local game developers. Through this capacity and relationship building, NorQuest's instructors—now learner experience designers—were able to develop robust learner experiences alongside local game development experts.

## TRENDS

- Democratization of education and adoption of open source solutions
- Gamification
- Lifelong learning
- Students as co-creators
- Virtual experiences

## SIGNALS OF CHANGE

- Robo Rally is a board game that teaches programming and cooperation. Although the game is competitive, winning is highly dependent on the capacity to efficiently and effectively learn how to program.
- The Kahoot! app is a basic quiz app that allows users to create custom quizzes on demand. The game assigns points and has leaderboards to give rewards to players for doing well.
- Keep Talking and Nobody Explodes is a cooperative game in which players communicate through abstract means to defuse a bomb. Although the game's outcomes are not realistic, the procedural aspects of learning how to defuse a bomb with guidance and support are interesting inspirations.
- America's Army is a recruitment and training tool that has been available since the mid-2000s. America's Army began as a comic book series and has grown into a large-scale game that allows recruits to try out life in the military.

## FURTHER READING

- The seminal work of Robin Hunicke, Marc LeBlanc, and Robert Zubek established "mechanics, dynamics, and aesthetics," the MDA framework, as a starting point for understanding game design and is a crucial tool for any instructional designer who seeks to embed game design into teaching and learning.
- Although the MDA framework has served as a basis for understanding game design, newer frameworks are starting to emerge, with "design, dynamics, and experience" as a promising framework that seeks to expand the limitations of MDA.
- When considering games for learning, the social constructivist approach is one of many that can be considered for adapting conventional learning material. Learn more from Linda Polin's work here.

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## Desired State 2030

# OPEN EDUCATIONAL RESOURCES (OER)

NORQUEST COLLEGE

**This Desired State is a vision for the future based on current trends and forecasting. It is a narrative set in 2030, exploring what NorQuest now looks like and how we have evolved over the last decade.**

NorQuest is now a global leader in open educational resource (OER) development and use. Faculty and student awareness of OER is strong—95% for faculty and 90% for students. More than 80% of College programs are what is known as "Zed Cred," programs with zero textbook costs. NorQuest-authored materials, including textbooks, test banks, videos, audio files, and even virtual reality simulations are prominent in the new provincial and national OER repository. A generous government and Hewlett Foundation–funded college and provincial grant program encourages faculty to create and review open materials. Beyond resources, faculty have widely adopted open pedagogy, a student-centred approach to learning where students create or co-create educational materials. One of the highlights of these many creations includes a student-authored practicum manual, a list of tips and resources for students going on practicum in the Health Care Aide field, which has been adopted across Canada. The Curriculum Development OER libguide is the go-to source for post-secondary institutions across Canada interested in finding, developing, and implementing OER or applying open pedagogy.

> **"The cost of college courses is the biggest drawback from me going back to school, being left with all that debt especially if you change your mind on where you want to end up, but free textbooks that are online would (for) one make it more convenient to travel around but also relieve some of the cost of courses, which to me is a step in the right direction."**
>
> *NorQuest Alumni, Anonymous*
> *Reimaging Higher Education Survey*

## HOW DID WE GET HERE?

Beginning in 2016, Curriculum Development began encouraging faculty to use OER in their courses, in particular open images. By 2018, there was widespread adoption of open images, to the point where it was no longer necessary to purchase an image subscription service. By 2020, more than 20 courses were using partially or fully open textbooks. Providing students with a free textbook can dramatically improve student learning outcomes. Research shows that students "have delayed purchasing textbooks; sixty-five percent elect not to purchase the textbooks; fifty percent choose majors based on the textbook prices; and thirteen percent have considered dropping their courses due to textbook prices" (EDUCAUSE, 2020). In 2020, the Students' Association of NorQuest College (SANQC) asked us to prioritize OERs, and results from a Reimagine Higher Education survey in Fall 2020 indicated that NorQuest students and alumni believed OERs were one of the top three most important trends for the future of education (NorQuest College, 2020). We listened.

> **"NorQuest's close ties to industry and community is a unique position for open education. The opportunity for reciprocal relationships with the profession through student-adapted resources increases relevancy for learners, enables work-ready skill development, and networking with potential future employers or mentors."**
>
> *Krysta McNutt, Open Education Lead, University of Alberta*

In 2022, NorQuest adopted an institutional OER procedure. The procedure provided faculty with guidelines for the creation and adoption of open materials, including licence conditions for OER released through NorQuest and how faculty time and resources would be dedicated to OER development. This procedure and numerous presentations at faculty meetings and town halls helped raise awareness of OER. These presentations also served to dispel some of the common myths about OER: that they are hard to find, that they lack quality, and that they lack the supplemental materials found in publisher textbooks (Grodecka & Sliwowski, 2014). The presentations also introduced faculty to open pedagogy. SANQC conducted a parallel OER awareness-raising campaign for students.

That same year, a local research initiative was established to measure the impact of OER by collecting data on OER use and students' financial savings. NorQuest continued to reach out to other provincial and international organizations involved in the research, development, and promotion of OER. We joined the Community College Consortium for Open Educational Resources (CCCOER), a great organization for colleges interested in OER development and networking. We began to explore

funding opportunities and applied for OER development grants through the Hewlett Foundation and the Bill & Melinda Gates Foundation. NorQuest also added the essential role of Transfer Agreement Liaison to the Teaching and Learning portfolio. This role was an important advancement for the College as transfer agreements, particularly with university degree programs, rose 124% in the next three years. In this work, the Liaison was able to socialize the success of our OERs, remove perceived barriers, and help support the recognition of NorQuest OER for transfer credit at other post-secondaries.

In 2023, NorQuest helped spearhead the re-establishment of eCampus Alberta. This time, however, eCampus was given a more focused role—promoting OER and lobbying the provincial government for funding. Using provincial funding, NorQuest established a series of grants for faculty involved in creating and reviewing OER, provided release time from teaching, and supported training, as well as other incentives to develop materials. Part of this work included incorporating the development of OER into the curriculum so that students were co-creators and could point to these materials on their Employment Profiles.

In 2025, NorQuest faculty, students, Disability Services, and Curriculum Development collaborated on the development of a comprehensive guide for finding, developing, and implementing OER and for sharing tips on open pedagogy. This guide included accessibility and Universal Design for Learning (UDL) training that propelled NorQuest to become the gold standard for OER creation. In fact, NorQuest developed an OER on accessibility that is used worldwide. This CC BY–licenced libguide became the go to source for post-secondary institutions and faculty across Canada interested in open practices. In partnership with U of A's Open Education Alberta Library Publishing for Open Textbooks , NorQuest faculty began publishing OER textbooks and supplementary materials at the rate of three per year so that in 2030, there are over 15 NorQuest-authored textbooks (in different media) in the provincial repository.

By 2028, NorQuest's dedication to open education was a tremendous success and raised our national profile. The same year, NorQuest gained international prominence as co-host, with the University of Alberta, of the OE Global Conference, the most important and prestigious international open education conference. This recognition led to international partnerships that supported the creation and evaluation of OER with a social justice lens, included global perspectives, and served as a catalyst for our faculty and students to support projects in other countries.

By 2030, NorQuest's active encouragement of OER development and use as well as open pedagogy, has not only enabled the College to realize its goals of providing students with inclusive and accessible education, but also helped us become one of the most innovative post-secondary institutions in the world.

## TRENDS

- Pricing pandemonium
- Democratization of education and adoption of open source solutions
- Virtual experiences
- Students as co-creators
- Faculty as facilitators

## SIGNALS OF CHANGE

- Open Education Global (OEG) "is a global, members-based, non-profit organization supporting the development and use of open education around the world."
- OER Commons is a public digital library of open educational resources. This is just one example of an OER repository.

## FURTHER READING

- Virginia Clinton and Shafiq Khan's paper, Efficacy of Open Textbook Adoption on Learning Performance and Course Withdrawal Rates: A Meta-Analysis, found that although there was no difference in the learning outcomes between students who used open textbooks and those who used commercial textbooks, the withdrawal rate for classes with open textbooks was lower.
- SPARC's OER Mythbusting debunks the top seven myths about OERs in higher education, including questions around sustainability, copyright, and free resources.
- Nancy Fraser's Reframing Justice in a Globalizing World highlights the importance of considering socioeconomic and cultural issues when using open resources. In other words, when adopting resources developed elsewhere, we should use a social justice lens to evaluate their relevance.

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## Desired State 2030

# GLOBAL ALLIANCE

NORQUEST COLLEGE

**This Desired State is a vision for the future based on current trends and forecasting. It is a narrative set in 2030, exploring what NorQuest now looks like and how we have evolved over the last decade.**

Using the concept of the Star Alliance model in the airline industry (Star Alliance, 2021) and the California Virtual Campus – Online Education Initiative (California Community Colleges, 2020), NorQuest College developed a partnership with 10 post-secondary institutions globally. Students are able to take online courses at one of the partner institutions while earning a credential either from the partner institution or their "home-base" institution. In addition, they are able to show on their transcripts, Employment Profiles, and social media platforms—like LinkedIn—that they have received international education.

This alliance has created cross-jurisdictional partnerships and filled the gap of study-abroad programs by giving students an opportunity to learn about other cultures and communities from the comfort of their homes. However, the biggest benefit for NorQuest College is the impact it has had as a recruitment tool. We have found that international enrolment increased because international students were already familiar with NorQuest College and felt they could be successful in their future studies.

> **"I think (it is) most important (that) students have the opportunity to continue their study from (anywhere)... Course transferability saves their time as well as leads learners to take other courses."**
>
> *NorQuest Student, Anonymous*
> *From the Reimagine Higher Education Survey*

The goal of the project has been to invite the world to NorQuest, take NorQuest to the world, and develop intercultural competencies.

It was a risky idea, and not everyone in the institution was on board with the alliance concept because of the complexity of developing course transfer agreements, sustainable institutional partnerships based on shared values, and concerns that NorQuest College students would prefer to take courses at other institutions, resulting in a decrease in revenue for NorQuest. That, coupled with provincial budget cuts in the early 2020s and concerns about future enrolment, were worrisome to many throughout the organization.

However, once implemented, we discovered that we had more students from other countries wishing to take courses at NorQuest College, to show Canadian education on their Employment Profiles, and access NorQuest's business incubator. With our increased focus on becoming a business incubator, we have connected students to entrepreneurial mentorship and provided access to technology, space, and investors. Many connections have been developed through NorQuest's work-integrated learning (WIL) opportunities, which could be completed virtually or in person. This means that students beginning their studies with NorQuest from their home countries have opportunities for virtual work experiences, business startup supports, and learned intercultural competencies.

## HOW DID WE GET HERE?

Following COVID-19, Immigration, Refugee, Citizenship Canada (IRCC) continued to allow international students to complete a portion of their studies in their home country that would count toward their post-graduate work permit (PGWP), which has been a great driver in NorQuest's success. The most popular courses with international students are those with verified digital badges, microcredentials, and virtual WIL opportunities, which can be stacked to form a certificate or diploma.

In addition, courses with simulations and virtual reality (VR) components have been very popular. The cost to purchase a pre-set VR headset has replaced the cost of textbooks, making some of the courses offered "Zed Cred."[2] The simulations and VR integration makes these courses valuable learning experiences by contributing a form of "hands-on" labs and training. Although some students who began their studies with us online through the alliance program did not want to continue their studies in Canada, they were still finding employment in their home country at a higher salary because of their international WIL experiences and their connections to a Canadian business incubator. Students were able to show prospective employers project-based work done in other countries, giving them a competitive advantage when starting their careers.

Wanting to leverage the value of the hidden curriculum of intercultural connection, at the start of their course, students are introduced to virtual "tables" at the Global Alliance Café (GAC). At these online meeting spots, student share perspectives, ideas, and experiences, with weekly conversation prompts.

[2] Zed Cred is a course with zero textbook costs. For more information on Zed Cred, please see the Desired State 2030: Open Educational Resources.

Along these lines, Global Communities of Practice for faculty have fostered innovative professional development and inspired new teaching practices, as well as strengthened the relationships with alliance institutions. This connection has also helped faculty to embrace their role as facilitators by bringing together NorQuest learners and learners from alliance partner institutions to tackle real-world problems in a project-based class (NorQuest College, 2019).

The alliance model has also helped to sell our subscription-based continuing education strategy (EDUCAUSE, 2020). Employers offering education subscriptions for their employees, and individuals wanting continuing education opportunities, love the idea of getting to take classes at our partner institutions because of our smooth laddering opportunities, which gives us a strategic advantage in the market.

More than anything, the alliance supports our Deep Purpose. As NorQuesters and Difference Makers, our purpose is to transform lives, the community, and the world. Through this alliance model, we have been working to live this purpose by democratizing knowledge (Bokor, 2012) and broadening our reach to provide accessible education that has the power to transform lives. With some of our courses, this purpose also comes through our focus on providing an "interrupted service model," meaning that students can download learning materials onto their devices while they have an internet connection and work on materials or study without access to the internet. NorQuest has also encouraged Black, Indigenous, and People of Colour (BIPOC) students to study and work abroad either in person or virtually, sharing their perspectives, experiences, and values. Students have gained the skills to do so by building their intercultural competencies after taking our Global Citizenship Bootcamp, which was launched in 2020 and expanded throughout the decade (NorQuest College, 2021).

## TRENDS:

- Personalized learning
- Lifelong learning
- Subscription-based education
- Purpose-driven organizations
- Alternative credentials
- Personal branding
- Faculty as facilitators
- Democratization of education and adoption of open source solutions

## SIGNALS OF CHANGE

- The Star Alliance began in 1997 and now has 26 member airlines, each with its own distinctive culture and style of service. Star Alliance members come together to offer smooth connections across a vast global network. You can book with one airline but are allowed to transfer among multiple airlines. October 2019 data states that the Star Alliance members have 762.27 million combined annual passengers, and serve 195 countries.
- The California Virtual Campus – Online Education Initiative (CVC-OEI) is a collaborative effort among California community colleges (CCCs) to ensure that significantly more students are able to complete their educational goals by increasing both access to and success in high-quality online courses. This initiative "gives over 2 million college students access to more than 10,000 online, transfer-level courses."
- The Global Citizenship Bootcamp at NorQuest College prepares students to study or work abroad by building their intercultural competencies and improving competitiveness in the future workplace.

## FURTHER READING

- The 2020 EDUCAUSE Horizon Report | Teaching and Learning Edition also explores the concept of alliances within higher education.
- Ray Schroeder's article, Subscription Rather Than Tuition, discusses the trend of subscription as a business model for higher education disrupters such as Coursera and LinkedIn Learning.

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## Desired State 2030

# POST-NORQUEST: OUR LEARNERS AT WORK

NORQUEST COLLEGE

**This Desired State is a vision for the future based on current trends and forecasting. It is a narrative set in 2030, exploring what NorQuest now looks like and how we have evolved over the last decade.**

NorQuest learners have indicated that the top skill they acquire through our courses is resilience. In an ever-changing world, we are proud of that.

The last 10 years have presented many challenges and opportunities for our learners. Having to live and work in fields constantly being disrupted can take its toll. However, our learners are uniquely situated to be able to adapt and bounce back stronger than ever. In today's workforce, individuals are responsible for improving their skills and competencies on a regular basis to stay competitive. There is fierce competition for top talent, and NorQuest learners have the unique advantage of being able to constantly reinvent themselves. Every NorQuest learner enters and re-enters the workforce "future-proofed" with our Skills of Distinction: Resilience, New Ways of Thinking, and Inclusion.

NorQuest serves various types of learners, including individuals with disabilities and newcomers. To ensure their success, it is important to understand their unique experiences and needs. NorQuest works closely with our learners, employers, and organizations, such as the Edmonton Mennonite Centre for Newcomers, to understand and address their potential barriers to employment. Many NorQuest learners are micro-entrepreneurs and work in the gig economy, meaning they make their income by being both an employer and employee—they might work as freelancers, work for multiple companies, be on-call, work on contract, and/or be temporary employees (Thompson Rivers University, 2019; Deloitte, 2021). They use the NorQuest Skills of Distinction on a daily basis to solve both work tasks and interpersonal challenges. In addition to technical skills, NorQuest learners also have the professional skills—communication, emotional intelligence, creativity, and innovation—to problem solve for the public good and earn a competitive wage. When working in the gig economy and in fluid, diverse, and multigenerational teams, these skills are vital to success. Our alternative credentials and subscription-based education model allow our lifelong learners to upskill or reskill by learning new technical and professional skills (formally known as soft skills) tailored to the learner's needs in order to complete project-based paid work.

Although automation and artificial intelligence (AI) have dramatically changed the way we work and live, we have been able to keep "fidelity to the human" by having humans complete the more social and emotional work, or work "that requires judgement" (Deloitte, 2021). The new division of labour among humans, machines, and algorithms has resulted in a decline in roles that are increasingly becoming redundant (World Economic Forum, 2020). Globally, approximately 85 million jobs had been displaced by 2025; however, even more adaptive roles and professions were created, counterbalancing these job losses (World Economic Forum, 2020). Approximately 97 million new roles emerged in completely new occupations or in existing occupations that underwent significant transformation and innovation (World Economic Forum, 2020). Currently "in-demand skills include working with machines (technology skills), applying specialized expertise (higher cognitive skills), interacting with stakeholders (social skills), and managing, teaching, and developing people (emotional skills) (Taylor et al., 2019)" (Boucher & Goble, 2019). Professions reflect the "adoption of new technologies and increasing demand for new products and services," which created "greater demand for green economy jobs, roles at the forefront of the data and AI economy, as well as new roles in engineering, cloud computing, and product development" (World Economic Forum, 2020).

> **"Emotional intelligence, resilience and adaptability all contribute to professional agility, which makes your (NorQuest students) reliable in nearly any circumstance."**
>
> *Member of a NorQuest Program Advisory Committee (PAC), Anonymous From the Reimaging Higher Education Survey*

Health care and community service work remains a top opportunity, full- or part-time, for work that cannot be fulfilled by AI but has been augmented by it (Robert, 2019; The Guardian Editorial, 2018). "Social-first and community businesses prosper" in 2030 where "workers find flexibility, autonomy, and fulfilment, working for organizations with a strong social and ethical record" in a "bustling and creative market" (PwC, 2018). New professions in 2030 "showcase the continuing importance of human interaction in the new economy through roles in the care economy; in marketing, sales, and content production; as well as roles where a facility or aptitude for understanding and being comfortable working with different types of people from different backgrounds is critical" (World Economic Forum, 2020).

Our Health and Community Studies program graduates[3] continue to be trained in evidence-based and accredited curriculum, which now includes how to work with AI programming and virtual care options. The use of AI to diagnose medical conditions has accelerated the ability for patient diagnostics and testing while also ensuring cost effectiveness for our public health system. Health and Community Studies curriculum also focuses on learning how to provide compassionate, empathetic care and communication to patients. Much of this social and emotional scenario-based practice, as well as medication administration, can be done through the virtual reality (VR) and augmented reality (AR) programs we have developed in partnership with local video-gaming companies.[4]

## HOW DID WE GET HERE AND HOW ARE OUR LEARNERS SUCCESSFUL AFTER RECEIVING A NORQUEST CREDENTIAL?

NorQuest's 2019 eScan found that

> In the current work environment, workers typically seek out jobs for which they have some but perhaps not all skills. In the future, employers may use reputation engines and data analytics to break work into tasks and actively seek out individuals with the right skills for those tasks. Organizations will need to develop a capacity to disaggregate work while retaining some long-term employees (e.g., for strategy and management). The worker may need to cultivate a personal brand (Boucher & Goble, 2019).

This trend of personal branding and the gig economy has continued through to 2030, and NorQuest has learned to pivot alongside these trends. Between offering verified digital badging, microcredentialing, and our Skills of Distinction, there are a number of ways we help our learners develop a personal and work brand. This includes being able to share content created in an educational setting—including things like open educational resources (OER) contributions or AI programming for the NorQuest teaching assistant, Sage—to highlight a learner's depth and breadth of skills.

With our significant workforce ties, we have also been able to create a mentorship program, NQ Difference Markers Connects (NQ Connects). NQ Connects helps connect students with industry members, instructors and staff, or alumni/lifelong learners. This mentorship program helps solve a number of problems for our learners who work in the gig economy, including loneliness, reputational-based hiring, and networking.

In keeping with NorQuest's Deep Purpose and our desire to create belonging, NQ Connects has also created an alumni co-working space, which has become an antidote for social isolation.

> **"I think it is important to always keep building on one's knowledge. With our evolving society, there is always a new skill that we should strive to add to our repertoire. Part of a rewarding career is being able to improve and move forward. Knowledge is power."**
>
> *NorQuest Alumni, Anonymous*
> *From the Reimaging Higher Education Survey*

The space is free to alumni for two years post-graduation and free to our subscription-based learners. The shared workspace model also has bookable breakout meeting rooms and makerspaces for our lifelong learners and industry connections.

In the early 2020s, the gig economy consisted of relatively low-skilled and low-paid workers, many without rights or consistency (TrendWatching, 2018). In 2018, the Bank of Canada estimated that as many as 30% of Canadians participated in some form of informal paid work (Kostyshyna & Luu, 2019). In order to develop some protections and support, a gig economy contractors' association was created. The association provides support by creating a community of gig workers and contractors to share experiences and crowd source solutions for work-based problems. It also functions as a hiring agency website where employers can search for contractors with certain skills, reputation, and availability. The association ensures that gig workers and contractors earn standard rates and are not being taken advantage of. At the same time, employers can also file complaints with the association if the work was not conducted according to the contract. Through this system, the contractor gets to decide whether or not to choose a job offered by an employer. Employers can give out bonuses to those who they felt exceeded expectations, which might make the contractor more likely to accept future opportunities from that employer.

Many of our learners, as well as learners from other institutions, participate in this association and have their personal branding profiles hosted on the site as it helps to ensure fairness in a new and precarious economy. The skills our learners acquire, including resilience, new ways of thinking, and inclusion, help them to be successful in this new fluid and team-based gig economy—and association data shows that NorQuesters are the highest-ranked contractors on the site.

[3] Our health programs that have accreditation standards still use the term graduate.
[4] See Desired State 2030: AR/VR for more information

## 2020 TRENDS

- Gig economy
- Professional skills
- Personal branding
- Democratization of education and adoption of open source solutions
- Mentor-to-protégé
- Gamification
- Virtual experiences
- Virtual companions

## SIGNALS OF CHANGE

- Agony and Ecstasy in the Gig Economy: Cultivating Holding Environments for Precarious and Personalized Work Identities is a study that looks at the challenges and successes in the gig economy.
- Ten Thousand Coffees is a networking and mentorship program that connects NorQuest students with College employees and external partners for a career-inspiring coffee.
- The hyremi™ platform is an "artifact from the future" by the Brookfield Institute for Innovation and Entrepreneurship. They imagine in 2040 that employment applications will be submitted through the hyremiTM platform, which gives applicants an employment score pulled from a "variety of data sources, including social media, LinkedIn, police records, health records, and public surveillance data."
- The United States–based Portfolium Folio Network allows students to build an online portfolio showcasing their learning achievements, projects, and competencies to empower them to better demonstrate their skills to employers.
- Recruitment tools, such as Plum's Talent Resilience Platform, promise to accurately map human potential and key behavioural indicators to ensure that organizations are hiring, developing, and deploying the right talent for them to stay resilient and adaptive.

## FURTHER READING

- Deloitte's report, "The Intelligence Revolution," looks at the changing role of the economy and future job archetypes. In addition to discussing the gig economy, the report also looks at how technology will "replace mundane or repetitive tasks, including administrative work, some legal roles, investment analysts, insurance agents, and medical diagnosticians."
- Thompson Rivers University's "Environmental Scan Series.11: The Future of Work: Part 1 – The Gig Economy and the Future of the Job," explains the trends moving the workforce into the gig economy.
- Future Work Skills 2020 report identifies six drivers of change that will shape the future employment landscape and 10 key skills that workers will require to adapt to those drivers of change.

## Predictions for how the workforce is expected to change

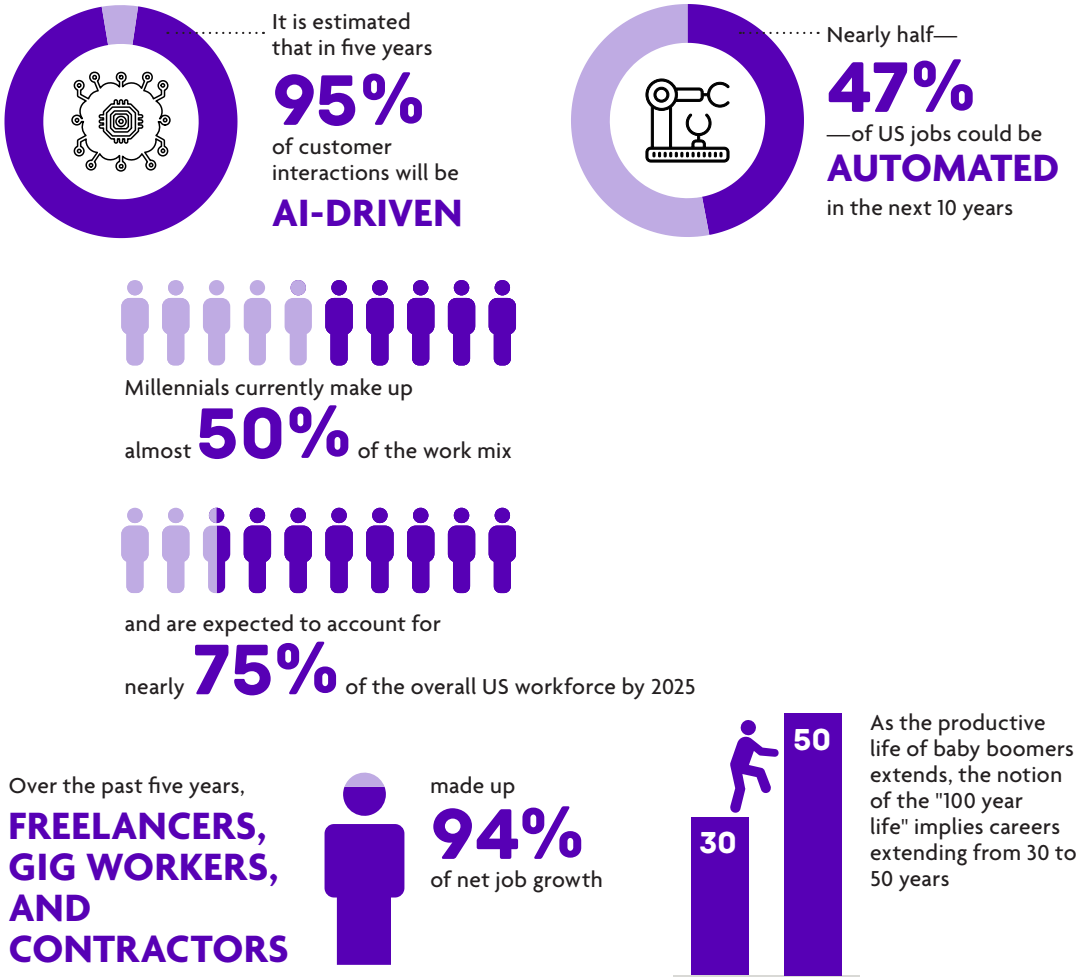


Image from: https://www2.deloitte.com/content/dam/insights/us/articles/4816_fow_health-systems/DI_FoW_health-systems.pdf (p.3)

## Top 5 job roles in increasing and decreasing demand across industries

### ↗ Increasing demand

1. Data Analysts and Scientists
2. AI and Machine Learning Specialists
3. Big Data Specialists
4. Digital Marketing and Strategy Specialists
5. Process Automation Specialists

### ↘ Decreasing demand

1. Data Entry Clerks
2. Administrative and Executive Secretaries
3. Accounting, Bookkeeping and Payroll Clerks
4. Accountants and Auditors
5. Assembly and Factory Workers

Source: World Economic Forum. (2020). *The future of jobs report 2020* (p. 30). http://www3.weforum.org/docs/WEF_Future_of_Jobs_2020.pdf

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## Desired State 2030

# ANTI-RACIST ORGANIZATION

NORQUEST COLLEGE

**This Desired State is a vision for the future based on current trends and forecasting. It is a narrative set in 2030, exploring what NorQuest now looks like and how we have evolved over the last decade.**

> **"I see this as an issue that should be the first thing to be dealt with in ANY community setting. People, no matter who they are and what they look like, should be able to walk into a space and not feel threatened or less than anybody else in the room. (They) should be allowed to focus on their daily life and feel safe."**
>
> *NorQuest Student, Anonymous*
> *From the NorQuest Reimagine Higher Education survey*

This Desired State is to **hold space** for conversations dedicated to moving NorQuest College towards being an **Anti-Racist Organization**. Results from a Reimagine Higher Education survey in fall 2020 indicated that current NorQuest students and alumni believe that being an anti-racist college will be the most important priority for the future of education (NorQuest College, 2020). We have a duty to listen, learn, and take action.

*How to be an Antiracist* author Ibram X. Kendi writes:

> The opposite of racist isn't "not racist." It is "anti-racist." What's the difference? One endorses either the idea of a racial hierarchy as a racist, or racial equality as an anti-racist. One either believes problems are rooted in groups of people, as a racist, or locates the roots of problems in power and policies, as an anti-racist. One either allows racial inequities to persevere, as a racist, or confronts racial inequities, as an anti-racist. There is no in-between safe space of "not racist" (Avins, 2020).

An anti-racist organization recognizes systemic racism within its workplace, from recruitment and hiring practices to performance management and recognition to career advancements, and actively makes its existing systems, policies, procedures, and culture more equitable by unlocking opportunities to workers who previously didn't have access to them (Liu, 2020). University of Virginia professor Laura Morgan Roberts argues that:

> [T]o be anti-racist is to acknowledge the permanence of racism through organizations, industries, and communities, and to recognize that racism is a system of disproportionate opportunity and penalties based on skin colour. ... This isn't always obvious. It can manifest in policies, procedures, unspoken norms, and routines that push people into different paths of opportunity, where some individuals have greater access and others have less, due to race (Liu, 2020)..

There is work that needs to take place at NorQuest and this work is an **emergent process**:

> The big thing to know about emergent processes is that they can be really uncomfortable. You don't know exactly how an emergent process will unfold. **You also don't know the specific outcomes that will help move anti-racism forward.** When a process is emergent, expectations and outcomes change along the way. This can lead to disappointment. It's not traditional project management. It's not like there's a Gantt chart with milestones on it. Things flow in unpredictable ways" (CommunityWise Resource Centre, 2017).

One of NorQuest's Qs, our intentional values, states that "Compassion creates belonging. **How we treat each other matters.** What we do now impacts seven generations. **Where there is fear, we turn up empathy and listening.** We don't know what other people are holding or carrying, so we start with compassion. What a difference a genuine smile can make. NorQuesters take care of each other and we take care of ourselves, so we can take care of **changing lives.**"

> **"Ending Racism is not for tomorrow...ending racism is for today!"**
>
> *NorQuest ESL Intensive Student, Anonymous*
> *From the ESL Reimagine Higher Education focus group*

There is a lot we need to learn and a lot of people we need to listen to (CommunityWise Resource Centre, 2017), and as Kyana Wheeler, a strategist for Seattle's Race and Social Justice Initiative, states, **"Anti-racism is a journey (and) justice is the goal"** (Avins, 2020). This promise to listen and learn, this work, is happening across the College with an anti-racism plan in development and with the Reimagine project, through which we will invite people to imagine what our 2030 could look like as an anti-racist organization.

> **"Ending racism starts with me and you"**
> *NorQuest ESL Intensive Student, Anonymous*
> *From the ESL Reimagine Higher Education focus group*

## SPRING 2021 UPDATE: CURRENT STATUS

In response to the re-emergence of the Black Lives Matter (BLM) movement as the focal point of societal discourse, NorQuest released the following statement in Spring 2020:

> We have not and will not rush to a response that doesn't start with an open dialogue within NorQuest. We will respond by incorporating our shared understanding into meaningful actions to make lives better and to stand in solidarity for what's right. **We have work to do.**

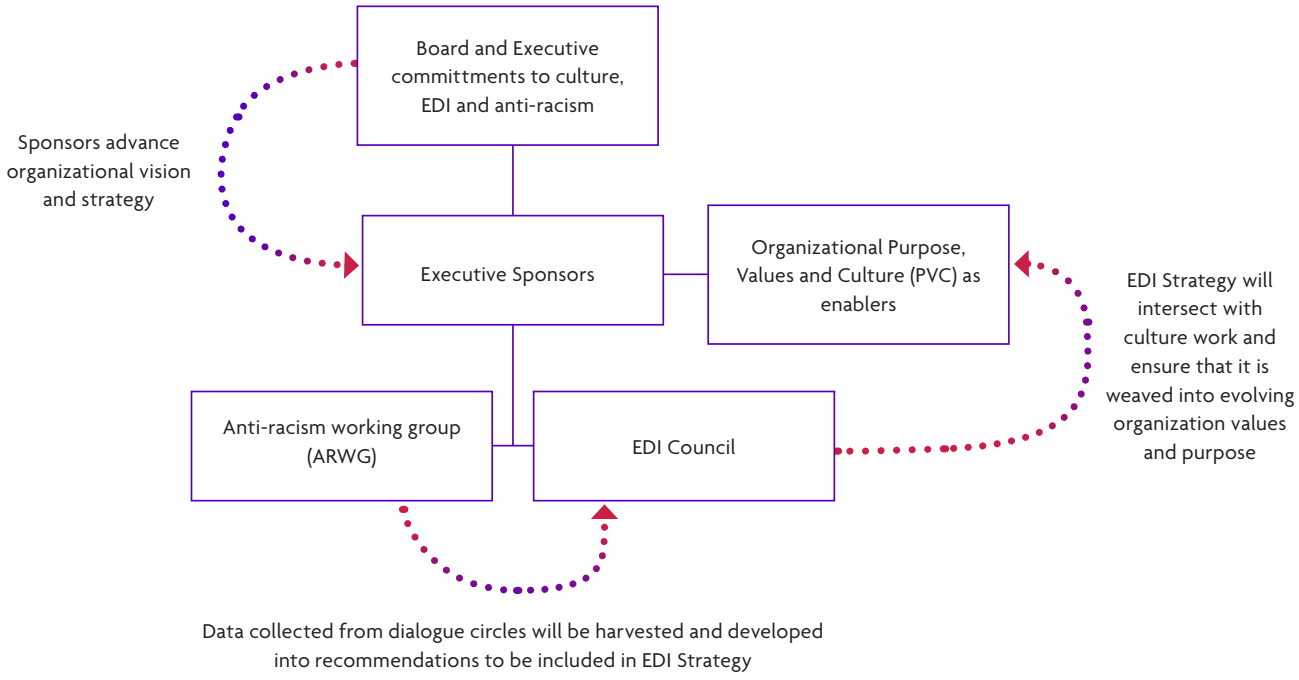
This communication outlined a pathway for NorQuest to begin dedicated and purposeful work on anti racism. Starting with an ongoing re-examination of ourselves and acknowledging the work NorQuest has to do internally became the foundational building blocks from which we could move forward.

Shortly afterward, the Anti-Racism Working Group (ARWG) was formed to facilitate the launch of an internal listening campaign to understand what issues of systematic racism exist within the college. The ARWG is composed of 16 members from across the College with significant Black, Indigenous, and people of colour (BIPOC) representation.

The listening campaign aims to capture information about issues, challenges, and opportunities to inform our anti-racism, equity, diversity, and inclusion (EDI), and culture work, which are already part of our priorities. Through communication efforts, the listening campaign aims to bring awareness to issues of racism, engage with NorQuesters across the College, and provide tools for having the difficult conversations required to inform what becoming an anti-racist organization looks like.

The following diagram illustrates how the work of the ARWG will inform the work of the EDI Council and be incorporated into the organization-wide EDI strategy. This diagram will continue to evolve to reflect our understanding and support the iterative planning processes.

## Integrated Governance View



## ACTIONS TO DATE

### Executive Commitments

The Executive Team has committed to supporting and championing the following:

1. An equity, diversity and inclusion (EDI) strategy and an Anti-racism Taskforce by having greater visibility into the strategies and project plans to advance milestones such as diversity in leadership.
2. Resource allocation to hire experts in the fields of EDI and anti-racism to advance the work; to demonstrate the importance of this work, the anti-racism advisor will have a dotted reporting line to the president and CEO of NorQuest College .
3. A racially equitable and inclusive lens—utilizing talent and expertise at the college—to support staff and student issues and concerns, and support purposeful and resourced evaluation of our policies, processes, and procedures.
4. A journey of continuous reflection and self-directed learning for ourselves and continued listening to and learning about the lived experiences by individuals of the Black, Indigenous, persons of colour (BIPOC) community through 1) allocating dedicated time on the Executive Team agenda related to the sharing of BIPOC lived experiences; and 2) participating in facilitated discussions to gain greater understanding and perspective on BIPOC worldviews. Furthermore, holding senior leadership and people leaders accountable to ongoing dialogue and training
5. Advocating for this leadership agenda internally and externally by dedicating appropriate resources in all areas of the College.
6. Committing to adjusting, reviewing, and revising these commitments on an annual basis.

### Listening Campaign

An internal college-wide listening campaign was launched using Circle practice. Circle practice is a held space for NorQuesters to practise listening and speaking from the heart and to allow a new future to emerge. The Circle is a sacred place to come together to practise listening, presence, and witnessing, and to build connections and nurture healing. These are community-led and community-supported conversations that honour and centre Indigenous wisdom in guiding our College community toward deeper relationships with ourselves and others to support racial healing and transformation.

The purpose of the Circle practice is to create a safe environment where participants can share their perspectives and experiences in a space where each person is equal and where each person belongs. Circle practices, or Sharing Circles, are a foundational approach in Indigenous practices because they encourage dialogue, respect, and the co-creation of understanding. This respectful approach to talking with others generates interconnectedness where voices are heard in a respectful and attentive way.

- All listening campaign facilitators received training on Circle Practice using this libguide resource. Training took place from August 1 to October 19, 2020. Asynchronous training was also available.
- Listening Campaign Phase 1: 16 facilitators and 64 participants took part in Sharing Circles in Fall 2020.
- Listening Campaign Phase 2: Launched additional sharing circles in Spring 2021. Phase 2 of the listening campaign was redesign to offer four different types of circles, with the aim of allowing NorQuesters to join Sharing Circles in ways that they felt was the safest and most comfortable for themselves.
  - Everyone Circles: Open to all staff to participate
  - Black Sharing Circles: Open to staff who identify as Black to participate
  - Indigenous Sharing Circles: Open to staff who identify as Indigenous (to Canada) to participate
  - BIPOC Sharing Circles: Open to staff who identify as BIPOC to participate
- The ARWG will analyze data from the listening campaign to identify opportunities for growth, gaps, and innovative ways for the College to become an anti-racist organization. Based on the findings of the listening campaign, the ARWG will develop actions to help move our community forward.

## OTHER CONTINUED AND UPCOMING ACTIONS

### Deans' Joint Commitment to Anti-Racism Equity

- NorQuest College deans are developing a commitment and actions they will take to improve equity and work toward the College becoming an anti-racist organization.

### Student Engagement

- Opportunities to learn from our students are being developed and are an essential component in this work.

### Anti-Racism (AR) and EDI Consultants

- The AR and EDI consultants will work closely together to create strategies that encompass the results of the listening campaign and work to create more avenues to engage in anti-racism and EDI work across the College.

### Communication

- The ARWG has and will continue to use various channels, including the NorQuest Unscripted video platform, internal newsletter, and email to share anti-racism work, callouts to join, and updates.

## FURTHER READINGS:

- Anti-racism Resource Guide
- White Fragility Subscription Box
- 10 ways to be a genuine ally to Indigenous communities
- Indigenous Ally Tool Kit (PDF)
- Guide to Allyship

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# GAME CHANGERS

NORQUEST COLLEGE

# GAME CHANGERS

Completing this concept paper is not the end of our Reimagine Higher Education undertaking. The work we have completed together moves forward, establishing our academic plan to 2030 and guiding the ongoing development of our Game Changers in two-year cycles. We will be tracking our progress toward our Desired States and scanning for signals of change, adjusting and course correcting in response to our findings.

By game changers, we mean the ideas and innovations we will implement in order to arrive at our Desired States. Game Changers fuel significant shifts or accelerations in our current way of doing things, and they may come in the form of teaching philosophies or new technologies, even policy or service design, to name only a few possibilities.

Desired States provide the visions toward which we are working. Game Changers focus our actions so that we can make meaningful progress toward our goals. Likely, we cannot achieve every idea proposed in this concept paper and, even if we could, we certainly cannot do it all at once. Game Changers are the work we need to begin now—addressing today's challenges as well as bringing us closer to our Desired States.

Prioritizing the three Game Changers described below creates openings for this work to flourish. These Game Changers overlap with one another, with projects already in progress, and with work we need to do in order to remain relevant and to become the college we want to be.

## CONNECTED TEACHING

Our first Game Changer is Connected Teaching. Here, connected teaching refers to instruction in a connected space, which often includes digital elements. Thinking beyond digital technologies, the term "connected teaching" also encompasses the "ongoing efforts to modernize and transform schools for the future and tackle persistent educational challenges of student achievement, engagement, and inequity through approaches such as personalized learning, blended learning, competency-based learning, online learning, virtual schools, and MOOCS" (Treacy, 2021). Reimagine Higher Education includes many of these approaches in our vision for 2030. We heard from NorQuesters that "community is our classroom philosophy," and so, connected teaching recognizes that "connection—the experience of engaging in growth-fostering interactions and relationships—is essential to human development and well-being" and to teaching (Schwartz, 2019). Connected teaching puts relationships and human connection at the heart of what we do, how we teach and how students (and teachers) learn. Connected teaching also honours the importance of educators connecting with one another.

We recognize and support our faculty as subject matter and teaching experts. As the teaching role continues to be less about "transmitting information and more about inviting learning and shaping the nuance of dynamic learning spaces" (Schwartz, 2019), we also consider the significant barriers and opportunities faculty face in developing content and delivering experiences that meet increasing student expectations. Students are calling for personalized learning pathways, engaging learning assets that are enhanced by technology, local content, and relevant to current events, along with near-continuous access to instructors, consideration of the overall public good, and much more. Educators are awash in a barrage of technologies, each of which possesses its own unique hurdles, including learning curve and cost, all of which must be considered alongside impact on learners.

Connected teaching cannot be about just one approach or technology. This Game Changer seeks ways forward for how and what we teach.

## LEARNING COMMUNITIES

Building on the idea that community is our classroom philosophy, learning at NorQuest continues to evolve away from "the ability to recall and deploy information and algorithms accurately and appropriately" to "the ability to consciously modify understandings, beliefs, and actions in response to evidence, experience, and reflection" (Elmore, 2019). This Game Changer seeks to deepen our connection to our student communities. NorQuest students are community builders, and we will enhance their opportunities to grow this skill through further connection with stakeholders, with College governance, and with co-creation of their learning experience. We embrace students as learners with "the capability to exercise judgment and control over what they learn, how they learn, what they intend to do with what they have learned" (Elmore, 2019). Students are co-creators in their educational journey at NorQuest and beyond. We will support our learning communities by celebrating their multiplicities and intersectionality through our approach to curriculum and program development and in our teaching and ways of delivery. We welcome students for life.

COVID-19 has been a catalyst for reconsidering what creates a meaningful life. As large portions of the population work from home and struggle with social isolation, the importance of building, joining, or connecting with community has solidified in our collective consciousness.

## ASSESSMENT OF LEARNING

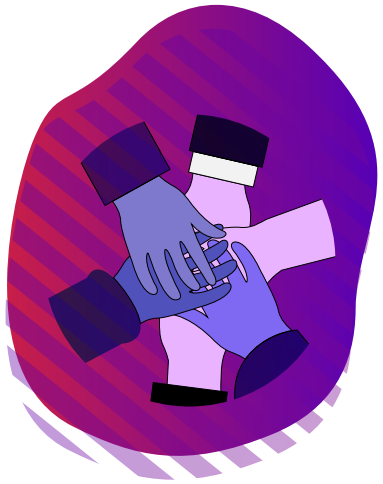
> "The future of assessment cannot be disconnected from the future of learning." (Elmore, 2019)

Arguing that "over the longer term, the prognosis for the education sector is not good," educator Richard F. Elmore (2019) predicts that, in order to meet industry and societal demands, we will "move the learning function, by degrees, out of the education sector and into the broader society" (p. 337). This move will be largely due to a "mismatch between assessment and the development of competent learners" (Elmore, 2019). In other words, learners will find less fraught ways to learn what they need to know when they need to know it.

In order to remain relevant in this new landscape of learning and to better serve our learners, we must create or enhance "developmental measures of learning that do not serve the institutional interests of the attainment structure, but that rather focus on guidance, feedback, support, and the creation of agency toward learning" (Elmore, 2019, p. 339). As we have identified in our concept paper, the post secondary education sector is experiencing a rapidly increasing challenge to its existence from non traditional competition such as Coursera or Amazon Educate. Cost and speed are part of the gaps these businesses are addressing for students and employers, but just as importantly, they are providing access to learning that previously has been available only through the tightly controlled doors of post secondary admissions.

Moving assessment from "the means by which we define, measure, evaluate, and confer 'merit'" to "the means by which individuals receive useful information about the development of their capabilities as learners over time" (Elmore, 2019) is a complex undertaking. However, assessment is foundational to much of our future vision for NorQuest as it plays a key role in supporting many of the ideas found in our Desired States, including personalized learning, virtual learning environments and learning activities, gamification, and competency-based learning. We believe that if we get assessment right, NorQuest will thrive even as the landscape of the educational sector continues to shift radically.

**Fittingly, each of the Game Changers has relationship at its centre. For 2030, we seek deeper connection with our many learning communities, for our students in how and what they learn, and for our faculty in all aspects of their connected teaching. We did not set out with this intention, but it is not a coincidence that we arrived at relationship, which is at the heart of all we do and strive for as NorQuesters.**



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# GLOSSARY OF TRENDS

**Alternative credentials:** Some post-secondary institutions (PSIs) are offering programs in which credentials are awarded upon demonstrated competencies, not coursework completion. Competency-based degrees appeal to non-traditional students by allowing them to "fast track" their education (Mazoue, 2013). Additionally, unbundling courses into modules allow for on-demand, workforce-relevant learning. Modules save time and money for both the student and the institution by allowing for flexible learning and teaching schedules, and are compatible with hybrid deliveries.

**Democratization of education and adoption of open source solutions:** Worldwide, students increasingly expect education that is high quality, almost (if not entirely) free, easily accessible, and readily transferable. This expectation is driving the adoption of open source solutions at post-secondary institutions. Open source materials are offered freely and openly without an accompanying need to pay copyright or licensing fees. These open source materials include teaching materials, electronic textbooks, and digitally based resources such as videos and interactive online resources (Government of Alberta, 2015).

**Ethics:** Unease regarding data collection and personal privacy will continue as technology evolves and the use of artificial intelligence permeates every facet of our lives. The challenge is determining how an organization can protect privacy while delivering personalized service and continuously improving that service. Studies in the US and UK found that "65% of consumers believe that AI would destroy their privacy rather than improve it. However, at the same time, 63% of US consumers are interested in personalized recommendations, and 64% are willing to share data in exchange for personalized benefits such as automatic deals" (TrendWatching, 2018). Individuals will seek brands that offer security and control over the collection and use of personal data (TrendWatching, 2020a).

**Gamification:** Building on the large and growing popularity worldwide of gaming, post-secondary institutions are exploring how course content may be redesigned around game dynamics (Stott & Neustaedter, 2013). Research shows that gamification in education increases student motivation, engagement, and learning. It mimics real-world requirements to apply knowledge, theory, and skills to practice, including effectively collaborating as teams. It also increases student retention, performance, and effort (Stott & Neustaedter, 2013; Connolly et al., 2012; Kapp, 2012)

**Gig economy:** Workers in the gig economy make their income by being both an employer and an employee, and they may work as freelancers, work for multiple companies, be on call, or rely on contracts and/or temporary employment (Thompson Rivers University, 2019; Deloitte, 2021). In 2018, the Bank of Canada estimated that as many as 30% of Canadians participated in some form of informal paid work (Kostyshyna & Luu, 2019), and this is projected to continue to grow (Alexander & Muthukumaran, 2016).

**Faculty as facilitators:** Traditional western notions of the role of faculty as "experts," or the primary source of information for students, is evolving, with faculty fulfilling the role of facilitators who promote student empowerment over their own learning (Beeman-Cadwallader et al., 2014). Lectures are being replaced with interactive learning experiences, and students are encouraged to pursue independent learning and engage in collaborative exercises and discussions with their classmates. Faculty are no longer in an authoritative role, but rather become facilitators or guides to their students' learning (McPhie, 2019). This evolving role helps students connect with organizations, businesses, or other post-secondary classes to collaborate on solving real-world problems as part of their learning experiences. A facilitator who leads students, rather than an expert who tells students, becomes framed in a larger goal of promoting student empowerment to create social action in their community (Beeman Cadwallader et al., 2014).

**Lifelong learning:** To meet the demands of the future workforce and the notion of the "100-year life," it is predicted that upskilling or reskilling multiple times throughout a career will be necessary. The World Economic Forum's Future of Jobs report highlights that employers estimate by 2022, no less than 54% of all employees will require significant reskilling and upskilling (World Economic Forum, 2018). Continuous or lifelong learning is increasingly seen as part of "educational well-being," akin to financial or health well-being; this trend is driven by work uncertainty and the rise of the machine economy (EY Ernst & Young, 2018).

**Mentor-to-protégé:** With the move toward "work from anywhere" employment options and the growing gig economy, issues such as isolation, loneliness, and reputational-based hiring will drive a need for mentorship and networking opportunities. People will embrace platforms that connect them with teachers, experts, and mentors in their quest to learn new skills (TrendWatching, 2020b).

**Pricing Pandemonium:** TrendWatching identifies "pricing pandemonium" as a megatrend or a slow-moving shift driving consumer behaviour and affecting millions of people across continents, demographics, and industries (TrendWatching, 2020). Pricing pandemonium is the result of the changing expectations consumers hold around pricing now that they have access to goods and services from all over the world and easily accessible tools to aid comparison shopping. This trend is one of the driving forces toward open educational resources (OERs), as well as the creation of alternative credentials.

**Students as co-creators:** Students as co-creators, also known as open pedagogy, is the engagement of students in the active creation of information instead of being passive consumers. This experiential learning style embraces collaboration while acknowledging and supporting student agency (UTA, 2020).

**Personal branding:** As the gig economy continue to grow, the role of creating a personal brand and employment profile to showcase personal skills and experiences on social media sites will become even more important. A national survey in the United States from 2018 indicated that 70% of employers use social media to review and screen candidates during the hiring process (CareerBuilder, 2018), and this will continue to increase as digital literacy increases.

**Personalized learning:** In contrast to a one-size fits all practice, personalized learning works to connect educational experiences to the needs and interests of individual learners (EDUCAUSE, 2020). As services within the market become more tailored to individual client needs, so too does the demand for personalized educational experiences, including materials tailored to a student's interest or area of required development.

**Professional skills**: Despite rising post-secondary attainment rates in Canada, employers consistently cite skill shortages as a key business challenge. There is a gap between what is provided in education and what employers need from graduates (Stuckey & Munro, 2013). Education models in Canada favour long school stays and relatively little work experience; this fails to provide balanced development of skills. Employers routinely stress soft-skill development as an area for improvement for all post-secondary graduates. To improve alignment between education and employer needs, the curriculum and pedagogy of the post-secondary system needs to focus more on non-academic employability skills.

**Purpose-driven organizations:** Purpose-driven organizations use their brand's values and purpose as a guidepost to decision making, even during difficult times. According to a study conducted by PricewaterhouseCoopers, Millennials are 5.3 times more likely to remain at a job when "they have a strong connection to their employer's purpose" (Schuyler & Brennan, 2016).

**Subscription-based education:** Subscription-based business models have been increasing steadily over the past decade because of their ability to provide consumers with unbeatable prices, convenience, personalization, and curation (Barseghian, 2019). Changes in the workforce (e.g., the gig economy) mean that workers increasingly need self-directed, affordable, accessible, and well-timed learning options for ongoing professional development (EY Ernst & Young, 2018). Examples of subscription-based models include Netflix, Amazon Prime, and Costco, and within the education sector, Coursera and LinkedIn Learning are key examples.

**Virtual companions:** This trend chatbots and virtual assistants into companions that consumers can "relate to on a deeper level" (TrendWatching, 2020b).

**Virtual experiences:** Virtual learning, the increased use of educational technologies such as augmented, virtual, or mixed realities, as well as artificial intelligence, are examples of virtual experiences. As online learning continues to expand, it will gain desirability and legitimacy, and these virtual experiences will become a genuine status currency (TrendWatching, 2020b).

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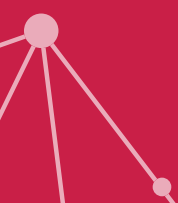

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