This report explores:

Shaping the Future Workforce
Enabling learners to build future-fit careers.

Labour Market & Values Shift

Human-Tech Synergy

Supporting Work Readiness
The Virtual Learning Strategy (VLS) is preparing Ontario postsecondary institutions for Hybrid Futures

The VLS is supporting ongoing and future virtual learning needs at all Ontario Indigenous Institutes, colleges, and universities. The VLS [link here] is built on three key pillars:

- Being the Future
- Being a Lifelong Learner
- Being a Global Leader

By applying strategic foresight approaches, the Ontario postsecondary sector can co-create hybrid futures by monitoring maturing trends and identifying future possibilities. This work aligns with the VLS pillar of Being the Future.

What is a Foresight Report?

Foresight reports are tools to support the navigation of uncertain and complex futures. Using strategic foresight (i.e., a research-driven, systematic exploration of possible futures), Foresight Reports help inform present-day decision-making by identifying patterns of change that may have significant lasting impacts for digital-by-design futures.

How do I use this Foresight Report?

This foresight report is a high-level overview of maturing trends within the postsecondary education sector. We recommend readers to use this report as a map for further exploration. Readers can click on the links provided to learn more about topics of interest. At the end of this report, readers will find a conversation guide to spark futures-facing conversations and explore gradients of possibility.

Why is Strategic Foresight important to Ontario postsecondary education?

The COVID-19 pandemic and the shift to emergency remote teaching amplified challenges across the Ontario postsecondary system. Strategic foresight supports institutions in navigating transformation by building awareness of some possible forces of change. Strategic foresight can help address immediate and short-term challenges, while articulating long-term visions for systems level evolution.
Introduction to Shaping the Future Workforce

The fourth industrial revolution is currently underway, and it is transforming the economy and the jobs within it. Among the technologies that are shaping our evolving labour market are Artificial Intelligence (AI), the internet of things (IoT), and big data.

The future of the economy, work, and education are inseparable. As desirable skills across diverse roles and occupations continue to evolve, postsecondary education functions can be an essential support for current and future workforce.

As illustrated by the narrative visual below, in this report we highlight driving forces that underlie the workforce conditions, the skills that are valuable for the future, and what work readiness will mean for Ontarians.

FRAMEWORK FOR NEEDS OF THE FUTURE

In the context of job disruption, demand for new skills, and reflection of learners’ intersecting identities, Ontario’s postsecondary institutions have a critical role in preparing learners with the appropriate skills to help them thrive, grow, and adjust as needed in their personal life and career journeys. This framework introduces eight attributes of learning that have been identified as critical in the Fourth Industrial Revolution, including learning contents and experiences.

Adapted from World Economic Forum.

FURTHER READING

1. Schools of the Future: Defining New Models of Education for the Fourth Industrial Revolution
   World Economic Forum

2. Innovation in Post-Secondary Education
   Future Skills Centre

3. Learning for the Jobs of the Future
   OECD
The Labour Market & Values Shift

The workforce and postsecondary education are intrinsically linked. On one end, labour market conditions influence learner needs and motivations. On the other end, evolving learner values and skills influence the labour market. Major trends that were occurring prior to the global pandemic have been accelerated, and further implications have emerged: increased tech integration across sectors, labour inequities, and the importance of a growth mindset for career agility and adaptability. Continuously engaging in education throughout one’s career journey can help learners navigate labour market demands while enabling the pursuit of purpose and personal values.

ADAPTING TO LABOUR MARKET NEEDS

The adoption of new technologies leads to high demand for high-skilled jobs that require specialized training and extensive knowledge in a specific field. Conversely, the need for low to mid-skilled jobs is declining, leading to an increasing skills gap that raises barriers for entry level workers to secure in-demand, high-skilled work. These circumstances present an opportunity for postsecondary institutions, government, and industry to shape inclusive and scalable education systems that meaningfully support lifelong learners in their career and life journeys.

SKILLS GAP

Contributing factors to the skills gap:
- Growing gig economy
- Decreasing cost of automation technology
- Inequitable access to learning & training opportunities
- Aging workforce
- Increasing demand for high-skilled & specialized labour

Postsecondary institutions as drivers of change

Postsecondary institutions can help respond to the job market demands by critically assessing what skills the learners are able to meet upon completing courses and activities. Labour market conditions change frequently, requiring continuous updates of educational materials, approaches, and programming.

RESKILLING & UPSKILLING

Effective and timely reskilling and upskilling can help close the skills gap while ensuring that human labour continues to be valued and augmented. Collaboration between postsecondary institutions and various industry partners can facilitate reskilling and upskilling initiatives that support learners in maintaining career agility and satisfaction.

Supporting skills success

Postsecondary institutions and partner organizations can jointly work towards:
- A culture of continuous learning
- Identifying relevant skills gaps
- Creating time for learning
- Developing and offering relevant learning opportunities

RESKILLING = acquiring new knowledge & competencies relevant to a new occupation or task.

UPSKILLING = supplementing or updating existing knowledge & competencies to improve performance in an occupational task.

"Making the shift from ‘survive to thrive’ depends on an organization becoming distinctly human at its core – a different way of being that approaches every question, every issue, and every decision from a human angle first."

– Deloitte Insights, 2020

LEARNER & WORKFORCE VALUES

Evolving economic labour market demands and changes in workplaces (e.g. shifts between remote and in-person work) have influenced the way we learn and work. Through self-reflection, many seek clarity and meaning during times of shifts. Flexibility, autonomy, engagement, and work-life balance are examples of personal values that many consider as important in finding work.

PURPOSE-FINDING

Personal, educational, and professional growth

During this time of reflection and flux, learners have the opportunity to find intersections of their competencies, passion, and contribution to the labour market and employer demands.

IKIGAI, ‘A REASON FOR BEING’

This self-reflective journey of purpose finding is what the Japanese concept Ikigai represents: the feeling of balance that motivates a continuous pursuit of personal, educational, and professional growth.

Navigating the gig economy

While some enjoy the increasing independence and flexibility of contract and freelance work, many are calling for unified definitions, support, and regulation of such work. Protecting learners and the workforce also involves ensuring access to adequate tools, skills, and knowledge that support entrepreneurial needs and advocating for oneself as a gig worker.

CHANGE DRIVERS OF THE LABOUR MARKET

Highlighted below is a non-exhaustive and constantly evolving list of significant influences on the labour market. Ontario’s postsecondary institutions can consider a variety of implications and possibilities for how learners may navigate the workforce and implementing solutions that are learner-centred, inclusive, and timely.

RECONCILIATION & INCLUSION

TECH-INTEGRATION

ONLINE PRESENCE

EVOLVING IDEOLOGIES

DEMOGRAPHIC CHANGES

SHIFTING GLOBAL INFLUENCES

URBANIZATION

CLIMATE EMERGENCY

CASE STUDY: FUTURE READY TALENT FRAMEWORK

The University of Waterloo’s Future Ready Talent Framework (FRTF) is a research-backed tool to help lifelong learners, employers, and educators understand key competencies that are needed to navigate the future of work and learning. The FRTF consists of 12 competencies grouped in 4 main thematic areas: transfer, expand, develop, and lead.

The Future Ready Talent Framework (FRTF) is designed to support all learners and at any stage of their learning journey. The FRTF is currently used in work-integrated learning programs at Waterloo to help students become future ready. The goal of the program is to support learners in developing skills to become future-proof. Through the FRTF, Waterloo aims to support learners by helping them identify future-ready talents, set goals, and expand their competencies.

FURTHER READING

1. Workforce of the future: The competing forces shaping 2030
   PWC

2. The Future of Ontario’s Workers
   StrategyCorp

3. Closing the Skills Gap
   World Economic Forum

4. Yesterday’s gone: Exploring possible futures of Canada’s labour market in a post-COVID world
   Future Skills Centre & Brookfield Institute
FURTHER READING

LEVERAGING INHERENTLY HUMAN SKILLS

The labour market is increasingly bridging the role of humans and technology, creating a need for a workforce that is proficient in foundational and soft skills. Developing these skills often requires both theoretical and practical experiences, and they are often transferable and interdisciplinary across jobs. The matrix below is a compilation of desired skills, positioned among four main categories.

A TECH-INTEGRATED WORKFORCE

The workforce is evolving in response to technology’s shifting role in the labour market. While it can create space for a new set of career priorities and opportunities, it also highlights the critical need for supporting individuals through this transition.

EVOLVING WITH AUTOMATION AND ARTIFICIAL INTELLIGENCE (AI)

Creating new opportunities

Technology has the potential to open opportunities for humans, including new job creation. Technological innovation has historically increased labour efficiency, allowing space for a shift in our life priorities in pursuit of purpose and meaning. This pursuit may prompt new types of interests, jobs, and career paths that highly value and leverage distinctly human capabilities. Reskilling, upskilling, and postsecondary education can play a critical role in supporting this pursuit and transition.

Supporting vulnerable populations

Automation and AI disproportionately impact marginalized groups. Indigenous and Black individuals in Canada face higher risks in employment security than other populations. Women, youth, and those with lower levels of education also face higher risks. With 45% of Ontario jobs projected to transition towards automation, focused support for at-risk populations is essential during this transition and beyond to eliminate inequity.

HUMAN-TECH PARTNERSHIPS

A future workforce impacted by technological innovation has been inevitable; technology has always reshaped how humans live and work. Engaging with technology can increase our efficiency, open up possibilities for growth, and help us transcend our limitations. Supporting the current and future workforce involves a lifelong learning mindset to align with evolving desirable proficiencies, and leveraging both human and technological capabilities. The role of education will be to strengthen the capabilities of learners beyond digital literacy, towards meaningful engagement with human-machine partnerships.

THE T-SHAPED SKILLS PROFILE

Each learner has the potential to offer a unique combination of competencies in the workforce. Representing this concept is the T-Shaped Skills Profile, a highly valued workforce profile which illustrates the balance between broad cross-disciplinary skills and depth of expertise.

THE X-SHAPED SKILLS PROFILE

The X-shaped learner is adaptive, soft (human)-skills proficient, and digitally literate. Considering the role of technology in the future of work, we can think of trans-disciplinary expertise as integrating human and technological capabilities.

A TECH-INTEGRATED WORKFORCE

The COVID-19 global pandemic has accelerated pre-existing technological trends, including job automation and remote work. Technology has the capacity to create meaningful opportunities for the futures of work, but a transition must include adequate support for the workforce to be successful.

As we move into post-pandemic recovery, the skills most valuable to the labour market will continue to evolve, and postsecondary education will have a significant role in preparing the existing and future workforce. This section explores the broader context of technology’s role in the labour market, skills unique to humans, and how technological advances can augment human capabilities.
Supporting Work Readiness

Each career path is influenced by an evolving set of internal and external factors – some may seek career advancement or change once or more throughout life. At the same time, the labour market environment continually evolves based on social, technological, economic, and political factors.

As a result of these ever-changing circumstances, the future demands a system of postsecondary education that is as dynamic and adaptable as the technologies around which our world now revolves. Work readiness integrates postsecondary learning opportunities with wraparound learner supports that can enable learners to become career-agile and future-ready.

EXPERIENTIAL & WORK-INTEGRATED LEARNING

Practical learning opportunities

Experiential Learning (EL) provides practical experience to learners in order to support theoretical course content. The objective of EL is to expose learners to specific disciplines, providing the freedom to explore and apply course concepts. Work-Integrated Learning (WIL) is a sub-category of EL, which is more focused on learner opportunities for workplace experience.

WIL in Ontario

Experiential & Work-Integrated Learning in Ontario

Experiential Learning (EL) and Work-Integrated Learning (WIL) will be an integral part of the strategies required to meet 10 metrics outlined by Ontario’s new performance-based funding model, which will take effect in 2022.

WIL and EL will provide students with the skills required to integrate into the workforce and develop job-ready skills. Link to learn more.

WIL benefits for learners, institutions, and industry

AI-enhanced career counselling

As a way to augment wraparound support in career counselling, platforms powered by AI, such as iGauge AI, can be used to identify existing skills, reveal gaps, and provide personalized recommendations informed by labour market demands.

CASE STUDY: BEST PATHWAY TO POSSIBILITY PROGRAM

Iohahi’Iawkehsane Education and Training Institute is one of the nine Indigenous institutes in Ontario recognized under the Indigenous Institutes Act, 2017. They provide education and training for learners at all stages of their learning journey. All programs, courses, and student opportunities offered by the institute are rooted in Haudenosaunee values, traditions, and culture. To learn more, visit their website.

FURTHER READING

1. Development and validation of a future-ready talent network
   University of Waterloo

2. Work-Integrated Learning in Ontario’s Postsecondary Sector
   HEQCO

   HEQCO

4. Building Future Skills
   Bow Valley College

ENABLING & MAINTAINING CAREER AGILITY

The model below is a holistic and iterative interpretation of the career journey. It suggests a perspective that is inquiry-based and lifelong, including elements of exploration, adaptability, growth mindset, and support systems. This model highlights critical factors for postsecondary learner supports to consider and implement into the learner experience.

WRAPAROUND LEARNER SUPPORTS

As postsecondary institutions bridge learner needs and the labour market, it is essential that learners have access to wraparound supports that help them achieve their goals in ways that accommodate intersectional learner identities and circumstances.

Learner supports can include:

- Curricula that prioritize vocational training that are ‘just-in-time’ for labour market demands
- Increased ways to enable flexible self-directed learning (e.g. micro-credentials)
- Practicum opportunities (e.g. apprenticeships)
- Mental health support through in-person and virtual options
- Hybrid career counselling and job placement services that evaluate current skills and identifies gaps to best support learner career trajectory.

To learn more about wraparound learner supports for hybrid campus communities, please visit our Hybrid Futures Foresight Report.
Questions to Facilitate Thinking

What
What new opportunities and challenges could arise from this trend?
What are the ethical implications of this trend?
What resources are needed to implement this trend (e.g., human, financial)?

Why
Why is shaping the future workforce important to our community (including learners)?
Why is this trend important to supporting the future workforce?

Who
Who needs to be involved in developing supports for the future workforce?
Who will be impacted (positively and/or negatively) by this trend?

How
How do we enhance capacity to facilitate the implementation of this trend?
How does this trend impact our current practices?
How can we build this trend to be sustainable?

Where & When
Where do we go from here (i.e., what are next steps)?
When can we take action?
When can we explore this trend further?

References and Resources

Introduction
eCampusOntario. Virtual Learning Strategy (VLS). [Links]

The Labour Market & Values-Shift

Iberdrola. (n.d.). Reskilling and upskilling: work training in the digital transformation era. [Links]


Copenhagen Institute for Futures Studies. (n.d.). What is Futures Literacy and Why is it Important? [Links]


Pwc. (2020). The future of work. [Links]


University of Waterloo. (2019). Are you ready to manage the workforce of the future? [Links]


White, M. (2021). It’s a sluggish labor market — or workers positioning themselves for better opportunities? NBC News. [Links]


Human- Tech Synergy


DesiLearnx. (n.d.). Upskill and reskill your workforce with future-ready online learning. [Links]

Douglas, E. (2020). 52% of Ontario employees are ready to quit — here’s how to stop them. Human Resources Director. [Links]


Karbhari, V. (2021). Higher ed’s role and opportunity in co-skilling, upskilling, and reskilling. eCampus News. [Links]


University of Waterloo. (2019). Are you ready to manage the workforce of the future? [Links]


White, M. (2021). It’s a sluggish labor market — or workers positioning themselves for better opportunities? NBC News. [Links]


Reach Out to Us!
For additional guidance, questions, or to share your work, please contact reachresearch@ecampusontario.ca.
Supporting Work Readiness


