

President's Report to McMaster University's Board of Governors April 20, 2023

Spotlight on Teaching and Learning

As the home of problem-based learning, McMaster has long been recognized as a global leader in teaching and learning innovation. We remain committed to creating the best possible learning environment for our students, and ensuring students are equipped with the knowledge and skills needed to make a transformative impact on our world.

Since the launch of McMaster's strategic plan, we have continued to innovate in this critical area, focusing on the expansion of active, experience-based, interdisciplinary, and inclusive learning. We continue to develop innovative and varied approaches that incorporate global insights and encourage creativity, risk-taking and reflection, while embracing the digital tools and virtual learning approaches that were introduced during the pandemic.

Progress in the area of Teaching and Learning includes:

- The development of a new Teaching and Learning strategy and the appointment of a new Vice-Provost, Teaching and Learning to implement the strategy.
- The launch of the Honours Sustainable Chemistry Program, which aims to prepare students to be leaders in the zero-carbon economy. It is the first of its kind in Canada.
- The development of the Reflective Learning Framework, which helps guide and assess students throughout experiential learning opportunities. The framework has been adopted across McMaster and at other institutions of higher learning.
- The development of additional active and flexible learning spaces to ensure that our physical and virtual spaces support learning outcomes and ensure accessibility and inclusivity to meet the needs of our communities.
- 95% of students participated in at least one course with an experiential learning component upon graduation, enabling the University to leverage \$200,000 in wage subsidies and employer funding in the past year to support 450 student placements.
- More than 3,600 co-op and internship placements for undergraduate students annually.

I would like to highlight further advances in this important priority area.

Launch of the Indigenous Studies Department

I'm pleased to share that McMaster has officially launched the Indigenous Studies Department, which is home to the Indigenous undergraduate program, a planned graduate program and a host of research and community-focused activities.

As Board members know, the creation of the department is an integral component of the [Indigenous Education Strategy](#), a strategic plan developed by the Indigenous Education Council and the McMaster Indigenous Research Institute, to further reconciliation and enhance the visibility and impact of the Indigenous communities on campus.

McMaster has a three-decade long record of leadership in Indigenous studies and scholarship, and is one of the longest-standing programs of its kind in Canada. Since its inception, Indigenous Studies at

McMaster has been a multidisciplinary field of study, focusing on Indigenous-centred thinking and analysis to understand the historical, social, political, and cultural aspects of Indigenous societies in Canada and around the world. It garners interest from Indigenous and non-Indigenous students alike and, as a department, will continue to expand in terms of course offerings, enrolment and faculty research programs, and in its strong community relationships to Six Nations of the Grand River.

This is a tremendously important and exciting step forward, both in supporting Truth and Reconciliation on our campus and in advancing and empowering Indigenous scholars, students and staff at McMaster.

The Digital Learning Strategy

The COVID-19 pandemic necessitated significant changes to the teaching and learning environment at McMaster, but also presented important opportunities to harness new virtual and digital platforms to enhance the learning experience for our students.

To advance the use of technology as a learning tool, McMaster has developed a Digital Learning Strategy framework as part of the [Partnered in Teaching and Learning strategy](#), introduced in May 2021.

Designed to complement the face-to-face learning experience, the framework identifies the ways in which online and technology-enhanced classrooms have changed the teaching and learning environment for both educators and students. The framework provides important opportunities to improve critical digital fluency skills for instructors and students, connect them with researchers, communities, industry partners and potential employers around the globe, and prepare students for the future of work.

Developed with input from students, staff and faculty as part of an evidence-informed approach, the framework also identifies ways in which digital approaches and tools have the potential to help overcome or reduce some barriers to learning, such as inaccessible course materials, family and personal responsibilities and obligations, transportation issues, physical classroom impediments and geographic location.

Additionally, in 2021 and 2022, McMaster was awarded the maximum of \$1 million dollars through the provincial government's [Technology and Equipment Renewal Fund program](#), which is intended to help modernize postsecondary infrastructure that will support postsecondary institutions in the delivery of high-quality education. This funding has assisted in the development of digital tools and approaches to enhance student learning at McMaster.

The Digital Learning Strategy framework officially launches on May 8, and is an important step forward in equipping McMaster students with the knowledge and digital skills needed to excel in our increasingly digital learning and work environments.

Task Force on Generative AI Technology in Teaching and Learning

In recent months, the emergence of generative artificial intelligence (AI) technology, such as ChatGPT, has led to many questions and concerns about how AI is, and will continue to, impact teaching, learning in higher education.

The MacPherson Institute, in partnership with the Offices of the Deputy Provost and the Vice Provost (Teaching and Learning) is forming a task force to explore the impacts of this evolving technology on teaching, assessments, and the student learning experience. This task force will include McMaster faculty, staff, and students from across disciplines. It will also include research and development projects that

examine the ways in which educators can either integrate generative AI into assessments or alter assessments to minimize the impact of generative AI. In the meantime, the MacPherson Institute has been offering workshops and consultations for faculty on generative AI including ChatGPT.

This task force will provide critical insights into how AI technologies are changing post-secondary education and how McMaster can adapt to this rapidly changing teaching and learning environment. I look forward to updating Board members as the task force develops.

The Partnered in Teaching and Learning Grants Program

To support McMaster faculty in implementing the principles outlined in the Partnered in Teaching and Learning (PTL) Strategy and in the University's Strategic Framework, McMaster has launched the Partnered in Teaching and Learning grants program.

Co-developed by the Office of the Vice-Provost (Teaching and Learning) and the MacPherson Institute, the program offers two types of grants: Seed Grants, which support innovations and enhancements at the course and program level, and Garden Grants, which support interdisciplinary and Faculty-wide projects.

In the first call for applications, 31 grants totalling over \$340,000 were awarded to fund a range of highly collaborative projects. Collectively, the projects include more than 200 project team members from across campus. Eighty per cent of project teams include students as co-investigators, and more than 50 per cent of project teams are interdisciplinary and include members from two or more Faculties or central units.

Projects include:

- Research studies to implement and assess innovative teaching methods, including a study on virtual reality technology in anatomy courses.
- A cross-campus initiative to research and create a sustainable solution for hybrid meetings and classes.
- The creation of new courses and materials to enhance equity, diversity and inclusion in the classroom, including SCIENCE 2AR3 - Foundations of Science: Equity, Justice and Anti-Racism in Science, which was developed through a PTL grant and has now been approved for inclusion in the Undergraduate Calendar.
- The development of curriculum, pathways, and resources to support and encourage experiential and work-integrated learning, including a project to expand the use of collaborative online international learning to develop students' intercultural competencies.

Applications for the 2023 grants will be accepted between April 24 and June 5. This program is playing a key role in advancing McMaster's strategic priorities, and creating exciting new opportunities to enhance teaching and learning at McMaster and set our students up for success.

Progress Update on MacPherson Institute Review

In 2018, McMaster undertook an [external review of the MacPherson Institute for Leadership, Innovation and Excellence in Teaching](#), which resulted in a series of recommendations to better align supports and services offered by the Institute with the needs of educators at McMaster.

In response, the Institute, under the leadership of Director Lori Goff, developed a three-year strategic plan that identified key initiatives to address recommendations from the reviewers and incorporate feedback from the teaching and learning community at McMaster. In October 2022, our Provost Susan Tighe invited the reviewers to return to McMaster to complete a progress review.

I am pleased to report that, according to that review, the MacPherson Institute has [successfully completed 51 of the 59 strategic initiatives](#), with several more still in progress. Key changes include a clear mission and mandate, streamlined program offerings, and the shift to a Faculty Liaison model of service.

The reviewers, who include representatives from the University of British Columbia, the University of Calgary and McMaster, also noted a “palpable shift” in the work environment and organizational structure at the MacPherson Institute and the “significant impact” these changes have had across the University community more broadly. As well, the reviewers identified opportunities for next steps, particularly to further defining how the MacPherson Institute will work in partnership with the Office of the Vice-Provost (Teaching and Learning).

I commend the staff and faculty at the MacPherson Institute for their responsiveness to the recommendations and for their ongoing commitment to providing our teaching and learning community with the innovative resources and supports needed to provide our students with world-class instruction and prepare them to support positive change in the world.

President’s Awards for Outstanding Contributions to Teaching and Learning

One of the most enjoyable parts of my role as President is to recognize the outstanding work and achievements of McMaster’s world-class faculty. Each year the selection committee recommends an exceptional group of educators for their exceptional innovation and commitment to student learning through the President’s Awards for Teaching Excellence.

We receive an impressive set of nominations every year, but I am particularly pleased by the number and quality of nominees being considered for this year’s awards. Since 2014, we’ve received an average of seven nominees annually. This year, we received a total of 21 nominations, representing a significant increase. Additionally, we have increased the number of awards from five to eight to recognize the incredible teaching and learning taking place at McMaster.

The strong response to our call for nominations is a testament to the value the McMaster community places on teaching excellence and reflects the caliber of teaching talent across all Faculties of the University. This year’s President’s Award recipients will be announced on the Daily News in May – I look forward to sharing the list of recipients with Board members.

New Course Assessment Tool

As part of McMaster’s ongoing commitment to support and advance innovation in teaching and learning, McMaster has moved to a new assessment platform designed to better evaluate students’ learning experiences within specific courses.

In fall of 2022, McMaster adopted Blue by Explorance, a cloud-based confidential course evaluation system based in Montreal, which has been widely adopted across many Canadian Higher Education Institutions. Using Blue by Explorance, students are asked to rate and provide feedback on their learning experience in the course, rather than simply rating the effectiveness of their instructors.

This system has already proved to be a valuable resource for improving teaching and learning practices and has been effective in providing educators and administrators with the quality data they need to incorporate student feedback into course design and improve the learning experience for McMaster students.

Wilson College Update

McMaster's Wilson College for Leadership and Civic Engagement, the most comprehensive leadership college in Canada, continues to take shape.

Last month, the College's [Minor in Leadership and Civic Studies](#) – open to students from all Faculties across McMaster – was approved for inclusion in the 2023-24 Undergraduate Calendar. The Faculties of Social Sciences and Humanities have also made significant progress on the curriculum development for the Joint Honours BA in Leadership and Civic Studies and are on-track to complete the draft of the Institutional Quality Assurance Process (IQAP) proposal by early summer. The IQAP proposal is expected to go to the Senate for approval in March 2024, with the BA degree program scheduled to launch in the 2025/26 academic year.

The searches for the [College's Academic Director and Endowed Chair in Leadership and Civic Studies](#) are well underway, as is the recruitment of members to the Wilson College external advisory board and the External Director.

As well, McMaster recently retained RDH Architects, who will be working in partnership with Shoalts and Zabak Architects (SZA). Together, they will support the feasibility study and design work for the new Wilson College building, which will include a residence for students as well as academic and collaborative spaces. RDH will conduct the feasibility study over the summer in collaboration with internal working groups, composed of staff and faculty from Social Sciences and Humanities and other University departments. The building is anticipated to be ready for occupancy by Wilson College students, staff and faculty in 2026.

These updates represent important progress toward McMaster's goal of educating the next generation of leaders who can anticipate and address complex challenges and work across the public, private and non-profit sectors to make a transformative impact on Canada and the world.

Accessibility in Teaching and Learning

To ensure that McMaster is providing students with accessible, inclusive learning environments and that the University is meeting the diverse educational needs of our students with disabilities, McMaster is developing a five-year Teaching and Learning Accessibility Roadmap, underpinned by AODA Postsecondary Education Standard (AODA PSE) final recommendations.

The development of the roadmap will be led by the Vice-Provost (Teaching and Learning) in collaboration with Faculties and administrative units across the University. The roadmap will reduce the reliance on the individualized accommodations system and will focus on improving educational and academic outcomes for McMaster students with disabilities through a holistic, systemic approach.

The development of this roadmap is funded through the Strategic Excellence and Equity in Recruitment and Retention (STEER/R) Program, which is intended to advance the pursuit of inclusive excellence by making seed funding available for transformative initiatives that benefit equity-deserving groups at McMaster.

The roadmap is an important step forward in reimagining McMaster's teaching and learning spaces and practices to enhance accessibility, enable academic excellence, and foster a sense of belonging for current and new generations of students with disabilities.

Teaching and Learning Month

As part of ongoing efforts to cultivate a campus environment where learning deeply matters and teaching is valued and recognized across the McMaster community, McMaster is hosting its fourth annual Teaching and Learning Month this May.

Led by the MacPherson Institute in collaboration with a number of campus partners, Teaching and Learning Month includes a series of events and activities that bring together educators, faculty members, instructors and staff from across McMaster. Events include professional development opportunities, as well as celebrations of teaching and learning through a variety of programming.

In past years, Teaching and Learning Month events have been highly successful in engaging faculty across campus. Last year, 13 campus partners contributed a total 41 events over the course of the month, which reached more than 450 educators at McMaster.

This initiative is an important opportunity to strengthen McMaster's teaching and learning community and highlight the innovative approaches to teaching and learning developed by McMaster's exceptional teaching faculty.

CAMPUS UPDATES

INCLUSIVE EXCELLENCE

McMaster named top Diversity Employer for fifth consecutive year

For the fifth consecutive year, McMaster University has been ranked one of Canada's best Diversity Employers in an annual competition that recognizes organizations with successful workplace diversity initiatives. This comes on the heels of McMaster also being named as one of Canada's Top Employers, ranking 13th overall. The Forbes ranking is created by surveying 12,000 Canadians about their workplace. McMaster has also been recognized as a top employer in the Hamilton-Niagara region for the 7th consecutive year.

Just keep going: Defense Minister Anita Anand and AVP Equity & Inclusion Sonia Anand talk leadership and resilience

The sisters spoke about leadership, resilience and their family history at an International Women's Day fireside chat organized by the Academic Women's Success and Mentorship committee.

New McMaster student award aims to elevate women in STEM

McMaster graduate Aquila Islam was a trailblazing physicist, educator and researcher. Pakistan's first woman to earn a PhD in nuclear physics, she spent her lifetime paving a path for the next generation of women in science. In honour of her legacy, a new fund at McMaster aims to continue to inspire and elevate women in Science, Technology, Engineering and Mathematics (STEM).

RESEARCH AND SCHOLARSHIP

McMaster satellite lifts off from Kennedy Space Center

A satellite designed and built by McMaster students and researchers has successfully launched into space on board a SpaceX Falcon 9 rocket. For the NEUDOSE team members on hand in Florida to watch their satellite take flight in person, the overwhelming feeling was one of pure excitement – and relief. Eight years of long nights and hard work had finally paid off. The satellite, called NEUDOSE, was launched from the historic Kennedy Space Center at 8:30 p.m. on March 14 as part of NASA’s 27th commercial resupply mission. Its next destination: the International Space Station (ISS).

The launch of the NEUDOSE satellite was covered by every major print and broadcast outlet in Canada, generating more than 475 broadcast mentions and 125 print stories that reached more than 20 million people.

[McMaster scientist wins prestigious award for superbug research](#)

McMaster University’s Lori Burrows is the recipient of a major national award for her research into drug-resistant infections, a global health crisis that kills more than one million people every year. The Canadian Association for Clinical Microbiology and Infectious Diseases (CACMID) has named Burrows the recipient of its 2023 John G. FitzGerald Award for her lab’s research into *Pseudomonas aeruginosa*, a ubiquitous drug-resistant pathogen that causes pneumonia and other hospital-acquired infections.

[One industry’s waste is another’s green product](#)

For DeGroote School of Business marketing professor Devashish Pujari, sustainable packaging goes well beyond getting rid of single-use plastics. Part of an interdisciplinary research team, Pujari is currently investigating how companies can move to a circular economy model, in which nothing goes to waste. Pujari and his team are examining how they can turn food waste from food processing industries into sustainable, bio-based packaging.

[Candida auris: What’s known about the rapid spread of the drug resistant fungus](#)

Candida auris (*C. auris*), an emerging fungus and serious global health threat, spread at an “alarming rate” in U.S. health care centres throughout 2020 and 2021 according to the Centers for Disease and Control Prevention (CDC). The fungus can be difficult to identify, spreads easily and can cause severe and sometimes lethal bloodstream infections, particularly among those with serious medical problems. Jianping Xu, a Faculty of Science Research Chair in Understanding Fungal Threats to Humans and member of the Global Nexus for Pandemics and Biological Threats, explains what researchers know about the fungus and how it may be spreading so quickly.

[McMaster, Terumo and AtomVie Global Radiopharma Inc. partner to manufacture medical devices for cancer treatment](#)

McMaster University, Terumo and AtomVie Global Radiopharma Inc. (AtomVie) have partnered to produce two medical devices used for the treatment of cancer. Composed of radioactive holmium-166 microspheres, QuiremSpheres™ and QuiremScout™ are used in Selective Internal Radiation Therapy (SIRT) to treat liver cancer. Last month, McMaster manufactured its first patient dose on behalf of Terumo. The microspheres were irradiated in the McMaster Nuclear Reactor and then processed and dispensed in a hot lab at the McMaster University Medical Centre. The product was shipped to a hospital in Europe and successfully used in a patient procedure.

Paul McNicholas received Dorothy Killam Fellowship for statistics and research on autism

McMaster University professor Paul McNicholas has been awarded a Dorothy Killam Fellowship for his research on identifying developmental trajectories of children on the autism spectrum. The Killam Prize and Dorothy Killam Fellowships program, run by the National Research Council of Canada supports scholars of exceptional ability, granting them time to pursue research projects of broad significance and widespread interest. McNicholas' fellowship, one of eight awarded nationally, is valued at \$160,000 over two years. McNicholas is a globally-renowned expert in the development of statistical and machine learning methods to analyze large and complex data sets.

McMaster pilot creates one-stop shop for research support

A team of experts has come together under one virtual roof to help ensure those involved in research at McMaster University have access to the digital tools, services, and supports that they need. The Digital Research Commons Pilot is a three-year project that will recommend how McMaster can create a more connected, capable, and user-focused approach to digital support for research. The goal of the pilot is to improve access to systems, services, software, and training for researchers across the institution.

ENGAGING LOCAL, NATIONAL, INDIGENOUS AND GLOBAL COMMUNITIES

Students bring bright ideas and solutions to inaugural sustainability pitch competition

Sixty-five plus innovative student thinkers teamed up to share their bright ideas and solutions to a number of local and global challenges this week at McMaster's first Sustainability Development Goals (SDG) pitch competition. Three winning teams took home \$2,000 in prizes each. The competition, which was open to all McMaster students, had 21 teams of two to six students from all six Faculties sharing three-minute pitches that tackled one of three challenges, each aligned with the United Nations' Sustainable Development Goals.

Building a digital community of global entrepreneurs

From Brazilian women to aging sex workers in Kenya and other marginalized persons, Benson Honig has provided entrepreneurial training across the globe. Now, Honig is taking a virtual incubator to Kenya to encourage new business opportunities for the region's multigenerational refugees and to promote cross-global engagement using enhanced digital techniques.

The Celestial Bear: Planetarium show explores Indigenous legend of our night sky

The popular Celestial Bear show returns to McMaster's planetarium for several sold-out shows this week as part of the launch celebrations for the department of Indigenous Studies.

OPERATIONAL EXCELLENCE

McMaster welcomes a new director of sustainability

Green energy and sustainability expert Dave Cano has been appointed McMaster's Director of Sustainability. In this leadership position, Cano will play an essential role in executing important initiatives, developing ambitious targets and defining key metrics related to McMaster's inaugural, campus-wide Sustainability Strategy. Cano brings his experience as a sustainability leader with the Town of Oakville and Western University and holds a master's degree in environment and business.

[New geothermal green energy system on campus](#)

McMaster will heat the new campus greenhouse with emissions-free geothermal energy, and is exploring multiple locations on campus for future geothermal sites. The new greenhouse will be the first building on campus to use a sustainable geothermal system to fully heat and cool the building. The greenhouse is under construction in front of the Life Sciences Building. It will be the second geothermal system on campus, adding to the one that primarily supports clean energy research in the Gerald Hatch Centre.

[Sustainability at McMaster](#)

As we count down to Earth Day, the Daily News is sharing stories about how McMaster is transforming our campus into a living laboratory for sustainability.

ANNOUNCEMENTS AND ACCOLADES

[Ontario invests \\$6.8 million to expand McMaster's nuclear capacity](#)

The Ontario government announced \$6.8 million in the provincial budget to strengthen the research capacity at the McMaster Nuclear Reactor (MNR), a leading supplier of medical isotopes used in breakthrough cancer treatments. The investment, spread over three years, is part of the University's \$25 million project to optimize operations of the nuclear reactor to 24 hours a day, five days per week, and increase the diversity and amount of isotopes produced.

[Provincial budget increases physician training at McMaster's medical school](#)

The 2023 provincial budget includes new funding to expand the training capacity at McMaster University's Michael G. DeGroote School of Medicine, helping to build a stronger and more resilient health care system, as announced by Premier Doug Ford on March 30, 2023. The province committed to funding new undergraduate medical school seats and postgraduate medical training seats at Ontario schools, including the Michael G. DeGroote School of Medicine where the announcement was made.

[McMaster ranked one of the world's top 50 universities for life sciences and medicine](#)

McMaster has once again been recognized as one of the world's top 50 universities for the study of life sciences and medicine, according to the 2023 QS World University Rankings by Subject. Ranking 48th in the world and fourth in Canada for life sciences and medicine, McMaster also saw significant growth in the areas of engineering and technology, natural sciences and social sciences and management.

[McMaster students, researchers, community advocate honoured as women of distinction](#)

Five highly accomplished people with strong McMaster connections were among the honorees at the YWCA Hamilton's annual Women of Distinction awards ceremony, held on March 2. Professors Sonia Anand and Natasha Johnson, researcher Shaila Jamal and community organizer Marybeth Leis Druery were all named Women of Distinction, and integrated biomedical engineering and health sciences program student Shayna Earle was recognized as this year's Young Trailblazer.