

September 28, 2012

Hon. Glen Murray
Minister of Training, Colleges & Universities
3rd Floor, Mowat Block
900 Bay St
Toronto ON M7A1L2

Dear Minister:

I am pleased to submit this proposed mandate statement and priority objectives. As you are aware, McMaster is a student-centred, research-intensive university devoted to serving our community and society by nurturing and enabling the fulfillment of human potential. In its 125-year history, McMaster has enjoyed a strong tradition of innovation and reinvention.

My letter to the community, *Forward with Integrity* (September 2011), challenged the University community to build on that tradition and re-imagine the teaching and learning experience to develop a distinct, effective and sustainable undergraduate and graduate student experience.

In order to determine the best approaches and practices to support a transformation, McMaster has been engaged in a pan-campus strategic consultation process over the last year. What emerged from these consultations was both a renewed commitment to research excellence and intensity and an emphasis on the integration of a “research frame of mind” into all aspects of university life. This “research-focused student-centred” approach will be McMaster’s driving imperative.

This proposed mandate statement builds on the work that we have undertaken since the release of *Forward with Integrity*. I have personally attended more than fifty consultations in the last year with faculty, students, staff and alumni. For more information on how we developed this proposed mandate statement visit:

<http://tinyurl.com/SMAIntroduction>

We thank you for the opportunity to present this submission. Please do not hesitate to contact me should you have any questions or require additional information at 905-525-9140 ext. 24340.

Sincerely,



Patrick Deane

Institutional Vision, Proposed Mandate Statement and Priority Objectives

A submission to begin the process of developing
McMaster University's strategic mandate agreement

“Our future shall be continuous and consistent with our past, expanding upon and fulfilling the historic character of McMaster as an institution. We will not only reaffirm the importance of radical questioning at the heart of the academic enterprise but we will ensure the integrity of our work by bringing a critical view to all of our practices—those which bear directly upon education and research as well as those less directly related to it.”

President Patrick Deane
Forward with Integrity



Ministry of Training, Colleges and Universities



Part 1: Proposed Mandate Statement

Our university was founded in 1887 and is governed by the McMaster University Act, 1976. We operate under a bicameral system (Senate and Board of Governors) and in consultation and coordination with the Government of Ontario's Ministry of Training, Colleges and Universities.

We exist to serve our community and society by nurturing and enabling the fulfillment of human potential: inspiring creativity and critical thinking, promoting an enduring love of learning and the habit of inquiry, and undertaking innovative research that extends the boundaries and enhances the efficacy of knowledge.

Priorities:

To achieve this mandate our approach over the next three years and beyond will focus on McMaster's three priority objectives which are, by necessity, interrelated. They are as follows:

1. Developing a distinct, personalized, engaging and sustainable undergraduate experience;
2. Enhancing the connections between McMaster and our community; and
3. Strengthening our research excellence and integrating it with our educational mission.

Our 125 years of achievement are grounded in an ability to embrace change and innovation. We will capitalize on our strengths and build on our hallmark interdisciplinary, inquiry-based, research-focused perspective. This will fuel a transformation that must occur in order to enhance the quality of our programs while expanding access and strategically increasing enrolment within a sustainable framework. Our intention is to pursue manageable growth in undergraduate and graduate programs that are aligned with our strategic priorities.

Innovation:

McMaster's evolution has relied on a willingness to develop pedagogical approaches that radically transform the way education is delivered. McMaster pioneered small group problem-based learning and evidence-based medicine, both of which enable a level of critical thought that allows innovation to flourish. Exceptional innovation and creativity is what has placed McMaster in the Top 100 Universities in the World.

McMaster defines innovation as: *extending the boundaries of knowledge and continually developing creative pedagogical approaches that are closely linked to and informed by the research enterprise, which increase the broader societal impact of the academy and are made possible by supporting and fostering risk-taking.*

Universities can only thrive if they embrace innovation in teaching, research and in their connections with the broader community. At McMaster we accomplish this by encouraging and supporting creativity and critical thinking in all aspects of our mission, by fostering and supporting risk-taking and by ensuring the integration of research outcomes and community engagement projects into our educational offerings. Our focus is on serving our society by extending the boundaries of human knowledge and graduating students who are thoughtful, capable and engaged citizens equipped with a range of flexible skills.

Productivity:

McMaster defines productivity as: *improving quality within the context of finite resources. This encompasses teaching, research and community engagement, recognizing the critical interplay amongst these diverse aspects of our mission. Quality is measured in terms of the positive impact we are able to make on the student experience, the depth and breadth of our research discoveries as well as our ability to translate the findings of that research, and the level of our engagement with the broader community.*

McMaster is already engaged in an institution-wide transformation, based on the priorities outlined in *Forward with Integrity* (September 2011) and discussed extensively during a year-long consultation process involving hundreds of students, faculty and staff. We aim to improve quality by closely integrating research and education and by embedding community-based, experiential learning in programs across all six Faculties. This will enable a more effective deployment of our resources and assist in establishing the University on a more sustainable footing. We expect to see significant developments over the three-year term of the SMA, which will lay the foundation for our broader transformation over the next decade.

Part 2: McMaster University - Vision

Our Vision

To achieve international distinction for creativity, innovation, and excellence.

Our Vision and the Proposed Mandate Statement:

McMaster's formal vision statement provides the platform on which *Forward with Integrity* has been built. It is *Forward with Integrity*, however, that provides the bold visionary commitment to transformation that will drive McMaster forward over the next decade. We must continually reimagine how best to equip our students for success and seamlessly integrate our educational mission with an expanding world-class research enterprise. This research-focused student-centred approach to scholarship and learning differentiates us, has defined our most renowned programs and resulted in our faculty receiving a variety of accolades, from Fellowships in the Royal Society of Canada to 3M Teaching Fellowship awards.

Part 3: McMaster University - Priority Objectives

Priority #1: Developing a distinct, personalized, engaging and sustainable undergraduate experience



"McMaster has been consistent in three vital areas: commitment to making the student experience the best it can possibly be; its drive to innovate in both teaching and research; and the belief that connecting with the community makes our students even better graduates and citizens." Lynton (Red) Wilson, Chancellor, McMaster and Alumnus ('62). Hear Chancellor Wilson's thoughts on the impact of McMaster on the student experience: <http://tinyurl.com/RedWilson>

Current Practices:

McMaster enjoys a storied tradition of pioneering academic programs based on self-directed, problem-based learning, which is intrinsically linked to the nature and mandate of a research-intensive university. These approaches have been emulated at many institutions around the world. The development of high-profile success stories such as the Medical Program, the Arts & Science Program and more recently the Bachelor of Health Sciences Program, has influenced the creation of the Honours Integrated Science Program (iSci), and the complete revamp to online delivery of the flagship Introduction to Psychology, Neuroscience & Behaviour course (IntroPsych). These are just a few examples of the way in which our research-intensive environment provides the basis for high-quality innovative learning techniques that speak to today's students, with their escalating access to information and their unprecedented connectedness. As indicated later in this submission, there are many other examples of innovations across McMaster's six Faculties and we will continue to build on these successes in the coming years.

Aspirations Over the Short and Medium Terms:

We will draw the most successful elements from our best programs with a view to expanding the benefits of such programs to the majority of our students. Our signature programs provide a high-quality, in-demand undergraduate education in a research-intensive setting. Financial constraints and the need to ensure the sustainability of our activities will make it increasingly difficult to offer a high-quality educational experience using traditional approaches. The answer lies in combining new teaching practices and learning environments with technology in a radical reconceptualization of our approach to mainstream education.

At the heart of our efforts to improve the student experience is our determination to develop and implement new experiential and self-directed learning opportunities and to intensify our distinctive interdisciplinary, inquiry-based, research-focused approach. Flexibility in the student journey is of the utmost importance and we will strengthen existing partnerships with other universities and colleges, as well as develop new pathways to rewarding careers. The aim is to provide our students with a personalized learning experience which ultimately equips them with the tools they need to be successful and engaged members of our society.

McMaster also shares the government's goal of increasing the number of under-represented students in the postsecondary education sector. In 2011-12, McMaster had 4,700 first-generation students, almost 500 Aboriginal learners (First Nations, Metis, and Inuit) and approximately 1,140 students with disabilities. We continually strive to improve access for these students and ensure they have the support they need to succeed.

Institutional Plan:

First, we are seeking a partnership with the provincial government to establish a pilot project called the **McMaster Experiential Learning Centre**. This pilot project will liberate students from the constraints of traditional programs, changing the ways in which we offer courses and evaluate success, as well as enabling a range of pedagogical innovations. It is focused on increasing experiential learning, online delivery, community engagement and mentorship.

The pilot project expands and builds on key lessons learned in our successful Bachelor of Health Sciences program and on the potential for savings that we have been able to generate there. Key components of the pilot project include:

- Facilitating interdisciplinary, experiential opportunities with the engagement of preceptors, skilled professionals with an interest in and commitment to students' education.
- Expanding community engagement opportunities with benefits for both the community at large and the students involved.
- Expanding blended and online learning opportunities through technological applications.
- Optimizing the use of our existing infrastructure.

This model will allow for significant improvements to quality since students will be engaged in experiential, self-directed and interdisciplinary learning. It also has the potential to achieve measurable cost savings, which will increase as the numbers of participating Faculties and programs expand. In our experience, particularly in Health Sciences, significant savings have been found. For example, for the 20% of the curriculum that is experiential, cost savings of approximately 10% have been generated. As part of this project we will measure and evaluate the impact on the student experience and the cost-savings achieved. The knowledge we generate will be scalable and applicable to others in the sector.

Second, as mentioned, McMaster is focused on the importance of establishing flexible pathways for students and plans to reinvest savings achieved through the pilot project to investigate in further detail the role and potential of prior learning assessment and recognition (PLAR). McMaster will also continue to build pathways for students who wish to transfer to or from other postsecondary institutions. We currently have agreements in place with a variety of universities and colleges, a recent example of which is our partnership with six other Ontario universities (Queen's, Guelph, Ottawa, Toronto, Waterloo and Western) to facilitate credit transfer for students. We will continue to build such partnerships in order to increase the flexibility with which students can complete their degrees.

We also expect to strengthen our partnership with Mohawk College and other colleges. Mohawk and McMaster have arguably the strongest college-university partnership in Ontario, a relationship that is exceptional amongst research-intensive universities and is a source of pride for both institutions. We run joint programs with Mohawk across our campus, using a variety of different approaches. Key to the partnership's success has been the willingness and the ability to build on each other's strengths. We will work with Mohawk to develop a joint strategy for postsecondary education in our community, one that takes a responsive and open approach and allows for a broad range of complementary student pathways. While the specific programs we develop will capitalize on the distinctive strengths of each institution, we intend ours to be a model that will be scalable across the system.

Finally, as part of our commitment to enhance and individualize the undergraduate and graduate student experience, we are assessing the benefits and pedagogical uses of a student learning portfolio. The portfolio is intended to capture and track both the curricular and co-curricular experiences of students, but more importantly and with the assistance of mentors, to help students identify and refine their personal learning goals and reflect on the value of their activities and accomplishments. The tool will encourage students to seek opportunities beyond the traditional program boundaries of Faculty and curriculum and foster the reflective frame of mind essential to lifelong learning and personal growth.

We anticipate adoption of these initiatives will build on our historical record of student success. McMaster students enjoy higher graduation rates on average than their peers, and since the implementation of Reaching Higher, the overall employment rate for McMaster graduates (2 years after graduation) has increased from 95% to 97%. While McMaster is also involved in piloting the Collegiate Learning Assessment (CLA) and the Assessment of Higher Education Learning Outcomes (AHELO), the University currently measures the experience of its undergraduate and graduate students through the National Survey of Student Engagement (NSSE) and the Canadian Graduate and Professional Student Survey (CGPSS). McMaster consistently ranks higher than the Ontario average in the University's academic challenge, the active and collaborative learning environment, student-faculty interaction, enriching educational experience provided to learners and the supportive campus environment.

While we are proud of these results, and while we are committed to testing new instruments for the evaluation of learning outcomes, we understand that existing surveys are limited in their ability to measure meaningfully the effectiveness of the experiential learning environment. For that reason, we will supplement these surveys with:

1. An annual student and faculty survey that will focus on experiential learning, community engagement, and undergraduate research. This survey will allow McMaster to report annually on the percentage of students enrolled in for-credit courses that contain experiential learning opportunities.
2. Percentage of for-credit courses that contain experiential learning opportunities.
3. A new employment survey that will measure the employment rate of McMaster graduates after five years. This new measure will provide insight into medium to long-term employment transitions, career development, the pursuit and impacts of lifelong learning, and the contributions our graduates make to society.

With the benefit of these initiatives we believe we will have the ability to make significant improvements to the quality of the student experience. To measure this, in addition to using existing tools, we will devote significant effort

to determining the indices that best reflect the impact on the individual, the institution and the community that we see as critical to our mission, in keeping with our evidence-based approach. As noted in relation to the McMaster Experiential Learning Centre, based on our previous experiences we also see the potential for cost-savings as we re-imagine the learning experience. We will evaluate these savings further as part of the proposed pilot project.

Priority #2: Enhancing the connections between McMaster and the community



"We know all of our work with neighbourhoods, with antipoverty and with developing a more robust future economy, could not be fully realized without the kind of contributions that Mac is making to our work and the community's welfare." Terry Cooke, President & CEO, Hamilton Community Foundation and Alumnus ('83). Hear Terry Cooke's thoughts on the impact of McMaster in the community: <http://tinyurl.com/TerryCooke>

Current Practices:

The culture of service distinguishes a McMaster education. Service takes a variety of different forms but the goal in all instances is to harness the creative and innovative energies of our students, faculty and staff and use them for the benefit of the broader community, whether local, regional, national or global. Obviously critical in this regard is experiential learning. Academic placements, student project grants, and internships, together with career planning and a coordinated and well-connected placement service, provide the opportunity for students to develop the skills needed to embark upon a rewarding career.

In addition, a considerable number of students and Faculties participate in clinical, field-based or professional training programs including:

- In 2011-12, approximately 4,300 undergraduate and 1,000 graduate students participated in clinical programs, representing approximately 18% of the University's total student population.
- In 2011-12, almost 2,700 undergraduate students were enrolled in programs containing a co-op component.

In our Social Sciences Faculty, for example, we focus on building pathways for high school students into the University, and by extension into the labour market and graduate training. We are offering a new life-mapping course for first-year students, three free University courses for 80 at-risk Hamilton students and a new "Social Sciences in Action" course designed to offer University credit for volunteerism and social and political activism. In the Faculty of Humanities, work has been undertaken with local school boards and international agencies to tackle the challenges of autism and low-literacy high school students.

Another compelling example of productive community engagement is the work undertaken at our Xerox Centre for Engineering Entrepreneurship and Innovation. This centre helps individuals and organizations develop their ideas into successful new products or services within existing companies, large or small, or to spawn new commercial enterprises. It also promotes the commercialization of technology-based innovation in Canada and around the world.

Aspirations Over the Short and Medium Terms:

Ensuring a relevant, rigorous, community-based education through an expanding breadth of engagement is an important priority for McMaster; it will be key to our success and of course it will also contribute directly to the health and prosperity of our partner organizations and of the community in general. Our proposed pilot project will build on the principles adopted by currently thriving initiatives such as Mac Serve, the McMaster Community Poverty Initiative, Health in the Hubs, the Discovery Program, and the Children and Youth University which have a strong

focus on building community engagement. Our aim is to become a key partner in the revitalization of Hamilton and the surrounding communities and thereby to have a transformative impact on our community.

Institutional Plan:

As noted from the outset, McMaster's three priorities and their benefits are closely interrelated.

We will continue to work closely with the City of Hamilton as well as communities in Niagara, Kitchener-Waterloo, Burlington and Halton Region through our distributed learning model. In addition we will build on our partnerships with the local government, business and other community groups. Our new downtown health campus is an excellent example of a productive partnership with the City of Hamilton; we look forward to its opening in 2014.

Our proposed McMaster Experiential Learning Centre will present a prime opportunity for improving the student experience and expanding our community engagement activities. It will be comprised of an integrated learning model that incorporates the community as an essential and vital component in the experience of undergraduate students. The proposed new Centre will also allow us to increase the number of students who are actively engaged with the community through service-learning, co-op training, entrepreneurial activity, or direct work experience with employers in manufacturing, construction, IT and communications, biotechnology, health care and many other sectors.

We will provide curriculum at all levels for those interested in learning about community engagement and recognize those who choose to develop their expertise in this area. We will also create a Network of Community Champions across our six Faculties to raise the visibility of our community engagement mission and to enable communication, mentoring and the sharing of best practices.

To measure our progress in achieving these objectives, we will continue to report on the University's NSSE survey results, and supplement this with the following new metrics:

1. An annual student survey that will focus on experiential learning, community engagement, and undergraduate research. This survey will allow McMaster to report annually on the percentage of students enrolled in for-credit courses that contain a community engagement component.
2. Percentage of for-credit courses that contain community-based engagement opportunities.
3. Percentage of students who participate in community-based engagement.
4. Percentage of students who participate in study abroad programs.

Priority #3: Strengthening our research excellence and integrating it with our educational mission



"The way in which we engage community through research is with commercialization... McMaster has shown this through investment in creating the research park and the training of our students so we can make a huge difference." Mark Chamberlain President & CEO, Trivaris. Hear Mark Chamberlain's thoughts on the impact of McMaster's research:
<http://tinyurl.com/MarkChamberlain>

Current Circumstances:

Since 2005, McMaster has consistently ranked second in Canada for research-intensity. Our research impact, using the H-index to measure the quantity and quality of all McMaster research publications, indicates we are well above the Ontario average and our U15 peers. McMaster is home to 69 CRCs, 89 endowed chairs, 7 endowed professors,

1 CERC and 7 NSERC industrial research chairs. With more than 100 research centres and institutes, McMaster is a provincial, indeed national, research powerhouse and innovation incubator.

McMaster excels at collaborative research with industrial, government and community partners. We are ideally positioned to play a vital role in the economic development of Ontario and in enhancing the social and cultural fabric of the province. We also have the expertise and experience to manage knowledge and technology transfer and commercialization in collaboration with our industry partners.

Our success is due in large part to the generous investments from the local, provincial, and federal governments and the private sector in world-class infrastructure and technology. Our success in attracting this research funding speaks to our reputation as a research powerhouse. McMaster had the highest average total tri-council (CIHR, NSERC, SSHRC) funding allocation per principal investigator (\$71,367) of all of Ontario's research-intensive universities. As well, our research-intensity over the last decade grew from almost \$100,000 per full-time faculty to about \$310,000, an increase of almost 210%. The average growth at other Canadian medical/doctoral universities was just over 140%.

Our research-intensity is fundamental to our pedagogical model, which seeks to embed the process of discovery and interdisciplinary collaboration at all levels of the learning process, and translates into innovative undergraduate curriculum and cutting-edge graduate training. Our research findings benefit local, national and international communities, while also adding tremendous value to our ability to teach students and prepare them for rewarding careers. McMaster is at the forefront of leveraging the link between research, teaching and learning. In fact, through our Centre for Leadership in Learning we recently collaborated with HEQCO and the Society for Teaching and Learning in Higher Education in the development of *Researching Teaching and Student Outcomes in Postsecondary Education: A Guide for the sector*.

Aspirations Over the Short and Medium Terms:

We intend to continue to contribute to economic development through progressive training programs, increasing the number of vital partnerships with the private sector and ingraining a research-focused mindset in the undergraduate and graduate learning experience to help train highly qualified personnel.

Our program mix will be driven by opportunities that enhance and build on our research-intensity, linking McMaster's areas of research excellence with opportunities that address the needs of society.

Institutional Plan:

First, McMaster's research will continue to reflect current and emerging social and economic issues of importance to our local community and beyond. Whether it is aging, infectious diseases, water or advanced manufacturing, poverty or literacy, we are committed to building a stronger economy and a healthier, more engaged society by continuously expanding the breadth of our research activities.

Second, in keeping with our commitment to be a research-focused student-centred institution, we will provide enhanced support to our faculty to assist them in engaging students in their research activities and creatively linking their research and teaching responsibilities.

Third, graduate training is central to research-intensity at McMaster and higher graduate enrolments are targeted for high-quality, interdisciplinary programs that are nationally and internationally recognized. We also anticipate introducing a number of new graduate programs to meet Ontario's higher education and training needs. Once these programs pass through our internal and external quality assurance processes, streamlined and expeditious program approval from MTCU will enable us to better respond to labour market needs and introduce innovative program options.

Fourth, we will extend our focus on and investment in opportunities that bridge the gap between research and commercialization. We encourage the Government of Ontario to invest in opportunities designed to bring universities together with industry. The German Fraunhofer model epitomizes the benefits of such partnerships and has been a model of success for that country.

Finally, we would expand upon the mandate of the Centre for Leadership in Learning to establish a centre for pedagogical research and best practices, consistent with becoming a research-focused student-centred institution.

To measure the progress of McMaster's objectives related to research-intensity the University proposes to report annually on the following:

1. Total annual research income compared to the U15 average.
2. The number of collaborative research projects with the private sector.
3. The number of invention disclosures, licenses, patents.
4. The number of major awards (e.g. Vanier Scholarship recipients, Polanyi Prize recipients, Canada Research Chairs).
5. The number of undergraduate students involved in research.
6. Percentage of undergraduate for-credit courses that contain a research component.
7. PhDs and MAs as a percentage of total enrolment.

SUMMARY

McMaster University's achievements are grounded in our proven ability to embrace change and innovation. We believe in transformation and over the past year our faculty, students and staff have enthusiastically engaged in a journey to enhance the capability of our students through experiential learning, extend both the breadth and depth of our connections with our community and enhance our research-intensity and its integration with student learning.

In order to move forward with our transformation we need government's support for the following:

- McMaster's Experiential Learning Centre pilot project.
- Ability to reinvest productivity savings to expand opportunities for students.
- Flexibility to build on the unique programs that continue to differentiate McMaster as a research-focused student-centred university.
- Government and community partners to build our community engagement and experiential learning platform.
- Ability to expand our undergraduate and graduate enrolments in areas of strategic importance to the University.
- Continued support for the research enterprise to help foster McMaster's reputation as one of the World's Top 100 Universities.

McMaster's transformation will allow for the re-deployment and more effective use of our resources. It enables us to capitalize on our strengths, build on our hallmark multidisciplinary, research-focused student-centred commitment, and drive quality, access and sustainability.