

**BROCK UNIVERSITY**

**RESEARCH INTERNATIONALIZATION TASK FORCE**

**Report to the Vice-President Research**

December 10, 2015

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## Abbreviations and Definitions

AUCC: Association of Universities and Colleges of Canada

AVP: Associate Vice-President

IC: Internalization Committee

ORS: Office of research services

TCPS: Tri-council policy statement (on research ethics)

VP: Vice-President

In exercising its mandate and for the purpose of this report, the Research Internationalization Task Force utilized the following definitions:

**Research:** An undertaking intended to extend knowledge through a disciplined inquiry or systematic investigation (TCPS 2, Chapter 1).

**International research:** This can be simply defined as “research in collaboration with scholars or institutions worldwide” (Lang p. 108). At the University level, this collaboration includes faculty members as well as librarians.

**Research Internationalization:** A process involving direct research interaction and collaboration between scholars from different countries. For the purpose of this report, the process is a systematic effort by which an institution with a research mandate promotes and sustains research collaboration with scholars and institutions outside its own national borders (adapted from Knight, 2004; Knight, 1994; Van der Wende, 1997).

**Internationalization of higher education:** the process of integrating an international, intercultural or global dimension into the purpose, functions or delivery of post-secondary education.” (Knight, 2004)

**Interdisciplinary research:** “any study or group of studies undertaken by scholars from two or more distinct scholarly disciplines. The research is based upon a conceptual model that links or integrates theoretical frameworks from those disciplines, uses study design and methodology that is not limited to any one field, and requires the use of perspectives and skills of the involved disciplines throughout multiple phases of the research process.” (Aboelela et al., 2007).

## The Research Internationalization Task Force

### *Mandate*

Dr. Gary Libben, Vice-President Research, created the “Brock Research Internationalization Task Force” in February 2013. This initiative is in alignment with Brock University commitment to research excellence and interest in internationalization of research, as captured in the document “ORS Vision 2020 Research Plan”.

The Task Force was given the following mandate:

- **Examine our current state.** What are our current research partnerships, collaborations, and agreements? How do we compare to other institutions?
- **Examine our strengths and opportunities.** How can we develop, where are our most natural development opportunities, and where can we build new opportunities. To what extent can we capitalize on Brock’s geographical location to attract world-class researchers and research events?
- **Examine best practices.** What examples and practices at other institutions can we learn from?
- **Identify challenges** and strategies to overcome them. What are the general and Brock-specific obstacles to expansion? How can we overcome them?
- **Recommend actions.** What actions can we undertake in the short, medium, and long term? Do we need to develop new university structures to implement the recommended actions? What will be required from institution-internal resources? What are the costs associated with each recommended action? What are the opportunities for external funding of recommended actions?

The Chair of the Task Force began recruiting members right after its creation but this proved to be a challenging endeavour and it only achieved the current membership by late 2013. Work began in early 2014. However, due to extenuating circumstances experienced by the Task Force’s Chair and some of its members, the team underwent a work hiatus from March to September 2014, resuming duties in October 2014. Since this date, Task Force members communicated frequently via email and met regularly in person to conduct fruitful discussions leading to the production of the present report.

A first full draft of this report was presented to Dr. Gary Libben on February 2015 and upon his feedback, a revised version was re-submitted to him on May 05.

Dr Libben introduced the report to the Research & Scholarship Policy Committee (R&SPC) on May 13. The Committee invited the Task Force to the meetings held on September 18 and November 20 in order to discuss the recommendations and elicit their prioritization. Following the committee’s recommendations, The Task force submitted to the R&SPC a modified version of the report on December 10, 2015, which received approval on December 18, 2015. In turn the R&SPC presented the report to Senate, in the 636th Meeting, held on January 13, 2016.

The work of the Task Force was completed on December 18, 2015, after which date, it has become a Standing Advisory Committee to the VP-Research and will meet with him and his staff at least 3 times a year to assist and monitor the implementation of their recommendations.

### *Task Force Members*

- 1) Sheila Young, BA. Director Brock International Services
- 2) Irene Maria F. Blayer, PhD. MLLC- Faculty of Humanities
- 3) Maria del Carmen Suescun Pozas, PhD. Department of History, Faculty of Humanities
- 4) Bareket Falk, PhD. Department of Kinesiology, Faculty of Applied Health Sciences
- 5) Ana Sanchez, PhD. Department of Health Sciences, Faculty of Applied Health Sciences (Chair)

### *Disclaimer*

The present report is product of the independent work of the above-mentioned members of the Brock community. The statements, ideas, and recommendations presented are the authors' sole responsibility. The Task Force members possess significant experience in conducting, fostering, and managing international research; their work was guided by a broader understanding of internationalization of higher education and underpinned by the transformational model of internationalization.

## Executive Summary

International research collaboration and international prestige are common features of research-intensive universities. Knowledge production and exchange is necessary to ensure and raise the quality of research globally, and to play a relevant role in today's society.

The Research Internalization Task Force was convened by the Vice-President Research with the mandate of analyzing the current state of the research internationalization process at Brock University, identify challenges and opportunities, examine best practices, and propose recommendations to further international research at our institution.

In alignment with similar analyses undertaken at other Canadian, European, and Australian universities, the Task Force concludes that strengthened international research collaboration will help Brock improve its position nationally while gaining international reputation. As a result, the University will be in a better position of attracting and retaining the best talent and research funding, which will consequently lead to greater contributions to both civil society and scientific community.

The Task Force findings demonstrate that the University has a long-standing interest in internationalization of its campus and curricula, but that a specific strategy for research internalization is yet to be proposed and implemented. International research of high caliber and relevance is being undertaken at the University by individual faculty members. However, as demonstrated by a growing body of literature, international research is hardly sustainable if it happens as isolated efforts by faculty members. At Brock, international research will only reach the next level if it is conducted under the auspices and recognition of the institution and can anchor itself within a variety of efforts around internationalization.

The Task Force recognizes that the moment has come for Brock to make structural and strategic changes to support and expand the internationalization of research. The office of the Vice-President Research is the natural administrative organ to champion the University's research internationalization process. However, in light of the interconnected nature of the University existence, the Task Force recommends that the VP-Research Office strive to harmonize efforts with other university constituencies working on internationalization of the institution at large. Brock University cannot reach international or global stature without comprehensive actions in regards to internationalization at all levels of our academic life, including research.

After careful analysis and deliberation, the Task Force submits the present report to the Vice-President Research in hopes to evoke institutional reflection, promote harmonization, and stimulate the generation of dedicated actions to coordinate, sustain, and enhance the research internationalization process at the University. At its core, the report contains short and medium-term practical recommendations that may guide the University's intention to promote research internationalization, as stated on "*Vision 2020 Research Plan*".

The Task Force encourages the University taking dedicated actions to enhance research internationalization and suggests beginning with a short-term plan for 2016, followed by a medium-term plan in the subsequent year, while the long-ranging actions are consulted and carefully planned in alignment with an institutional policy.

To provide some guidance, for 2016 the Task Force suggests: a) Creating a research fund for international research and scholarly activities; b) Adjudicating an International Research Award; c) Integrating an international research advocate in the University's Internationalization Committee; d) Consulting with international research stakeholders on a regular basis; and d) Increase the visibility of international research and other international scholarly activities on the University's website and through social media.

As medium-term priorities, the Task Force recommends that the Vice-President Research: a) designates explicit international responsibilities (worked into workload) within ORS and among AVPRs; b) implement an international research situation analysis survey among researchers, librarians and scholars at the institution; and c) commissions a bibliometric and network analysis of international activities and publications to assess opportunities for strengthening and growth.

It is the position of the Task Force that the creation and implementation of a university-wide strategy for research internationalization is imperative. To this effect, the Task Force members would be willing to continue their involvement with all aspects of Research Internationalization. A potential avenue could be becoming a Standing Advisory Committee on Research Internationalization.

Considerable time and investments will be necessary to establish appropriate University structures and support mechanisms—including human resources—as well as to provide adequate funding to launch and sustain research internationalization commitments and initiatives.



## Introduction

Scientific research is a fundamental producer of new knowledge. Given current globalization trends [*i.e.*, increasing cross-border flows of information, knowledge, commodities and capital as well as people (Archibugi & Iamarino, 1999; Schwaag-Serger & Wise, 2010)], knowledge has become a key resource driving innovation, growth and progress. In a globalized society, scientific development requires collaboration and cross-cultural initiatives that can be addressed through the internationalization of research.

International research is an essential attribute of “world-class universities” in which research internationalization is no longer a fragmented, incoherent and sporadic process; instead it becomes an integrated and planned course of actions (Jones & Oleksiyenko, 2011).

The elements characterizing international research (*i.e.*, in collaboration with scholars or institutions worldwide), are varied in nature, but in general, research is viewed as international when components of the design and execution and the ensuing dissemination and use of the knowledge produced are international in nature (Pearce, 2013). The research internationalization process can lead to and be expressed through several modalities of cooperation, ranging from mobility (physical or virtual) of researchers or research students; multinational research projects, cross-border contract research, creation of, or participation in, international research organizations, societies, and networks; creation of, or participation in, joint research programs (including graduate education, policy, research); holding of international conferences; publications by authors from different countries, publication in a foreign language other than the official language of the researcher’s institution; translation of works by foreign authors, to the dissemination of research through new technologies (Edler & Flanagan, 2011).

Collaboration leads to higher scientific quality, as it opens up new ways of thinking and brings about new ideas. The possibilities of new discoveries and innovations are maximized when researchers work in collaboration (CAA, 2012). Knowledge —both codified and tacit— flows naturally through collaboration. Upon production, knowledge exchange has positive spillover effects and may contribute to economic advancement. Very importantly, new knowledge and innovation can help solve some of the world’s most pressing needs (Lauto & Valentin, 2013).

Higher education institutions play an important role in the quest for new knowledge and finding solutions to global –as well as local– challenges (Antelo, 2012). Universities and colleges across the globe are increasingly collaborating with one another, as well as with community organizations, and the public and private sectors (Jones & Olenksiyenko, 2011).

In Canada, Universities and Colleges are actively engaged in the production of knowledge and innovation. In recent years, Canadian universities have increased their research networks and cooperative agreements, and have established programs that enable the training and co-supervision of highly-qualified personnel of both Canadians abroad and students from other countries in Canada (CCA, 2012). International research collaboration as measured by publication co-authorship in 2013 was higher than the world’s average, as well as higher than that of the United States (47% vs. 20% and 31%, respectively) (AUCC, 2014). This suggests that Canada is well positioned in terms of global connectedness and competitiveness, and according to the latest AUCC’s Internationalization Survey, illustrates the breadth of research ties established by Canada’s universities (AUCC, 2014).

Brock University aims to make a significant contribution to society, both within and outside our geographical and cultural boundaries. Having increased its status to a comprehensive university, Brock is poised to raise its significance and reputation both nationally and internationally. To this effect, the institution needs to firmly support academic and research collaborations following a two-prong approach: strengthening existing top research areas as well supporting emerging research and innovation ideas.

With the growing demands of the global knowledge economy, Brock requires to devise a strategy to meet global challenges and stay competitive. Research excellence, especially through stronger international partnerships will help Brock achieve these goals. At the same time, Brock University cannot reach international or global stature without comprehensive actions in regards to internationalization at all levels of our academic life (e.g., see: Griffith University, 2014; Copenhagen University, 2012; McMaster University, 2014).

## Current State of Brock's Research Internationalization

*Examine our current state. What are our current research partnerships, collaborations, and agreements? How do we compare to other institutions?*

### *Internationalization*

The value of *internationalization* has been long recognized at Brock and as such, it has become a strategic priority for the institution. Recognizing that internationalization occurs in a continuum, Brock's commitment to internationalization involves integrating a global perspective into the teaching, learning, research and service functions of the institution. To translate policy into action, Brock's Internationalization Committee (IC) was created in early 2004 by the Vice-President Academic, with the mandate to engage in strategic planning, facilitate cross-departmental communication, and monitor the progress of Brock's internationalization objectives, as outlined in the Long Range Planning Recommendations. As it stands, the IC appears to deal primarily with undergraduate education affairs (mainly supporting travel abroad opportunities for students and recruiting foreign students), and with establishing agreements for international academic cooperation. The IC oversees the development and implementation of a Strategic Internationalization Plan (Brock-New Directions 2013-2016).

Central offices supporting a broad range of international activities comprise: Brock International Services, English as a Second Language (ESL) Services, International Market Development, and the Confucius Institute. These too are largely dedicated to undergraduate education, and with the exception of the Confucius Institute, report to the Vice-Provost and Associate Vice-President, Student Services.

Brock International (which from 2006-2008 reported directly to the Office of the Vice-President Research), is the most prominent university structure involved in Research Internationalization. Its current mandate makes Brock International Services responsible for a number of institution-wide services and activities, including:

- Welcoming international students, scholars, visitors, and delegations to the University;
- Managing the wide range of programming for students both international and Canadian;
- Managing the visiting international professor and scholar programs;
- Developing and maintaining protocol for institutional agreements and partnerships;
- Promoting international funding opportunities;
- Facilitating international partnership and project development, international policy development, and other international matters of the institution.

Brock International has fostered and supported over the years, the creation of a variety of academic and research partnerships. Presently, the University has over 50 international research-specific agreements with institutions in 28 countries.

Although wide-ranging, Brock's institutional internationalization initiatives have translated more prominently into the internationalization of education (*e.g.*, student mobility, cooperation agreements, *etc.*).

### *Research internationalization*

A dedicated policy, strategy, or framework to advance the research internationalization process at the university does not presently exist at Brock. Moreover, formal structures aiming to specifically foster

international research are scarce. The Office of the Vice-President Research does not have an explicit unit or research officer dedicated to overseeing or promoting international research.

Although analyzing the history of institutional internationalization and research internationalization at Brock is beyond the scope of this document, some aspects are important to mention as the Task Force believes that there is a need for an institutional memory that shines the path of future decisions. In 2011, Kathryn E. Lang conducted a qualitative research study entitled “*Mapping one university's response to Internationalization: A case study*” (Master’s of Education thesis). Lang’s research focused on Brock University (although in her thesis, the institution is referred to as MSOU, a mid-sized Ontario University), and her findings show that efforts to internationalize the institution go back to at least 1981. Similarly, Lang notes that considerations to integrate international research and development activities into the Associate Vice-President Research (A-VPR) portfolio begun as early as 2004, with “the appointment of a new A-VPR, an added responsibility of International Development integrated into the position and title” (Lang, 2011. Appendix C, page 170). As described by Lang, the AVP position evolved into Vice-President Research, and the term “international development” was removed from the title.

More recently, in early 2013, the current VP-Research appointed two Associate Vice-Presidents, one for the Natural and Health Sciences, and another for the Social Sciences and the Humanities. To the Task Force’s knowledge, neither AVP-R has a distinct mandate to promote or support research internationalization.

Upon examining the senior administrative level positions and roles, research internationalization does not seem to occupy a prominent place. The same can be said after examining individual academic units. Among the 6 existing academic Faculties, only the Faculty of Education has an Associate Dean's Office, Research and International Initiatives; created to “provide leadership, outreach, and support for all research and international initiatives within the Faculty of Education at Brock University”. The Associate Dean works in coordination with Brock International and other constituencies. Goodman School of Business has 4 administrative positions dedicated to various aspects of their international programming: for the purpose of international recruitment, coordination of international graduate programs, and exchange and study abroad. However, in these two as well as in the remaining four Faculties, a formal unit to support international research does not exist.

In sum, institutional efforts specific to the internalization of research are decentralized, not explicitly mandated and could be better coordinated and developed.

The lack of explicit or visible structures or policies to support research internationalization has not precluded members from the Brock community to actively pursue and engage in research collaborations with partners in different countries around the world. Across the university, faculty members, students, and staff have been engaged in meaningful research collaborations expressed through both academic research outputs (joint projects, student supervision, grant applications, publications, *etc.*), and through beneficial impact to research partners and their associated communities at the local and international level. As well, a number of faculty members actively engage in international entrepreneurship, which has emerged as a distinct field of research. Some information about these activities can be gleaned from publication databases, Brock International’s website, and faculty members’ individual pages.

However, scattered information on university's web pages is likely incomplete and/or outdated. Hence, it is difficult to obtain an accurate estimate of the international research activities taking place at the university. This not only prevents determining Brock strengths and ascertaining opportunities for growth, but also precludes from having baseline data from which to propose research internationalization strategies and from which to measure their eventual performance. But gathering information is not enough. At the same time, Brock needs to establish a clear, yet comprehensive definition of *International Research*. Such definition requires the creation of a set of indicators encompassing the variety of disciplines under active research at the institution as well as reflecting the multiple modalities and numerous outputs characterizing international research. These indicators should be identified not only from the international literature but also through a consultation process within the institution.

In light of the challenges and opportunities presented by globalization, and the pivotal decision to evolve Brock from an institution focusing primarily on undergraduate education to becoming a research-intensive university; moving forward, Brock will require an explicit policy backed by actions as well as funding to sustain and expand international research.

## Strengths and Opportunities

*Examine our strengths and opportunities. How can we develop, where are our most natural development opportunities, and where can we build new opportunities. To what extent can we capitalize on Brock's geographical location to attract world-class researchers and research events?*

Globalization and the expansion of communication technologies have created new opportunities for international research, which have been materialized by administrators, staff, and faculty members along with graduate students. Similarly, the past decade the University experienced an intentional expansion of student enrolment, undergraduate and graduate programs with the goal of becoming a research-intensive university. The synergetic interactions of globalization and growth have created a collective of facilitating factors for the expansion of research of both local and international scope. Such facilitators are in turn, fertile grounds for future expansion at all levels.

### *Current facilitators of research internationalization*

At present, Brock's natural process of research Internationalization is enabled by the following:

- a. *Existing policies*
  - Brock's Academic Plan, "Brock 2014" considers Research as one of four key pillars crucial to securing Canada's future in a world. Brock's intentions to make important contributions to global issues are highlighted.
  - Brock Research Plan "Vision 2020 Research Plan" considers the promotion of research internationalization an institutional priority.
  
- b. *Existing institution-wide administrative structures*
  - The Internationalization Committee and Strategic Internationalization Plan.
  - Brock International Services.
  
- c. *Human capital*
  - Existing Canada Research Chairs; faculty members of world-class reputation maintain and promote international research collaborations.
  - Across the University and in every Faculty, there are individual researchers engaged in international research collaborations.
  - A significant numbers of foreign-born faculty members maintain successful research collaborations with colleagues in their native countries.
  - Brock diversity is growing and there are faculty members and student body from all over the world. This presents natural opportunities for international collaboration and exchange of knowledge.
  
- d. *Physical facilities as knowledge attractors*
  - The Cairns Family Health and Bioscience Research Complex, already attracting top-scientists, has a vast potential in term of research Internationalization.
  - The existing BSL3 laboratory, as a highly specialized laboratory facility has great potential for research Internationalization. This is especially true since very few of the pathogens requiring such facility are autochthonous to the country or of local importance.

e. *Research centres and institutes*

- **Research institutes** have been created along the years and many are actively engaged or have the potential to be engaged in international research collaborations: The Brock Institute for Scientific Computation; Centre for Applied Disability Studies; Centre for Bone and Muscle Health; The Centre for Digital Humanities; The Centre for Healthy Development; Centre for Sport Capacity; The Cool Climate Oenology and Viticulture Institute (CCOVI); The Humanities Research Institute; The Niagara Community Observatory; The Tecumseh Centre for Aboriginal Education and Research.
- **Trans-disciplinary research institutes:** the recent establishment of five trans-disciplinary institutes: the Institute for Advance Bio-Manufacturing; the Brock-Niagara Centre for Health and Well-being; the Environmental Sustainability Research Centre (ESRC); the Jack and Nora Walker Centre for Lifespan Development Research; and the Social justice Research institute.
- **The UNESCO Chair in Community Sustainability**
- **The Marilyn I. Walker School of Fine and Performing Arts**

f. *Research culture*

- Multidisciplinarity and transdisciplinarity are increasingly recognized as essential to production of new knowledge and innovations (mentioned above, the five trans-disciplinary institutes).
- In addition to basic research, applied research and translational research are becoming more relevant.
- The integration of business models into research enterprise is becoming more common.

g. *Geographic location*

- Brock is situated in the Niagara Region, a privileged geographical location well-known in most of the Western world.
- Brock's main campus is part of a UNESCO Biosphere Reserve, set atop the Niagara Escarpment in Ontario.

### *Opportunities for growth*

It has been suggested that successful partnerships begin at grassroots (*i.e.*, individual researchers) level. That is, in many cases, successful inter-institutional partnerships begin with individual researchers and their leadership. Therefore, it is important to continually examine grassroots successes (and failures) and support such efforts. Currently at Brock, individual faculty members are the main drivers for the internationalization of research. Thus, it will be helpful to engage researchers interested in or successful at international collaboration in an ongoing exchange of ideas and planning.

At the same time, international research will hardly be sustainable if it happens as isolated efforts by faculty members. International research will only reach the next level if it is conducted under the auspices and recognition of the institution and can anchor itself within a variety of efforts around internationalization. As such, and recognizing that the ultimate driving forces for research Internationalization are faculty members, a careful balance between faculty-driven international

collaborations and institutional interests is needed. Decentralized initiatives must be coordinated, supported, and enhanced by a strong and well-defined central administration.

Opportunities for growth can be expanded or created at different levels. Many initiatives already exist at Brock University in some form. In the Recommendations section, the Task Force is proposing a series of opportunities involving undergraduate and graduate students, individual researchers or bodies within the university (e.g., research centres or transdisciplinary research hubs). See also **Appendix I** for a summary of these recommendations.



## Best Practices for the Internationalization of Research

*Examine best practices. What examples and practices at other institutions can we learn from?*

The following are some of the practices and strategies implemented or pursued by Canadian and other high-income country universities. The list is broken down into two sections: those currently implemented at Brock (thus reflecting the institution is on the right path); and those not yet implemented at Brock but viewed as essential by other institutions aspiring to become truly global institutions.

### Practices and Strategies Specific to International Research Currently Occurring at Brock

#### *Pursuing strategic institutional partnerships*

Universities identify specific institutions, countries, regions, and research areas that offer the best opportunities for research and education.

Currently, the University has over 50 international research-specific agreements with institutions in 28 countries.

#### *Integration of globalization in the university experience and diversifying student population*

Opportunities for researchers, students, and staff to engage with international, intercultural, and global dimensions through workshops, course content and materials; promote the value of study abroad, encourage students to travel. Others include: encourage political, cultural literacy, second language acquisition, etc. In parallel, universities make efforts to diversify countries from which students are recruited and adjust how they deliver services to accommodate international students.

Brock's percentage of international students out of total enrolment is about 10% and 35% at the undergraduate level and graduate level, respectively. As reported in AUCC's Internationalization Survey (2014), these figures appear fairly representative of the Canadian universities in average.

Although these initiatives are largely driven by policies for internationalization of the university, they may actually result in broadening of research interests due to the international focus of such students. Interestingly, a recent survey of European universities revealed that the primary reason to increase the number of international students was not revenue generation but rather to improve the overall quality of education (EAIE, 2015).

#### *Recognizing the value of international activities*

Include international activities as an explicit entry into annual activity reports. Create awards for international research and engagement at the same level than other academic awards.

These are explicitly mentioned in Brock's "Vision 2020 Research Plan".

#### *Creation of joint degree-programs*

There are some joint programs in place at Brock, although such degrees are not specifically research-oriented. In Europe and North America cooperative agreements among institutions take a variety of forms: from shared supervision and multi-institutional study/research to joint curricula approval and franchised degrees from one institution to another (e.g., British degree programs awarded by a Dutch university).

## Practices and Strategies Specific to International Research not yet Implemented at Brock

### *Defining internationalization and its guiding principles*

It is common for academic institutions to integrate “internationalization” into their core values and elevate it into strategic priorities. In addition to recruiting international students, Brock would benefit by having a broader framework that considers how the institution responds to such internationalization.

Some institutions have already taken the opportunity to set themselves apart from others in the how and why they internationalize. A recent survey of European higher education institutions states: “despite the imperative for higher education to internationalise, the reasons for, and challenges of, internationalisation differ according to national and institutional contexts.” (EAIE, 2015).

### *Defining international research and its guiding principles*

At its basic level, international can be defined as “research in collaboration with scholars or institutions worldwide”. However, as mentioned above, there is an urgent need to create a *working* definition of what “international research” means at Brock. But beyond drafting a definition based on national and international literature, such definition should include a set of indicators encompassing the variety of disciplines under active research at the institution. It should also reflect the multiple modalities and numerous outputs characterizing international research. A consultation process within the institution would be the best way to achieve this goal.

### *Cataloging, analyzing and publicizing Brock’s international activities*

Knowing the extent of our international collaborations will facilitate knowing our strengths and opportunities for growth. Very importantly, it would help demonstrate to the Brock community and beyond that the university is an important player in the international landscape and is committed to making an international/global impact (e.g., see: McMaster 2014, International Compendium, appendixes B and C). As noted below, the Task Force recommends implementing an institutional survey to gather pertinent data.

### *Routine monitoring of internationalization activities*

Assess budgets, measure progress and decide what is most effective. Keep updated inventory of international research and education initiatives.

### *Providing financial support for international research and scholarship*

Make seed money available to faculty to encourage collaborations either faculty-driven or that are strategically important to the institution’s intentions to promote international research.

### *Facilitating and funding mobility to pursue international research*

Offering and funding international research and study opportunities (faculty and student implementing research projects abroad; graduate students placements in foreign institutions, etc.).

### *Establishing a long-term business plan to support international research and scholarship*

Allocate a percentage of the university gross budget to support international partnerships and research, actively pursue funding from government and non-governmental agency, and private donors. Tap into the potential for international research and cooperation with the international alumni network.

*Providing administrative support for international research and scholarship*

Support development of complex international proposals as well as the administrative maintenance of successful initiatives.

*Providing capacity building for international cooperation*

Offer seminars and workshops as well as one-on-one mentorship for faculty members interested in pursuing and maintaining international research collaborations. At the same time, view international activities as a valuable form of capacity building and involve those involved in mentoring others.

*Creating a clear policy and goals for internationalization of research*

Backed with funding and evaluated using appropriate indicators.

*Developing standards*

Establish a model for international partnerships (contracts, agreement of cooperation, etc) and develop standards for international research collaboration. Such standards should be modelled after well-established norms that consider a wide spectrum of values, best practices, and laws.

*Creating university structures to foster internationalization of research*

Identify and/or create structures that provide support for world class research in a global environment. Two suggestions can be considered:

- a) Expand the role of the Internationalization Committee (IC) to consider research as well. In this regard, the IC is the ideal university structure to maintain and build upon Brock's institutional memory pertaining to internationalization and internationalization of research.
- b) Create a permanent international advisory committee to coordinate and plan the university's international strategies and actions, including research internationalization. To this effect, McMaster University has created the International Strategy Advisory Group, which brings together representatives of all constituencies to coordinate and plan the university's international goals (<http://oia.mcmaster.ca/international-strategy-advisory-group-isag>).

*Developing public spaces that celebrate international research*

When planning physical environments, develop spaces and opportunities so students and researchers can exchange ideas outside the classroom. Such spaces would make a clear statement on the importance of celebrating innovative thinking, open culture, and global exchange of knowledge at Brock.

*Recognizing and celebrating efforts*

Give tangible evidence to faculty and staff that international engagement is a valued activity. Other institutions incorporate criteria that recognize international activities in the evaluation of research, teaching and service in tenure and promotion. Create awards for international research and engagement at the same merit level than other academic awards.

*Enhancing the visibility of international research, both internally and externally*

Coordinate and establish a strong media presence within Canada and abroad.

*Integrating internationalization of research to the institutional identity*

Raise the profile of international research and demonstrate that it is an essential endeavour at the University. Communicate the university's vision of internationalization, both internally and externally.

*Pursuing opportunities that highlight global affairs*

Selecting strategic areas where the institution can make an important contribution.

*Developing academic units with a global focus*

Institutes or research centres with a focus on international / global research.

*Harmonization of degrees and creating parity*

In the European Union (Bologna Process, European Union) universities are harmonizing programs internationally and ensuring transfer of credits, thus guaranteeing that once knowledge is acquired, it can be used elsewhere. This creates uniformity among graduate and post-graduate degree programs across Europe in order to enable students to study and receive credit in multiple countries.

*Preserving and transmitting institutional memory pertaining research internationalization*

Future strategies and action should take into consideration the historic evolution of various structures, strategies, and lines of action (or inaction), as they pertain to research internationalization.

The work of Lang (2011) shows that considerable time and knowledge have been invested into creating and/or reforming what exists at Brock today, but documentation describing the reasons why decisions were made or the impact such decisions had was not available to this Task Force. *Institutional memory is critical to organizational effectiveness* and all efforts should be made to not only preserve it but also to make it available to all stakeholders involved in the process of research internationalization.

## Challenges

*Identify challenges and strategies to overcome them: What are the general and Brock-specific obstacles to expansion? How can we overcome them?*

### *Overarching challenges*

There are challenges inherent to international research. International research is a complex endeavour and can carry considerable uncertainties and risks in terms of time and investments. It is often more expensive than similar research conducted locally and involves a high degree of coordination. Further, international partnerships often require more time to develop and launch, and achieving results can take longer than expected. At the individual level, international research can be exhausting for researchers, demanding considerable time and effort; imposing administrative, culture and language demands, as well as impress high expectations for the researcher, both at home and at foreign institutions. It is crucial for universities to recognize and create appropriate incentives for researchers engaged in international collaborations.

Intense internationalization at universities can also have systemic adverse effects. Experts argue that internationalization (expressed by authors in terms of marketization, commodification of knowledge, commercialization of learning, among others) has led to the decline of academic quality, and many universities have shifted from the basic disciplines to professional education and from teaching to research in measuring institutional excellence. This is a challenge because loss of reputation in undergraduate education carries long-term unfortunate consequences.

Added to this mix, globalization forces are imposing new challenges. Even though globalization presents many opportunities for knowledge creation and transfer as well as for innovation and entrepreneurship, it also creates challenges at a very fast pace. Universities must be innovative and dynamic and be able to adapt and stay competitive.

### *Challenges of doing international research in Canada and Ontario*

Despite recent optimistic reports (CCA, 2012), challenges specific to Canada at the moment include: the current economic atmosphere at a national level, the shrinking budgets allocated to scientific and scholarly research and the ensuing limited funding for international research projects not aligned with national or agencies priorities.

In addition, the restrictive view of international research potential in terms of knowledge products (innovation and production of goods and services) limits the scope of research that investigators can participate in. The current —sometimes almost exclusive— interest in higher education initiatives that translate into revenue and products of commercial value is a diametric shift from the “aid” approach occurring throughout the 1970’s and early 1980s in Canadian universities (Snowdon, 2014). This shift from “*aid to trade*” —as Snowdon calls it— is indeed a result of political and economic externalities. From examining the history of internationalization of higher education in Canada (and Ontario specifically), it can be concluded that if a “golden era” ever existed when international research was curiosity- as opposed to commodity-driven; it probably spanned throughout the late 1980s to the early 2000s. The last 5-10 years have been characterized by a constantly increasing focus on market competitiveness (Snowdon, 2014). Indeed, a common challenge to Ontario’s Universities is the narrow understanding of internationalization as put forward by the Council of Ontario Universities in the document *The “Open Ontario” strategy for internationalizing postsecondary education* (2010). The underpinning of the recommended strategy is to aggressively enter in the global competition for the “best, brightest, boldest” individuals so they choose the Province and help boost the economy and

shape our future. Related to this standpoint is the aggressive recruiting of foreign students, especially from emerging economies (especially China, Brazil, and India) as a source of revenue and to compensate decreasing local enrolments. Although increasing population diversity is important and could eventually translate into internationalization (or globalization), it does not represent the essence of true internationalization: a deep transformation of the university, in which a globalized perspective permeates into all aspects of the academic life.

Specific to Ontario, according to Jones & Oleksiyenko (2011), the province's government's research policies and initiatives are geared to furthering economic development, and as such there is a high emphasis on local/provincial needs with little room to support international research.

In summary, government initiatives, as stated by Snowdon (2014), "can have a major impact on international enrolment and internationalization initiatives – both negative and positive."

### *Challenges specific to Brock University*

1. Limited understanding of internationalization and the narrow mandate of the IC, mainly restricted to supporting travel abroad opportunities for students, recruiting foreign students, and the undersigning of cooperation agreements.
2. Despite Brock's institutional efforts for internationalization (in both enrollment and curricula), there seems to be little awareness of global issues and the value of internationalization among students, staff, faculty members and administration.
3. In 2011, Brock moved from the Primarily Undergraduate to the Comprehensive University category to reflect its growth in the number of grad programs and grad students. At present, Brock ranks last among the 15 Comprehensive universities in Canada. This is understandable since Brock is measured against well-established institutions. However, according to the McLean's ranking little progress has been made in regards to the institution's advancement in such ranking.
4. Striving to be regarded as a research-intensive university has imposed increasing demands on faculty members endeavouring to balance teaching and research with equal energy and quality.
5. In light of the current budgetary constraints, research as a whole and in particular international research is underfunded.
6. Lack of mandate for internationalization of research  
This creates multiple challenges if the institution relies solely on faculty leadership to craft and lead processes of internationalization.
7. Absent or deficient dedicated structures, funding and staff to support and expand international research.  
This creates uncertainty among the faculty members and may discourage future efforts.

## **Recommended Actions for the Strengthening of International Research**

What actions can we undertake in the short, medium, and long term? Do we need to develop new university structures to implement the recommended actions? What will be required from institution-internal resources? What are the costs associated with each recommended action? What are the opportunities for external funding of recommended actions?

### *Establish definitions and indicators for international research*

- a. Establish a clear, yet comprehensive definition of “International Research”
- b. Create a set of indicators to help understand, measure, and evaluate International Research. These indicators must account for the variety of disciplines under active research at the institution as well as reflect the multiple modalities and numerous outputs characterizing international research.

### *Conduct a situation analysis*

- a. Conduct a university-wide survey to assess current landscape of international research at the university. Identify enablers, obstacles and barriers and produce an action plan to support international researchers.
- b. Commission a bibliometric and scientific/scholarly network study to determine the extent and potential impact of the research undertaken in collaboration with international partners. Such analysis should include not only number of collaborations but also collaboration indexes and collaboration affinity (CCA 2012).
- c. Hold University-wide discussions and create a shared vision of the future of internationalization of research.

### *Publish and disseminate an annual catalog or compendium of international activities*

This will serve to demonstrate Brock’s international / global engagement.

### *Implement policy and strategies*

- a. Create and implement a university-wide policy for research internationalization
- b. Identify strategic priorities for internationalization, for example, (i) Whether aspiring to collaborate with global leaders, developing countries, or wishing to play an active role in solving global challenges; (ii) Determining research areas of strategic investment; (iii) Making distinctions between Innovation as defined within economic growth theories (*i.e.*, the transformation of knowledge into products and services) and knowledge production and exchange based on academic excellence; (iv) Strategic faculty recruitment to increase the potential for international research.
- c. Develop strategies for strengthening existing top research areas as well as for supporting emerging research and innovation ideas.
- d. Develop strategies to approach private donors for international research funding / students’ mobility opportunities, *etc.*
- e. Advocate at the government level for support to ensure that funding for collaboration is not confined to supporting a national or provincial agendas of economic productivity.

### *Consider changes in administrative structures*

- a. Integrate international research more visibly into Office of VP-Research.



- b. Restructure the AVP-R positions; potentially merging the current Natural and Health Sciences and the Social Sciences and Humanities positions into one, and creating a new one that more visibly addresses international research. Both AVP-R would work in close coordination.
- c. Create a staff position within ORS to facilitate international collaboration.
- d. Revise the mandate of the Internationalization Committee.
- e. Increase coordination between Office of VP-Research/ORS and Brock International and Student Services.
- f. Increase coordination at the Faculties level (e.g., Associate Deans of Research playing a more visible role in supporting and advocating for international research).

### *Create or intensify academic opportunities for international research*

There are a number of opportunities that could be implemented or intensified to support and advance international research at Brock. Many of the opportunities listed below involve the allocation of funding by the university. These funds are essential not only to support international collaboration but also to increase the mobility of researchers and graduate students. Importantly, some of these opportunities are useful to support research centres and researchers targeting international opportunities in timely manner.

#### *Consider creating a new inter-disciplinary Institute for Global Research and Engagement*

In addition to the five recently created transdisciplinary institutes, one with a specific focus on research on transnational (global) issues would send the right message as to the importance of international research and engagement in our institution.

### *Appoint international adjunct faculty*

In many cases, individual researchers who are part of one of Brock's Research Centres already collaborate with other international researchers. It is recommended that such collaboration will result in the latter's appointment as adjunct faculty in the specific Research Centre. This will increase visibility of the Centre and Brock University. Similarly, graduate students' research may benefit from the expertise of an international researcher invited to serve on the student's advisory committee. Such advisory roles may or may not be reserved for collaborative projects.

### *Strengthen the Visiting Scholars Program*

To expand and crystallize research partnerships, the following strategies are recommended:

- Fellowships to be provided to researchers visiting Brock for periods of four to eight weeks to work with Brock University partners. Ideally, such fellowships should include expenses such as housing, medical insurance, and possibly some living expenses.
- Fellowships to be provided to mid-career Brock researchers to spend four to eight weeks working with new or existing high-quality international partners abroad (more extended stay may be funded by relevant research centre or individual researcher grant).
- Scholarships to be provided to PhD students to spend up to one semester working with high-quality international partners.

### *Support international conferences or workshops held at Brock*

Such an opportunity would support Brock University researchers or research centres to plan, organize and conduct a workshop or small, focused conference with invited international researchers (guests) from targeted institution(s) to promote major research collaborations.



### *Create joint graduate programs*

It is suggested that Brock University will identify countries and institutions within each country to commence discussions for establishing joint or double masters/doctoral degree programs with a focus on strong research areas at Brock. These institutions should likely be the ones that Brock already has successful partnerships with.

### *Create international graduate courses*

Graduate courses may be taught by multiple faculty members in multiple (international) institutions. Students from all participating institutions (two or more) could enroll in these courses. With online courses, this is relatively easy to implement.

### *Target international research funding opportunities*

There are numerous funding opportunities for international, collaborative research. However, applying for and obtaining such grants require considerably administrative support. Therefore, it is recommended that the office of research services (ORS) would create a suitable position to this effect (e.g., an international grants facilitator or an international research officer).

### *Create internal funding opportunities for international research*

It is suggested that an international research funding opportunity will be created within Brock University which would serve as a catalyst fund for larger opportunities. These opportunities can be theme-specific (e.g., basic research, health or environmental issues, etc.), or region/country-specific collaborations (e.g., Canada-Brazil; Canada-India, Canada-China, Canada-EU, Canada-Latin America, etc.).

### *Make available start-up funds for new, international recruits*

Such funds would serve to attract established international scholars (mid-career) or promising new investigators.

### *Create an “International Club”*

This “club”, or social, networking group would serve international and Brock scholars who are currently engaged in international research to discuss, solve and share ideas regarding issues related to international research (e.g., communication, transfer of data, specimens, etc.). It would also provide local recognition for such researchers.

### *Support researchers and their students in their international research*

- a. Recognizing that doing international work is very demanding, requires more time to develop partnership, may entail heavy administration, publish results.
- b. Providing time and resources: consider teaching load reduction for faculty members involved in large international research projects.
- c. Providing guidance for negotiating collaborations (not just funding, but fair distribution of work and authorship, intellectual property).
- d. Valuing and supporting international researchers even if they do not fit into the current entrepreneurial model (university-enterprise model).

### *Celebrate and support diaspora researchers*

Diaspora faculty [faculty members born outside Canada and maintaining strong research ties with their country/region of origin (AUCC, 2009)] can play a catalytic role in contributing to institutional partnerships abroad, encourage greater student mobility; mitigate brain drain, etc.

### *Raise the profile of the university as a place where international research takes place*

Public perception is critical to attract and retain the best talent, and at the same time this reinforces institutional identity within and beyond the University.

### *Harmonize efforts towards the internationalization of the Institution*

Since international research does not occur in isolation but as part of a larger context, the Task Force also recommends that the Office of the VP-Research works in harmony with university-wide initiatives aiming at internationalization of undergraduate education that will ultimately contribute and support the process of research internationalization at Brock.

To this effect, it is useful to be reminded of the Internationalization Statement of Principles for Canadian Educational Institutions, in particularly the Fourth Principle, which reads:

*“Ideally, internationalization is inclusive, pervasive and comprehensive, encompassing all aspects of the work of the institution (teaching, research, service and community outreach) and the full range of institutional goals and actions, including: curriculum and program design; teaching and learning development; student, faculty and staff mobility; language education and training; research and innovation; projects and services; community outreach and local economic development.” (CBIE, 2014).*

## Conclusions

Internationalization of research is beneficial to the university because it will result, basically, in four types of outcomes:

- Enhanced academic reputation
- Enhanced creativity and flow of knowledge
- Greater demand by international scholars and students
- Increased opportunities for innovation, patent, and commercialization and potential revenue generation

While it is important to focus on outcomes to increase revenue, which are often highlighted due to their measurability, it is the view of this Task Force that an enhanced academic reputation is likely the one of highest impact. Over the long run, it will greatly affect the other outcomes, as well as attract international scholars, faculty, and grants. However, it takes considerable and sustained efforts and a very long time to increase *and maintain* reputation. Very importantly, as Brock evolves towards comprehensiveness, it is crucial to keep in mind and build upon the institution's 50-year history around international research and internationalization.

Finally, in addition to decisive senior leadership commitment to research internationalization to augment the University's reputation and relevance, Brock University cannot reach international or global stature without comprehensive actions in regards to internationalization at all levels of our academic life.



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## Appendix 1



*Appendix I: Summary table of potential academic opportunities for increasing and promoting the internationalization of research at Brock University.*

Examples of opportunities	Key constituencies			
	Undergraduate students	Graduate students	Individual researchers	Research centres
*Appoint international scholars as Adjunct Faculty				x
*Involve international scholars on graduate student advisory committees		x	x	
Create/ allow graduate program with joint supervision in collaboration with international scholars (Students could receive degrees from both institutions)		x	x	x
Provide support for hosting scholars at Brock			x	x
Provide support for Brock researcher abroad			x	
Support small, highly specialized international conferences/workshops at Brock			x	x
Provide additional support international graduate students coming to Brock		x		
Collaborate with international partners in creating graduate courses (e.g., fully or partially online)		x	x	
Hire or train staff at Office of Research Services to identify and facilitate targeting international research funding opportunities				
Create “ <i>International Club</i> ” – for researchers and graduate students conducting international projects (a virtual or physical space to meet and celebrate)		x	x	
Provide additional funding to new international recruits			x	
Award travel funds to plan or implement international projects	x	x	x	
Create funding opportunities for international research <ul style="list-style-type: none"> <li>▪ Region or country-specific</li> <li>▪ Theme-specific (e.g., health, environmental issues, etc.)</li> </ul>			x	x
Create a new Inter-disciplinary Institute for Global Research and Engagement or similar			x	x
*No funding required				