



**THE HARRIS
CENTRE**
Memorial University





**Reflecting on Regional Engagement of Higher Education Institutions:
Have we Learned Anything?**

Wade Locke, Ph.D.*
Department of Economics, Memorial University of Newfoundland

A Report Supported by
The Leslie Harris Centre of Regional Policy and Development
Applied Research Fund

April 18, 2009

* *The author acknowledges having received helpful comments from Elizabeth Beale, Mike Clair, Cyril Farrell, Doug May, Wade AuCoin and Rob Greenwood. Any remaining errors or omissions are the sole responsibility of the author.*

Table of Contents

Acronyms and Abbreviations Used in This Report

Executive Summary	i
1.0 Introduction	1
2.0 How do NL, MUN and the CNA Compare to Other Jurisdictions?	3
2.1 What do NL, MUN and the CNA do in Terms of Regional Engagement?.....	3
2.1.1 The Harris Centre – A Model of Engagement and Knowledge Mobilization	3
2.1.2 The Fisheries and Marine Institute – Locally Relevant and Internationally Focused 4	
2.1.3 The Genesis Group – Linking the Academy to the Economy	4
2.1.4 CNA Applied Research Program – Burgeoning Research for Local Problems	4
2.1.5 Grenfell’s Centre for Environmental Excellence – Building a Sustainable Cluster .	5
2.1.6 Oil and Gas Development Partnership – Addressing a Transformative Industry.....	5
2.1.7 INCO Innovation Centre – Targeted Innovation	5
2.1.8 C-CORE – Applied Technology and Economic Development	5
2.1.9 Medical Research – Taking Advantage of Our Gene Pool for Our Advantage.....	6
2.1.10 Centre for Energy Education, Research & Development – Preparing for Prosperity	6
2.1.11 Centre for Research in Environment and Oceans - Moving Forward with Our Heritage	7
2.1.12 Institute for Ocean Technology - Access to State of the Art Infrastructure.....	7
3.0 What can we Learn?	8
3.1 Lessons to be Learned - Other Atlantic Provinces	8
3.1.1 New Brunswick	8
3.1.1.a New Brunswick Innovation Foundation – Supporting Local Research.....	8
3.1.1.b Next NB/Avenir NB – Early Engagement	8
3.1.1.c Acadian Miracle – Making a Difference.....	9
3.1.1.d Rural and Small Town Program – Addressing the Periphery	9
3.1.2.e Debt Relief for Students – Combating the Brain Drain	9
3.1.2 Prince Edward Island	9

3.1.2.a	Institute for Island Studies – Understanding Your Competitive Advantage.....	9
3.1.3	Nova Scotia	10
3.1.3.a	Community Partnership on Drug Abuse – Improving Local Conditions.....	10
3.2	Lessons to be Learned - Other Jurisdictions	11
3.2.1	The Region of Twente, the Netherlands.....	11
3.2.1.a	Research Excellence - Not Sufficient.....	11
3.2.1.b	Industrial/Business Experience is the Classroom – a High Return.....	11
3.2.1.c	Transition from the Academy to the Economy – Accelerating Knowledge Transfer	12
3.2.2	The Canary Islands, Spain.....	12
3.2.2.a	Social Capital - Destructive Competition versus Constructive Cooperation	12
3.2.2.b	Promotion, Tenure, Research Support and Local Needs – An Appropriate Incentive	13
3.2.3	Nuevo León, Mexico.....	14
3.2.3.a	Student Social Service as a Requirement to Graduate – Local Exposure.....	14
3.2.4	Sunshine and Fraser Coast, Australia.....	15
3.2.4.a	Formalized Process – First Step in Encouraging/Monitoring Community Engagement.....	15
3.2.4.b	Innovative HR Policies - Regional Engagement Contributes to Promotion	16
3.2.5	Region of Jyväskylä, Finland.....	16
3.2.5.a	Societal and Economic Engagement Indicators – A First Step to Acceptance...	16
3.2.6	Central Norway Region, Norway.....	17
3.2.6.a	Experts in Teams – Dipping Your Toe in the Pool.....	17
3.2.6.b	The Idea Portal – A Good Idea.....	18
3.2.6.c	Research-Based Competence Brokerage – Active Marketing of Research Capacity.....	18
3.2.7	North Paraná, Brazil.....	18
3.2.7.a	Lack of Institutional/Regional Culture – An Impediment to Engagement	19
3.2.8	Valencia, Spain.....	19
3.2.8.a	The Spanish Social Council – Injecting the Community into the HEIs.....	19
3.2.8.b	Fundación CYD – A Business-Led Initiative	20

3.2.9	Jutland-Funen Region, Denmark.....	20
3.2.9.a	Legislation - Not Enough	20
3.2.9.b	Project-Organized, Problem-Based Learning – An Applied Approach to Engagement.....	21
3.2.10	Region of the North East, England.....	21
3.2.10.a	Knowledge House – Making HEI Expertise Accessible.....	21
3.2.10.b	Northern Rural Network – Connecting the Stakeholders	21
4.0	Conclusion - What else can we do?.....	23

Acronyms and Abbreviations Used in This Report

ACOA	Atlantic Canada Opportunities Agency, a federal crown corporation
AUCEA	Australian Universities Community Engagement Alliance
CNA	College of the North Atlantic, Newfoundland and Labrador
CEE	Centre for Environmental Excellence, Sir Wilfred Grenfell College, Newfoundland and Labrador
DFO	Department of Fisheries and Oceans, Government of Canada
GDP	Gross Domestic Product
HEI	Higher-Education Institutions
MBA	Master's in Business Administration
MUN	Memorial University of Newfoundland
NL	Newfoundland and Labrador
NTNU	Norwegian University of Science and Technology
OECD	Organization for Economic Cooperation and Development
OGDP	Oil & Gas Development Partnership, Memorial University of Newfoundland
PRR	Peer-Reviewed Report, part of the OECD study process
R&D	Research & Development
SES	Self-Evaluation Study, part of the OECD study process
SME	Small and Medium-sized Enterprises
UNB	University of New Brunswick

Executive Summary

From 2005 to 2007, Memorial University of Newfoundland (MUN) and the College of the North Atlantic (CNA) participated with the other Atlantic Provinces in the Organization for Economic Cooperation and Development's (OECD's) 12-country, 14-region study on the contribution of higher education institutions (HEIs) to regional development. That study attempted, among others things, to strengthen the contributions of HEIs to regional/local development by improving interplay and mutual capacity building between HEIs and regional/provincial/local stakeholders and to raise awareness that the role of HEIs extends beyond the core competencies of knowledge generation (research) and knowledge transfer (teaching) to a third function, knowledge mobilization (regional/local engagement).

Although this OECD exercise yielded vast amounts of useful information, the amount of information generated and its comprehensiveness may be intimidating and, as such, may not be as accessible to those who can make good use of this research. Rather than let this information be underutilized in the Newfoundland and Labrador (NL) context, this current report, supported by the Harris Centre, has reviewed, evaluated and synthesized the relevant information to determine what lessons NL can take from the OECD exercise.

By applying these lessons within our local jurisdictions, both the Atlantic Region and the province can enhance the role of our universities and community colleges as agents of economic and social growth. While NL's HEIs have performed, and continue to perform, well both in absolute terms and relative to HEIs in the other jurisdictions studied, it is important to recognize that the effectiveness of our universities and community colleges in facilitating regional/local engagement can be enhanced by implementing the positive initiatives and avoiding the negative lessons that fall out of the OECD study.

This current report evaluates how NL, MUN and the CNA are doing in terms of regional engagement and it offers illustrations of successful regional engagement initiatives that are found in NL. This includes the Harris Centre, the Fisheries and Marine Institute and the Genesis Group to name a few. In addition, this report profiles regional engagement practices found in the OECD countries studied. While these span the globe and are multidimensional, a sample of the diversity of practices from which NL can learn are: student debt relief in New Brunswick, the *Lectoraten* programme in the Netherlands, student social service commitment in Mexico, promotion and tenure practices in Australia that include regional engagement as a criterion, regional engagement metrics developed in Finland, the active marketing of research capacity in Norway through the Research-Based Competence Brokerage programmes, the Spanish social council, project-organized, problem-oriented curricula in Denmark and the one-stop shopping of university expertise and facilities offered by the Northeast of England's Knowledge House.

Although there is a growing awareness around the world of the importance of local HEIs engaging local stakeholders and applying some of the institutions' intellectual capital to issues and problems that are important locally, sometimes this awareness simply translates into lip-service and is not manifested in a tangible approach to promote institutional engagement. Consequently, rather than

expressing the right sentiments, bolstered by the latest buzzwords, it is important to implement meaningful and specific changes within the HEIs.

With this in mind, the following recommendations came out of the current exercise:

- MUN should create a University Regional Engagement Professor along the same lines as its current University Research Professor. This will demonstrate that the institution does hold regional engagement in similar esteem as it does research.
- MUN should modify the criteria for promotion and tenure to state that legitimate and appropriate regional engagement activities that are of sufficient quality and significance “should” be considered in promotion and tenure decisions at all ranks. While the language of the current Collective Agreement does not preclude departments from considering regional engagement activities (that is, they “can” consider these activities), there is no requirement to consider them. As a result, even when faced with significant and substantial regional engagement contributions that have made an important impact on the university and on the province, some departments have weighted these accomplishments at practically zero so that they do not effectively count in promotion and tenure decisions at MUN.
- MUN should create an inventory, through an appropriate survey administered to faculty members, of the extent and types of regional engagement undertaken by the university. As well, MUN, through their Centre of Institutional Analysis and Planning and interested researchers within the university, should develop a set of metrics for measuring the amount and quality (significance) of regional engagement.
- MUN, as part of its strategic plan, should develop a plan of action for facilitating and enhancing local engagement. As well, the university needs to acknowledge the legitimacy of regional engagement as a scholarly activity at MUN. This can be done as part of its strategic plan and through highlighting successful regional engagement activities on its website.
- Given that: (i) applied economic research related to NL and its regions is currently very limited; (ii) such research could inform decisions in such diverse fields as health, energy, labour markets, intergovernmental fiscal arrangements, local economic development or the environment; (iii) this type of analysis has the potential to better inform policies that could increase NL’s sustainable quality of life and its standard of living; (iv) in order to encourage effective engagement, the University has to have the capacity to undertake the types of applied analysis required in today’s knowledge-based society, MUN should develop this capacity by establishing a Centre of Applied Economic Analysis where faculty members can be seconded, graduate students and post-doctoral fellows hired and appropriate, comprehensive analysis can be undertaken in areas that are important to the well-being of the Province.
- In line with the *Lectoraten* programme utilized in the Netherlands, MUN should encourage its various faculties and departments to have senior lecture courses offered by individuals from industry, government and NGOs. This could be easily applied in Engineering and Business where senior people can be invited to give a special topics course. It could equally

apply in political science or economics where Deputy Ministers or Assistant Deputy Ministers can give policy related courses. As well, it can be equally relevant in other areas if sufficient ingenuity and imagination are applied.

- Along the lines of Denmark and Norway, MUN should consider the feasibility of having some courses taught in a multidisciplinary way that deal with real world problems in the community. This will expose students to the skill sets and techniques that are useful in the workplace and give them a greater appreciation of how their course of studies can be applied in the real world. As well, Mexico's student social service would help students gain a better appreciation of the issues and problems that are found in all parts of NL. Although this may not work for all disciplines, it can certainly be appropriate in some areas and can be tried as a limited pilot project.
- Having ongoing and formal input from the public, similar to the Spanish Social Councils, will ensure that concerns and issues important outside of the university are made known to the senior administration. MUN should consider establishing a council of public representatives that can advise the university on issues that are important in the community. This council can generate an annual report that should be made available on the university's website as well.
- MUN should investigate whether the Research-Based Competence Brokerage utilized in Norway might be feasible to implement in NL. This seems to work well in environments where the local business sector may not have sufficient absorptive capacity to benefit from the diffusion of existing technology/research or even to know exactly what they need or how they might benefit. This circumstance could describe a large number of the small businesses that make up NL's private sector.
- MUN should consider adopting a model similar to the Knowledge House that currently is in operation in the Northeast of England. This could be beneficial in the NL context because it could make various forms of expertise located in the university more accessible to stakeholders outside of the institution. Many of the things that are being done now by MUN or that are being suggested for MUN to do are characterized by the fact that the university "reaches out" to specific individuals or groups in certain industries or communities. However, there may be important opportunities missed because some people or groups that are not being reached. An arrangement like the Knowledge House could provide an easier point of entry for these people or groups to "reach into" the institution and avoid the possibility that these stakeholders fall through the cracks. Indeed, universities in the entire Atlantic region should consider adopting a similar concept.

In addition to the recommendations for MUN, the government:

- should consider expanding their interest-forgiveness program on student debt to include reducing the loan principal by a given amount for each year that recent graduates stay and work in the province. As a first instance, the government could emulate the New Brunswick model where for each year worked in the province, \$2,000 is forgiven up to a maximum of \$10,000; and

- should consider the provision of grants for academic research for locally-focused research. These grants could be \$5,000 to \$10,000 to encourage young academics to address local issues that are important to the province.

While not actually recommendations, two other issues/practices were identified:

- As a tool for regional development, Spain's Fundación CYD, whereby a business group does independent assessments of the effectiveness of the university, has some appeal. It could act as a secondary accountability check to ensure that the university is undertaking the kinds of activities that are considered important for the private sector.
- Finally, it is important learn a lesson from the Canary Islands, where social capital is abundant, as it is in NL, but it is not utilized in a cooperative, constructive way, but in a competitive, destructive way. If we do not work for a common purpose and for the good of the province, it is easy to fall into the lobster trap — no one can get out of the pot because the others pull him back down, leading to the demise of them all.

The overall conclusion that comes out of the current report is that the contribution of MUN to the province is significant, but there is potential to make it even greater. It is important to explicitly acknowledge that and put in place the procedures and initiatives that can ensure that our potential is realized to its fullest.

1.0 Introduction

Memorial University of Newfoundland (MUN) and the College of the North Atlantic (CNA) participated with the other Atlantic Provinces in the Organization for Economic Cooperation and Development's (OECD's) 12-country, 14-region study on the contribution of higher education institutions (HEIs) to regional development. The study covered the period 2004 to 2007.¹ Although the OECD study's objectives were multi-faceted, the goals that are most relevant for the current report to MUN's Leslie Harris Centre of Regional Policy and Development (Harris Centre) are:

- to strengthen the contributions of HEIs to regional/local development by improving interplay and mutual capacity building between HEIs and regional/provincial/local stakeholders; and
- to raise awareness that the role of HEIs extends beyond the core competencies of knowledge generation (research) and knowledge transfer (teaching) to a third function, knowledge mobilization (regional/local engagement).

As part of the OECD exercise, each region prepared a self-evaluation study (SES) according to a recommended sampling/evaluation framework that was designed to elicit specific information on key areas of interest. In addition, international experts, as part of peer review teams, visited each region and prepared a separate, independent peer review report (PRR) on the region. This PRR, effectively an independent check on the findings of the SES, was to address issues similar to those covered in the SES. Supplementing the SES and PRR were numerous analyses and background studies that were presented at workshops and conferences held in Sweden, Denmark and Spain. All of this research was synthesized in the final report published in the 2007 OECD publication entitled: *Higher Education and Regions: Globally Competitive, Locally Engaged*.

This comprehensive evaluation involved more than 3,000 pages of analyses for the final report, the SESs and PRRs for each region plus thousands of other pages of information prepared as background for the OECD exercise. Although there are vast amounts of useful information contained in the OECD report and in its supporting documentation, its size and comprehensiveness is intimidating and, as such, may not be as accessible to those who can make good use of this research.

¹ The study sponsored by the OECD's Programme on Institutional Management in Higher Education (IMHE) was entitled: *Supporting the Contribution of Higher Education Institutions to Regional Development*. While there were 28 other studies (14 self-evaluation studies and 14 peer review reports), the final OECD report was entitled: *Higher Education and Regions: Globally Competitive, Locally Engaged*. The 14 regions, drawn from all parts of the globe, were: the Sunshine-Fraser Coast (Australia), the state of North Paraná (Brazil), Atlantic Canada (Canada), the Jutland-Funen region (Denmark), the Øresund region (running between Denmark-Sweden), the North East region (England), the Jyväskylä (Finland), the Busan region (Korea), the Nuevo León region (Mexico), the region of Twente (the Netherlands), the Mid-Norwegian region (Norway), the Valencia region (Spain), the Canary Islands (Spain) and the region of Värmland (Sweden). The participation of Atlantic Canada was made possible by generous financial and logistical support of the Atlantic Canada Opportunities Agency and the Leslie Harris Centre of Regional Policy and Development; the Atlantic Provinces Economic Council managed the project, led the Steering Committee and contributed to the research; the Atlantic Association of Universities and the Atlantic Provinces Community College Consortium both provided data and personnel to this study, and the four provincial governments and all Atlantic Canadian universities and communities colleges provided logistical support, facilities and access to information that was an integral component of the research effort for the Atlantic Canadian portion of the study.

Rather than let this information be underutilized in the NL context, this report, supported by the Harris Centre, has reviewed and evaluated the information contained in the final OECD report and the various SESs and PRRs to determine what lessons NL can take from the OECD exercise.

This report consists of four sections, including the introduction. Section two offers an assessment of how NL, MUN and the CNA are doing in terms of regional engagement. This section also provides illustrations of successful regional engagements initiatives that are found in NL. This is followed in section three with a description of regional engagement activities or issues found around the world from which NL can benefit. The final section concludes with a series of recommendation for the NL's HEIs and government on how the effectiveness of the institutions can be optimized to increase their contribution to economic and social development within the province and for future generations.

2.0 How do NL, MUN and the CNA Compare to Other Jurisdictions?

When compared both to the other jurisdictions studied and to the remaining Atlantic Provinces, MUN and the CNA have done, and are continuing to do, well. In fact, NL HEIs are doing as well as institutions in any other jurisdiction studied and better than most in terms of regional engagement and knowledge mobilization. While the level of local engagement compares favourably to the other jurisdictions, things can be improved. It is always possible to learn from other jurisdictions, both in terms of their successful initiatives and in terms of factors that have constrained the ability of their HEIs to contribute in a meaningful way to the economic and social development in regions within their spheres of influence.

2.1 What do NL, MUN and the CNA do in Terms of Regional Engagement?

It is not feasible to attempt to provide a comprehensive listing and/or description of the numerous examples of successful regional engagement activities associated with MUN and CNA. Instead, the more modest goal of identifying some of the more significant examples of knowledge mobilization and regional engagement will be attempted in this section.²

2.1.1 The Harris Centre – A Model of Engagement and Knowledge Mobilization

The Harris Centre aims to co-ordinate and facilitate the university's educational, research and outreach activities in the areas of regional policy and development. They have taken tangible steps to stimulate more research in regional policy and development through, for example, their *Applied Research Fund*. In addition, the Harris Centre attempts to generate greater interaction of MUN faculty, students and staff with stakeholder needs and opportunities through initiative such as their *Graduate Student–Industry Knowledge Exchange*, their *Strategic Partnership Initiative*, their *Graduate Student Research Commercialization Project* and the *DFO Marine Protected Areas Collaborative Research Initiative*. As well, the Harris Centre stimulates opportunities for debate and discussion on issues of public importance in regional policy and development through *Memorial Presents*, regional workshops and synergy sessions. Another approach to enhance and expand interactions between regional stakeholders and university research expertise is the new website *Yaffle*. This is also a unique search engine that allows the public to search for research by topic, by researcher and by expertise. As well, it enables the stakeholders to suggest a topic on which they need information as a way of stimulating the interest of university researchers in the suggested area. It is an obvious and straightforward gateway for regional stakeholders to contact the appropriate researcher(s) within the university to address their problem. Finally, the Harris Centre, while quite successful in its knowledge mobilization efforts, is always looking for new ways to make university

² Of course, what one might consider significant, someone else might not. The following list is significant in that based on my research in this area, these stand out as some of the more important ways that MUN and CNA engage regional stakeholders within NL.

expertise more useful and meaningful to the various regional stakeholders. The most recent examples of this were their knowledge mobilization conference: *Knowledge in Motion 2008* and their support for the establishment of a *Knowledge Mobilization Network* within MUN.

2.1.2 The Fisheries and Marine Institute – Locally Relevant and Internationally Focused

As part of MUN, the Fisheries and Marine Institute, offering undergraduate and graduate degrees, along with diploma, certificate and vocational programs, is a leading centre of fisheries and marine training.³ The institute develops, applies and transforms new technology initiatives to support the oceans industries. Moreover, it supports industry through its participation in research and development, technology transfer, and public policy advocacy initiatives. The Institute has a number of specialized centres and units, including the Centre of Marine Simulation, the Offshore Safety and Survival Centre, the Centre for Aquaculture and Seafood Development, the Centre for Sustainable Aquatic Resources, the School of Ocean Technologies Applied Research unit and MI International. These areas lead the Institute, both nationally and internationally, in applied research and technology transfer and in the provision of training to a variety of industry clients. Finally, the institute has secured more than 150 funded projects in over 50 countries.

2.1.3 The Genesis Group – Linking the Academy to the Economy

MUN's Genesis Group enhances technology transfer and facilitates economic development. It supports new technology-based start-up companies by providing incubation space, and business and financial mentorship in the Genesis Centre. As well, it licenses new technologies to maximize benefits for the province.⁴ Specifically, the Genesis Group enables access to the faculties of MUN to build a stronger connection between both the discoveries and applied research of academics and the processes of innovation and sustainable business formation. Quite simply, it commercializes good ideas so that society as a whole can benefit from the research.

2.1.4 CNA Applied Research Program – Burgeoning Research for Local Problems

The CNA has aggressively stepped into the field of applied research and has started to apply its skills, expertise and equipment to local problems for the benefit of the regions in which the college operates. For example, the CNA's Renewable Energy from Oceans initiative: "Burin Wave Power Pump" is capable of pumping required volumes of offshore water for on-shore applications and for support of the aquaculture industry. Another example is the Geospatial Research Centre which conducts research on ecosystems in support of the forestry industries.

³ Locke et al. (2007, p. 56). Additional information provided on the Institute's activities was provided by the officials with the Institute.

⁴ Locke et al. (2007, p. 56).

2.1.5 Grenfell's Centre for Environmental Excellence – Building a Sustainable Cluster

The Newfoundland and Labrador Centre of Excellence for Environmental Science, Research and Technology (CEE) at Sir Wilfred Grenfell College is a collaboration of businesses, government and HEIs to provide long-term economic and social benefits to the region. It attempts to achieve this by becoming a dynamic research cluster bringing together the critical mass of people, expertise, capital and entrepreneurial drive to fuel development in the region through its world-class research into critical environmental sustainability issues. In particular, the CEE works to build productive alliances between industry, science and technology to contribute to the expansion and commercialization of research and development, and improve access to global science and technology programs and funding.⁵ That is, with sufficient critical mass, the CEE will sustain its own contribution to sustainable development.

2.1.6 Oil and Gas Development Partnership – Addressing a Transformative Industry

With the discovery of significant oil and gas fields off the shores of NL, the Oil and Gas Development Partnership (OGDP) was a partnership between MUN and other academic institutions, government and industry with the objective of transforming the province into an internationally recognized leader in education, training, and research and development related to all facets of the oil and gas industry.⁶ In its early years, the OGDP offered a Masters in Oil and Gas Studies, but recently this function has been taken over by the Faculty of Business which is about to offer an Executive MBA (Petroleum). This new program will emphasize team-based work and development of major business projects. Through this collaboration and educational outreach, MUN has a direct influence on the fastest growing industry within NL.

2.1.7 INCO Innovation Centre – Targeted Innovation

The Inco Innovation Centre has enabled MUN to substantially increase capacity to conduct research and to develop new or improved methods and technologies pertaining to the exploration for and the exploitation of mineral deposits.⁷ As well, this centre emphasizes research on hydrometallurgical processing in the mineral industry, the latest innovation in NL's mining industry. Other major areas of research focus include geophysics, with an emphasis on seismic methods for exploration and delineation, mineralogy and geochemistry. Using this base of research, the centre will initiate and develop techniques and services establishing itself as an effective mining innovation centre that will help NL exploit its abundant mineral resources.

2.1.8 C-CORE – Applied Technology and Economic Development

C-CORE offers specialized engineering services to national and international clients, and has a collaborative working relationship with MUN.⁸ C-CORE aims to apply advanced technology

⁵ <http://www.ceenl.ca/index.asp>

⁶ <http://www.mun.ca/OGDP/about/>

⁷ <http://www.mun.ca/iic/about/>

solutions to challenges encountered in offshore oil and gas production and transportation, gas transmission (on-land pipelines), mining, and pulp and paper. Areas of core expertise include intelligent systems, remote sensing, ice engineering and geotechnical engineering.⁹ C-CORE is an effective instrument for technology provision in key areas of the provincial economy.

2.1.9 Medical Research – Taking Advantage of Our Gene Pool for Our Advantage

Because NL's population descended from a very small group of original settlers and immigration to the province has been limited since the first settlement, current residents have, more-or-less, descended from this original group of settlers.¹⁰ Consequently, it is easier to find and trace diseases if there are no other genes or families affecting the gene pool. MUN medical school researchers have been able to take advantage of this local characteristic to benefit both the local population and people around the world.

One important illustration of this is the fact that MUN researchers have discovered the gene responsible for ARVC (arrhythmogenic right ventricular cardiomyopathy), a deadly genetic heart condition highly prevalent in NL. As a result of this discovery, doctors are already implanting defibrillators in adult carriers. On development of ventricular fibrillation, the event causing sudden death, a shock is delivered to the patient's heart, reversing the ventricular fibrillation.¹¹ For the more than 100 people whose lives have been prolonged as a result of this discovery, there can be no greater impact of the institution on the community.

2.1.10 Centre for Energy Education, Research & Development – Preparing for Prosperity

MUN is proposing to increase innovative capacity within the province in the area of energy. The most significant current economic initiatives in terms of contribution to GDP are energy-related activities. These include the offshore oil projects, offshore gas projects, and the Lower Churchill Hydro Project. These projects are so significant in that each has the ability to transform the economy and society of NL in both positive (enhanced prosperity) and negative (increased social costs) ways. Consequently, it is important to plan for these developments in order to maximize the positive impacts while simultaneously minimizing the negatives. This centre will position MUN to more effectively contribute to this prosperity and to offer possible solutions to any anticipated negative attributes of development. As an operating strategy, planning is superior to reacting.

⁸ Note, C-CORE is not an acronym. It is the legal name of the corporation. However, in earlier years, the corporation was known as the Centre for Cold Ocean Research and Engineering, but it has since diversified into several new areas which required a name change.

⁹ Locke et al. (2007, p. 56).

¹⁰ <http://www.releases.gov.nl.ca/releases/2000/health/0502n03.htm>

¹¹ http://today.mun.ca/news.php?news_id=3623

2.1.11 Centre for Research in Environment and Oceans - Moving Forward with Our Heritage

The history and culture of NL has been tied and continues to be tied to the ocean and its resources that surround the province. MUN has developed extensive research capacity in terms of the ocean and the environment. The proposed Centre for Research in Environment and Oceans will enable the university to confront more complex opportunities and challenges from a multidisciplinary perspective that currently does not exist at the levels required in the new and evolving environment. This will include enhancing the understanding of how the local marine ecosystem works; the adaptation of marine technologies to Arctic and harsh environments; the research capacity in terms of sustainable utilization of marine biological resources; and the ability of society to address issues associated with the remediation of fish stocks.

2.1.12 Institute for Ocean Technology - Access to State of the Art Infrastructure

The National Research Council's Institute for Ocean Technology (IOT) is a national centre for ocean technology research and development. It conducts ocean engineering research through modeling of ocean environments, predicting and improving the performance of marine systems, and developing technologies with the goal of providing technical expertise in support of ocean technology industries.¹² The IOT has helped to commercialize vessel prototypes, offshore technologies, and underwater systems. Ongoing research projects provide the long-term investment in knowledge required for Canada to compete in the international marketplace in today's knowledge-based economy.

¹² Locke et al. (2007, p. 59).

3.0 What can we Learn?

3.1 Lessons to be Learned - Other Atlantic Provinces

3.1.1 New Brunswick

3.1.1.a New Brunswick Innovation Foundation – Supporting Local Research

The New Brunswick Innovation Foundation (NBIF) is an independent corporation supporting innovation in order to improve productivity and advance the knowledge-based economy within New Brunswick. With seed capital from the Province of New Brunswick, the NBIF makes leveraged investments in R&D and early-stage innovative companies in the province. The NBIF offers R&D investments involving academic institutions, including the *Research Innovation Fund*, the *Research Technicians Initiative*, and the *Research Assistantships Initiative*. The NBIF also offers other business investment vehicles, including a venture capital fund, the *Enterprise Innovation Fund* (pre-seed/seed), and others.¹³ Some of these initiatives may help the recently formed Newfoundland and Labrador Research and Development Council to more successfully fulfill its mandate.

3.1.1.b Next NB/Avenir NB – Early Engagement

In 2003, Next NB/Avenir NB was a bilingual project initiated by the University of New Brunswick. This initiative sought to raise awareness of New Brunswick's challenges and inspire the province's citizens to step forward to talk to each other about the future of their province. This initiative took the ideas and research conducted at UNB and disseminated it for a wider audience. It was designed to build linkages among researcher and stakeholders to strengthened future economic growth in New Brunswick. While this program has now ended, it has evolved into three other initiatives: (1) 21inc. is a network of new and emerging leaders committed to creating the capacity for change in New Brunswick through leadership. This network will consult with the leaders in various communities to more fully appreciate challenges and opportunities confronting New Brunswick; (2) New Brunswick Business Council, a body of New Brunswick's leading CEOs who are committed to leading efforts to make a difference, provides an opportunity to share ideas on the steps New Brunswick will have to take if it is to meet the challenges facing New Brunswickers; and (3) the St. Andrews Symposium, a small annual colloquium that continues the Next NB conversation by exploring in a deeper, more focused exploration of a topic of importance to the Province of New Brunswick.

Promoting the university research capacity as an economic development lever is being done in part by the Harris Centre, but its mandate does not allow it to consider all aspects of MUN's research and its implications for the province. Moreover, since the Next NB/Avenir NB initiative appeared to have been targeted at young people and at setting the direction for the future of the province, an

¹³ Locke et al. (2007, p. 65).

initiative like this might be best suited to a university/government agenda to engage youth within NL.

3.1.1.c Acadian Miracle – Making a Difference

Université de Moncton’s contribution has been a crucial ingredient to the “Acadian Miracle,” the cultural revival and the economic vitality of south-eastern New Brunswick centred in Moncton. That is, the university has had a vital role in facilitating and enhancing economic development in the Acadian community within Atlantic Canada. This demonstrates that universities can be transformative in terms of a region’s culture and economy. Using Moncton as a case study, Sir Wilfred Grenfell College might be able to actually fulfill this role on the west coast of the province — albeit with a societal and economic theme rather than a cultural focus.

3.1.1.d Rural and Small Town Program – Addressing the Periphery

The Rural and Small Town programme at Mount Allison University prepares people and organizations to adapt to change and to act on opportunities for developing sustainable rural communities and small towns. It helps local communities and other agencies to find policy and practice solutions to aid in the revitalization of small rural communities. Clearly, with large parts of NL being composed of rural communities, MUN and the province could benefit from a similar model being adopted within NL.

3.1.2.e Debt Relief for Students – Combating the Brain Drain

Debt relief of \$2,000 per year, up to \$10,000 maximum, is offered by the Government of New Brunswick for graduates staying and working within that province. This could be an effective means of combating the brain drain caused by young graduates having to move to Western Canada to secure sufficient income to deal with their crushing debt load.¹⁴ It would be interesting to observe in a few years whether this initiative has been an effective mechanism in battling the brain drain. While conceptually it should help, it is possible that the impact may not be significant enough to stem the outflow of young graduate — only time will tell.

3.1.2 Prince Edward Island

3.1.2.a Institute for Island Studies – Understanding Your Competitive Advantage

To encourage a deep knowledge and understanding of Prince Edward Island and to serve as a bridge between the University and Island communities, the Institute of Island Studies provides research,

¹⁴ In the 2009 Budget, the Government of Newfoundland and Labrador eliminated the interest on Newfoundland and Labrador Student Loans. As well, the Government of Nova Scotia has a debt relief program for their students.

education, and public policy analyses that are focused on the culture, environment, and economy of small islands.¹⁵ This is one tangible way that the university is trying to address issues that relate to and affect the small island on which it operates. It will enable the province to address the realities of being a small island and to learn from how other jurisdictions have dealt with the constraints associated with being a small island.

3.1.3 Nova Scotia

3.1.3.a Community Partnership on Drug Abuse – Improving Local Conditions

The region of Cape Breton has experienced a serious drug abuse problem. To respond to this issue, the Community Partnership on Drug Abuse was formed. The office is located at the university and several members of the university are directly involved in this Partnership. The Partnership provides research funding for projects directly related to the issue of drug abuse and also provides a forum for community involvement. In this regard the university is taking an active role in addressing a problem that adversely affects the community.

¹⁵ <http://www.upei.ca/iis/>

3.2 Lessons to be Learned - Other Jurisdictions

3.2.1 The Region of Twente, the Netherlands

The region of Twente, located in the Netherlands on the eastern border with Germany, has approximately 600,000 inhabitants.¹⁶ There are five HEIs in Twente, one of which is the University of Twente, a scientific institution that undertakes research. It is interesting that the region is one of the five designated “R&D hot spots” in the Netherlands. It has per capita R&D expenditures that exceed the national average.¹⁷

3.2.1.a Research Excellence - Not Sufficient

Despite its excellence in research, the region suffers from relatively low productivity, low household income, high unemployment (18.5% versus 15.4% nationally), a brain drain, skill shortages, and uneven development (the region has less than 80% of the national GDP per capita).¹⁸ It appears that the benefits of research excellence remain concentrated in a small group of knowledge-intensive firms, while the remaining businesses experience low levels of R&D investments, low innovation and lower productivity.

Clearly, achieving research excellence has benefited a subset of the population, but it has not filtered down to the others within the region. Even if it can be assumed that some of these benefits will eventually trickle down to the region, the experience in the region of Twente reveals that it may take a long time. Furthermore, it may have a limited impact without deliberate attempts both to ensure that some of the research capacity addresses local problems and to enhance knowledge mobilization at the HEIs in such a way that the local region can absorb the innovative potential offered. In other words, if one of the objectives of research is to benefit the region, then research for research sake may not be enough, even if it is excellent.

3.2.1.b Industrial/Business Experience is the Classroom – a High Return

One approach to increasing regional engagement in the Netherlands is the *Lectoraten* programme. Under this initiative, the HEIs hire applied professors with relevancy to the local surroundings. These professors are hired to meet specific regional needs such as promoting innovation, increasing regional engagement and promoting arts enterprise.¹⁹ Given their experience in the region and in industry, it ensures that students get exposed to practical experience as it relates to local issues and

¹⁶ Sijgers et al. (p. 1).

¹⁷ Rushforth et al. (2006b, p.10).

¹⁸ Sijgers et al. (p. 6).

¹⁹ Rushforth et al. (2006b, p. 19).

problems. This, in turn, should facilitate more interaction and more benefit for the local region from the intellectual capital resident at their HEIs. In particular, it should build university-community links around research areas that is often missing in regions with academically successful HEIs.

3.2.1.c Transition from the Academy to the Economy – Accelerating Knowledge Transfer

An interesting approach to combating the brain drain and to enhancing knowledge transfer from the HEIs to the region of Twente is through a separate post-graduate programme known as the *Fast Forward programme*.²⁰ The objective of the two-year programme is to match high potential graduates with organizations that need innovative staff who are able to contribute immediately. Those enrolled in the programme receive tailored management training and undergo three eight-month work assignments in different local or regional companies and organizations. In addition, these students receive a personal development project with self-awareness training, peer development, continuous assessment and feedback from peers and coaches. The programme is successful in that 95% of *Fast Forward* graduates have stayed in the region and work there.

3.2.2 The Canary Islands, Spain

The Canary Islands, a peripheral region of Spain, comprises seven islands located out in the Atlantic Ocean close to the coast of West Africa.²¹ The islands are grouped into two provinces. The regional government has provincial capitals on the two main islands, Tenerife and Gran Canarias, one for each province. As well, the Canary Islands have two universities, one on each of the main islands. The business sector in the Canaries is characterized by many very small firms, and a few big firms that are not regional. Tourism is the primary driver of economic activity, accounting for 37% of GDP.

3.2.2.a Social Capital - Destructive Competition versus Constructive Cooperation

Normally, social capital is perceived and portrayed as a positive attribute that facilitates economic and social development through enhanced ability to draw upon an informal network of contacts to achieve a common objective. A NL example would be the 1999 Canada Winter Games that were successfully hosted in Corner Brook because of the huge network of volunteers who worked together to ensure that things ran smoothly. It was the social capital residing within the region that enabled a relatively small community to effectively handle the logistical and organizational details of the games and to enhance community pride. That is, people working together as a team for a common purpose ensured the successful hosting of the Winter Games.

²⁰ Rushforth et al. (2006b, p. 24).

²¹ Darias et al. (p. 13).

On the other hand, in the presence of jealousy and intraregional competition, social capital can be negative. It can restrict people to deal only with their own subgroup. Moreover, people may resist change that may be good for the entity as a whole but better for those outside of their subgroup. Since those outside of the subgroup are relatively advantaged, people inside the subgroup oppose the initiative.

Because of their small size, the Canary Islands have an abundance of social capital. However, the Canary Islands PRR found that “competition and sometimes jealousy between each of the seven islands and between the two provincial groups appears to be high, sustained and endemic.”²² By way of illustration, there was strong opposition to the formation of a second university focusing on engineering on Gran Canarias, as an alternative to develop a single regional university system under a single management. Even after two decades, the memory is fresh and bitter in many memories, dominating institutional policies and relations today. Competition appears to be unproductive and wasteful rather than healthy.²³ Furthermore, ties between the universities and the business sector in the Canaries were scarce and there was lack of a culture of cooperation between businesses and the universities.²⁴ In fact, the PRR noted that even though stakeholders agreed that certain initiatives were worthwhile and appropriate to instigate, they were not undertaken and many stakeholders expressed a concern that such changes could ever be carried out.²⁵

3.2.2.b Promotion, Tenure, Research Support and Local Needs – An Appropriate Incentive

As in most other jurisdictions, the promotion and tenure decision emphasizes academic publications with little emphasis on community engagement. However, the PRR points out that “institutional autonomy does not extend to non-accountability, and academic freedom does not mean being paid for whatever teaching and research takes one’s fancy.”²⁶ The report goes on further to note that “it is the task of the universities’ leadership to enable this cultural and organizational change, to ensure that academic autonomy is protected but not used as an excuse to be unresponsive to society, and to lead colleagues to see that international stature can be enhanced rather than threatened by serving the needs of the region.”²⁷

As a consequence, R&D expenditures are very low and Canarian universities allocate few resources to research, with no specific focus on regional needs.²⁸ In response to this need and to ensure a higher commitment towards outcomes that are directly related to regional needs, the regional government is now developing a new financial model for universities that uses the social impact of universities as a financial variable; develops special support for research of excellence in priority

²² Duke et al. (2006, p. 17).

²³ Duke et al. (2006, p 20).

²⁴ Duke et al. (2006, p. 24).

²⁵ Duke et al. (2006, p 45).

²⁶ Duke et al. (2006, p 49).

²⁷ Duke et al. (2006, p. 54).

²⁸ Duke et al. (2006, p 8).

areas; measures the links of the university with the environment; and co-finances practical work in enterprises and pilot programmes on entrepreneurship.²⁹

By connecting research and promotion to community engagement, to some degree, the new financial model will indicate to academics the importance that society places on being able to have some of the HEI's intellectual capital address problems that are important to the region.

3.2.3 Nuevo León, Mexico

The state of Nuevo León is located in the North Eastern region of Mexico, 200 km from the border with Texas. Approximately 85% of its population lives in the Monterrey metropolitan area, which is the financial, commercial and industrial centre of the Northern region of Mexico. Nuevo León has the third largest economy in Mexico and its per capita income exceeds the national average.³⁰

3.2.3.a Student Social Service as a Requirement to Graduate – Local Exposure

Interestingly, since 1944 in order to graduate with a professional degree from an HEI, Mexican students are required to perform 480 hours of professional service of public service.³¹ Social service programs are fully integrated into the academic curricula of the Universidad de Monterrey.

The rationale for this requirement is twofold: (1) it allows students to “give back” to the community; and (2) it provides the student with “real-life” experiences that will make students more sensitive to the needs of the community.³² Although not explicitly stated as a purpose, students who work in various areas of the country gain a better appreciation of the issues that are important to those areas. This, in turn, may entice some of the students to stay in those areas, effectively acting as a counter measure to the brain drain experienced in many rural areas.

While this model might not work in all jurisdictions and for all disciplines, it might, however, be feasible for some majors. It would ensure that the majors get an exposure to areas of the province outside of the community in which the HEI is located. Furthermore, it may give students an appreciation of real world problems being experienced by people outside of the halls of academia. This may pique their interest and encourage them to stay in NL, thus counteracting the brain drain that historically has characterized NL.

²⁹ Duke et al. (2006, p. 23).

³⁰ Mora et al. (2006, p. 6-7).

³¹ Mora et al. (2006, p. 71). This service lasts for a maximum period of two years and a minimum of six months.

³² Mora et al. (2006, p 36).

3.2.4 Sunshine and Fraser Coast, Australia

The Sunshine-Fraser Coast is located to the North of Brisbane in South East Queensland. With its population is growing at 3% per annum, it is one of the fastest growing regions of Australia. People are attracted to the area for lifestyle and tourism reasons. Despite having a significant retirement population, the region has experienced a loss of young people to education and employment opportunities elsewhere.³³ It has two campus-based universities, the University of the Sunshine Coast (USC) and the Wide Bay campus of the University of Southern Queensland (USQ).³⁴

3.2.4.a Formalized Process – First Step in Encouraging/Monitoring Community Engagement

There is no formal requirement that universities adopt regional engagement as part of their mission, but having regional engagement as part of their mission, the university can then be judged on its performance against that part of its mission.³⁵ For example, every two years, Australia's *Institution Assessment Framework* evaluates universities' sustainability, including its community engagement based on publicly available documentation.

As well, the *Regional Partnerships Scheme* provides opportunities to access funding for regional engagement initiatives in partnership with regional stakeholders. Specifically, in recognition that HEIs play vital economic, social and cultural roles in their local communities, the *Regional Protection Funding* enables regional universities to maintain and build their capacity to carry out research which is of benefit to regional Australia.³⁶ In addition, the *Collaboration and Structural Reform Fund* attempts to foster collaboration between higher education providers and business and other groups and has resulted in the establishment of a collaborative Institute for Enterprise and Regional Development in north-west Tasmania.³⁷

Finally, Australian Universities Community Engagement Alliance (AUCEA) is an alliance of 34 universities that supports universities in strengthening their engagement with local and regional communities.³⁸ Specifically, the AUCEA supports university-community engagement in order to promote the social, environmental and economic and cultural development of communities. The AUCEA promotes direct and mutually beneficial interaction between universities and communities that is essential for the development and application of knowledge. It attempts to:

- raise awareness and disseminate best practice in university-community engagement;
- facilitate collaborative research in university-community engagement between AUCEA members and their communities;
- promote the integration of engagement into curriculum and the student experience;
- promote the recognition of the scholarship of engagement as a valid pedagogy; and

³³ Neller et al. (2006, p. 18-9).

³⁴ Neller et al. (2006, p 14-5).

³⁵ Neller et al. (2006, p 33).

³⁶ Neller et al. (2006, p 33).

³⁷ Neller et al. (2006, p 31).

³⁸ <http://aucea.med.monash.edu.au:8080/traction/permalink/Website0>

- collaboratively develop resources that support university-community engagement.

An equally important function of the AUCEA is that it developed a national approach to benchmarking university community engagement. If you cannot develop an appropriate metric, it is harder to measure progress and to demonstrate the importance of the initiative to public policy objectives. Appropriate measurement is a prerequisite to general acceptance and adoption of community engagement as a legitimate and expected function of HEIs.

3.2.4.b Innovative HR Policies - Regional Engagement Contributes to Promotion

Promotion and tenure criteria at the University of the Sunshine Coast explicitly recognize and emphasize the importance of regional engagement or service as an activity that is relevant to promotion.³⁹ While the need to include regional engagement activities in promotion and tenure decisions is considered important at other universities studied by the OECD, this is the only area that appears to have taken the step to place regional engagement on the same footing as research and teaching. This gives young, energetic scholars an extra incentive to utilize some of their expertise and energy to address problems that are important locally and to make the HEI a more important institution within the local region.

3.2.5 Region of Jyväskylä, Finland

The Jyväskylä region, located in Central Finland 250 kilometres north of Helsinki, consists of nine municipalities with a total of nearly 163,400 inhabitants. It is the sixth largest region in the country by population and one of the fastest growing regions in Finland, with annual population exceeding one percent per annum. As well, the region of Jyväskylä is one of the five Finnish growth centres. On the other hand, the region has relatively high unemployment (14% regionally versus 11% nationally) and Central Finland is characterized by low productivity within the existing business base which is predominantly SMEs with low level of R&D investment.⁴⁰ There are two HEIs located in the region: the University of Jyväskylä and Jyväskylä Polytechnic.⁴¹

3.2.5.a Societal and Economic Engagement Indicators – A First Step to Acceptance

Within Finland, polytechnics have a more direct role in regional development than do universities. Recent reforms have been designed to strengthen the role of HEIs in regional development and in the regional innovation system. Specifically, legislation explicitly defines a regional development task for polytechnics and stresses co-operation with business. While there is no explicit regional development role of the university sector, the impact of education and research on the surrounding

³⁹ Charles et al. (2006, p. 47).

⁴⁰ Goddard et al. (2006, p. 15).

⁴¹ Mukkala et al. (p. 11-3)

society and region has gained increasing attention. In fact, to encourage universities to act in close collaboration with the local stakeholders and to transfer the body of knowledge to the use of society and industries, the new Universities Act highlights the significance of societal interaction associated with the basic duties (education and research) of universities.⁴²

Similar to Australia, the Finnish HEIs have developed metrics of regional engagement. In particular Jyväskylä Polytechnic maintains a sophisticated management information system which tracks 138 performance indicators, eight of which are specifically linked to regional engagement.⁴³ It is through measuring and monitoring of community engagement indicators that their true importance and significance will be realized.

3.2.6 Central Norway Region, Norway

The Central Norway Region has a population of 400,000 people and consists of the counties of Sør-Trøndelag and Nord-Trøndelag, with Trondheim (155,000 people), the third largest city in Norway, as the main city. There are five HEIs located in Trondheim, the largest being the Norwegian University of Science and Technology (NTNU) with 19,500 students.⁴⁴ It is a wealthy region with close to full employment and with no evidence of industrial decline. Its population enjoys the elevated living standards found throughout Norway and the region has considerable public R&D resources.⁴⁵ The fastest growing sector in the region is oil and gas, which provides a major contribution to regional employment and growth. The challenge facing the region appears to be how to develop sources of growth and economic activity other than the oil and fishing industries.

3.2.6.a Experts in Teams – Dipping Your Toe in the Pool

All Masters level students at NTNU are obliged to take the course “Experts in Teams”. This course is organized around project work in teams of five students from different disciplines, where the professor operates as facilitator. Each team member ensures that his/her know-how and expertise contributes to the mutual problem-solving process. In this way, students are trained in multi-disciplinary communication and how to operate in a multidisciplinary environment. The intention is to promote cross-disciplinarity; to introduce new teaching methods; and to prepare the students for the type of teamwork that is common in working life.⁴⁶

⁴² Mukkala et al. (p. 6).

⁴³ Goddard et al. (2006, p. 31).

⁴⁴ Self Evaluation Team (2006, p. 2-3).

⁴⁵ Sotarauta et al. (2006, p. 6).

⁴⁶ Sotarauta et al. (2006, p. 35).

3.2.6.b The Idea Portal – A Good Idea

The Idea Portal is a website where small businesses can announce a need for project ideas that students can access. Such ideas can be the starting point for project work and/or for summer jobs. One goal is to make the students familiar with regional industry.⁴⁷

This is similar to the *Yaffle* search engine recently developed and introduced by the Harris Centre at MUN, except the *Yaffle* website is more broadly targeted, is a two-way conduit, and relates to research and research ideas. The Idea Portal is an obvious and straightforward way for regional stakeholders to gain access to the HEIs and their research and innovative capacity.

3.2.6.c Research-Based Competence Brokerage – Active Marketing of Research Capacity

Another interest innovation in the Norway HEIs is the Research-Based Competence Brokerage programme. These programmes, in finance, organizational management and markets, are designed to stimulate R&D efforts in companies with little or no such experience. As well, they are meant to improve their innovation ability and competitive position and to strengthen the R&D institutions' role as industry partners.

Under these programmes, researchers from the HEIs call on SMEs in the region to identify and describe R&D opportunities. The selected companies obtain project funding from the Research Council of Norway. Researchers from R&D institutes as well as HEIs are engaged to assist the companies.⁴⁸ This program helps stimulate demand for R&D in firms that previously did not take advantage of expertise at the HEIs and enhances supply of R&D from the HEIs by creating an opportunity to supply their skills to the community.

3.2.7 North Paraná, Brazil

The state of Paraná is found in the south of Brazil, bounded in the north by the state of São Paulo, in the south by the state of Santa Catarina, in the northeast by the state of Mato Grosso do Sul, in the west by Paraguay and in the southwest by Argentina.⁴⁹ According to the SES completed for Brazil, “*There is no clear consensus as to what exactly constitutes “Northern Paraná. ... this region refers to the area that is dynamically located along the Londrina-Maringá axis, covering a vast area that extends over at least three mesoregions: Northwestern Paraná, North Central Paraná, and the Northern Pioneer Meso-region.*”⁵⁰ The HEIs in North Paraná consists of two state universities and a number of private colleges. As well, North Paraná is dependent on agriculture and agribusiness for much of its economic activity and it has a population of 1.8 million inhabitants.

⁴⁷ Sotarauta et al. (2006, p. 36).

⁴⁸ Self Evaluation Team (2006, p. 34).

⁴⁹ Rolim et al. (2006, p. 16).

⁵⁰ Rolim et al. (2006, p. 19).

3.2.7.a Lack of Institutional/Regional Culture – An Impediment to Engagement

Based on interviews with officials from the HEIs and from regional stakeholders, the international peer review team identified the need for a cultural change both within the institutions and by external stakeholders. In particular, the peer review team found that the HEIs' faculty members may not have been sufficiently open to local needs; internal career incentives might further discourage responding to local needs; and faculty members may be reluctant to participate in commercial ventures. Moreover, it may not always be easy to get a timely response from the institutions. As well, local businesses appear to have limited vision about the role of HEIs in the regional sustainable development process. Consequently, priority is given to the generation of knowledge for the national/international academic community rather than to the application of the established knowledge for the local/regional community's development.⁵¹

The benefit of the HEIs to the community can be enhanced when the culture of scholarship includes regional engagement. As well, the effectiveness of knowledge mobilization is impeded further if the absorptive capacity of the stakeholders is not high.

3.2.8 Valencia, Spain

The Region of Valencia is located on the Mediterranean coast and has a population of slightly more than 4.5 million inhabitants, 10.5% of the population of Spain.⁵² Its level of economic activity (GDP) is similar to the national average. The Valencian Higher Education System is made up of seven universities, of which five are public and two are private.⁵³ There are approximately 146,000 students enrolled in the Valencian university system.

3.2.8.a The Spanish Social Council – Injecting the Community into the HEIs

As specified in legislation, the Social Council ensures that society participates in university affairs. It is responsible for promoting and assessing relations between the university and its cultural, professional, economic and social environment. In particular, the Social Council promotes communication and dialogue between the universities and the regional stakeholders. As well, the Social Council is responsible for assessing the quality and effectiveness of these relationships.

The Social Council has representation from the following groups: the governing council of the university, the regional parliament, regional administration, local administration, the major trade union and business organizations, chambers of commerce and professional associations.⁵⁴ This

⁵¹ Mora et al (2006a, p. 25).

⁵² Blaya et al. (2006, p. 9).

⁵³ Zepeda et al. (2006, p. 7).

⁵⁴ Blaya et al. (2006, p. 59).

formalizes a role to ensure that the HEIs are engaged with the community and devote some of their intellectual capital to local problems and issues.

3.2.8.b Fundación CYD – A Business-Led Initiative

Fundación Conocimiento y Desarrollo (CYD) acts as a broker between universities and the business sector in Spain. It analyzes and promotes the contribution of Spanish universities to economic and social development and enhances the university-business interface. For example, the foundation's recent survey found that Spanish businesses perceive Spanish universities as neither driving regional development nor having the appropriate organization for carrying out regional development. Given this perception, it probably should not be surprising that over 80% of companies report that they have not turned to universities to carry out research projects. Despite this, most companies suggested that universities should promote enterprise activities, and facilitate the creation of spin-off companies.⁵⁵

Armed with this information, universities can attempt to determine whether these perceptions are accurate and whether or not they can or should attempt to address these perceptions.

3.2.9 Jutland-Funen Region, Denmark

The Jutland-Funen region is located in the western part of Denmark, comprising the Jutland peninsula, the island of Funen and several smaller islands. The area makes up 77% of Denmark's territory and has 55% of the country's population but it is not an officially recognized region within the Danish structure of government.⁵⁶ It consists of eight counties and 173 municipalities with their own decision-making capacity. There are four universities in Jutland-Funen: the University of Aarhus (22,000 students), the Aarhus School of Business (5,500 students), the University of Southern Denmark (16,000 students) and Aalborg University (13,000 students).

3.2.9.a Legislation - Not Enough

The Danish University Act has designated a third task for the universities. Specifically, universities have to enter into a contract with the government that specifies each institution's goals and deliverables in the fields of research, education, and knowledge dissemination and interaction with industry and society, but there was no incremental funding associated with this extra task.⁵⁷ Even though one should expect that this would lead to enhanced regional engagement, the international peer review team for Denmark found that there was only limited evidence of partnerships with industry as well as an absence of institutional strategies for regional engagement. They did find that leaders of participating HEIs, consistent with the University Act, stressed the importance of regional

⁵⁵ Zepeda et al. (2006, p. 19).

⁵⁶ Rushforth et al. (2006a p. 11).

⁵⁷ Rushforth et al. (2006a p 15).

engagement. However, the development of a culture of partnership with industry was still at an early stage in the HEIs' region building activities.

3.2.9.b Project-Organized, Problem-Based Learning – An Applied Approach to Engagement

Students at Aalborg University are expected to spend half of their study time working in multidisciplinary, problem-oriented teams, where groups of students undertake projects in cooperation with businesses, organizations and public institutions. This provides students with valuable competences beyond ordinary teaching and enhances their employability. As well, the enterprises get a clearer picture of what the university stands for and how the students might fit in as prospective employees. With approximately 2,000 projects undertaken each semester, Aalborg University receives ideas for research and teaching and the region benefits from a fully engaged HEI.⁵⁸

3.2.10 Region of the North East, England

The North East of England is the smallest of the English regions with a population of 2.5 million. The region comprises two county councils, covering the sub-regions of Durham and Northumberland and ten unitary authorities comprising the urban areas of the region in the northeast of England. There are five universities and twenty-three further education colleges.

3.2.10.a Knowledge House – Making HEI Expertise Accessible

Knowledge House is a joint initiative of the five North East universities that offers businesses access to university expertise and specialist resources in order to provide expert solutions for developing ideas and solving problems through collaboration, consultancy, training and research. It offers a 'cradle to grave' service, stretching from the receipt and circulation of enquiries through project management and delivery to post-completion evaluation.⁵⁹ Currently, Knowledge House receives over a thousand enquiries from client companies and delivers almost 200 client contracts on an annual basis.

3.2.10.b Northern Rural Network – Connecting the Stakeholders

An interesting example of university outreach and a mechanism for knowledge exchange both between the university and businesses and among businesses is the Northern Rural Network administered by the Centre for Rural Economy at the University of Newcastle. This network of more than 600 members, including researchers and the rural development practitioners from businesses, public agencies and the voluntary sector, is a locally-centered model of rural

⁵⁸ Rushforth et al. (2006a p 35-6).

⁵⁹ Charles et al. (2005 p. 41).

development that is based on the management and development of human capital and intellectual assets.⁶⁰

⁶⁰ Charles et al. (2005 p 47).

4.0 Conclusion - What else can we do?

Having gone through the comprehensive analysis on the role of HEIs in regional engagement with 13 other OECD regions, Atlantic Canada and NL are well positioned to capitalize on the lessons learned. By applying these lessons within our local jurisdictions, both the region and the province can enhance the role of our universities and community colleges as agents of economic and social growth. While NL's HEIs have performed, and continue to perform, well both in absolute terms and relative to HEIs in the other jurisdictions studied, it is important to recognize that the effectiveness of our universities and community colleges in facilitating regional/local engagement can be enhanced by implementing the positive initiatives and avoiding the negative lessons that fall out of the OECD study.

Although there is a growing awareness around the world of the importance of local HEIs engaging local stakeholders and applying some of the institutions' intellectual capital to issues and problems that are important locally, sometimes this awareness simply translates into lip-service and is not manifested in a tangible approach to promote institutional engagement. Consequently, rather than expressing the right sentiments, bolstered by the latest buzzwords, it is important to implement meaningful and specific changes within the HEIs.

With this in mind, it is recommended that:

1. MUN should create a University Regional Engagement Professor along the same lines as its current University Research Professor.⁶¹ This will demonstrate that the institution does hold regional engagement in similar esteem as it does research.
2. MUN should modify the criteria for promotion and tenure to state that legitimate and appropriate regional engagement activities that are of sufficient quality and significance "should" be considered in promotion and tenure decisions at all ranks. While the language of the current Collective Agreement does not preclude departments from considering regional engagement activities (that is, they "can" consider these activities), there is no requirement to consider them. As a result, even when faced with significant and substantial regional engagement contributions that have made an important impact on the university and on the province, some departments have weighted these accomplishments at practically zero so that they do not effectively count in promotion and tenure decisions at MUN.
3. MUN should create an inventory, through an appropriate survey administered to faculty members, of the extent and types of regional engagement undertaken by the university. As well, MUN, through their Centre of Institutional Analysis and Planning and interested researchers within the university, should develop a set of metrics for measuring the amount and quality (significance) of regional engagement.

⁶¹ MUN's University Research Professor receives a two-course remission and a small research grant each year for a five-year period. There are two such awards in each year, with a maximum number of ten professors so designated in any given year.

4. MUN, as part of its strategic plan, should develop a plan of action for facilitating and enhancing local engagement. As well, the university needs to acknowledge the legitimacy of regional engagement as a scholarly activity at MUN. This can be done as part of its strategic plan and through highlighting successful regional engagement activities on its website.
5. Given that: (i) applied economic research related to NL and its regions is currently very limited; (ii) such research could inform decisions in such diverse fields as health, energy, labour markets, intergovernmental fiscal arrangements, local economic development or the environment; (iii) this type of analysis has the potential to better inform policies that could increase NL's sustainable quality of life and its standard of living; (iv) in order to encourage effective engagement, the University has to have the capacity to undertake the types of applied analysis required in today's knowledge-based society, MUN should develop this capacity by establishing a Centre of Applied Economic Analysis where faculty members can be seconded, graduate students and post-doctoral fellows hired and appropriate, comprehensive analysis can be undertaken in areas that are important to the well-being of the Province.
6. In line with the *Lectoraten* programme utilized in the Netherlands, MUN should encourage its various faculties and departments to have senior lecture courses offered by individuals from industry, government and NGOs. This could be easily applied in Engineering and Business where senior people can be invited to give a special topics course. It could equally apply in political science or economics where Deputy Ministers or Assistant Deputy Ministers can give policy related courses. As well, it can be equally relevant in other areas if sufficient ingenuity and imagination are applied.
7. Along the lines of Denmark and Norway, MUN should consider the feasibility of having some courses taught in a multidisciplinary way that deal with real world problems in the community. This will expose students to the skill sets and techniques that are useful in the workplace and give them a greater appreciation of how their course of studies can be applied in the real world. As well, Mexico's student social service would help students gain a better appreciation of the issues and problems that are found in all parts of NL. Although this may not work for all disciplines, it can certainly be appropriate in some areas and can be tried as a limited pilot project.
8. Having ongoing and formal input from the public, similar to the Spanish Social Councils, will ensure that concerns and issues important outside of the university are made known to the senior administration. MUN should consider establishing a council of public representatives that can advise the university on issues that are important in the community. This council can generate an annual report that should be made available on the university's website as well.
9. MUN should investigate whether the Research-Based Competence Brokerage utilized in Norway might be feasible to implement in NL. This seems to work well in environments where the local business sector may not have sufficient absorptive capacity to benefit from the diffusion of existing technology/research or even to know exactly what they need or how

they might benefit. This circumstance could describe a large number of the small businesses that make up NL's private sector.

10. MUN should consider adopting a model similar to the Knowledge House that currently is in operation in the Northeast of England. This could be beneficial in the NL context because it could make various forms of expertise located in the university more accessible to stakeholders outside of the institution. Many of the things that are being done now by MUN or that are being suggested for MUN to do are characterized by the fact that the university "reaches out" to specific individuals or groups in certain industries or communities. However, there may be important opportunities missed because some people or groups that are not being reached. An arrangement like the Knowledge House could provide an easier point of entry for these people or groups to "reach into" the institution and avoid the possibility that these stakeholders fall through the cracks. Indeed, universities in the entire Atlantic region should consider adopting a similar concept.

In addition to the recommendations for MUN, the government should consider expanding their interest-forgiveness program on student debt to include reducing the loan principal by a given amount for each year that recent graduates stay and work in the province. As a first instance, the government could emulate the New Brunswick model where for each year worked in the province, \$2,000 is forgiven up to a maximum of \$10,000.

Another initiative that the provincial government should consider is the provision of grants for academic research for locally-focused research. These grants could be \$5,000 to \$10,000 to encourage young academics to address local issues that are important to the province.

The Spanish example, Fundación CYD, whereby a business group does independent assessments of the effectiveness of the university as a tool for regional development, has some appeal. It could act as a secondary accountability check to ensure that the university is undertaking the kinds of activities that are considered important for the private sector.

Finally, it is important learn a lesson from the Canary Islands, where social capital is abundant, as it is in NL, but it is not utilized in a cooperative, constructive way, but in a competitive, destructive way. If we do not work for a common purpose and for the good of the province, it is easy to fall into the lobster trap — no one can get out of the pot because the others pull him back down, leading to the demise of them all.

The contribution of MUN to the province is significant, but there is potential to make it even greater. It is important to explicitly acknowledge that and put in place the procedures and initiatives that can ensure that our potential is realized to its fullest.

Bibliography

Blaya, I., Costa, J., Cuenca, M., Chiralt, A., Escardino, A., Gandia, A., García, A., García, A., García, I., Gómez, A., Gutierrez, A., Perles, G., Marqués, S., Martínez, A., Mora, J., Moratal, A., Navarro, I., Palomar, M., Romero, F., Bover, S., Self Evaluation Report: Valencia, Spain, OECD/IMHE Project: Supporting the Contribution of Higher Education Institutions to Regional Development, October 2006

www.oecd.org/document/35/0,3343,en_2649_35961291_35602979_1_1_1_1.00.html#Valencia

Caballero, R., Case Study Report on the State of Nuevo León, Mexico, OECD/IMHE Project: Supporting the Contribution of Higher Education Institutions to Regional Development, April 2006,

www.oecd.org/document/35/0,3343,en_2649_35961291_35602979_1_1_1_1.00.html#Nuevo_Leon

Charles, D., Bowman, S., Garlick, S., and Tait, L., Peer Review Report: Sunshine-Fraser Coast Australia, OECD/IMHE Project: Supporting the Contribution of Higher Education Institutions to Regional Development, November 2006,

www.oecd.org/document/35/0,3343,en_2649_35961291_35602979_1_1_1_1.00.html#Sunshine_Frazer

Charles, D., Conway, C., Pickering, H., Tennant, J., Chaudhury, S. and Allan, P., North East England Case Study Report, OECD/IMHE Project: Supporting the Contribution of Higher Education Institutions to Regional Development, October 2005,

www.oecd.org/document/35/0,3343,en_2649_35961291_35602979_1_1_1_1.00.html#NEofEngland

Darias, N., Ceballos, J., Gonzelez, J., Sanchez, J., Quintana, C., Verna, C., and Valcarcel, B., Self Evaluation Report: Canary Islands, Spain, OECD/IMHE Project: Supporting the Contribution of Higher Education Institutions to Regional Development,

www.oecd.org/document/35/0,3343,en_2649_35961291_35602979_1_1_1_1.00.html#Canary_Islands

Duke, C., Etzkowitz, H., Kitagawa, F. and Rhee, B., Peer Review Report: Busan, Republic of Korea, OECD/IMHE Project: Supporting the Contribution of Higher Education Institutions to Regional Development, www.oecd.org/document/35/0,3343,en_2649_35961291_35602979_1_1_1_1.00.html#Busan

Duke, C., Hassink, H., Powell, J. and Puukka, J., Peer Review Report: Northeast of England, OECD/IMHE Project: Supporting the Contribution of Higher Education Institutions to Regional Development, January 2006,

www.oecd.org/document/35/0,3343,en_2649_35961291_35602979_1_1_1_1.00.html#NEofEngland

Duke, C., Marmolejo, F., Mora, J., Gomes, and Uegama, W., Peer Review Report: Canary Islands, Spain, OECD/IMHE Project: Supporting the Contribution of Higher Education Institutions to Regional Development, July 2006,

www.oecd.org/document/35/0,3343,en_2649_35961291_35602979_1_1_1_1.00.html#Canary_Islands

Garlick, S., Kresl, P., and Vaessen, P., Peer Review Report: The Øresund Science Region: A cross-border partnership between Denmark and Sweden, OECD/IMHE Project: Supporting the Contribution of Higher Education Institutions to Regional Development, June 2006,

www.oecd.org/document/35/0,3343,en_2649_35961291_35602979_1_1_1_1.00.html#Oeresund

Goddard, J., Etzkowitz, H., Puukka, J. and Virtanen, I., Peer Review Report: The Jyväskylä Region of Finland, OECD/IMHE Project: Supporting the Contribution of Higher Education Institutions to Regional Development, May 2006,

www.oecd.org/document/35/0,3343,en_2649_35961291_35602979_1_1_1_1,00.html#Jyvaskyla

Jang-soo Ryu, Sung-joon Paik, Dae-shik Lee, Hyun-joong Jun, Eui-soo Cho and Jong-han Kim, Self Evaluation Report: Busan, Republic of Korea, OECD/IMHE Project: Supporting the Contribution of Higher Education Institutions to Regional Development, January 2006,

www.oecd.org/document/35/0,3343,en_2649_35961291_35602979_1_1_1_1,00.html#Busan

Kerndrup, S., Self Evaluation Report: Jutland-Funen, Denmark, OECD/IMHE Project: Supporting the Contribution of Higher Education Institutions to Regional Development, March 2006,

www.oecd.org/document/35/0,3343,en_2649_35961291_35602979_1_1_1_1,00.html#Jutland_funen

Locke, W., Beale, E., Greenwood, R., Farrell, C., Tomblin, S., Dejardins, P.M., Strain, F., and Baldacchino, G., Self Evaluation Report: Atlantic Canada, Canada, OECD/IMHE Project: Supporting the Contribution of Higher Education Institutions to Regional Development, March 2007,

www.oecd.org/document/35/0,3343,en_2649_35961291_35602979_1_1_1_1,00.html#Atlantic_Canada

Mora, J., Gomes, J., Haddad, P. and Marmolejo, F., Peer Review Report: Northern Paraná, Brazil, OECD/IMHE Project: Supporting the Contribution of Higher Education Institutions to Regional Development, November 2006,

www.oecd.org/document/35/0,3343,en_2649_35961291_35602979_1_1_1_1,00.html#Northern_Parana

Mora, J., Marmolejo, F. and Pavlakovich, V., Peer Review Report: Nuevo León, Mexico, OECD/IMHE Project: Supporting the Contribution of Higher Education Institutions to Regional Development, November 2006,

www.oecd.org/document/35/0,3343,en_2649_35961291_35602979_1_1_1_1,00.html#Nuevo_Leon

Mukkala, K., Ritsila, J. and Suosara, E., Self Evaluation Report: Jyväskylä Region, Finland, OECD/IMHE Project: Supporting the Contribution of Higher Education Institutions to Regional Development,

www.oecd.org/document/35/0,3343,en_2649_35961291_35602979_1_1_1_1,00.html#Jyvaskyla

Neller, R., Hall, S. and Eastall, R., Self-Evaluation Report: Sunshine-Fraser Coast Australia, OECD/IMHE Project: Supporting the Contribution of Higher Education Institutions to Regional Development, February 2006,

www.oecd.org/document/35/0,3343,en_2649_35961291_35602979_1_1_1_1,00.html#Sunshine_Frazer

OECD, Higher Education Regions: Globally Competitive, Locally Engaged, OECD, Paris, 2007.

Rolim, C., Serra, M., Rodrigues, R., and Lugnani, A., Self Evaluation Report: Northern Parana, OECD/IMHE Project: Supporting the Contribution of Higher Education Institutions to Regional Development, September 2006,

www.oecd.org/document/35/0,3343,en_2649_35961291_35602979_1_1_1_1,00.html#Northern_Parana

Rushforth, J., Arbo, P., Puukka, J. and Vestergaard. J., Peer Review Report: Jutland-Funen, Denmark, OECD/IMHE Project: Supporting the Contribution of Higher Education Institutions to Regional Development, June 2006,

www.oecd.org/document/35/0,3343,en_2649_35961291_35602979_1_1_1_1.00.html#Jutland_funen

Rushforth, J., Arbo, P., Puukka, J. and Vestergaard. J., Peer Review Report: Twente in the Netherlands, OECD/IMHE Project: Supporting the Contribution of Higher Education Institutions to Regional Development, March 2006,

www.oecd.org/document/35/0,3343,en_2649_35961291_35602979_1_1_1_1.00.html#Twente

Self Evaluation Team., Final Self-Evaluation Report: Trøndelag (Mid-Norway Region), OECD/IMHE Project: Supporting the Contribution of Higher Education Institutions to Regional Development, January 2006,

www.oecd.org/document/35/0,3343,en_2649_35961291_35602979_1_1_1_1.00.html#Trondelag

Sijgers, I., Hammer, M., ter Horst, W., Nieuwenhuis, P., and van der Sijde, P., Self Evaluation Report: Twente, OECD/IMHE Project: Supporting the Contribution of Higher Education Institutions to Regional Development,

www.oecd.org/document/35/0,3343,en_2649_35961291_35602979_1_1_1_1.00.html#Twente

Sotarauta, M., Dubarle, P., Gulbrandsen, M. and Nauwelaers, C., Peer Review Report: Trøndelag (Mid-Norway Region), Norway, OECD/IMHE Project: Supporting the Contribution of Higher Education Institutions to Regional Development, June 2006,

www.oecd.org/document/35/0,3343,en_2649_35961291_35602979_1_1_1_1.00.html#Trondelag

Steering Group, ØRESUND Region, Self Evaluation Report: ØRESUND Region, OECD/IMHE Project: Supporting the Contribution of Higher Education Institutions to Regional Development, November 2005,

www.oecd.org/document/35/0,3343,en_2649_35961291_35602979_1_1_1_1.00.html#Oeresund

Steering Group, Värmland, Self Evaluation Report: Värmland Region, Sweden, OECD/IMHE Project: Supporting the Contribution of Higher Education Institutions to Regional Development, January 2006,

www.oecd.org/document/35/0,3343,en_2649_35961291_35602979_1_1_1_1.00.html#Vaermland

Steve Garlick, Gordon Davies, Mario Polèse and Fumi Kitagawa, Peer Review Report: Atlantic Canada, Canada, OECD/IMHE Project: Supporting the Contribution of Higher Education Institutions to Regional Development, March 2007,

www.oecd.org/document/35/0,3343,en_2649_35961291_35602979_1_1_1_1.00.html#Atlantic_Canada

Van Vught, F., Garlick, S., Nordström, L., and Yelland, R., Peer Review Report: Värmland Region, Sweden, OECD/IMHE Project: Supporting the Contribution of Higher Education Institutions to Regional Development, May 2006,

www.oecd.org/document/35/0,3343,en_2649_35961291_35602979_1_1_1_1.00.html#Vaermland

Zepeda, E., Marmolejo, F., Matthews, D., and Parellada, M., Peer Review Report: Valencia, Spain, OECD/IMHE Project: Supporting the Contribution of Higher Education Institutions to Regional Development, November 2006,

www.oecd.org/document/35/0,3343,en_2649_35961291_35602979_1_1_1_1.00.html#Valencia



THE LESLIE HARRIS CENTRE OF REGIONAL POLICY AND DEVELOPMENT

1st Floor Spencer Hall, St. John's, NL Canada A1C 5S7

Tel: 709 737 6170 Fax: 709 737 3734 www.mun.ca/harriscentre

THE HARRIS CENTRE Memorial University

