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Strategies and Practices for Overcoming Obstacles to the Effective Commercialization of Student Innovation on University Campuses

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University of Windsor

Tawfik: Knowledge-Synthesis on Leveraging Investments in HERD – Final Report May 15, 2012

Strategies and Practices for Overcoming Obstacles to the Effective Commercialization of Student Innovation on University Campuses

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EXECUTIVE SUMMARY

Both provincial and federal policy-makers aim to ensure that knowledge and technology transfer on university campuses result in clear and measurable economic gains. Although the effort to promote university faculty innovation and technology transfer has existed for several years, the recent trend in bolstering economic growth has shifted to include student R&D and innovation. The commercialization of student innovation poses challenges quite different than those encountered by faculty (lacking financial and professional resources and position power). Consequently, they may not be in a position to make informed decisions concerning their intellectual property and other legal rights. Lack of clarity and conflicts of interest may create institutional barriers and prevent students from accessing professional assistance at the institutional level.

Policy makers seeking to promote economic growth through university technology transfer must establish institutional infrastructure, tools, and practices designed to foster an entrepreneurial culture among both students and faculty innovators, This report provides and overview of the current state of Canadian university business and legal policies, practices and procedures relating to student ownership and commercialization of innovation.

What we have learned:

- 1. 42 of the 94 Canadian Universities examined have IP policies that expressly apply to students, and of these 42 institutions, 24 of them have comprehensive IP policies that cover all students (both undergraduate and graduate) but do not specifically address the particular nature and interests of students as non-employees and as a particularly vulnerable group.
- 2. 18 of the 42 institutions have IP policies that expressly apply to students and include a separate student-specific IP policy and/or student-specific clauses within their campus-wide IP policies. These are referred to as "Tier 1".
- 3. These 18 institutions have taken active steps to address the vulnerabilities of students with respect to IP ownership and commercialization by providing for:
 - a. clear identification of IP ownership issues for students;
 - b. clear identification of the commercialization procedures;
 - c. measures that recognize the need for students to be fully informed of their rights and interests
 - d. measures to redress the imbalance of bargaining power that inheres in the student-faculty or student-University relationship;
 - e. clear direction as to what individual or agency will address disputes or complaints
- 4. 13 of these 18 institutions host at least one entrepreneurship centre or similar infrastructure designed to provide students with entrepreneurial support and resources. However, research indicates that these 18 institutions are not necessarily recognized among the top Canadian universities with respect to course offerings pertaining to entrepreneurship.
- 5. Very few Canadian University Entrepreneurship Centres have posted intellectual property policies, provide any direct links to legal assistance, or have onsite lawyers.

- 6. Additionally, to accommodate and foster student entrepreneurship, most universities have set up a myriad of other commercialization activities and programs that complement and extend outreach beyond university technology transfer and research offices. This includes multidisciplinary and inter-institutional centres (much rarer) and collaborative incubators.
- 7. Tier 1 universities were more likely than others to externalize and incorporate entities for technology transfer
- 8. Although university technology transfer offices may be able to offer some assistance in the commercialization of student technology, we note that university staff (including legal and technology transfer officers) represent university interests and as such, may be restricted in their ability to provide unfettered advice to students.
- 9. Legal clinics providing commercialization assistance (including advice pertaining to intellectual property law) may provide students with an affordable avenue for acquiring legal assistance in the commercialization of innovation.
- 10. Commercialization clinics might be established but need to abide by strict policies in order to ensure that law society rules regarding student entitlement to practice law and conflict of interest are respected
- 11. Other alternatives to the provision of legal assistance might be considered

In conclusion:

We synthesize knowledge about the policy and practices and infrastructure available for technology transfer of student inventions. Our joint consideration of intellectual property protection and business and legal support services has tried to overcome some of the traditional functional and knowledge silos.

Looking forward, we recommend that independent and comprehensive measures be developed to assess the performance of each university with respect to its student commercialization policies and practices. Do comprehensive and student-centered IP policies make a difference in creating certainty for student innovators and confidence in the institutional infrastructure to support commercialization?

Previous researchers have studied the connection between patents and on campus commercialization. Future research must differentiate student commercialization from faculty commercialization. Additionally, other indicators related specifically to student centered innovation in Canada must move beyond patents to include other forms of intellectual property, such as copyright and industrial designs. Further, given that universities are measured by learning outcomes, we recommend that universities include learning outcomes connected to experiential entrepreneurial opportunities. If a purpose is also to create an entrepreneurial culture, and students who are better able to identify and seize venture opportunities, then we must also consider indicators over time that reflect the true impact of developing a student-centered entrepreneurial culture. The university learning culture supported by strong student centered policies and practices will develop a more enduring entrepreneurial spirit in Canadian graduates.

Finally, more work needs to be done in relation to measuring the effectiveness of various models for providing independent legal advice to student innovators with the view to ensuring that students are given timely, meaningful and cost-effective access to legal support so that their rights and interests are properly addressed.

STRATEGIES AND PRACTICES FOR OVERCOMING OBSTACLES TO THE EFFECTIVE COMMERCIALIZATION OF STUDENT INNOVATION ON UNIVERSITY CAMPUSES

Introduction:

Increasingly, post-secondary institutions and governments are paying close attention to commercialization initiatives in respect of student innovations. The key reasons for this growing trend are at least two-fold:

- a) Jobs are scarce for new graduates such that they are increasingly being encouraged to start their own businesses. A university education that includes applied learning in entrepreneurship becomes an essential vehicle for fostering an entrepreneurial society. (*United States Association of Small Business and Entrepreneurship (USASBE)* Meeting New Orleans, January 2012). Research on the nexus between entrepreneurship and education indicates that not only is the number of Canadian university graduates rising especially in science and engineering but that those who are entrepreneurial retain the full value of their educational investment, are better able to identify and maximize opportunities and embody traits such as risk-taking, pro-activeness and innovativeness (e.g., Barringer et al., *Entrepreneurship Successfully Launching New Ventures*, 2005; Ucbasaran, Westhead and Wright, *Habitual Entrepreneurs*, 2008).
- b) Universities and governments are broadening their view of campus R&D and commercialization to capture student innovation especially undergraduate student innovation. The potential wealth generation resulting from such an expansion of campus commercialization initiatives would have far reaching economic and social benefits (*Ontario Centres of Excellence* Meeting Mississauga, Nov. 2011).

In as much as student innovation and commercialization are desirable outcomes, the process of bringing great ideas to market may require some greater intervention in order to fully capitalize on University and Government investment in campus R&D. Indeed, in order to fully maximize the social and economic benefits of student innovation commercialization, an additional piece may need to be brought to bear in the form of an entrepreneurial infrastructure.

In a number of recent private and public sector studies relating to Canada's economic health, one key issue is highlighted: Although all levels of Government provide significant funding to Universities for R&D, the results in terms of economic growth and development are disappointing¹. In order to develop economic growth, there must be a transfer of knowledge from academia to practice. On campus entrepreneurship involves knowledge transfer related to venture creation, licensing, consultancy work and academic spinoffs. Industry Canada's (2010, p. 23) report notes that 25% of their respondent

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¹ Social Sciences and Humanities Research Council and Industry Canada Knowledge Synthesis Meeting, April 16, 2012

institutions did not transfer knowledge to society. One third of the sample transferred knowledge through academic spinoffs or licensing agreements and/or intellectual property rights.

Building from our own experience in establishing an entrepreneurship and law centre with a goal of providing business and legal support to student innovators at the University of Windsor, we have identified some gaps in infrastructure that have hampered our ability to meet our objectives.

These gaps are:

1) Comprehensive Institutional Policies on IP and Commercialization:

University commercialization structures may not necessarily fully address student innovators. University commercialization support resources, including TechTransfer offices² may not legitimately be able to provide support to students in the absence of comprehensive IP policies or similar statements of policy that specifically include all students within their purview. Even then, a University's policies that treat students indistinguishably from faculty innovators or staff innovators without acknowledging and attempting to redress some of the particular vulnerabilities of student innovators may not be doing enough to foster and encourage student commercialization success. What might a student-centered IP and commercialization policy look like?

2) The Development of an Entrepreneurial Culture among Student Innovators, among others, on University campuses:

A pro-active approach to empowering students to commercialize could also result in the fostering of an entrepreneurial culture among student innovators. In other words, some student innovators may be better served by resources that allow them to start their own business ventures instead of assigning their IP to the University with some profit sharing formula. The innovative idea is but the first step in the process of commercialization and students may lack essential know-how about how to transform an innovative idea into a business. We consider the types of University commercialization activities that currently provide meaningful and effective support to entrepreneurial students.

Industry Canada's 2010 report on entrepreneurial education identified issues related to student access to education³. Results indicated that close to 40% of institutions surveyed

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² Or Research Services offices – namely resources whose mandate is to foster research and commercialization on campus.

³ Industry Canada. December 2010. The teaching and practice of entrepreneurship within Canadian higher education institutions. http://www.ic.gc.ca/eic/site/sbrp-rppe.nsf/eng/h_rd01200.html Cat. No. Iu188-103/2010E-PDF ISBN 978-1-100-17514-0 60841.

lacked a strategy to deliver entrepreneurial education, and only 28% of institutions targeted students across all faculties, instead usually focusing upon business and engineering. Forty-eight per cent of the universities sampled provided short-term funding to support student entrepreneurship. These results have implications for our current topic of student-centered commercialization, for example, as universities advocate and actively support entrepreneurial activities, how do they address situations when the student interest differs from the university's interest? What might an effective student entrepreneurship strategy look like?

3) The Provision of Essential Legal Support to Student Innovators:

Essential and independent legal support, especially in the area of IP law, may be lacking. Generally, this is a problematic issue since IP legal advice is essential to the effective commercialization of innovation. However, the costs to the individual innovator can be extremely high. Technology Transfer offices or similar resources often provide legal assistance to innovators but in the case of student innovators questions of conflict of interest may have to be addressed and independent legal advice may have to be sought. This is a significant obstacle for students who often don't have the financial means to seek the assistance of an IP lawyer. The issue is exacerbated in smaller cities and communities in the country that frequently do not have the benefit of IP lawyers practicing in their geographic area. This is the case in Windsor, for example. Innovators must then seek legal advice either in Detroit (based on U.S. law) or Toronto – neither are acceptable substitutes for local expertise both in terms of cost and accessibility to meaningful services. What infrastructure has been or could be developed to offer meaningful and cost-effective legal support to student innovators? Could law students, under proper supervision, provide basic legal support for student innovators on University campuses?

This report will attempt to establish the pre-requisites for the development of an entrepreneurial model of student innovation commercialization by canvassing the current policies and practices among Canadian Universities in respect of each of the three critical infrastructure issues we have identified above.

Methodology:

Using the list of Canadian Universities drawn from the Association of Universities and Colleges of Canada (AUCC) website and appended here as Exhibit 1, we gathered and analyzed the following data:

1. IP policies of all Canadian Universities:

We looked specifically for those Universities that had comprehensive campus-wide IP policies that expressly included students within

their purview.

The data relating to IP policies was gathered from the various University websites. In some cases, follow up contact through email or by telephone was made although in a very small number of cases, we could not gather any information at all about their practices and policies.

2) University Entrepreneurship Centres and other commercialization programs and activities involving student innovators.

Previous studies have relied upon primary data collection using surveys and self-reported by selected universities.⁴ This method underlines that the universities who actually participate have likely developed a supporting entrepreneurial and commercialization infrastructure. For example, the survey is sent to an identifiable individual involved in entrepreneurship, who has the interest and passion to participate. For the current report we compile secondary data from university and association across Canada to build a more comprehensive understanding of university student-centered commercialization activities.

To identify and assess the business support services provided to student innovators, information on Canadian entrepreneurship centres and activities, as well as technology transfer offices was obtained by an online search of university websites using the AUCC list of universities.

We investigated each member of the Canadian Association of Business Incubation and identified business incubators affiliated with Canadian universities.

We considered the relationship between universities and entrepreneurship clubs, focusing on the 2012 list of active members from the ACE website well-recognized Advancing Canadian Entrepreneurship (Students in Free Enterprise).

Our search of university centres and activities also highlighted some specific graduate education programs involving new venture development. However, an in-depth consideration of entrepreneurial education was beyond the scope of the current report. Fairly recent and credible reports on entrepreneurial education in Canada are easily accessible⁵.

⁴ For example Industry Canada (2010) and Menzies, T. V. (2009, August). Entrepreneurship and the Canadian Universities: Report of a National Study of Entrepreneurship Education 2009, St. Catharines, ON: Brock University (ISBN 978-0-9683539-5-0).

⁵ For example, Menzies, 2009; Industry Canada, 2010.

3) Law School legal clinics and the provision of services, if any, to student innovators: We identified those Universities with law school clinical programs that handled clients with IP or business law issues. The inquiry centered on whether these clinics handled student innovators and if so, whether there were conflict of interest policies.

In respect of the data relating to law school clinics, law school websites were surveyed but most of the information was gathered by telephone or email conversations with the Director or staff lawyer at each clinic.

We acknowledge that the methodology we employed was not foolproof in that we can't assert with any certainty that we have accurately reported on the current state of affairs for each of the 94 Canadian Universities we examined. That said, our primary objective was to look for models, approaches or benchmarks across the University system rather than to analyze the specifics of each University. We gathered the information necessary to meet this objective.

Discussion:

Part A : Identifying best practices among those Universities that have student-centered IP and commercialization policies

Our survey of all 94 Canadian Universities 6 reveals that the vast majority of Canadian Universities have considered IP ownership and commercialization in some form or another. 7 The bulk of them fall into 3 categories:

1) Those whose IP ownership and commercialization rules fall exclusively within faculty collective agreements or, if the faculty are not unionized, some form of agreement negotiated with faculty. This group was excluded from further

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⁶ As listed on the AUCC website. We treated affiliated degree-conferring institutions as separate entities unless otherwise specified. Similarly, we considered the 9 institutions that comprise the Université du Québec network as independent institutions – These are Université du Québec en Abitibi-Témiscamingue ("UQAT"), Université du Québec à Chicoutimi ("UQAC"), Université du Québec à Montréal ("UQAM"), Université du Québec en Outaouais ("UQO"), Université du Québec à Rimouski ("UQAR"), Université du Québec à Trois-Rivières ("UQTR"), Ecole nationale d'administration publique ("ENAP"), Ecole de Technologie Supérieure ("ETS"), Institut national de la recherche scientifique ("INRS")

⁷ Universities about which we could not find any information which were therefore excluded from further review are Brescia College University (affiliated with University of Western Ontario), Canadian Mennonite University, Concordia University College of Alberta, Dominican College of Philosophy and Theology, University of King's College (affiliated with Dalhousie University), King's College University (affiliated with University of Western Ontario), Ecole nationale d'administration publique, Redeemer University College and Royal Military College of Canada

- consideration since they do not or have not yet contemplated rules for student innovation.⁸
- 2) Those that have a campus-wide IP and commercialization policies or guidelines (hereafter "IP policy" or "IP guidelines") and no collective agreements or other faculty negotiated agreements or whether the agreement is silent on faculty IP issues.⁹
- 3) In some cases, there are both collective agreement provisions to govern faculty members and an overarching campus-wide IP policy. In some of these cases the policy is incorporated by reference into the agreement.¹⁰

⁸ Brandon University, Campion College (affiliated with University of Regina), Cape Breton University, Carleton University, Dalhousie University, First Nations University, Huron University College (affiliated with University of Western Ontario), Kwantlen Polytechnic University, Luther College (affiliated with University of Regina), Nipissing University, Mount Alison University, Mount Saint Vincent University, Saint Paul University (affiliated with University of Ottawa), St Francis Xavier University, St Jerome's University (affiliated with University of Waterloo), St Thomas University, St Thomas More College (affiliated with University of Saskatchewan), Thompson Rivers University, Trent University, Université de Moncton, University of Prince Edward Island, Université du Québec à Trois-Rivières, Université Sainte Anne, University of Lethbridge, University of Ontario Institute of Technology, University of Sudbury, University of Windsor, University of Winnipeg, University of Western Ontario,

⁹ Ecole des Hautes Etudes Commerciales de Montréal (affiliated with Université de Montréal), Ecole de Technologie Supérieure, McGill University, Nova Scotia Agricultural College, Trinity Western University, University of British Columbia, University of Waterloo

¹⁰ Acadia University, Algoma University, Bishop's University, Brock University, Concordia University, Ecole Polytechnique de Montréal (affiliated with Université de Montréal, Emily Carr University of Art + Design, Ontario College of Art and Design, Institut national de la recherche scientifique, Lakehead University, Laurentian University, McMaster University, Memorial University, Mount Royal University, Nova Scotia College of Art and Design, Queen's University, Royal Roads University, Ryerson University, Saint Mary's University, Simon Fraser University, Université Laval, Université du Québec en Abitibi-Témiscamingue, Université du Québec à Chicoutimi, Université du Québec à Montréal, Université du Québec en Outaouais, Université du Québec à Rimouski, Université de Saint-Boniface, Université de Sherbrooke, University of Alberta, University of Calgary, University of the Fraser Valley, University of Guelph, University of Manitoba, University of New Brunswick, University of Northern British Columbia, University of Ottawa, University of Prince Edward Island, University of Regina, University of Saskatchewan, University of Toronto (in addition to its affiliates Victoria University, University of St Michael's College, University of Trinity College), University of Victoria, Vancouver Island University, Wilfrid Laurier University, York University

Commercializing student innovation on University campuses is a multi-layered and multi-step process similar to that of bringing faculty innovation and R&D to commercialized form. Our operating assumption is that Universities that have specifically addressed student innovators, especially undergraduate innovators, within a comprehensive IP and commercialization policy would best exemplify a student-centered approach.

Firstly, through the vehicle of an inclusive IP policy, institutions would have explicitly recognized the way in which students contribute to innovation and knowledge on campus. Secondly, we took the view that a comprehensive and inclusive IP policy that is open, transparent and publicly available would be in the best interest of students as it provides them with a clear statement of the University's position. Finally, those that have taken further steps to explicitly recognize and correct some of the vulnerabilities inherent in their status as a student, especially their unequal bargaining position vis-à-vis their professors and the institution itself would be at the forefront of a student-centered approach. These ideal models would, at least on the face of the record, provide a more supportive environment for student innovators. As a result, those Universities that address student IP issues on a case-by-case basis, rather than through an open and transparent policy, were excluded from further consideration.

In light of our governing assumptions, we were especially interested in identifying those Universities with comprehensive IP policies that

- 1) Applied to both undergraduate and graduate students;
- 2) Addressed all forms of IP especially both patents and copyright
- 3) Considered student IP ownership and IP commercialization questions as opposed to academically related issues such as copyright and plagiarism.
- 4) Recognized and attempted to redress the vulnerable position of students in relation to IP ownership and commercialization

We excluded those Universities with inaugural IP policies in progress or in draft form limiting ourselves to those policies that are currently in force. We also excluded from deeper analysis those Universities who have considered the question of commercialization of all campus innovation and have, as a matter of ideological principle, chosen an open access, open publication/dissemination policy. In effect, these Universities would generally tend to steer away from developing a commercialization infrastructure.11

We then narrowed the pool even further by identifying those Universities that had specific student IP policies versus those that included students expressly in their comprehensive IP policies versus those that were silent on the issue but appeared to include students. We excluded the latter group from consideration on the basis that a student-centered approach would have to ensure that the policy was clear, unambiguous,

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¹¹ See Athabasca University—"Open Access Research Policy" http://www2.athabascau.ca/secretariat/policy/research/openaccess.htm

easily understood and readily available online (since this is likely the first medium of inquiry for most students).

Using these filters, the Universities that met our basic criteria are presented by province in Exhibit 1.

Analyzing these even further, we excluded UNBC's IP policy from further consideration on the ground of ambiguity. The IP policy states that it is largely derived from that of the University of Waterloo and that it applies to all members of the University. Under Waterloo's policy, member is defined as including 'students'. However, this key definitional provision was omitted from the UNBC policy and therefore it is not at all clear whether the policy does, in fact, apply to students.

We excluded other IP policies for being limited scope either because they applied to graduate students only or were limited to specific programs. Their lack of comprehensive application left them outside of our preferred target group but we did refer to some of their features in our final deliberations. These excluded policies are:

Lakehead – IP policy expressly excludes undergraduate students and there appears to be no separate policy for undergraduates

McMaster – Ownership of student work policy is copyright specific and the only IP commercialization policy relating to students is limited to those registered in the MEEI

OCAD – IP policy is limited to graduate students

Ottawa – ambiguous in that IP Policy 29 applies to graduate students only but the Policy Relating to the Conduct of Research says that it covers 'students'. Since the IP policy is the specific document (as opposed to the more general Policy on Research), the policy is of limited scope

UQAC – IP policy appears limited to students doing research as part of a research team

UQAM – IP policy same limitation as UQAC

York – IP policy for graduate students only and even then only tells them they can get a patent and that lawyers are expensive

After excluding those 8 institutions for the reasons mentioned, 42 institutions had IP policies that expressly applied to all students. In all 42 cases, the Universities expressly assert no rights over student IP except where done in the course of employment or under other clearly enumerated circumstances.

Analyzing the policies even further one finds that within this pool, 2412 institutions have comprehensive IP policies in which all students are covered but which did not specifically address the particular nature and interests of students especially in respect of their status as non-employees and in their vulnerability (unequal bargaining position, barriers to accessing necessary business, legal resources...). These policies treated student innovators as indistinguishable from faculty or staff.

The University of Regina's policy is a good example of this approach. The policy is drafted with reference to faculty, staff and other employees of the University. Its only reference to students is in the section entitled "Scope" in which it is stated that ".... Intellectual Property issues involving students will be addressed in a manner consistent with this policy." 13

In light of these considerations, 18 of the 42 Universities were of particular interest in that they either had separate student-specific IP policies or IP guidelines or they included student-specific clauses within their campus-wide IP policies. Because they have expressly directed themselves to the particular issues surrounding student innovation and commercialization, they are currently at the forefront of a student-centered approach. Thus, these "Tier 1" Universities were the pool to which we looked to identify best practices.

It should be noted that nothing should be taken to suggest that the other 24 University IP policies, or indeed, some of the excluded policies didn't embody some of the same features that will be described in relation to Tier 1 Policies. However, it was within the Tier 1 group that we found the best examples of institutional attention to student interests and the features found in other institutions were similarly found among the Tier 1 group.

Our analysis of the 18 Tier 1 policies noted in Exhibit 2 elicited the following.

The treatment of student-related IP and commercialization issues can either take the form of a separate student IP policy or a campus-wide IP policy that contains student-specific clauses. Nine Tier 1 institutions have separate student IP policies namely, Acadia, Bishop's, Brock, Laurier, NSCAD, Ryerson, Saint-Boniface, Sherbrooke, UNB. The others treat student-specific issues within the purview of their overall IP policy.

In at least one case, students were consulted in the elaboration of the policy: Acadia's guidelines state that input was sought from Acadia student representatives and that

¹² Algoma, Concordia, Emily Carr U, Fraser Valley, INRS, Laurentian, Laval, Manitoba, McGill, Memorial, Mount Royal, Queen's, Regina, Royal Roads, Simon Fraser, Sudbury, Trinity Western, U of A, UBC, UOIT, UQAR, U of T (including Trinity, St Michael, Victoria), UVic, Waterloo (including St Jerome's)

¹³ University of Regina, Policy Number 10.95 approved February 28, 2006 Board of Governors. http://www.uregina.ca/presoff/vpadmin/policymanual/general/1095.shtml

feedback from the Acadia Students Union and the Acadia Graduate Students Association was incorporated into the final draft.

Some policies explicitly recognize the particular needs and interests of student innovators in preambles or similar introductory statements:

For example, the Preamble of the Ryerson policy expressly recognizes that:

"[a] student at Ryerson does not fall into the classical case of an employer/employee relationship...When a student is accepted at Ryerson, there is no contract in place other than an implied condition that the student expects to obtain the level of instruction that he/she is paying for..."

Thus, the Ryerson policy sets out as its objectives to: "1) safeguard a student's fundamental, moral and property rights in innovative works in research projects and ii) provide for ways and means for the Institute to be in a position to develop commercially-viable innovations that have had assistance or have been developed by students" Interestingly, the preamble also invokes Article 27 of the Universal Declaration of Human Rights that provides that "everyone has the right to the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is author"

In similar vein, Sherbrooke's Preamble recognizes, among other things:

"l'importance de créer des conditions d'études et de recherche harmonieuses entre les divers acteurs et actrices de la recherche (étudiantes et étudiants, stagiaries postdoctoraux, professeures et professeurs, Université, partenaires externes) favorisant non seulement l'innovation, la diffusion des connaissances et leur accessibilité, la valorization commerciale de la recherche et la protection contre l'utilisation abusive par une tierce partie, mais également une formation de qualité offrant un maximum d'atouts pour une carrière de haut niveau à tout étudiant ou étudiante..." [emphasis added]

Others reflect the need to ensure that students are treated fairly in respect of the IP that they generate. For example, Acadia's guidelines "have been developed to ensure that all students and post-doctoral fellows at Acadia are treated fairly and equally with respect to Intellectual Property (IP) ownership."

Similarly, the UQAT policy states as one of its objectives "Assurer une reconnaissance juste et équitable des droits respectifs de tous les partenaires, including les étudiants ayant participé aux productions universitaires"

Some policies do not contain preambles or else do not speak specifically to studentspecific issues or concerns. However, within the texts of the policies themselves one finds a variety of clauses designed specifically with students in mind.

These substantive provisions can be categorized under the following headings:

1. Student IP Ownership Clauses

This is the first and crucial step in ensuring that student-specific IP issues are properly addressed. Providing easy to understand rules on student IP ownership sends the message that the institution is respectful of the intellectual and creative contributions of its students.

Generally speaking, where students generate innovation under a contract of employment with the University, the IP rests with the institution. However, students innovate in a variety of contexts outside of an employment relationship. It is these non-employment situations that create the most difficulty. Expressly recognizing student ownership issues in non-employment contexts is an important consideration.

In at least two cases, the institution provides for absolute ownership by students: This is the approach taken at NSCAD where, unless there's an agreement to the contrary or the work was commissioned, the student owns all IP regardless of whether University facilities and resources were used. However NSCAD does claim a share of revenue for any invention developed using NSCAD facilities.14

Ecole Polytechnique de Montréal has a clause in its Declaration of Student Rights and Responsibilities that establishes the broad principle that "[in] accordance with laws in this area and policies in effect at Polytechnique, and based on the extent of their contribution, students are entitled to individed [sic] intellectual property rights for any work to which they have contributed as part of their program, as well as to any ensuing copyright."15 That said, the Policy Regarding Technological Intellectual Property provides that the institution is the owner of the IP that was created by Polytechnique researchers.

Generally, ownership rules are more nuanced and in the majority of the policies reviewed, a number of different research scenarios are described with varying results in terms of student ownership. For example, the most elaborate policy in this respect is Ryerson's that identifies multiple ways in which student research and innovation takes place and elaborates the ownership policy in respect of each scenario. These scenarios range from the traditional "external grant research" or "independent thesis research project" to those

¹⁴ See Clauses A1 and C1

¹⁵ Clause 2.2. French text reads: "Conformément aux lois applicables en cette matière et aux politiques en vigueur à l'École, les étudiants disposent, dans la mesure de leur contribution, à des droits de propriété intellectuelle sous forme indivise pour des travaux auxquels ils ont contribué dans le cadre de leur programme de formation, ainsi qu'aux droits d'auteur en découlant." There's also a separate copyright policy that has a section on student copyright generally but deals with authorship issues and does not touch specifically on commercialization

that include "internship and co-op placement research", "dependent thesis research project", "survey-type projects" and "class, group and team projects". Thus, although as a general principle, Ryerson student retain ownership of the IP they generate in non-employment situations, in the case of "class, group and team projects, for example, ownership rests with the institution.

Clearly articulated IP ownership rules that identify and address the multiple ways in which students generate IP through their research and academic activities are the necessary first steps for a student-centered approach. Ideally and as a matter of principle, IP policies should adopt an expansive approach to student ownership of IP.

2. Commercialization Practices and Procedures Clauses

Whether the student innovates alone or, more commonly, as part of a team or group n a formal research setting or otherwise, students are the weaker parties in questions involving commercialization and IP protection. They may be more vulnerable to abuse and more easily exploited and deprived of their IP. They are often in an unequal bargaining position with their professors, third parties or the University. They may not be able access necessary information as readily as others to permit them to make informed decisions about their IP rights. Their interests in completing their academic requirements may be undermined by commercialization agreements that prevent them from disclosing results.

Drawing from our Tier 1 group, the following measures to redress these concerns can be identified:

a) The principle of fair and equitable treatment

Ensuring that students are treated fairly and equitably is a thread that runs through a number of Tier 1 policies whether contained as an overarching statement of principle as in the case of Acadia and UQAT cited above, or in the body of the text within the commercialization clauses.

Clause 4.9 of Calgary's policy states specifically that "...where the co-Creators include students and supervisees, faculty have special responsibility to ensure that all concerned are informed of the relevant policies and considerations and that the resulting arrangements are fair and equitable".

Similarly, the VIU policy states at clause 4.11: "When students or other supervised persons are involved, the supervising person is obligated to inform the students or other supervised persons of the intent to Commercialize and inform them that the Vancouver Island University TTO or its equivalent will advise them of all relevant polices, with the goal of achieving arrangements that are fair and equitable."

b) Resources or support prior to entering into agreements about IP rights and commercialization arrangements

Fair and equitable treatment of students in respect of IP and commercialization must be supported by resources designed to ensure that students are informed of their rights and interests at the outset. The above-cited clause in the VIU policy clearly makes the link between the provision of relevant information and the attempt to reach a fair and equitable arrangement with students. It attempts to safeguard students' interests by placing the onus on faculty supervisors to advise students of their rights prior to commercialization arrangements being entered into. Placing the onus on the faculty member or supervisor to apprise students of their IP rights is a logical approach but may not provide the most effective independent and objective informational and advisory resource for a student.

In the case of NSCAD, a copy of any agreement over IP made by a student shall be provided to the Student Union. While the attempt here is to provide Student Government oversight, this may not be sufficient to prevent any abuse of authority since the obligation on the part of the institution is to provide a copy once an agreement has been entered into and there appears to be no right of objection on the part of the Student Union.16

A more pro-active approach can be found among a number of Quebec Universities namely, Bishop's, ETS, HEC, Sherbrooke, UQAT and UQO. These policies contain a clause prohibiting an assignment of rights by a student without prior approval. This measure targets possible abuses of authority and undue exploitation of students in negotiations and commercialization agreements.

For example, the ETS clause reads: "Aucun cession de droits d'un étudiant a un professeur ou à une enterprise à laquelle ce dernier est associé ne peut être exigée de l'étudiant à mois d'approbation par le doyen des études ou son délégué qui vérifie alors le bien-fondé et la légitimité de cette exigence et s'assure du consentement libre et éclairé de l'étudiant". 17 In effect, through this type of clause, the institution is accepting a fiduciary-like responsibility towards its students.18

Bishop's clause 3.6 is similar but it goes further by stipulating that a surrender of rights by a student is to be treated as exceptional: "Any educational and collaborative relationship must be based on free and informed consent. Any request that a student...give up his or her moral rights or surrender commercial rights must be approved by the Office of the Vice-Principal. Such surrendering of rights is the exception and must be recorded in a written agreement signed by all the parties in question." However, unlike the provisions in the ETS (largely mirrored in the HEC, Sherbrooke, UQAT and UQO policies) this clause does not expressly place the onus on a senior University

¹⁶ Clauses B4 and C4

¹⁷ Clause 33 in respect of copyright. This same clause is repeated in the patent and computer software sections of the policy.

¹⁸Whether the University sits in a fiduciary position towards its students in matters relating to IP and commercialization is a live issue but one that is beyond the purview of this Report.

administrator, such as the VP Academic or VP Research, to determine the reasonableness and legitimacy of the request for the assignment of rights.

Although excluded from our Tier 1 group, UNBC's policy contains a similar clause for the protection of graduate students: "Where established agreements are modified which waive, limit or assign IP rights, that modified agreement must be reviewed and approved by the Vice Provost Research and Graduate Programs or delegate and, if graduate students are parties to the research, the Associate Dean of Graduate Studies." 19 Here again, there is no positive requirement on the Vice Provost to ensure that the request to assign is reasonable and legitimate.

c). Clauses relating to the right to information

In order for students to be able to fully engage in the IP commercialization process, they need to have the necessary information upon which to make reasoned decisions in respect of their IP ownership arrangements. A number of policies address this issue by placing a positive obligation on the part of a designated individual to provide necessary information so that students can give free and informed consent.

In some cases, supervising faculty are given the responsibility of apprising students of their IP rights. This is the case of Calgary, as discussed.

A similar principle can be found in the policy at HEC under heading 4: "Principes à l'égard des étudiants: Devoir d'information de l'étudiant". This section provides that students have a right to be informed of all HEC policies and rules and must be informed by his or her supervisor about any contractual or other issues pertaining to a proposed research activity. Similarly, the UQAT policy at clause 7.5 states that: "Le professeur...qui offre à un étudiant...d'effectuer ses travaux dans le cadre d'une recherche contractuelle doit informer l'étudiant...des conditions dans lesquelles s'effectueront ces travaux et des conséquences en matière de Propriété intellectuelle. L'étudiant...qui donne son consentement libre et éclairé doing signer une entente...".

In some cases, students are expressly told to seek independent legal advice, at their own expense, in order for them to make informed decisions. This is the case in the Acadia, Calgary and HEC policies.

In the case of Laurier, the issue of independent legal advice is somewhat more implicit: "Where the research of a student and a professor results in an invention which may be patentable, a memorandum of agreement should be written and signed, with the assistance of the office of research services and/or lawyers for all parties. In this agreement, the rights of the student, the professor and the university should be identified."20

20 Laurier policy at II (h).

¹⁹ UNBC policy at p. 5

Part C of this Report will tackle the question of effective and affordable legal support for student innovators in more detail.

d). Clauses dealing with commercialization contracts and student academic interests

In cases of commercialization, especially with IP rights at stake, conflicts may arise between the academic interests of the student (especially graduate student) and those of the institution or its commercialization partners. A common clause in the various policies surveyed included safeguards to protect the student's interests above all other considerations.

Examples of this type of clause can be found in Bishop's policy that states at clause 3.9: "Bishop's University will see to it that nothing in any contract abridges a student's right to be assessed accurately and fairly regarding graduation and will uncompromisingly negotiate... for recognition by the third party of Bishop's University's members' rights to publish and use, for teaching and research purposes, any academic products that emerge from such a contract."

ETS' policy stipulates that: "L'Ecole ne peut conclure un accord de confidentiality avec des partenaires externes au détriment du droit d'un étudiant de déposer, pour fins d'évaluation et de diplomation, son rapport, son mémoire ou sa thèse."21

Finally, another interesting protective clause can be found in the Sherbrooke policy prohibiting an organization or an enterprise from making it a condition for the awarding of a bursary that the student renounce his or her IP rights.22

3. <u>Dispute Resolution clauses – </u>

It is beneficial that a policy include clear guidance as to how to resolve disputes under the policy so that students know what to do when disputes arise of IP ownership or commercialization questions. Although not exclusive to them, most of the Tier 1 institutions have incorporated dispute resolution procedures within their policies 23—Some processes begin internally and informally through the Dean of the Faculty or some other designated official with further recourse to mediation, arbitration and litigation. 24 Some leave the entire process to internal resolution. 25 Whether it is entirely in the best interest of students to have disputes settled exclusively internally through a senior University administrator is debatable.

22 Sherbrooke policy at p. 18

²⁵ Laurier, UNB, VIU

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²¹ ETS policy at paragraph 20

The exceptions are Acadia, Brock, NSCAD, Saint Boniface, USask that contain no dispute resolution clauses

²⁴ Bishop's, Calgary, EPM (in its copyright policy only), ETS, HEC, Ryerson, Sherbrooke, U de M, UQAT, UQO

One interesting variation can be found at Ryerson that provides for a University Committee, the Intellectual Property Committee, to resolve disputes on questions of student IP ownership and commercialization. The Committee includes students among its members.26

In sum, whether in the form of a separate student IP policy or containing student-specific clauses, a student-centered approach would require some recognition of the particular circumstances and vulnerabilities of students within the IP and commercialization relationship with the University. Currently, policies have sought to address the vulnerabilities by drafting clauses that provide the following:

- a) clear identification of IP ownership issues for students;
- b) clear identification of the commercialization procedures;
- c) measures that recognize the need for students to be fully informed of their rights and interests
- d) measures to redress the imbalance of bargaining power that inheres in the student-faculty or student-University relationship;
- e) clear direction as to what individual or agency will address disputes or complaints

A model IP policy for students should, at the very least, take into account all of these enumerated features.

Comprehensive IP policies are, however, but one step in a larger process. If the goal of policy-makers is to ensure that innovation, including student innovation, results in clear economic gains for Canadians, then an IP policy alone may not suffice. Most of the IP policies under review offer no particular measures to foster an entrepreneurial culture among innovators. The assumption may well be that innovation, commercialization, and entrepreneurship go hand in hand. This might be true in some cases but not in all. More pro-active measures might be required at the institutional level to foster entrepreneurship among all innovators but especially among student innovators. Empowering students by providing them with entrepreneurial tools, resources and support should be considered as part of an overall University strategy.

The Preamble of the policy at VIU is an interesting example of the recognition that commercialization may require entrepreneurship support to maximize returns. One of its stated purposes is to "[p]rovide the potential for gaining funds and other resources to be used to promote and aid research and creative activities, employee and student entrepreneurism, and technology transfer...". "Entrepreneurism" isn't defined anywhere in the policy but the policy does suggest that VIU will "assist with the creation of new ventures through advice on business planning, legal matters and capital acquisition".

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²⁶ Rverson Clause 4.1

Although not among our Tier 1 group, another example can be found in McMaster's Master's of Engineering Entrepreneurship and Innovation Program Student Policy in which one of the stated objectives is to "provide business resources and network capabilities for student enterprise projects."27

What infrastructure and systematic supports are being or could be put in place to take a more entrepreneurial approach to student innovative activity?

In similar vein, at least three of the policies surveyed expressly apprised students of the fact that they could seek independent legal advice at their own expense. While it is a good first step to advise students that they may have interests that should be advanced through independent counsel, how realistic is it to place the burden, especially the financial burden, entirely upon the student? In other words, advising students that they can obtain legal advice may be designed more to shield the institution from legal liability rather than a genuine concern about the imbalance of bargaining position. If an institution were to be more pro-active in assisting students in obtaining independent legal advice what form might this assistance take?

The next two sections of this Report will examine these two fundamental issues.

Part B: Entrepreneurial Support for Student Innovators

Our first synthesis topic considered the development of policies that clarify the relationship between universities and students with respect to commercialization and intellectual property. We extend this to a second synthesis that identifies student-centered programs, activities and practices that encourage student centered innovation and commercialization. We looked for a pattern in entrepreneurial activities amongst universities that had comprehensive IP policies versus those that did not and tried to identify common practices.

The level of entrepreneurship is determined by regulatory framework, research and development and technology, entrepreneurial capabilities, culture, access to finance and finally, market conditions. ²⁸. Universities have stepped in to try to fill some of the gaps by developing entrepreneurial infrastructure that facilitates 1) the development of entrepreneurial capabilities in students, 2) the research and development of student inventions and venture ideas, and 3) new venture funding. Menzies concluded that entrepreneurship courses skyrocketed in popularity from 1979 to 1999 (growth rate of

²⁸ Fischer, E. and Reuber, R. The state of entrepreneurship in Canada. February 2010. Small Business and Tourism Branch Industry Canada. http://www.ic.gc.ca/eic/site/sbrp-rppe.nsf/vwapj/SEC-EEC_eng.pdf/\$file/SEC-EEC_eng.pdf Cat. No. Iu188-99/2010E-PDF ISBN 978-1-100-14889-2 60719

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²⁷ Agreement on Commercialization and IP for the Master's of Engineering Entrepreneurship and Innovation (MEEI) Program Policy at http://milo.mcmaster.ca/policies/meei student policy

444% at the undergraduate level, and 232% at the graduate level). Although this rate slowed, in the five years before the report there had been a 33% increase in courses. As entrepreneurial courses became more accepted, many educators also realized the need to help students commercialize their inventions. Accordingly infrastructure was created that included entrepreneurship centres, business incubators, competitive activities, clubs and even, in some cases, law clinics.

We present data on four different indicators of entrepreneurial climate and technology transfer, specifically with respect to commercialization activities of a business and legal nature. Appendix A profiles Canadian entrepreneurship centres and activities sorted by intellectual property infrastructure (Tier 1 and other). These were obtained by an online search of university websites using the AUCC list of universities. Appendix B outlines the technology transfer capabilities associated with each university, specifically noting whether commercialization is handled internally or externally, and whether it reports to the Office of Research, or operates as an independent centre. This was also obtained through an online search of university websites. Appendix C shows Canadian incubators that are affiliated with Canadian universities. This was obtained by investigating each member of the Canadian Association of Business Incubation and identifying those affiliated with universities. Finally, Appendix D considers the relationship between universities and entrepreneurship clubs, focusing on the well-recognized Advancing Canadian Entrepreneurship (Students in Free Enterprise). We sourced the 2012 list of active members from the ACE website. Whereas Appendices A, B and C generally reflect formal activities, Appendix D addresses informal cultural indicators. We discuss these data below.

Technology Transfer Offices

A review of university websites indicated that the Tier 1 universities were more likely than others to establish and incorporate external technology transfer offices. It should be noted that University of Quebec affiliates collaborated in some technology transfer support (Valeo Management, ValoRIST). In addition to removing perception of university bureaucracy when commercializing university spinoffs, this separation complements the Tier 1 university approach with respect to clarifying and minimizing the early-stage conflicts of interest inherent in on-campus commercialization activities.

Entrepreneurship Centres and Incubators

Thirteen of the 18 Tier 1 universities hosted at least one entrepreneurship centre, and in some cases universities might support multiple more specialized centres. For example, University of New Brunswick hosts three commercialization focused centres: the International Business & Entrepreneurship Centre (IBEC), the Pond-Deshpande Centre

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²⁹ Menzies, T. V. (2009, August). Entrepreneurship and the Canadian Universities: Report of a National Study of Entrepreneurship Education 2009, St. Catharines, ON: Brock University (ISBN 978-0-9683539-5-0).

for Innovation and Entrepreneurship, and the Dr. J. Herbert Smith Centre for Technology Management & Entrepreneurship Centre (JHSC). Ryerson, another 'Tier 1' has an impressive student focused infrastructure including an entrepreneurship centre, angel network, business incubator, and competitive and seed funding opportunities. Additionally their SIFE club has a strong competitive record, and has received the greatest university support from a Tier 1.

Most centres targeted a wide group of faculty, students, alumni and the small business community, but focused directly on students through the design of specific courses, internships and competitions. The Menzies (2009) report identified the universities that offer the most courses in entrepreneurship. Perhaps surprisingly, this list of universities was not dominated by our Tier 1 universities. Additionally the existence or focus upon graduate programs did not necessarily determine whether there was support for an entrepreneurship centre, especially when it was anchored in the business school.

The State of the Nation report on Canada's Science, Technology and Innovation (2010) highlighted the need to focus on transferring knowledge from universities, delivering value and generating wealth from commercialization. The authors suggested that collaboration and clusters build a critical mass necessary for more impactful research initiatives and for recruitment of the best scientists and industry partners. Our review of the commercialization activities identified some clusters actively working together (even thought some institutions were not formally affiliated). For example, in Quebec, three affiliated universities: HEC, Ecole Polytechnique Montreal, and Universite de Montreal collaborate for technology transfer and other entrepreneurial activities (Neumann Centre, Bombardier Incubator). Collaboration by co-located/geographically near but unaffiliated universities include 1) University of Toronto and Ryerson, collaborating at the BioDiscovery Centre, 2) University of Waterloo, Guelph, and Wilfrid Laurier working with the Accelerator Centre in Waterloo, 3)The NRC Centre for Fuel Cell Innovation in Vancouver working with many universities and builds a critical mass in fuel cell technology, and 4) ValoRIST, working with the 9 University of Quebec affiliates.

The incubators were generally more loosely affiliated with a university than were entrepreneurship centres. This encouraged more co-operation and co-use of the incubation facility by more than one university. There seemed to be more direct university involvement in the pre-incubation stage, when inventions were fostered through experiential learning activities, on-campus entrepreneurship programs and centres. This provides universities and students with early opportunities to flag and resolve issues related to conflicts of interest.

³⁰ Government of Canada (Science Technology and Innovation Council). 2011. Imagination to Innovation: Building Canadian Paths to Prosperity. State of the Nation 2010. Canada's Science Technology and Innovation System. Cat. No. Iu4-142/2010E ISBN 978-1-100-17972-8 60872

In general, upon review of the entrepreneurship centres and commercialization activities, it became clear that there are common practices in Canada with respect to hosting business plan and new venture competitions, mentoring and consulting, conducting workshops. These practices are widely adopted across universities both with and without comprehensive intellectual property policies. However, few of the Entrepreneurship Centre websites described intellectual property policies and almost none provided direct links to legal aid. There were no onsite lawyers, and no emphasis on legal aid even for the centres that had lawyers involved on the Board of Directors, for example, Dobson-Lagasse Centre (Bishops) and Centech (Ecole de Tech. Sup.). The Centre for Enterprise and Law was the only centre in Canada to provide both legal and business support, with law students supervised by an Intellectual Property Director. Hence this may explain the lack of emphasis on clarifying intellectual property ownership and conflicts of interest between university, professors, and students.

Informal Commercialization Activities and University Support

Advancing Canadian Entrepreneurship is a highly organized and competitive club that encourages student entrepreneurial teams to develop outreach projects that improve the quality of live and standard of living for people in need. The club also encourages students to start their own businesses. The ACE website (http://www.acecanada.ca/bin/aboutUs/what.cfm) notes that almost 2,000 students, representing 61 universities and colleges, are actively engaged. Remarkably, the organization website boasts that 181 business ventures and 497 entrepreneurial community outreach projects have been delivered and 257 full-time and 390 part-time jobs created, with an estimated value of economic activity of 12 million dollars. The ACE website also listed campus and community awards received by these chapters, and a count of these indicates that in general smaller universities may be more likely than larger universities to provide support and recognition for their SIFE club. Perhaps the small size of the university helped the SIFE club to stand out. Also the smaller universities and communities may lack access to the same level of funding and infrastructure as larger universities mandating a less formal and more volunteer approach to encourage an entrepreneurial climate. The ACE and SIFE clubs are also dominated by Englishspeaking Canadian chapters, likely because the clubs host their national and international competitions in English.

Part C: University Legal Help with Student Start-ups and Conflicts of Interest

As the entrepreneurship initiative continues to take off across Canadian university campuses, and the calls for commercialization of student innovation grower louder, it is imperative the governmental, institutional and economic measures are established to provide the requisite support for students to take their innovation from the classroom to the market place. While commercialization support is multi-faceted, requiring business, accounting and legal expertise, the concerns surrounding legal support for student innovators are complex and difficult to manage.

Generally speaking, students find it difficult to acquire independent legal advice in any number of situations, given both their lack of financial resources and the limited legal clinics available to offer pro bono assistance. The area of intellectual property law only exacerbates this dilemma, as clinics generally lack expertise in the field of intellectual property law, and competent practitioners are difficult to access (especially in smaller Canadian cities) and their services may be costly.

While some Canadian universities offer students commercialization assistance through their in house technology transfer office, this option also comes with its own set of unique challenges (as discussed below). Many commentators now advocate for the establishment of entrepreneurship clinics which offer intellectual property services to student innovators. These entrepreneurial clinical models, while addressing the issues of lack of intellectual property services as well as the lack of student financial resources, must be carefully established and operated, so as to avoid violating legal ethical rules pertaining to student entitlement to practice law and conflict of interest avoidance. If established properly, entrepreneurial clinics provide for the possibility of supporting student innovation while offering students a unique and valuable clinical experience.

Entitlement to Practice Law

The legal profession, as a self-governed profession, is subject to the rules and bylaws of each respective provincial governing body responsible for oversight. In Ontario, the *Law Society Act*³¹ provides the Law Society of Upper Canada (LSUC) the authority to self-regulate the legal profession in Ontario. Through the *Act*, the LSUC has developed By-laws and Rules of Professional Conduct (the 'Rules') to assist in the regulation of the practice of law and the monitoring of conduct that is unbecoming of the profession.³²

Section 26.1(1) of the *Act* states that subject to subsection (5) no person, other than a licensee whose license is not suspended, shall practise law in Ontario or provide legal services in Ontario. Subsection 26.(5) provides that a person who is not a licensee may practise law or provide legal services in Ontario if and to the extent permitted by the By-laws. While the *Act* provides a broad definition of 'legal services'³³, Section 27.(1)

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³¹ R.S.O. 1990, C. L.8 [the *Act*].

³² Although a thorough and in-depth analysis of the rules of professional conduct of governing bodies across Canada falls outside the scope the current analysis (given the authors' experience in Ontario), our research seems to indicate that the rules pertaining to entitlement to practice and conflict of interest are similar across Canada in both common law and civil law jurisdictions.

³³ (5) For the purposes of this Act, a person provides legal services if the person engages in conduct that involves the application of legal principles and legal judgment with regard to the circumstances or objectives of a person.

⁽⁶⁾ Without limiting the generality of subsection (5), a person provides legal services if the person does any of the following: 1. Gives a person advice with respect to the legal interests, rights or responsibilities of the person or of another person; 2. Selects, drafts, completes or revises, on behalf of a person, i. a document that affects a person's interests

states that the scope of activities authorized under each class of licence and any terms, conditions, limitations or restrictions imposed on each class of licence shall be as set out in the By-laws.

Pursuant to By-Law 2.(1), a licensee requires an L1 license in order to practice law in Ontario as a barrister and solicitor. By-law 5 sets out a separate class, P1, and provides the limitation that holders of a P1 license may only engage in activities pertaining to proceedings such as Small Claims Court, proceedings in the Ontario Court of Justice pursuant to the *Provincial Offenses Act* and summary conviction court under the *Criminal Code*. By-law 30 provides an exemption, permitting certain classes of individuals to provide the services permitted of a P1 licensee, despite not being licensed as such, including students working in a legal clinic (pursuant to the *Legal Aid Services Act*, 1998) and students providing legal services through programs established by Pro Bono Students Canada.

By-law 4.(34) permits students to provide services permitted of a P1 licensee, despite not being licensed as such, provided that the student is employed and directly supervised by an L1 licensee. By-law 7.1(3.1) permits a licensee to delegate to a non-licensee tasks and functions in connection with the licensee's practice of law, provided that the licensee maintains 'effective control' over the non-licensee's provision of services to the licensee. By-law 7.1(1)(2) defines 'effective control' as:

a licensee has effective control over an individual's provision of services to the licensee when the licensee may, without the agreement of the individual, take any action necessary to ensure that the licensee complies with the Law Society Act, the by-laws, the Society's rules of professional conduct and the Society's policies and guidelines.

By-law 7.1(4.(1)) requires that a licensee take complete responsibility for their practice of law, which extends to the supervision of non-licensees, and supervision of delegated tasks. Similarly, Rule 5.01(2) of the Rules require that a licensee assume complete professional responsibility for his or her practice of law and shall directly supervise non-lawyers to whom particular tasks and functions are assigned. Furthermore,

in or rights to or in real or personal property, ii. a testamentary document, trust document, power of attorney or other document that relates to the estate of a person or the guardianship of a person, iii. a document that relates to the structure of a sole proprietorship, corporation, partnership or other entity, such as a document that relates to the formation, organization, reorganization, registration, dissolution or winding-up of the entity, iv. a document that relates to a matter under the Bankruptcy and Insolvency Act (Canada), v. a document that relates to the custody of or access to children, vi. a document that affects the legal interests, rights or responsibilities of a person, other than the legal interests, rights or responsibilities referred to in subparagraphs i to v, or vii. a document for use in a proceeding before an adjudicative body; 3. Represents a person in a proceeding before an adjudicative body; 4. Negotiates the legal interests, rights or responsibilities of a person.

By-law 7.1(4.(1)) provides a list of important considerations for a licensee when delegating tasks to non-licensees³⁴.

Quite possibly the most significant provision, By-law 7.1(6) sets forth the prohibition that a licensee is not to allow a non-licensee to provide legal advice to a client, and all correspondence to a client (besides correspondence of a routine, administrative nature) must be signed by the licensee. As such, with respect to students, outside of the exceptions set out in By-law 4.(34) and By-law 30, a licensed lawyer must at all time be responsible for the provision of legal services, as well as the provision of all legal opinions and advice.

Conflict of Interest

The law imposes upon a lawyer (as with other professionals) a fiduciary obligation to act in an honest and candid manner in the best interests of the lawyer's client. The various administrative bodies responsible for self-governance of the legal profession across Canada impose rules pertaining to a lawyer's ethical duty to avoid situations of conflict of interest, which rules correlate with, and in most circumstances supplement a lawyer's fiduciary obligations. It has been stated that "the basic prohibition against conflicts of interest is rooted in the lawyer's fiduciary duties of loyalty and confidentiality which seek to assure effective legal representation of clients." ³⁵

The LSUC's Rules, specifically, Rules 2.04-2.06, attempt to define the nature of a conflict of interest and how a lawyer must act in circumstances of conflict. Rule 2.04(1) sets out the general definition of a "conflict of interest":

2.04(1) A "conflict of interest" or a "conflicting interest" means an interest

(a) that would be likely to affect adversely a lawyer's judgment on behalf of, or loyalty to, a client or prospective client, or

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³⁴ By-law 7.1(4.(1)) provides the following qualifications: the licensee shall not permit a non-licensee to accept a client on the licensee's behalf; the licensee shall maintain a direct relationship with each client throughout the licensee's retainer; the licensee shall assign to a non-licensee only tasks and functions that the non-licensee is competent to perform; the licensee shall ensure that a non-licensee does not act without the licensee's instruction; the licensee shall review a non-licensee's performance of the tasks and functions assigned to her or him at frequent intervals; the licensee shall ensure that the tasks and functions assigned to a non-licensee are performed properly and in a timely manner; the licensee shall assume responsibility for all tasks and functions performed by a non-licensee, including all documents prepared by the non-licensee; the licensee shall ensure that a non-licensee does not, at any time, act finally in respect of the affairs of the licensee's client.

³⁵ Peter Joy, Robert R. Kuehn; *Conflict of Interest and Competency Issues in law Clinic Practice*, 9 Clinical Law Review 493 at 523.

(b) that a lawyer might be prompted to prefer to the interests of a client or prospective client.

The above-referenced definition is broad (and somewhat vague); it is likely a deliberate attempt to provide a wide definition able to encompass the plethora of conflict situations that lawyers may face in practice. The Commentary following Rule 2.04(1) provides a list of conflict of interest situations, which include the financial interests of a lawyer, the duties of a lawyer to any other client, and the obligation to communicate information³⁶.

With respect to the issue of a lawyer's 'financial interest', and the creation of a potential conflict of interest situation, the Commentary following Rule 2.04(1) states that a conflict of interest may arise if "a lawyer... [has] a personal financial interest in the client's affairs or in the matter in which the lawyer is requested to act for the client".³⁷

Equally as broad is the general prohibition against conflicts of interest, as set out in Rules 2.04(2) and (3):

- (2) A lawyer shall not advise or represent more than one side of a dispute.
- (3) A lawyer shall not act or continue to act in a matter when there is or is likely to be a conflicting interest unless, after disclosure adequate to make an informed decision, the client or prospective client consents.³⁸

The Commentary following Rules 2.04(2) and (3) explain that a lawyer's judgement and freedom of action on a client's behalf must be as free as possible from

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³⁶ With respect to the obligation to communicate information, this obligation must be read in conjunction with a lawyer's obligation to safeguard privileged information, i.e. the obligation to *not* disclose a client's privileged information. As discussed in the LSUC guidelines on Conflicts of Interest, found at

http://rc.lsuc.on.ca/pdf/kt/conflictsOfInterest.pdf: "Conflicts of interest arise in situations where the lawyer has knowledge of confidential information from one client that is relevant to another client's matter. On the one hand, the lawyer owes a duty to one client not to disclose the information, as required by the confidentiality rule at 2.03; on the other hand, the lawyer owes a duty to the other client to disclose the information, as required by the honesty and candour rule at 2.02. The lawyer cannot properly meet both obligations, hence the conflict."

³⁷ Commentary following Rule 2.04(1).

While the Commentary section following Rules 2.04(2) and (3) shed some light on the interpretation of the section, the language of these Rules as well as the Commentary itself remain wrought with ambiguity. The Commentary following Rule 2.04(1) states that every circumstance where, for example, a lawyer has a financial interest in the matter, does not automatically create a conflict of interest, insinuating that the essential element(s) of a conflict is any circumstance(s) likely to have an "adverse influence on the lawyer's judgement or loyalty to the client".

conflict of interest. The Commentary goes on to provide several examples of specific circumstances where a lawyer's role may be subject to a conflict of interest, such as employment within a firm which has acted for a client with adverse interests to that of the lawyer's client, acting as both counsel and a director of a corporation, or where a lawyer may have a sexual or intimate personal relationship with their client.

However, the Commentary following Rules 2.04(2) and (3) provides little in the way of an expanded definition of 'conflict of interest'. The LSUC has released a guidance document pertaining to conflicts of interest which defines an 'interest' as "anything of importance or consequence".³⁹ The guidance document goes on to state that:

the definition of "conflict of interest" includes not only actual conflicts of interest but potential conflicts; interests that "would likely" have adverse effects, or that a lawyer "might" be prompted to prefer. In this discussion, the term "conflicts" is to be read as referring to both potential and actual conflicts of interest. ⁴⁰

The broad definition of 'conflict of interest' creates tremendous difficulty for lawyers given both the imprecision in defining an actual conflict of interest, as well as the admonition regarding *potential* conflicts of interest. With respect to seemingly noncontentious matters, the LSUC provides a warning to lawyers, advising lawyers to remain cognizant of potential conflict pitfalls:

Lawyers may be asked to act for joint clients on opposing sides of a non-contentious matter... Although initially client interests may seem as if they are the same, during the course of the retainer the clients' interests may diverge, new issues may arise that are contentious, or the protection of confidential information may come into play.⁴¹

Read in conjunction, the assertion that the conflict of interest prohibition extends beyond actual conflicts to include potential conflicts, as well as the LSUC's warning regarding seemingly non-contentious matters, create an ominous cloud hanging over lawyers, requiring them to remain vigilant at all times regarding potential conflict pitfalls.

Rule 2.04(3) provides for possible situations where a lawyer may continue to act in circumstances of a conflict where the client provides their consent. The Commentary pertaining to the consent exception refers to the consideration of such factors as "the availability of another lawyer of comparable expertise and experience, the extra cost, delay and inconvenience involved in engaging another lawyer, and the latter's unfamiliarity with the client and the client's affairs."

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http://rc.lsuc.on.ca/pdf/kt/conflictsOfInterest.pdf.
 http://rc.lsuc.on.ca/pdf/kt/conflictsOfInterest.pdf.

⁴¹ http://rc.lsuc.on.ca/pdf/kt/conflictsOfInterest.pdf.

⁴² Commentary following Rules 2.04(3) and (3).

Furthermore, the Commentary loosely refers to circumstances of consent as 'joint representation', and cites examples involving 'commercial transactions'. The references in the Commentary to 'joint representation' and 'commercial transactions' suggest that Rule 2.04(3) should be read in conjunction with, or at the very least should be informed by Rule 2.04(6) pertaining to joint retainers.

The Rules provide some guidance to lawyers regarding how to approach joint retainer situations. Generally speaking, joint retainers are limited in their applicability. Primarily, joint retainers appear to have limited applicability outside of commercial transaction situations. As such, it is difficult to envision circumstances falling outside of commercial transaction circumstances where conflicts are unlikely and information can be pass freely and openly between parties. The LSUC has released a guidance document pertaining to joint retainers, which document solely references transactional matters. 44

Finally, the Rules make it abundantly clear that when a conflict of interest situation arises that cannot be resolved in accordance with the exceptions set out in the Rules, a lawyer must withdraw from the situation by terminating their retainer with either one or both clients

(6) Except as provided in subrule (8.2), where a lawyer accepts employment from more than one client in a matter or transaction, the lawyer shall advise the clients that

(b) no information received in connection with the matter from one can be treated as confidential so far as any of the others are concerned, and

(c) if a conflict develops that cannot be resolved, the lawyer cannot continue to act for both or all of them and may have to withdraw completely.

44 http://www.lsuc.on.ca/media/may0605jointretainers.pdf. The LSUC has provided additional Rules and guidelines that further restrict the applicability of joint retainers. Rules 2.04(11) and (12) "prohibit a lawyer, or two or more lawyers practising in partnership or association, from acting for both the borrower and the lender in a mortgage or loan transaction except in limited defined circumstances", see http://rc.lsuc.on.ca/pdf/pmg/real estate joint retainers.pdf. Similarly, Rule 2.04.1 provides that an individual lawyer cannot act for both the transferor and the transferee in a transfer of real property, again, subject to very limited circumstances. Some of these limited circumstances include: a transfer where the transferor and the transferee are the same and the change is being made to effect a change in legal tenure; a transfer being registered to give effect to a severance of land prior to the expiry of a consent under the Planning Act or pursuant to a municipal by-law; a transfer from an estate trustee to a person who is beneficially entitled; a transfer where the transferor and the transferee are related persons as defined in section 251 of the Income Tax Act (Canada); the lawyer practices law in a remote location where there are no other lawyers that either the transferor or the transferee could without undue inconvenience retain for the transfer.

⁴³ Rule 2.04(6) states:

⁽a) the lawyer has been asked to act for both or all of them,

Application of Law

<u>Entrepreneurial/Business/Intellectual Property Legal Clinic Model - Entitlement to Practice Law</u>

The operation of a 'non-traditional' legal clinic, such as a business/entrepreneurial or intellectual property legal clinic, is somewhat problematic from a foundational perspective, given that the LSUC Rules do not provide a carve out permitting the operation of such clinics. The By-laws do provide specific exemptions allowing students to provide legal services normally falling under the scope of a P1 licensed practitioner. However, these exemptions are inapplicable to the 'non-traditional' clinical models as the By-laws explicitly state that the exceptions only apply to the specific traditional legal aid clinics (such as those established pursuant to the *Legal Aid Services Act, 1998*). Furthermore, the type of activities envisioned as falling within the scope of an entrepreneurial/business law clinical model, such as providing corporate/commercial opinions or trade-mark search reports, would not fall within the permitted practice of a P1 licensed practitioner (i.e. paralegal activities, such as Small Claims Court appearances; simple Criminal Code matters).

The By-laws, however, do permit students to work under the supervision of an L1 licensee (i.e. a licensed lawyer entitled to provide legal services). An L1 licensee is permitted to delegate tasks and functions in connection with the licensee's practice of law to students, provided that the licensee maintains 'effective control' over the non-licensee's provision of services to the licensee.

Accordingly, the operation of a clinical business/entrepreneurial/IP law clinic is possible, although it requires structuring the clinic in an arrangement which is both unique and distinct from the current legislated legal aid clinical models. With respect to a business law clinical model, an L1 licensee could operate their own private practice to receive the 'clinic clients', however those clients would in reality be clients of the licensee rather than the clinic itself. The clinical students could work under the practitioner as part of their academic clinical program, provided that the practitioner at all times maintain effective control over the activities of the students.

The model described above has in fact been implemented, although in a somewhat different fashion, at several law schools in Ontario. The Osgoode Hall Law School (Osgoode) Business Clinic pairs participating students with practicing lawyers at the law firm of Stikeman Elliot LLP. The students meet with clients from the local community who typically cannot afford to pay for commercial law services, and engage in client intake procedures, following which they provide the requisite legal services under the supervision of a practicing lawyer. The students prepare a final opinion/deliverable, which is reviewed and signed by the lawyer, and then provided to the client. Students are marked based on their participation in academic portions of the clinic, as well as feedback provided by their supervising lawyer.

Similarly, Western University Faculty of Law (Western) Business Law Clinic, which operates in conjunction with the Community Legal Services Clinic, pairs participating students with practicing lawyers from the London community. Unlike the Osgoode Business Clinic, it is not one law firm that provides supervision, but rather 12-15 practicing lawyers from a variety of different firms. The clinic is operated in much the same fashion as Osgoode's Business Clinic; students perform client intake and prepare legal opinions/deliverables under the supervision of practice lawyers who sign off on any final product that is then provided to the clients.

The Queen's University (Queen's) Business Law Clinic operates in a slightly different manner than that of Osgoode and Western. The Queen's Clinic utilizes the services of a Clinical Director, a licensed L1 practitioner, to supervise, review, and sign off on all student work and legal opinions.

Accordingly, provided that a licensee holds a valid L1 license, maintains an active LPIC insurance policy covering the provision of third party legal advice, and keeps all Law Society fees and records up to date, they would be qualified to supervise law students in a proposed business law clinic. It is imperative, however, that the other major Law Society requirements, namely representation to the public, maintaining effective control and avoiding conflicts of interest (discussed in detail below) are respected.

Pertaining to representations to the public, the clinic must make sure to represent to clients at all times, and especially at the client intake stage, that the students are not licensed to practice law, that the students are working under the supervision of a practicing lawyer as part of an academic program and the name of the lawyer/law firm with whom the client is entering into a retainer arrangement. It is important that the practitioner is represented, at all times, as the individual providing legal advice, in their own capacity and not as an agent of the University.

The administration of the clinic must be such that the supervising lawyer may at all times maintain 'effective control' over the tasks performed by the students. This will require, among other things, appropriate file management and client correspondence systems. Privilege must be managed at all times, and this must be made clear from the beginning. The clients must acknowledge that as part of the program, they must waive privilege as required in order to disclose information to supervising professors, other students and administrators. Furthermore, as per the By-laws, all final opinions must be reviewed and signed by the supervising lawyer before being provided to the client. It must be clear to the client that it is the supervising lawyer, and not the student, who is providing the final opinion to the client.

<u>Entrepreneurial/Business/Intellectual Property Legal Clinic Model - Conflict of</u> Interest Issues

The unique approach to the operation of business/entrepreneurial/intellectual property clinics, namely those employing an L1 licensee to supervise and provide all legal opinions to clients, enables Universities to work around the narrow LSUC Rules

and By-laws pertaining to students' entitlement to engage in the practice of law. While this model allows Universities to address the entitlement issue, it places the licensee within a unique and intriguing potential conflict of interest situation.

Provided that the supervising lawyer is paid for their services by the University, the supervising lawyer cannot at any time place themselves in a position whereby they would be in a conflict of interest situation with the University. Although there is no prohibition on a lawyer having several different 'employers' or 'clients', a lawyer cannot act for any party that is in a conflict position with any of their employers or clients.

The intriguing and complex conflict issue arises with respect to situations involving University students as clients. Entrepreneurship clinics, which provide legal assistance to student entrepreneurs in an attempt to foster an atmosphere of innovation and entrepreneurial activities on campuses, have become very popular and are far more abundant in the U.S. The entrepreneurial clinical model provides a unique pedagogical experience as well as tremendous benefits to young entrepreneurs who do not have the means of accessing professional services. However, a practicing lawyer cannot act for any student in any situation where the University may have an interest in the matter, as this would place the lawyer in a conflict situation.

In most circumstances, a University's interests and a student's interests would be completely separate, and despite the LSUC's warning regarding potential conflicts of interest and apprehension in the face of seemingly non-contentious matters, a licensee would be relatively safe from the possibility of finding themselves in a conflict situation. The area of intellectual property is an exception to this generality, as University and student interests may very well intersect depending on a plethora of factors. The situation is exacerbated by the current climate across Ontario campuses, where commercialization of technology has become of paramount importance, and where many Universities lack comprehensive intellectual property ownership policies pertaining to faculty ownership, let alone student ownership, as discussed in Part A.

As mentioned, the Canadian experience pertaining to conflicts of interest in the clinical setting is far behind that of the U.S., given the paucity of established Canadian entrepreneurship clinics. Furthermore, of the handful of existing entrepreneurship clinics, few provide legal services to students and even fewer provide comprehensive intellectual property support.

The L. Kerry Vickar Business Law Clinic at the University of Manitoba provides legal information, rather than advice, to start-up business clients from the local community, pertaining to issues surrounding business associations and structures. The mandate of the L. Kerry Vickar Business Law Clinic is narrow, in that it focuses on a small community of local rather then student entrepreneurs. Furthermore, the Clinic provides only information, rather than advice, thereby removing it from any potential

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^{45 &}lt;u>http://law.robsonhall.ca/clinical-learning/business-law-clinic.</u>

conflict situations. 46 Likewise, the University of Victoria Business Law Clinic operates in much the same fashion, tending to focus on community clients and providing only information, rather than advice.⁴⁷

The McGill University Faculty of Law (McGill) Legal Information Clinic does not explicitly turn away student entrepreneurs, yet student entrepreneurs make up a very small percentage of their client base. The services provided by the McGill Clinic are usually relegated to the provision of information and guidance with respect to individuals who may have expertise to cater to the student's needs. 48 The Osgoode clinic does occasionally take on student entrepreneurial clients, but the focus of the Osgoode clinic is more transactional rather than intellectual property.⁴⁹

The Oueen's Business Law Clinic actively attempts to recruit student entrepreneurs as clients. The Queen's clinic provides business law services including assistance with incorporation, shareholder agreements, and general business contracts. ⁵⁰ However, the Queen's clinic does not provide comprehensive intellectual property services- the extent of the Oueen's clinic's intellectual property services pertains to trademark matters.⁵¹

The Western Business Clinic does provide intellectual property services. The Western Business Clinic will advise clients on intellectual property matters pertaining to ownership and acquisition of intellectual property rights, subject to some qualifications.⁵² While the Western Business Clinic is receptive to taking on student entrepreneurs as clients, to date, the Clinic has received few, if any, student entrepreneur clients. Community Legal Services, the Western Business Clinic's counterpart, does act on behalf of students with respect to Academic Appeals before the Senate Review Board.⁵³ Both Clinics have adopted an overarching Conflict of Interest Policy. However, given the relatively modest involvement that the Western Clinics have with student entrepreneurs. and accordingly, limited experience with student intellectual property issues, this Conflict of Interest Policy does not provide detailed guidance regarding student client matters.

⁴⁶ Conversation with clinic representative 47 http://www.law.uvic.ca/blc/.

⁴⁸ Conversation with clinic representative—see also http://mlic.mcgill.ca/site.php?lang=en&page=freeinfo.

⁴⁹ Conversation with clinic representative

⁵⁰ http://qblc.queensu.ca/index.html.

⁵¹ Conversation with clinic representative. See also http://qblc.queensu.ca/qblcservices.html.

⁵² Conversation with clinic representative. See also http://www.law.uwo.ca/community/WBLC/index.html. While the Clinic will advise on ownership and acquisition issues, this Clinic will not file either patent or trade-mark applications, nor will the clinic provide opinions on the validity of patent claims.

http://www.law.uwo.ca/CLS/index.html.

The Centre for Enterprise & Law (CEL) at the University of Windsor provides a truly multi-disciplinary approach, a joint collaboration between the business and law faculties. Under the supervision of both business and legal supervisors (including a licensed lawyer), teams of business and law students provide full entrepreneurial support to both students and faculty (through a collaboration with the University of Windsor's Office of Research Services, Technology Transfer Office). The CEL provides intellectual property support, including trade-mark and novelty searches, as well as advice on ownership, licensing and technology valuation. The CEL has recognized that the student entrepreneurs may create a conflict situation in the event that their innovation has arisen during the course of academic activities, and as such, has spearheaded institutional reforms pertaining to student intellectual property ownership and conflictfree access to institutional entrepreneurial support.

As seen from the above summary of the various business/entrepreneurship clinics in Canada, the issue of conflict of interest has received little attention in Canada due to the fact that few clinics provide legal assistance to student entrepreneurs. Furthermore, only a handful of Canadian business/entrepreneurship clinics provide intellectual property law services, and of those that do only the Western Business Law Clinic and the CEL are receptive to the possibility of providing such services to student entrepreneurs.

As the U.S. legal clinical educational system is far more advanced then the clinical programs available in Canada, the issue of conflict of interest in the clinical setting has received far more attention in U.S. academia. Professors Geoffrey Hazard and William Hodes assert that while the clinical setting is unique and poses its own distinct challenges, the issue of conflict of interest is not unique to any specific setting, but rather stems from the essential conflict of interest rules and policies applicable to all lawyers in all facets of the profession.⁵⁴ As such, whether in Canada or the U.S., in typical private practice or in a clinical setting, the approach to resolving and managing conflict of interest issues are rooted in a lawyer's fundamental ethical obligations, regardless of the specific context. Joy and Kuehn state:

As loyal representatives of their clients' interests, clinic students and faculty owe undivided loyalty to their clients, and are bound to protect client confidences and secrets so that their clients are not harmed. Like all other lawvers, clinic students and faculty must take all reasonable steps to avoid undue influences, whether from other clients, third parties, or personal interests, that threaten to divide client loyalties, compromise client confidentiality, or otherwise affect their independent judgment. Thus, conflict of interest problems center on identifying and avoiding the conflicts, and most conflict of interest issues arising in a law school clinical program are similar to those arising in any other law office. 55

⁵⁴ GEOFFREY C. HAZARD, JR. & W. WILLIAM HODES, THE LAW OF LAWYERING § 10.1, at 10-4 (3d ed. 2001).

⁵⁵ Joy and Kuehn, p. 527.

Joy and Kuehn state that the first step involved in considering potential conflict issues in a legal clinical setting is to define the structure of the clinic.⁵⁶ From this assessment, Joy and Kuehn come to several conclusions pertaining to the status of law students in a legal practice setting. Generally speaking, Joy and Kuehn conclude that law students can be categorized as either staff, temporary lawyers or 'non-lawyer employees' in law firms, and as such, are subject to obligations of client confidentiality and conflict of interest rules (subject to certain qualifications).⁵⁷

As referenced above, under Ontario's Rules and By-laws, law students are permitted to undertake legal work under the supervision of a licensed lawyer, provided that the licensee maintains 'effective control' over their practice at all times. The definition of 'effective control' imparts on a licensee the obligation to ensure the licensee's practice, at all times, is in compliance with all applicable Rules and By-laws of the LSUC and places all professional responsibility squarely on the shoulders of the licensee. Accordingly, it is a licensee who is responsible for ensuring that all ethical obligations, including the protection of solicitor-client privilege and managing conflicts of interest, including those arising in relation to students and other staff, are at all times

Joy and Kuehn address specific conflict issues pertaining to clinical practice in the areas of civil litigation and criminal law, as well as students' and clinical faculty's previous and post clinical employment. 58 While no particular attention is given to the clinical practice of intellectual property law, or assisting with commercialization of student innovation, Joy and Kuehn do point out that "as employees of law schools and universities, clinical faculty are also subject to additional influences that may lead to conflicts"⁵⁹, warning that:

clinic faculty must also be careful to decline legal work or obtain informed consent from all affected parties... when the law school or university is the opposing party.... the clinical faculty's independent judgment on behalf of a client may be adversely affected or materially

⁵⁶ Joy and Kuehn, p. 529. For example, questions pertaining to the type of clinical program being offered (i.e. a criminal defense clinic, a general civil practice clinic, a domestic violence clinic, and a housing issues clinic) and how the clinic is set up (i.e. similar to a law firm, with docket systems, staff, office space, etc.) are important preliminary considerations. As such, Joy and Kuehn conduct a comprehensive assessment of the rules of professional conduct and legal ethical obligations imposed by various governing bodies across numerous U.S. jurisdictions.

⁵⁷ Joy and Kuehn, pp. 534-537. Note that these qualifications generally relate to the tasks performed by the students, whether strictly administrative or 'duties on cases comparable to admitted lawyers'. Where it is the latter, the students' ethical obligations will, generally speaking, be equivalent to those of practicing lawyers (see pp. 533-534). ⁵⁸ Joy and Kuehn, pp. 546-550.

⁵⁹ Jov and Kuehn, p. 550.

limited because of the inherent conflict in litigating against one's employer. ⁶⁰

The conflict arises as a result of the possibility that:

clinical faculty's independent judgment on behalf of a client may be adversely affected or materially limited if the opposing party or opposing party's counsel is another law school faculty person who has control or influence over the terms and conditions of the clinical faculty's employment, as may occur for clinical faculty employed on a contract basis or in the pre-tenure process. 61

Furthermore, Joy and Kuehn indicate that clinical faculty should approach situations involving interests adverse to a university or law school governing board with apprehension, stating that the weight of authority leads to the conclusion that a potential conflict of interest exists. The potential conflict results from the creation of an impression that "the attorney's representation of the legal services client may be influenced by fear of the board member's power. Recognizing that university governing boards do not always exert direct control over the clinical practitioner's lawyering, Joy and Kuehn still assert that:

... the university's governing board does typically approve tenure for law school professors, may influence the action of tenure-track faculty during their pre- tenure employment, or may have power over the clinical program's funding. Additionally, the governing board may have direct control or influence over the law school dean, who may in turn exert pressure on clinical faculty employed under at-will or on a contract basis. Thus, although there may be little opportunity for the impermissible sharing of confidential client information or a reduced chance of direct interference with the terms and conditions of the clinical faculty's employment by the governing board, there are risks of potential conflicts of interest. Whenever a member of the governing board exercises direct or indirect influence over clinical faculty, there is a conflict of interest. ⁶⁴ [emphasis added]

Joy and Kuehn conclude that the issue of potential conflicts of interest in the clinical setting, with respect to a clinical faculty's relationship vis-a-vis the university, the predominant consideration is the amount of influence the university, or individuals within the university, may exert "over the clinic attorney's salary, tenure, or working

⁶¹ Joy and Kuehn, p. 552.

⁶⁰ Joy and Kuehn, p. 551.

⁶² Joy and Kuehn, p. 552.

⁶³ Joy and Kuehn, p. 552.

⁶⁴ Joy and Kuehn, p. 553.

conditions."⁶⁵ Although Jov and Kuehn recognize that client consent may be available in some circumstances, they warn that in the clinical setting, where clients may not have realistic options for alternative legal representation, consent may not be fully voluntary. ⁶⁶ Furthermore, their question as to whether the university must also provide consent, in instances where a client's interest may potentially be adverse to those of the university. remains somewhat unresolved.

Anthony Luppino tackles the issue of student innovation and entrepreneurship directly, pointing out that the issue of student entrepreneurship poses unique challenges within a complex atmosphere of competing interests. Luppino states that the issue begins first and foremost with university intellectual property policies which only occasionally address the issue of student intellectual property ownership. In cases where the university intellectual property policies do address student intellectual property ownership, the terms of these policies are wrought with ambiguity. As such, Luppino points out that even in the most basic of student projects, in the event that intellectual property is generated, "claims to ownership or at least shares of proceeds from exploitation of that property might logically be made by every student on the team, course instructors or teaching assistants and perhaps the university itself.⁶⁷.

The concerns regarding student intellectual property creation on university campuses are not limited to ownership issues. Luppino points out emerging trends in U.S. litigation pertaining to student (and faculty) intellectual property creation, two of which have become prevalent and concerning. Primarily, the issue of the inadvertent creation of partnerships, between teams of students as well as between student(s) and faculty has emerged as realistic concern across campuses in the U.S., and has become the subject of several litigated cases.⁶⁸ Luppino points out that focusing entirely on the issue of invention and/or ownership often overlooks the threshold question of whether a partnership may have been formed, and the repercussions of such.⁶⁹

Furthermore, Luppino points out the very realistic possibility that faculty and/or the university may have fiduciary duties and obligations towards students with respect to the development, ownership and commercialization of intellectual property. ⁷⁰ Luppino states:

the evolving case law on fiduciary duties suggests that universities could better apprise faculty of obligations they may have to their collaborators—whether the latter be other faculty, post-doctoral research assistants or graduate or undergraduate students. In these

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⁶⁵ Joy and Kuehn, p. 554.

⁶⁶ Joy and Kuehn, p. 554.

⁶⁷ Anthony J. Luppino, Fixing A Hole: Eliminating Ownership Uncertainties To Facilitate University-Generated Innovation, (2009) 78 UMKC Law Review 367 at p. 414.

⁶⁸ Luppino, p. 414. ⁶⁹ Luppino, p. 414.

⁷⁰ Luppino, p. 424.

collaborative research scenarios, faculty are indeed often in a special position of trust in relation to those working under them, and it makes sense both that they have corresponding fiduciary duties and that they be made to understand that they have them. University intellectual property polices should not ignore or attempt to negate such fiduciary duties; they should embrace them in clear written terms.⁷¹

As a first step in addressing this tangled web of intellectual property issues, Luppino recommends that university intellectual property policies must be articulated in such fashion as to clearly establish ownership rights, and establishing processes/policies for determining issues such as:

- whether it is indeed protectable intellectual property;
- who made creative contributions to its development;
- whether the production of the property was a work for hire generally or a specifically sponsored or commissioned project;
- whether any use of university resources involved in producing the innovation was sufficiently significant to give the university an ownership claim even if it was not a work for hire or sponsored/commissioned project;
- whether any party involved has waived or is otherwise estopped from validly asserting ownership rights; and
- whether any party involved has violated any legally enforceable duty in such party's actions or omissions relating to such property. 72

As a large majority of university policies (in Canada and the U.S.) extend to a university the possibility of an ownership interest based on student or faculty use of 'university resources', Luppino recommends that the university needs to adopt comprehensive definitions and examples of the types of use that may lead to university ownership rights. Furthermore, Luppino points out that an overwhelming majority of university intellectual property policies require that either, or both, faculty and students provide an invention disclosure to the responsible university office. Luppino recommends that universities make considerable efforts to develop comprehensive disclosure processes in order to acquire sufficient information to best determine issues such as ownership, partnership, etc, from early stages in the innovation process. ⁷⁴

⁷² Luppino, p. 417.

⁷¹ Luppino, p. 424.

⁷³ Luppino, p. 419.

⁷⁴ Luppino, p. 385. Luppino recommends that university invention disclosure processes be developed in order to acquire detailed information pertaining to:

[•] general description of the invention and its commercial potential;

[•] date and place of discovery of the invention; sources of funding of associated research;

details on any publication to date or proposed publication;

relationship to prior inventions and patents; and

Students represent a relatively vulnerable group with respect to intellectual property creation and exploitation on campuses, due to the fact that they lack access to resources and professional assistance for commercializing their intellectual creations. However, Luppino also comments that students need to be adequately informed of their rights and obligations under any applicable university intellectual property policies, and advocates that comprehensive disclosure of university intellectual property policies and their effects of students' intellectual creations be brought to students' attention at all available opportunities, including through university websites and possibly as inclusion to course syllabi and assignment instructions.⁷⁵

Many university intellectual property policies provide for the possibility of a waiver or release of any university rights of ownership in favour of the inventor/author. The advantage of such waivers/releases cannot be overstated, as they assist in releasing one set of interests in the context of university innovation and go a long way in clearing the path of any potential conflicts of interest (discussed below). Luppino analyzes various U.S. university intellectual property policies, concluding that conditions of such waivers/releases often include such considerations as:

- a requirement that a formal request be made by the inventor or author;
- the necessity of a recommendation by a specific committee or office;
- non-disturbance of the rights of research sponsors;
- reservation by the university of rights to use the intellectual property under a license or other arrangement;
- a condition that the inventor or author reimburse the university for expenses previously incurred by it relating to the property;
- mandatory sharing agreement between the university and the inventor or author regarding proceeds realized from commercialization of the intellectual property.⁷⁷

Much like Joy and Kuehn, Luppino points out that university employees, including tech transfer officers and university counsel (whether in-house or counsel engaged for specific university purposes) represent the interests of the university, and as such, may very well be disqualified from providing legal assistance to student innovators due to conflict of interest issues.⁷⁸ However, Luppino advocates that university legal clinics may provide a solution to the dilemma of student entrepreneurs and access to counsel, stating:

[•] identification of any existing or potential participants in exploitation of the invention (such as potential licensees).

⁷⁵ Luppino, p. 417.

⁷⁶ Luppino, p. 379.

⁷⁷ Luppino, p. 379.

⁷⁸ Luppino, pp. 418-419.

So, how will students (or faculty) of modest financial means access competent legal counsel? ... One possibility to fill the gap in affordable legal counsel for students or faculty involved in creative pursuits is through the transactional or intellectual property clinics operated at many law schools across the United States that offer pro bono or modest cost legal services. At least some of these law school clinics are amenable to representing students at their universities if they can work through potential conflict of interest rules in an acceptable manner, a significant hurdle as the attorneys on the clinic's staff are usually university employees. [emphasis added]

As noted in the above referenced passage, Luppino, similar to Joy and Kuehn, recognizes that the issue of university employment and conflict of interest with respect to the provision of legal services presents a difficult situation. Luppino suggests the possibility of legal clinics maintaining an active roster of competent counsel willing to take on student entrepreneur matters on a pro bono basis, as a potential solution to the conflict of interest issue.⁸⁰

The recommendation that a roster of pro bono lawyers acting on behalf of student entrepreneurs may circumvent the clinical conflict of interest situation. However, practically speaking, it is difficult for legal clinics to accumulate a roster comprising a number of competent and capable lawyers sufficient to address the needs of an abundance of student entrepreneurs. This phenomenon is particularly problematic in Canada, where many smaller cities lack a sufficient number of lawyers willing to provide pro bono services to students, as well as a lack of lawyers competent in issues relating to commercialization (including intellectual property).

One must not overlook the possibility that a comprehensive and articulate university intellectual property policy which addresses student/faculty/university ownership, combined with the systematic development of processes for informing students of their rights and obligations pertaining to intellectual property and for disclosing such innovations to the appropriate university authorities, may provide university legal clinics with the opportunity to service student entrepreneurs. As discussed above, the LSUC Rules and By-laws permit lawyers to continue to act in a potential conflict situation, provided that all relevant parties are adequately informed of the nature of the potential conflict, and informed consent is provided by the parties.

A comprehensive intellectual property policy with well articulated definitions and mechanisms for determining ownership would allow all parties (students, faculty, university) to determine with some confidence (although not absolute certainty) where they stand with respect to intellectual property ownership. A disclosure system, whereby students are constantly informed of their rights and obligations, empowers students with

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⁷⁹ Luppino, pp. 418-419.

⁸⁰ Luppino, p. 419.

knowledge and dispels some of the vulnerability associated with potential misinformed consent.

A well-defined process of invention disclosure to the responsible university office provides the university with the opportunity to address any potential contentious issues relating to ownership early in the innovative process, thereby mitigating against conflicts, as well as potential (costly) disputes later in the innovation life-cycle. More importantly, the invention disclosure process, combined with an articulate intellectual property policy, allows the university to assess any potential claim it may have to any such intellectual property, and provide a waiver/release if no such claim exists.

As discussed in detail above, the LSUC Rules and By-laws pertaining to consent and information disclosure to all relevant parties contain considerable ambiguity. However, a university waiver/release policy likely meets the LSUC's requirements, as the university has (subject to any possible contractual disputes arising in the future) disavowed any interest in the subject intellectual property. A comprehensive disclosure process would ideally keep all parties informed of their rights and obligations, and as such, in the event that any such waiver/release is acquired by a student, a clinical lawyer could confidently act for the student in these circumstances as the potential for conflict has been substantially minimized. Although there remain conceivable scenarios where adverse interests may still arise between the parties in the future, a clinical lawyer may withdraw at that time.

While still in the 'invention disclosure' phase of the above-referenced scenario, students would likely need to enter into a contractual relationship with the university, acknowledging the purposes of such disclosure, how confidential information will be used, and the rights, obligations and potential liabilities of the parties. At this stage, a university, or possibly a legal aid provider (such as Legal Aid Ontario (LAO)) could maintain a legal assistance fund to cover the cost of independent legal advice for students, in order to place students in a position of informed consent prior to signing any such disclosure agreements.

Part D: Conclusions and Recommendations for Further Study

This report identified common practices across Canada that are focused on student centered innovation and commercialization. We synthesized knowledge about the policy and practices and infrastructure available for technology transfer of student inventions. Our joint consideration of intellectual property protection and business and legal support services has tried to overcome some of the traditional functional and knowledge silos.

We focused upon 'Tier 1' universities with comprehensive intellectual property policies that covered both graduate and undergraduate students. While graduate students are more likely to be seeking traditional academic positions, the same cannot be said of undergraduate innovators whose research goals may be different. In both cases, however, offering them another career option, namely that of building a business around their innovation may be their individual and our collective solution to Canada's sluggish results in economic growth.

Looking forward, we recommend that independent and comprehensive measures be developed to assess the performance of each university with respect to its student commercialization policies and practices. Previous researchers have studied the connection between patents and on campus commercialization⁸¹. Future research must differentiate student commercialization from faculty commercialization. Additionally, other indicators related specifically to student centered innovation in Canada must move beyond patents to include other forms of intellectual property, such as copyright and industrial designs, for example.

We also suggest that given the primary mandate of any university is connected to learning outcomes, there should be inclusion of learning outcomes connected to experiential entrepreneurial opportunities. If a purpose is also to create an entrepreneurial culture, and students who are better able to identify and seize venture opportunities, then we must also consider indicators over time. Many of the centre and incubator websites, and even the SIFE chapters, noted the number of jobs and new ventures created, the level of funding attracted to new ventures and an estimate of economic impact. These outcomes, although important to Canadian government and private donors, do not necessarily reflect the true impact of developing a student-centered entrepreneurial

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⁸¹ For example, Shane, S. (2002). Selling University Technology: Patterns from MIT. Management Science, 48(1) Special Issue on University Entrepreneurship and Technology Transfer pp. 122-137. Article Stable URL: http://www.jstor.org/stable/822688. and Thursby, J and Kemp, S. (2002). Growth and productive efficiency of university intellectual property licensing. Research Policy, 31 (1): 109-124.

culture. The university learning culture supported by strong student centered policies and practices will develop a more enduring entrepreneurial spirit in Canadian graduates.

Finally, more work needs to be done in relation to measuring the effectiveness of various models for providing independent legal advice to student innovators with the view to ensuring that students are given timely, meaningful and cost-effective access to legal support so that their rights and interests are properly addressed.

Exhibit 1: List of AUCC Universities by Province

British Columbia

Emily Carr University of Art + Design ("Emily Carr U")
Kwantlen Polytechnic University ("Kwantlen")
Royal Roads University ("Royal Roads")
Simon Fraser University ("Simon Fraser")
Thompson Rivers University ("Thompson Rivers")
Trinity Western University ("Trinity Western")
University of British Columbia ("UBC")
University of Northern British Columbia ("UNBC")
University of the Fraser Valley ("Fraser Valley")

University of Victoria (UVic")

Vancouver Island University ("VIU")

Alberta

Athabasca University ("Athabasca")
Concordia University College of Alberta ("Concordia U College")
Mount Royal University ("Mount Royal")
The King's University College ("King's U College")
The University of Lethbridge ("Lethbridge")
University of Alberta ("U of A")
University of Calgary ("Calgary")

Saskatchewan

Campion College ("Campion")
First Nations University of Canada ("First Nations U")
Luther College ("Luther")
St. Thomas More College ("St Thomas More")
University of Regina ("Regina")
University of Saskatchewan ("USask")

Manitoba

Brandon University ("Brandon")
Canadian Mennonite University ("Canadian Mennonite")
The University of Winnipeg ("Winnipeg")
Université de Saint-Boniface ("Saint-Boniface")
University of Manitoba ("Manitoba")

Ontario

Algoma University ("Algoma") Brescia University College ("Brescia") Brock University ("Brock") **Carleton University ("Carleton")**

Dominican College of Philosophy and Theology ("Dominican")

Huron University College ("Huron")

King's University College ("King's U College")

Lakehead University ("Lakehead")

Laurentian University of Sudbury ("Sudbury")

McMaster University ("McMaster")

Nipissing University ("Nipissing")

Ontario College of Art and Design University ("OCAD")

Queen's University at Kingston ("Queen's")

Redeemer University College ("Redeemer")

Royal Military College of Canada ("RMC")

Ryerson University ("Ryerson")

Saint Paul University ("Saint Paul")

St. Jerome's University ("St Jerome's")

The University of Western Ontario ("UWO")

Trent University ("Trent")

University of Guelph ("Guelph")

University of Ontario Institute of Technology ("UOIT")

University of Ottawa ("Ottawa")

University of St. Michael's College ("St Michael's")

University of Sudbury ("Sudbury")

University of Toronto ("U of T")

University of Trinity College ("Trinity")

University of Waterloo ("Waterloo")

University of Windsor ("Windsor")

Victoria University ("Victoria")

Wilfrid Laurier University ("Laurier")

York University ("York")

Québec

Bishop's University ("Bishop's")

Concordia University ("Concordia")

École de technologie supérieure ("ETS")

École des Hautes Études Commerciales de Montréal ("HEC")

École nationale d'administration publique ("ENAP")

École Polytechnique de Montréal ("EPM")

Institut national de la recherche scientifique ("INRS")

McGill University ("McGill")

Université de Montréal ("U de M")

Université de Sherbrooke ("Sherbrooke")

Université du Québec à Chicoutimi ("UQAC")

Université du Québec à Montréal ("UQAM")

Université du Québec à Rimouski ("UQAR")

Université du Québec à Trois-Rivières ("UQTR")

Université du Québec en Abitibi-Témiscamingue ("UOAT")

Université du Québec en Outaouais ("UQO") Université Laval ("Laval")

New Brunswick

Mount Allison University ("Mount A") St. Thomas University ("St Thomas") Université de Moncton ("Moncton") University of New Brunswick ("UNB")

Nova Scotia

Acadia University ("Acadia")
Cape Breton University ("Cape Breton")
Dalhousie University ("Dalhousie")
Mount Saint Vincent University ("Mount Saint Vincent")
Nova Scotia Agricultural College ("NSAC")
Nova Scotia College of Art and Design ("NSCAD")
Saint Mary's University ("Saint Mary's")
St. Francis Xavier University ("St FX")
Université Sainte-Anne ("Sainte-Anne")
University of King's College ("U of King's")

Newfoundland & Labrador

Memorial University of Newfoundland ("Memorial")

Prince Edward Island

University of Prince Edward Island ("U PEI")

Exhibit 2: Universities with IP policies that apply to students - by Province82

Province	Ratio to Total	Universities
Alberta:	3:7	Mount Royal
		U of A
		Calgary
British Columbia	9:11	Emily Carr U
		Fraser Valley
		Royal Roads
		Simon Fraser
		Trinity Western
		UBC
		UNBC
		UVic
		VIU
Manitoba	2:5	Manitoba
		Saint-Boniface
New Brunswick	1:4	UNB
Newfoundland and	1:1	Memorial
Labrador		
Nova Scotia	2:10	Acadia
		NSCAD
Ontario	19:32	Algoma
		Brock
		Lakehead
		Laurentian
		Laurier
		McMaster
		OCAD
		Ottawa
		Queen's
		Ryerson
		Sudbury
		UOIT
		U of T (+ St Michael's, Victoria, Trinity)
		Waterloo (+ St Jerome's)
		York
Quebec	15:17	Bishop's
		Concordia
		EPM
		ETS
		HEC
		INRS
		Laval
		McGill
		Sherbrooke
		U de M
		UQAC
		UQAM

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⁸² Prince Edward Island does not figure in this chart. The University of Prince Edward Island did not meet our criteria in that there is no separate IP policy outside of the Faculty's Collective Agreement.

		UQAR UQAT UQO
Saskatchewan	2:6	Regina
		USask

Exhibit 3: Tier 1 Comprehensive Student Innovation Intellectual Property Policies

Acadia University: *Student and Post-Doctoral Fellow Intellectual Property Guidelines* (Feb. 2006)⁸³

Bishop's University: *Policy for managing intellectual property at Bishop's University*⁸⁴

Brock University: *Ownership of Student-Created Intellectual Property* – Chapter 23 in Brock's Faculty Handbook.⁸⁵

Ecole de Technologie Supérieure: *Politique et Règles en Matière de Propriété Intellectuelle* (August 2000, last amended Nov 2006)⁸⁶

Ecole Polytechnique de Montréal: *Policy Regarding Technological Intellectual Property* (Sept 2010)⁸⁷ read with *Déclaration des Droits et Responsabilités des Etudiants*⁸⁸

Ecole des Hautes Etudes Commerciales de Montréal: *Politique de Propriété Intellectuelle* (June 2003, updated June 2009)⁸⁹

Nova Scotia College of Art and Design: NSCAD Students Intellectual Property Rights Agreement⁹⁰

Ryerson University: *Policy on Ownership of Student Work in Research Policy #63* (March 1989)⁹¹

⁸³ Retrieved from:

http://research.acadiau.ca/tl_files/sites/research/Student%20and%20Posdoc%20fellow%20IP%20Guidelines.pdf

⁸⁴ Retrieved from:

http://www.ubishops.ca/fileadmin/bishops_documents/admin_governance/u_policies/Policy for managing intellectual property at BU.pdf

85 Retrieved from:

http://www.brocku.ca/webfm send/4651

⁸⁶ Retrieved from:

 $\underline{http://www.etsmtl.ca/A-propos/Direction/Politiques-}$

reglements/PolitiqueProprieteIntellectuelle

⁸⁷ Retrieved from:

http://www.polymtl.ca/sg/docs_officiels/en/propintel_en.htm#5.4

⁸⁸ Retrieved from:

http://www.polymtl.ca/sg/docs_officiels/1310droi.htm

89 Retrieved from:

http://www.hec.ca/direction_services/secretariat_general/juridique/reglements_politiques/documents/politique_propriete_intellectuelle.pdf

90 Retrieved from:

http://nscad.ca/site-nscad/media/nscad/StudentsIntellectualPropertyRights.pdf

University of Saskatchewan: *University of Saskatchewan Principles and Policies Regarding Intellectual Property and Commercialization*⁹²

Université de Sherbrooke: *Politique sur la protection de la propriété intellectuelle des* étudiantes et des étudiants et des stagiaires postdoctoraux de l'université de Sherbrooke – *Politique 2500-011* (June 2001)⁹³

University of Calgary: Intellectual Property Policy (April 1994)⁹⁴

University of New Brunswick: Guidelines on Intellectual Property Interests for Students Involved in Research at the University of New Brunswick (Sept. 2006)⁹⁵

Université de Montréal: *Politique de l'Université de Montreal sur la Propriété Intellectuelle – Politique 60.13* (Dec 1994)⁹⁶;

Université du Quebec en Abitibi – Temiscamingue: *Politique et Règles en Matière de Propriété Intellectuelle* (May 2010)⁹⁷

Université du Quebec en Outaouais: *Politique et Règles en Matière de Gestion de la Propriété Intellectuelle* (April 2005, revised June 2010)⁹⁸

⁹¹ Retrieved from:

http://www.ryerson.ca/senate/policies/pol63.txt (currently under review). To be read with "Intellectual Property Guidelines" of the School of Graduate Studies. Retrieved from:

http://www.ryerson.ca/content/dam/graduate/policies/documents/IP_Guidelines.pdf

92 Retrieved from:

http://www.usask.ca/research/ilo/uofs ip.php

93 Retrieved from:

 $\underline{http://www.usherbrooke.ca/accueil/fileadmin/sites/accueil/documents/direction/politiques/2500-011.pdf}$

Retrieved from:

http://www.ucalgary.ca/policies/files/policies/Intellectual%20Property%20Policy.pdf

95 Retrieved from:

http://www.unb.ca/research/ors/indgovtserv/iptt/guidelines.php

⁹⁶ Retrieved from:

http://www.direction.umontreal.ca/secgen/pdf/reglem/francais/sec_60/rech60_13.pdf Builds upon 1978 "Politique de l'universite de Montreal sur les Brevets d'Invention: Principes, Reglements et Procedure" retrieved from:

http://www.direction.umontreal.ca/secgen/pdf/reglem/francais/sec_60/rech60_2.pdf

97 Retrieved from:

http://www.uquebec.ca/resolutions/uqat/resolutions/PP/2011/Politique_et_regles_en_matiere_de_propriete_intellectuelle.pdf

98 Retrieved from:

Université de Saint-Boniface: *Politique concernant la propriété intellectuelle des travaux d'étudiants* (June 2000)⁹⁹

Vancouver Island University: Intellectual Property Policy 31.13 (June 2009)¹⁰⁰

Wilfrid Laurier University: *Ownership of Student-Created Intellectual Property* (Dec 1994, revised Nov 2007)¹⁰¹

NB: We treated the Tier 1 institutions as equivalent without regard to their particular history, programs of study or other distinguishing features. It may well be that there are commonalities among these institutions that would lend themselves to a more student-centered approach but this is an analysis that falls outside the purview of this report.

http://ugo.ca/sites/ugo.ca/files/fichiers-

uqo/recherche/politique et regles matiere propriete intellectuelle.pdf

http://www.ustboniface.mb.ca/admin/document.doc?id=358

http://www.viu.ca/research/aboutresearchatviu/Policydocumentsgoverningresearch.asp #policies

http://www.wlu.ca/page.php?grp_id=2505&p=11446

⁹⁹ Retrieved from:

Retrieved from:

¹⁰¹ Retrieved from: