Volume 22 • Issue 2 (2019)

Legal, Ethical and Privacy Issues Affecting Data Sharing Among Ontario's Higher Education Institutions in Interinstitutional Collaboration

Paula Green and Brian Baumal

Abstract

Legal, privacy and ethical concerns impacted data sharing among post-secondary institutions in academic collaboration in Ontario. The legal/ethical environment was embodied by FIPPA (Freedom of Information and Protection of Privacy) legislation, Research Ethics Board protocols and Institutional Acts enacted by the provincial

Paula Green

Paula Green is the administrator for the York / Seneca Partnership. She has a PhD in Education from the University of Toronto, Ontario Institute for Studies in Education.

parliament. Collectively, they placed limitations on how and what data was shared; as well as the volume, types, frequency and use of the data exchanged. The 'Data Sharing in Academic Collaborations and Pathways' study categorized the data exchanged into two broad categories, namely: a) data sharing for administration; and b) data sharing for research and planning. The legal/ ethical environment also impacted the attitudes of staff within the six academic institutions who participated in the 'study.' And Communication Privacy Management theory offered some explanation for the behaviours and attitudes that were observed.

Introduction

This paper is one of two written as part of a post-study analysis of the "Data Sharing in Academic Collaborations and Pathways" study, conducted by Baumal (April 2018). It will outline how the legal, ethical and privacy environments in Ontario shaped the attitudes and behaviours of staff working within institutions engaged in data sharing in academic collaboration. The paper will provide a short, though sometimes repeated history of Ontario's post-secondary system. The growth in student mobility between the Colleges of Applied Arts and Technology and the universities; and the resulting infrastructure to support it, as well as the emergence of research within the colleges, are addendums for understanding the interinstitutional relationships, not envisioned historically in Ontario. These dynamics also provide the context for the discussion of data sharing across academic institutions.

Overview of Higher Education & Methodology

She began working in the field of education in 2004 and has also taught part-time, previously, in the Ontario 'Community College' system. Her research interests are in the areas of internationalization, interinstitutional partnerships (college-university collaboration) and student mobility (transfer & pathways). She can be reached at pgreen@york.ca or paula.green@senecacollege.ca.

Brian Baumal

Brian Baumal is the Principal of Thinklounge Research a public opinion and market research firm. He has conducted over 1,000 public policy focus groups on topics such as immigration, regulatory affairs, health promotion and nutritional labeling. Within the education sector, he has gained a reputation for research that produces reliable recommendations in areas such as advancement. He conducted the research

Many provincial post-secondary systems in Canada have a binary structure comprised of universities and colleges, and Ontario is no exception. Previously, they were demarcated as degree granting and non-degree granting sectors (Jones, 1996, p. 361). When the Ontario Colleges of Applied Arts and Technology were envisioned in the 1960s, they were created as terminal institutions to offer two and one-year credentials to expedite the entry of 'work-ready' graduates into the labour market (Skolnik, 2010). A transfer function between Ontario's 'Community Colleges' and universities was not part of the original design of the province's Post-Secondary Education system. However, after years of lobbying, the Post-Secondary Education Choice and Excellence Act 2000, granted authority to the CAATs (Colleges of Applied Arts and Technology) to offer applied baccalaureate degrees. Under this legislation, CAATS could offer degrees to a maximum of 5% of their programming; while those colleges designated as Institutes of Technology and Advanced Learning (ITALS) are eligible to offer up to 15% of their programming as degrees (Skolnik, 2016; Postsecondary Education Quality Assessment Board (PEQAB), 2018; Lang & Lopes, 2014; Wheelahan, et al., 2017) .

Ontario universities have a well-established history and tradition of research. However, with the emergence of degree granting within the CAATs, opportunities for research also began to gain a foothold in these institutions. In Canada, it was the Tri-Council[1] which created ethical policies to guide the conduct of research involving humans. Under the (Tri-Council Policy Statement) TCPS2, institutions must establish Research Ethics Boards (REBs) to assess the ethical acceptability

that lead to U of T's very successful "Boundless" positioning, and access. His work for the Council of Educators of Toronto on the issue of student financing for those receiving social assistance continues to help educational institutions and front-line workers navigate a complex set of policies for students facing challenging circumstances. He can be reached at bb@thinklounge.ca.

of research. REBs must also evaluate foreseeable risks and weigh those against the benefits; as well as evaluate the ethical implications of the research at its initial stages, through to its completion (Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, and Social Sciences and Humanities Research Council of Canada, 2014, p. 13).

To conduct research and institutional planning, data was sometimes exchanged between institutions. This included but was not limited to linking data to create large data sets for analysis. Data was also exchanged to facilitate student mobility. Accordingly, data privacy has become a growing concern, both within the higher education sector and throughout Ontario. As such, the Provincial Government enacted FIPPA – the Freedom of Information and Protection of Privacy Act to govern how data can be collected, transferred and used by many government-related organizations in Ontario, including all post-secondary institutions. FIPPA is administered by the Office of the Privacy Commissioner of Ontario. It issues various standards, precedents, best practices and advice to institutions on how to implement the Act. FIPPA received royal assent in 1987 and came into effect in 1988 (Government of Ontario, Ministry of Government and Consumer Services, 2018, p. 6).

Student mobility/ the transfer or movement of students between and within education systems, has become quite prevalent not only in Ontario, but across Canada. Provinces have therefore established organizations to facilitate and support student mobility. Among the first to do so was Alberta, which created ACAT (Alberta's Council on Admissions and Transfer) in 1974. More than a decade later, BCCAT (British Colombia's Council on

Admissions and Transfer) was established in 1989, followed by CATNB (Council on Articulations and Transfer of New Brunswick), in 2010. Ontario was next, when it established ONCAT (Ontario Council on Articulation and Transfer) in 2011. Similar organizations were later established in Manitoba, Saskatchewan and Nova Scotia (Pan-Canadian Consortium on Admissions and Transfer, 2017).

In Ontario, ONCAT, the consortium of the Province's 45 post-secondary institutions, provides funding to support pathway development and enhancement; as well as research and innovation in post-secondary institutions, through an annual RFP (Request for Proposals) process. For the 2017/2018 funding cycle, York University and Seneca College, under the auspices of the York Seneca Partnership, secured research funding for the 'Data Sharing in Academic Collaborations and Pathways' project. The study conducted research among six institutional partners; three colleges and three universities. Thirty-one interviews and two focus groups were conducted as part of this qualitative study with staff engaged in interinstitutional collaboration, in the areas of administration, management, registration, admissions, IT, legal and privacy.

The 'Data Sharing' qualitative research project utilized a post-hoc analysis or post-study-analytical approach. The latter has mostly been employed in quantitative research, where statistical tests and resulting analysis were conceived after data was collected. (See Wise & Shaffer, 2015). In this study, the impact of the legal/ ethical environment on data sharing was conceived after the research was conducted and the data was collected. It was therefore not an intended outcome of the original

project but was unearthed during the data analysis - making this a post-study-analytical approach. We are therefore theorizing that the legal/ ethical environment which facilitated the exchange of data between institutions also created some undue obstacles for data sharing.

In the post-study analysis of the research findings it was found that attitudes affected the sharing behaviours and the quantum of data sharing activities engaged in, by staff within institutions in academic collaboration. The legal/ethical environment comprised of FIPPA legislation, REB protocols and Institutional Acts, seemed to provide some explanation for the variations observed in the levels of sharing activity and the attitudes and behaviours of staff and institutions towards data exchange.

Literarure Review & Theoretical Framework

As discussed above, how individuals and by extension institutions, engaged in academic collaboration and understood or interpreted the legal regime, affected their attitudes and behaviours about data sharing. We are theorizing that individuals with more liberal attitudes openly shared data, compared to those who were not as liberal. The latter tended to be more restrictive and, in some cases, formalize exchanges with detailed data sharing agreements.

The theory of Communication Privacy Management (CPM) offered some explanation for the attitudes, behaviours and practices observed in the ‘Data Sharing’ study. The theory is comprised of three basic elements. Namely, privacy ownership; privacy control and privacy

turbulence (Petronio, 2013). “Privacy ownership defines the boundaries surrounding information, marking it private” (Petronio 2013, p.9). It considers what people mark as private information and how they regulate access to it. On the other hand, privacy control regulates the condition of granting or denying access to information; while privacy turbulence assumes that privacy regulation can be unpredictable; may be disrupted; or suffer a complete breakdown (Petronio, 2013, p 9-11), such as a data breach. The limitation of this theory was that it explains how individuals manage their private information, but may be challenged when elucidating on organizational behaviour, or how individuals within organizations who have access to vast quantities of student information, manage privacy. Having said that, the ‘Data Sharing’ study observed how individuals within these post-secondary collaborations shaped data exchange within their academic environments.

Within CPM theory, “the notion of co-ownership has made a significant contribution to seeing privacy issues and disclosure as relational in nature” (Petronio, 2013, p.9). That is, the authorization to disclose information assumes the existence of a relationship between givers and receivers of information. In the ‘Data Sharing’ study institutions have assumed co-creator-ship/ co-ownership/ custodian-ship of the student data. They were guided by their Institutional Acts; which over time have also embedded FIPPA legislation to assist with decision-making regarding data privacy. Additional safeguards have also been woven into the fabric of information privacy, through policies that now require the establishment of REBs. The latter has been enshrined in TCPS2 Article 6.1 policy which states that “institutions

shall establish or appoint REB(s) to review the ethical acceptability of all research involving humans conducted within their jurisdiction or under their auspices, that is, by their faculty, staff or students, regardless of where the research is conducted" (Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, and Social Sciences and Humanities Research Council of Canada, 2014, p. 69). Individual staff made interpretations of these acts and rules to govern whether to disclose student information to partner institutions. According to CPM theory, risks and benefits are often weighed in the motivations for revealing or concealing information (Petronio 2013, p. 10).

CPM also promotes the notion that an individual's privacy orientation guides their privacy rule choices. However, there are catalysts that can influence changes to those rules. For example, becoming married may create a relational catalyst that would necessitate the negotiation of privacy rules. This is because the couple within that relationship have become co-owners of information and must now navigate each other's orientation regarding the regulation of private information (Petronio 2013, p. 10). Presumably, institutions with more equitable orientations towards their academic relationship, or those that understood their positioning/ social capital within the higher education environment, or had specific strategic objectives, would be more inclined to champion data exchange. However, since individuals were also responsible for implementing data exchange, willingness to share was also affected by individual attitudes.
Yet the exchange of information between an individual and an organization is also subject to 'calculus behavior',

which placed limitations on what can be shared (Lwin & Williams, 2003, p. 260). This means that individuals who perceive negativity in the future disclosure of personal information would be least likely to share or have more restrictive attitudes about/ towards data sharing. In short, there is a calculation about the future consequences of the disclosure. Trust therefore becomes one catalyst in this decision-making (Lwin & Williams, 2003, p. 260). “However, people are willing to disclose personal information if the exchange for some economic or social benefit outweighs the risks (Hansell, 2003; Milne and Gordon, 1993)” [Lwin & Williams, 2003, p.261]. Consequently, the catalyst criteria for rule changes regarding privacy is based on the interface of the motivation between risk and benefit (Petronio 2013, p. 10). Once the benefits outweighed the risks there is a greater likelihood to share.

Within the Province, each post-secondary institution has an Act of Provincial Parliament (most universities have their own, while Ontario Colleges have a collective act) that allows them to create student records, which includes data collection for educational, statistical and administrative purposes in fulfillment of their respective mandates. As a result, many Institutional Acts and privacy policies indicate that information collected from students will be used in this manner (Baumal, April 2018, p. 11). Therefore, the collection of data with personal identifiers by post-secondary institutions in Ontario for registrial, research, articulation or planning purposes is not prohibited. However, in Ontario, FIPPA only applies to / regulates the use of personal information. This may include tombstone data’ such as: name; address; date of birth; and educational data, including a student identification number, and/ or the

Ontario Education Number/ OEN (Baumal, April 2018, p.10).

On the other hand, de-Identified records are not governed by FIPPA legislation (Baumal, April 2018, p. 27). Therefore, de-identified records (e.g. anonymous or aggregate level) data or records can be transferred without student consent. However, as the amounts and variety of publicly available data about individuals grow exponentially, there is an increasing fallacious distinction between identifying and non-identifying attributes (Narayanan & Shmatikov, 2010, p. 25). Yet, the de-identification of records does not provide complete assurance of data security/safety. It's simply "a weak form of privacy" (Narayanan A & Shmatikov, 2010, p. 26). This is because advancements in technology and economic incentives from hackers for personal data, for example, are rapidly rendering de-identification obsolete. As a result, access to any form of identifiable information about an individual that is unique, makes it possible to link this data back to specific individuals (Narayanan & Shmatikov, 2010, p. 25-26). Yet the protection of privacy demands cooperation from all stakeholders within or external to organizations, to be truly effective (Cavoukian, 2012, p. 19). Accordingly, "information privacy concerns influence individuals' attitudes, such as their preferences for regulatory environments (Milberg et al. 2000; Van Slyke et al. 2006)" [(Belanger & Crossler, 2011, p. 1020]. Consequently, data protection and privacy also require "strong access control mechanisms and non-technological protection methods such as informed consent and contracts specifying acceptable uses of data" (Narayanan & Shmatikov, 2010, p. 26). In Ontario, regulation 460 of the FIPPA legislation outlines these

parameters, in what is often referred to as data sharing agreements.

The findings from this post-study analysis of the 'Data Sharing' study will be discussed in the next section. It will outline the types of data shared and the motivations for the sharing behaviours exhibited by respondents. Following this, the paper will end with a discussion and conclusion about the impact of Communication Privacy Management theory on the sharing behaviours and attitudes observed in study respondents.

Findings

Five types of data sharing practices were uncovered as part of the study. They were data transfer for: a) registrial and record keeping purposes; b) administration of collaborative and co-registration programs; c) student redirection; d) administration of research into articulation agreements and; e) institutional research and planning. In the 'Data Sharing' study, Baumal (April 2018) further collapsed these five categories into

1. data sharing for administration; and
2. data sharing for research and planning.

Administrative data transfers referred to the first three categories (a, b & c) and research data transfer the last two (d & e).

Administrative Data Transfer

Registrial and Record Keeping

Some of the institutions in the study shared the same type of Student Information System. In these relationships, mechanisms were created to track mobility and student success when they transferred between institutions. Under these collaborations' registration data

was exchanged, but students were informed at the onset about the data sharing arrangement between the institutions, on their websites and at the point of application (Baumal, April 2018, p. 32).

Sometimes registration data was shared in aggregate format. However, some respondents complained that this was sometimes of little value. This was because the entire student record was required for enrolment, in cases of college / university transfer or student redirection. Additionally, competition for students between institutions often impacted attitudes about the willingness or unwillingness to share data. Some respondents acknowledged that where institutions had good relationships, there was more openness to share, particularly in instances where programs were complementary. For example, an accounting diploma would be considered complementary/ highly aligned to an accounting degree. Consequently, registrars with open attitudes often exchanged data more freely and strategically. They looked to data exchange to plan strategically for program enrolment and for the whole institution. These staff were keen to understand where students were coming from (institutions and sending programs) to estimate program demand and to support the enhancement of the student experience. Their approach was therefore was more holistic than transactional. Consequently, in these scenarios, there was a greater interest in collaborating than in competing (Baumal, April 2018).

Administration of Collaborative and Co-registration Programs

Sometimes, in programs such as the 'Collaborative Nursing' data sharing was made easier when the sending

institution simply shared data to ‘complete the registration.’ In other collaborative or co-registration programs data exchange was sometimes made difficult. This was largely due to factors such as the timing of grade release; differences in grading scales and semester start and end dates; residency rules, financial aid and scholarships. Collectively, these factors inhibited data transfer. Adding further to the complexity was also the question of who would legally own the data once it was transferred (Baumal, April 2018, p. 31-32). Some respondents suggested that this could be improved, if the broader purpose was understood and other areas of the sending and receiving institutions were invited to participate in the process of decision-making regarding data transfer (Baumal, April 2018, p. 32). Furthermore, they suggested that broader access to the Ontario Education Number (OEN) would better facilitate data exchange, particularly in these types of situations, as the OEN would provide access to a student’s entire academic record. At the same time, legal questions were raised, which challenged the widespread use of the OEN. Within the legal environment, the sharing of data must also be consistent to the purposes for which it was originally collected. Therefore, the transfer of an entire student record (containing all of an individual’s academic history) may prove challenging or may not be permitted. Further complicating this was the concern that not all students who transferred into the Ontario PSE (Post-secondary Education) system had an OEN, particularly those students who were transferring from outside of the province. Thus, there was also the recognition that the OEN was not universal and that this approach would create data interpretation issues (Baumal, April 2018, p. 31-32).

Student Redirection

Data was also shared between institutions for the purposes of redirection. Student redirection was often employed at the point of admission or after the student had stayed at least one semester, usually, at the university. However due to poor academic performance at the university, they were being advised to transfer to a college. The second redirection point would sometimes occur after an application to university was submitted, but the applicant did not meet the admission GPA (Grade Point Average) requirement. To keep the student with the same 'academic ecosystem,' institutions would sometimes refer these applicants to partner institutions such as colleges. With permission from students, institutions may often opt to share student data, to facilitate this type of student mobility. This was intended to be efficient and cost effective for students, who would usually no longer be required to pay an additional application/ administrative fee. With the student's permission, transcript data would be exchanged. However, redirection also posed several challenges, which included, but were not limited to, its purpose, data translation and the equity in sharing data across institutions. Some colleges for example accused the universities of delaying data sharing to take advantage of the per student funding revenues coming from the provincial government. Consequently, attitudes towards data sharing in redirection impacted the volume and the frequency with which it was shared between institutions (Baumal, April 2018, p. 30).

Research Data Transfer

Administration of Research into Articulation Agreements

Data was also shared/ transferred to support articulation

agreements. These agreements outlined what credits would be granted to students at the receiving institution when they transferred. The process involved course and curricula review. As part of the evaluation, the receiving institution would make a judgement about course equivalencies and whether the sending institution provided enough foundational instruction, to anticipate success at the receiving institution. In contemplating the development of articulation agreements, information such as grades, graduation rates and degree completion timelines, were needed to assess the feasibility of such arrangements. The exchange of this type of data was often desired and facilitated between institutions. Sometimes this was shared as aggregate data. However, even in this format, in smaller programs, where staff had direct exposure to these potential students, it was difficult to maintain data privacy and confidentiality (Baumal, April 2018, p. 32).

Evaluating the success of an articulation arrangement was also another instance where data was exchanged between institutions. Here data was often transmitted in aggregate format as part of summary reports. However, concerns were raised about how such data would be interpreted and used at/ by the receiving institution. There was also the additional concern that this type of data often lacked information on outcomes such as employment or transfers to other institutions outside of the collaboration. Some institutions therefore opted to fill some of these missing details by evaluating transcript requests to particular institutions and programs. This however was not seen as ideal by many respondents. Consequently, there is a continuing need to push for greater access to the OEN, which has the greatest potential for data accuracy in assessing student mobility

and success (Baumal, April 2018, p. 34). This was further supported by the view “among some participants that more open exchanges of data would allow institutions to play to their individual strengths, thus producing better outcomes both for students and institutions” (Baumal, April 2018, p. 34).

Research & Planning

Institutions within the ‘Data Sharing’ study also acknowledged that data was sometimes exchanged for research and planning purposes. Colleges and universities with collaborative programs would do enrolment projections and share the data, to plan for staffing before students transferred to the receiving institution. Additionally, research and planning divisions/ departments shared data for project-specific purposes to support the research initiatives of their academic partners. These were often quite formal and required the development data sharing and confidentiality agreements. Additionally, all research projects requiring data transfer had to be authorized by REBs. Some of these projects were internal or had received funding from stakeholder institutions such as ONCAT (Ontario Council on Articulation and Transfer) or HEQCO (Higher Education Quality Council of Ontario). Sometimes these data sets were mined and/ or linked to other data sets, such as Statistics Canada. However, some respondents expressed frustration at the limitation and term of use imposed by REBs, for access to the data beyond the original timelines of the research project (Baumal, April 2018, p. 32).

Data was also transferred for research and planning between institutions and the Ministry of Training, Colleges and Universities (MTCU), formerly the Ministry

of Advanced Education and Skills Development (MAESD), Ontario. Even data that was anonymized and/or properly safeguarded was at best shared extremely judiciously and cautiously by the 'Ministry'. For example, it was only recently that institutional researchers and planners could see the exact proportion of Ontario students that transferred between the college and the university systems. These broad numbers released by the 'Ministry' were both hailed as positive and concerning by some participants in the study. This access though was limited to specific staff at each institution. Additionally, at the time of the interview, the use of the OEN was restricted by the 'Ministry,' because of legislation prohibiting its collection and transfer. However, among colleges and universities with Collaborative Nursing arrangements, the OEN was typically exchanged to facilitate enrolment; while some also used it to exchange project-based research data (Baumal, April 2018).

Discussion

As mentioned previously, the five data sharing activities described were grouped into two larger categories, namely, administrative; and research data transfer. Data for administrative purposes (registration; co-registration/ collaborative programming and redirection), were sometimes shared quite openly or was sometimes withheld or aggregated. On the other hand, research data exchange was often hampered by the legal regime, particularly, REBs. These 'Boards' were charged with reviewing all research activities at institutions, whether it was being done in the setting, or being used for administrative or planning purposes and / or by external consultants. REBs therefore, appeared to have

considerable influence in regulating what data was shared, the term of use and conditions for access.

Although this may not have been overtly expressed by respondents, since the ‘Ministry’ has oversight provincially for post-secondary institutions, and being a part of government, there was potentially a stricter code for adherence to the legal regime. Privacy turbulence concerns may have meant an over-abundance of caution regarding how much data was shared and who would have access to the data, at each post-secondary institution in Ontario.

Among respondents with more restrictive data sharing approaches, there was less sharing activity. Perhaps in some instances ‘fear’ or lack of trust may have been the catalyst, or possibly the interpretation of the privacy legislation may have been responsible for triggering particular behaviours and attitudes regarding data sharing. These scenarios often produced more restrictive attitudes/ responses towards data sharing by institutions in collaboration. However, it’s difficult to be certain of this proposition, as this was not the initial focus of the ‘Data Sharing’ study.

Some of the restrictive behaviours and attitudes observed may have also been due to logistical concerns. The logistics of data transfer seemed to be the greater impediment. Differences in Student Information Systems and grading scales, for example, often created file transfer protocol challenges, given the anticipated volume of the exchange, as well as conversion issues. These challenges in and of themselves may have also impacted attitudes towards data sharing, as individuals weighed the risks against the potential, and perhaps the

uncertainty of the reward, such as future reciprocity. Additionally, for some, a more cautious response was invoked because of concerns about their institution's reputation. Limited access to the OEN meant raised concerns over data translation. How would the transferred data be interpreted by the individuals and the institutions receiving the data; and would low student mobility numbers in arrangements, lead to presumptions about a lack of success, or other negative assumptions about the receiving institution, were deliberated on, by respondents.

Among study participants who had more open data sharing orientations, there was a consistent call for access to the OEN. There was the sense that individuals, and by extension, institutions understood their legal responsibilities regarding student data, and would work within the parameters of Institutional Acts and FIPPA legislation, to manage the data exchange process. Institutions also felt that they had the necessary IT and security infrastructure to manage data and keep the data received, safe. Some institutions even took the extra step of including attestation clauses for students, particularly in co-registration type arrangements, despite their awareness of Institutional Acts authorizing the creation and use of student data. These respondents never expressed concern over any potential abuse or misuse of the custodial relationship that institutions had for student data. Instead, they had an inherent trust in individuals and institutions engaged in data sharing.

So, did CPM (Communication Privacy Management) offer enough of an explanation for /about the behaviours and attitudes observed in the 'Data Sharing' study? In retrospect, the attitudes and behaviours observed were

only partially explained by this theory. How were privacy control; privacy ownership; and privacy turbulence negotiated? Among respondents there was inherent trust that individuals and institutions would live up to their fiduciary responsibility as co-owners of the student data being exchanged. Were concerns about privacy turbulence a deterrent for sharing? In the case of the 'Ministry', sharing occurred but was restricted. As well, were there calculus behaviours and catalysts in these academic collaborations that affected data sharing? As was discussed previously, 'fear' about the potential repercussions of sharing private student information outside of the institution, for some, may have been a factor. For many others though competition for students, economic concerns over per-student funding was weighed against the benefits of data sharing and may have resulted in some of the more restrictive data sharing behaviours and attitudes observed.

Conclusion

As expected CPM theory was not completely adequate for predicting and explaining the liberal or restrictive attitudes towards data sharing in academic collaboration. Perhaps, calculated decisions on whether to reveal or conceal information hinged upon whether the data being exchanged, was an individual's personal information, or whether it was personal information belonging to other individuals, held within the custodianship of an institution, requested for use within these academic collaborations. Here, decision-making between risks and benefits might differ in these situations. Greater strategic interests, such as enrolment projections, comprehensiveness on student mobility, and interpretations of the legal regime seem to have affected

attitudes and the quanta of data exchanged between institutions. Finally, along with the aforementioned, the inclusion of competition for funding and students, as well as individual and institutional social capital, might collectively offer a more holistic explanation of post-secondary interinstitutional data sharing practices in Ontario.

The Tri-Council is comprised of three institutes, namely the Canadian Institute of Health Research; Natural Sciences and Engineering Research Council of Canada; and the Social Sciences and Humanities Research Council of Canada. These three federal research agencies have created joint policy - The Tri-Council Policy Statement (TCPS) - on the Ethical Conduct for Research Involving Humans (Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, and Social Sciences and Humanities Research Council of Canada, 2014). To be eligible for funding, post-secondary institutions in Canada must also adhere to these policies.

References

Baumal, B. (2018, April). *Data Sharing in Academic Collaborations*. York University and Seneca College (York/ Seneca Partnership). Think Lounge Research.

Bélanger, F., & Crossler, R. E. (2011, December). Privacy in the Digital Age: A Review of Information Privacy Research in Information Systems. *MIS Quarterly*, *35*(4), 1017-1071.

Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, and Social Sciences and Humanities Research Council of Canada.

(2014, December). *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans*. Retrieved January 2019, from file:///F:/Professional%20Development%20&%20Conferences/Transfer-%20Student%20Mobility/Privacy%20and%20Data%20Sharing/Legal-Ethical%20Paper/TCPS_2_FINAL_Tri-Council.pdf

Cavoukian, A. (2012, Winter). Privacy by Design. *Leading Edge: IEEE Technology and Society Magazine*, pp. 18-19.

Government of Ontario, Ministry of Government and Consumer Services. (2018). *Freedom of Information and Protection of Privacy Manual*. (Q. P. 2018, Producer) Retrieved from Chapter 1 - The Legislation: https://files.ontario.ca/books/foi_privacy_manual_-_final-v02-2018-03-08-en-accessible.pdf

Jones, G. (1996). Government, Governance, and Canadian Universities. *Higher Education: Handbook of Theory and Research, XI*, 337-371.

Lang, D., & Lopes, V. (2014, Summer). Deciding to Transfer: A Study of College to University Choice. *College Quarterly*, *17*(3). Retrieved from http://collegequarterly.ca/2014-vol17-num03-summer/lang-lopes.html

Lwin, M., & Williams, J. (2003). A Model Integrating the Multidimensional Developlmental Theory of Privacy and Theory of Planned Behaviour to Examine the Fabrication of Information Online. *Marketing Letters, 14*(4), 257-272. Retrieved 2019

Narayanan A & Shmatikov, V. (2010, June). Privacy and Security: Myths and Fallacies About Personally

Identifiable Information. *Communications of the ACM*, *53*(6), pp. 24-26.

Pan-Canadian Consortium on Admissions and Transfer. (2017, June 8). *Provincial Councils on Credit Transfer Expand Agreement to Enhance Student Mobility across Canada*. Retrieved from Pan-Canadian Consortium on Admissions and Transfer - News: https://pccatweb.org/news/provincial-councils-on-credit-transfer-expand-agreement-to-enhance-student-mobility-across-canada/

Petronio, S. (2013, January 22). Brief Status Report on Communication Privacy Management Theory. *13*(1), 6-14. doi:https://doi.org/10.1080/15267431.2013.743426

Postsecondary Education Quality Assessment Board (PEQAB). (2018, August). *Quality of Ontario College Degrees*. Retrieved from Postsecondary Education Quality Assessment Board: http://www.peqab.ca/QualityONCollegeDegrees.html

Skolnik, M. (2010). A look Back at the Decision on the Transfer Function at the Founding of Ontario's Colleges of Applied Arts and Technology. *Canadian Journal of Higher Education*, *40*(2), 1-17.

Skolnik, M. (2016, November 24). *Origin of Ontario College Bachelor Degrees.* Retrieved from Ontario Institute for Studies in Education (OISE): https://www.oise.utoronto.ca/pew/UserFiles/File/OriginOntarioCollegeBachelorDegrees.pdf

Wheelahan, L., Moodie, G., Skolnik, M., Liu, Q., Adam, E., & Simpson, D. (2017). *CAAT baccalaureates: What has been their impact on students and colleges?* Toronto: Centre for the Study of Canadian and

International Higher Education, OISE-University of Toronto.

Wise, A. F., & Shaffer, W. (2015). Why theory matters more than ever in the age of big data. *Journal of Learning Analytics, 2*(2), 5 - 13. Retrieved 2019, from http://dx.doi.org/10.18608/jla.2015.22.2

[1] The Tri-Council is comprised of three institutes, namely the Canadian Institute of Health Research; Natural Sciences and Engineering Research Council of Canada; and the Social Sciences and Humanities Research Council of Canada. These three federal research agencies have created joint policy - The Tri-Council Policy Statement (TCPS) - on the Ethical Conduct for Research Involving Humans (Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, and Social Sciences and Humanities Research Council of Canada, 2014). To be eligible for funding, post-secondary institutions in Canada must also adhere to these policies.