How Do Parliamentarians Use ICTs?

A Thesis
Submitted to the Faculty of Graduate Studies and Research
In Partial Fulfillment of the Requirements
For the Degree of

Master of Public Policy
University of Regina

By
Yassine El Bahlouli
Regina, Saskatchewan
November 21, 2019

© 2019: Y. El Bahlouli
Yassine El Bahlouli, candidate for the degree of Master of Public Policy, has presented a thesis titled, *How Do Parliamentarians Use ICTs?*, in an oral examination held on October 2, 2019. The following committee members have found the thesis acceptable in form and content, and that the candidate demonstrated satisfactory knowledge of the subject material.

External Examiner: Dr. James Farney, Department of Political and International Studies

Supervisor: Dr. Justin Longo, Johnson-Shoyama Graduate School

Committee Member: *Dr. Ken Coates, Johnson-Shoyama Graduate School

Committee Member: Dr. Ken Rasmussen, Johnson-Shoyama Graduate School

Committee Member: Dr. Michael Boda, Grad One-Time Committee Member

Chair of Defense: Dr. David Senkow, Faculty of Business Administration

*participated via video conference*
Abstract

Parliamentarians have many responsibilities, both in the legislative chamber and in their constituencies. From participating in house and committee deliberations, to proposing legislation or amendments to other proposed bills, and speaking on behalf of and defending the interests of their electors, parliamentarians are supported by the resources of the body that administers parliament. In the digital era, these resources usually include information and communication technologies (ICTs) that facilitate these important and challenging tasks and support parliamentary transparency and legislative functions. However, little is known about how parliamentarians currently use ICTs to accomplish their goals. This research assesses how parliamentarians in the Canadian House of Commons and in the Saskatchewan Legislative Assembly use ICTs to carry out their legislative and representative functions, and how the further use and adoption of ICTs can improve their performance. The research finds that the legislators surveyed are adopting ICTs and using Web 2.0 tools to accomplish their work, and that the use of laptop computers, smart phones, and social media to communicate, promote their objectives, and influence parliamentary and public discussion are all having a direct and often positive impact on their daily business. From these findings, core recommendations are made for the administrative offices of parliament to improve the effectiveness of existing tools, address emerging confidentiality and data security concerns, and strengthen legislator’s access to tools for the analysis of proposed legislation and the oversight of government actions.
Acknowledgements

I would like to acknowledge my indebtedness and render my warmest thanks to my supervisor, Dr. Justin Longo, who made this work possible. His friendly guidance and expert advice have been invaluable throughout all stages of the work.

I would also like to thank my committee members for extended discussions and valuable suggestions, which have contributed greatly to the improvement of the thesis. I also want to thank you for letting my defense be an enjoyable moment, and for your brilliant comments and suggestions, thanks to you.

I would especially like to thank FGSR and JSGS for providing excellent working conditions and for their financial support, scholarship and teaching assistantship making this research possible.
Dedication

Special thanks are due to my family.

To my parents for their greatest indirect contribution to this work who have taught me love of studies and learning.

To my wife, Hasnaa, and my son, Ilyass, for their continuous support and understanding. Words cannot express how grateful for all of the sacrifices that you have made on my behalf.

I want to thank my brothers for their constant encouragement throughout this experience.
# Table of Contents

1. Introduction ....................................................................................................................... 1  
2. Literature Review ............................................................................................................... 5  
  2.1. E-Parliament Around the World .................................................................................. 6  
  2.2. ICTs in Canadian Legislatures .................................................................................. 9  
  2.3. The Work of Canadian Parliamentarians ................................................................. 13  
  2.4. The Parliamentarian in the Digital Era ....................................................................... 19  
3. Methodology .................................................................................................................... 23  
  3.1. Participants .................................................................................................................. 24  
  3.2. Interview Procedures ................................................................................................. 28  
  3.3. Data Analysis Methods .............................................................................................. 29  
  3.4. Ethical Considerations ............................................................................................... 31  
  3.5. Difficulties and Limits ............................................................................................... 31  
4. Results and analysis ......................................................................................................... 32  
  4.1. The Use of ICTs by Parliamentarians ........................................................................ 33  
  4.2. The Impact of ICTs and Social Media on Their Work ............................................. 37  
  4.3. Work/Life Balance and Distance Challenges ......................................................... 39  
  4.4. Future Needs ............................................................................................................. 41  
  4.5. Summary .................................................................................................................... 44  
5. Recommendations ............................................................................................................ 46  
6. Conclusion ......................................................................................................................... 48  
References .......................................................................................................................... 52  
Appendix 1: Invitation to participate to interview ............................................................... 56  
Appendix 2: Participant Consent Form: Interview ............................................................. 57  
Appendix 3: Interview Protocol .......................................................................................... 59  
Appendix 4: Research Ethics Application and Certificate of Approval ............................. 62
List of Figures

Figure 4.1: The most cited current ICTs used .......................................................... 37
Figure 4.2: The most cited future ICT needs ............................................................ 43
List of Tables

Table 2.1: Information Technology Budget ................................................................. 11
Table 3.1: Interviewee characteristic combinations .................................................... 25
Table 3.2: 42nd Parliament of Canada, By Party ........................................................ 26
Table 3.3: 42nd Parliament of Canada, By Gender ...................................................... 26
Table 3.4: 42nd Parliament of Canada, By Province ................................................... 26
Table 3.5: 28th Legislature of Saskatchewan, by Party ............................................. 27
Table 3.6: 28th Legislature of Saskatchewan, by Inferred Gender ............................ 27
1. INTRODUCTION

“One machine can do the work of fifty ordinary men. No machine can do the work of one extraordinary man”

_Elbert Hubbard (Hubbard 1911, 151)_

_How do parliamentarians use information and communications technologies to carry out their legislative and representative functions?_

Parliament¹ is an assembly that provides for the democratic governance of a population, having several functions and roles: public debate, legislation, oversight and approval of government action, citizen representation, and civic and stakeholder engagement. As a deliberative assembly, parliaments provide a forum for debating issues related to public policy and governance. Debates in parliament are an occasion to discuss current issues, propose new legislation and government policy initiatives, and for the opposition to critically assess the work of the government.

As a legislative authority, parliamentary bodies enact new laws and change existing laws. As an oversight body, parliaments exercise oversight and scrutiny

¹ This work surveys Canadian federal Members of Parliament (MPs) and Members of the Legislative Assembly [MLAs] of Saskatchewan. They will be referred generally as “parliamentarians”, and their institutional form as “parliament”, unless they are being referred to specifically by their respective title of MP or MLA, or the reference is specifically to the Parliament of Canada, the House of Commons of Canada (itself one component of the Parliament of Canada, along with the Sovereign represented by the Governor General, and the Senate of Canada), or to the Legislative Assembly of Saskatchewan.
over the actions of the government. By exercising oversight, parliament can control government actions, and examine and challenge its work through different methods and techniques such as questioning ministers and engaging in the investigative work of committees. One of the principles of responsible government in our Westminster system of parliamentary democracy is that if the house passes a motion of non-confidence in the government, the government must resign. As an approval body, parliament provides input into the crafting of the budget, reviews and approves the raising of taxes and allocation of spending proposed by the government by debating and scrutinizing the budget bill. Parliament approves its passage into law, and monitors its implementation by exercising ongoing oversight through parliamentary committees and the questioning of ministers in the house.

As an engagement body, parliament facilitates civic and stakeholder participation in parliamentary processes. Parliament is a place to hold events such as public hearings, and parliament and its members maintain a connection with citizens through the media, parliamentary television, websites, social media, and publications. Parliaments also give citizens the opportunity to participate in the legislative process via mechanisms like petitions.

However, these important parliamentary roles are not easy for the institution or its individual members to carry out. In fact, parliamentarians face daily difficulties in fulfilling their mission and honouring their commitments to their electors.
Canadian parliamentarians encounter several constraints with regard to the slowness of processes and bureaucratic delays owing to things such as complicated rules and competing values. In recent years, an additional requirement is that the contributions of civil society actors—who are called on to participate more and more in the development of laws—have had to be integrated into government deliberations. Indeed, in order to fulfill their role and mandate, the work of the parliamentarian has become an increasingly complex process not just according to the means available to them, but also according to the existing institutions and the interconnections amongst the regulations and procedures in force.

For many decades now, an ever-increasing number of jurisdictions are using technology-based innovative solutions in their administrative and political environments to assist civil servants and politicians in meeting their responsibilities. While referred to generally as e-government (West, 2004), the specific application studied here is specifically referred to as e-parliament, which refers to a broad range of initiatives that involve the application of information and communications technologies (ICTs) designed to improve internal parliamentary processes, and enhance the efficiency, effectiveness, and workings of parliament itself, with the aim of strengthening parliamentary democracy (Kingham, 2003), and to ICT mechanisms used by parliamentarians to access information relevant to the fulfilment of their responsibilities (Mostert, 2004).
This research focuses on two institutions: the federal House of Commons of Canada, and the provincial Legislative Assembly of Saskatchewan. The central question is how the work of parliamentarians is changing as a result of new ICTs including Web 2.0 tools and social media. The research looks specifically at the use of technology by parliamentarians, and how technology is adopted by parliamentary institutions to optimize and enhance members’ roles in parliamentary processes, to support parliamentarians in the meeting of their responsibilities, enhance the efficiency, effectiveness, and workings of parliament itself, and strengthen parliamentary democracy.

This thesis is structured as follows. The following section reviews the literature on the status of e-parliament around the world, the use of ICTs in Canadian legislatures, the work of Canadian parliamentarians, and the work of parliamentarians in the digital era. Building on the literature review, the research question that is the focus of this thesis asks how parliamentarians currently use ICTs to carry out their legislative and representative functions. In section 3, the methodology and research methods are explained including the identification of participants, the procedures for conducting the semi-structured interviews, and the data analysis methods. In addition, the ethical considerations that guided the work are detailed, and some difficulties and limitations in the research are discussed. In section 4, the data results and analysis are discussed, focusing on the use of ICTs by parliamentarians the impact of ICTs and social media on their
work, the impact of ICTs parliamentarians’ attempt to achieve work/life balance (with a specific focus of the impact of distance between the location of parliament and the member’s constituency), and concluding with the respondents’ thoughts on future challenges and opportunities in using ICTs to support the work of parliamentarians. Section five draws on the findings from the field research and the literature review to propose recommendations for parliamentary administrations to consider in the future use of ICTs to strengthen parliamentary democracy. I conclude with some observations from the research that are important considerations yet do not fall within the realm of administrative recommendations.

2. LITERATURE REVIEW

The development and growth of ICTs generally, and the expansion and impact of the Internet and world-wide web specifically, have had profound impacts on global and local economic, social, and political practice (Yousefi, 2011). Statistics on the global Internet penetration rate indicate that there are approximately 3.5 billion Internet users worldwide (ITU 2017), with the widespread deployment of mobile technology driving much of the growth in recent years. These ideas and statistics are important for this research. Indeed, with the advance of ICTs and the expanding population of Internet participants, ICTs are part of the life of parliaments, parliamentarians and their connection to citizens.
In this section, I review the state of the art on the use of ICTs in parliament (i.e., e-parliament), the impact of ICTs on the work of parliamentarians, and specifically the current challenges facing Canadian parliamentarians. The structure of the literature review is organised as following with specific subsections on e-parliament around the world, the use of ICTs in Canadian legislatures, the work of Canadian parliamentarians, and the work of parliamentarians in the digital era. Following the literature review, the research question that is the focus of this research is derived from an assessment of the current gaps in the research and the areas where previous research needs to be considered given the passage of time and the advance of technology.

2.1. **E-Parliament Around the World**

E-parliament covers a broad range of initiatives that involve the application of ICTs to parliamentary processes (Kingham, 2003), and ICT mechanisms used by parliamentarians to access information relevant to the fulfilment of their responsibilities (Mostert, 2004). It includes equipment in datacenters, computers and mobile devices used by parliamentarians and their staff, content and workflow management software, cyber security procedures, digitalization of documents, intranet and extranet systems, open data platforms, interactive websites, use of social media to monitor and connect with citizens, public databases, and interconnection with the government (IPU 2016).
The fundamental values and characteristics of a democratic parliament are representativeness, transparency, openness and accessibility, accountability and effectiveness. As the information society has important and multiple implications for political actors, public bodies and institutions, administrators, civil society, and citizens, parliaments are not immune to these implications. Indeed, the rapid growth of ICTs is changing the environment in which parliaments operate and influencing how citizens perceive them. Parliaments have to adopt a continuous technological evolution and public sentiment sensing approach in order to strengthen democracy and encourage citizen political engagement, rather than simply being witnesses to this digital transformation of society.

Since the first edition of its report on e-Parliament issued in 2008, up to the most recent report of 2016, the Inter-Parliamentary Union (IPU)² has highlighted the different experiences and efforts of parliaments to use modern technologies to strengthen their institutional role (see IPU 2006-2016). According to the IPU, many parliaments are facing financial barriers to improving their capacities but also face strategic challenges, a lack of political and institutional commitment, and access to best practices. The 2016 report (IPU 2016, 11) highlights the fact that deciders and stakeholders continue to perceive e-parliament as a "purely technical" evolution while ignoring the legal framework and human resources as pillars that must coexist in a clear strategic plan. Another internal side of e-

² The IPU is an organization made up of national parliaments from around the world (https://www.ipu.org). Amongst its many activities, it holds bi-annual e-parliament conferences (http://wepc2016.org) and helps member parliaments plan and adopt e-parliament strategies (see http://wepc2016.org/en/wepr2016).
parliament concerns the procedures and mechanisms relating to the main professions of a parliament, namely legislative production and oversight of governmental action.

The expected results from this transformation are mainly to improve the following four criteria: efficiency, accountability, time, and transparency. The use of ICTs and interconnected data exchange systems actively participate in the qualitative and quantitative improvement of the legislative production. This improvement concerns all phases, from the inception of a bill to its adoption and publication in the official gazette, through the work and debates of parliamentary groups, parliamentary committees, parliamentary administration, plenary sessions, and exchanges with the ministers and departments affected by the bill. With respect to the oversight of government action, the use of new technologies has transformed the steps and procedures of this role. The editing, treatment, validation of written or oral questions, their transmission to the ministers concerned, as well as in the opposite way the treatment of the answers within the constitutional deadlines, the work of the parliamentary committees, recording the minutes, and bridging with the government departments are all transformed by providing them with reliable, efficient, and fast technological tools. In its latest global e-parliament report, it was evident that many parliaments are placing an increasing volume of data online in open formats and accessible by a wide audience, allowing for greater participation of citizens in the work of their parliaments (IPU 2016).
Yet deeper transformation remains elusive. For example, only 22% of parliaments have information systems capable of analyzing budgets submitted by the government and to monitor their implementation (IPU, 2016). Thus the challenge of truly digitally transformed e-parliament remains, especially for developing countries but also for some developed countries that do not have a strategic vision or lack the political will to move towards an efficient, accountable, timely, and transparent parliament.

However, we must not ignore the difficulty and complexity of any transition to e-parliament. Like any digital transformation, beyond the computer systems, applications, hardware and infrastructure, there remain two other pillars of a functional and professional information system: the procedures and regulations on one side, and qualifications and training of the systems managers on the other. In 2009, the IPU sent a questionnaire to more than 250 legislatures in its 188 member countries. More than 27,000 legislators responded, and the results pointed towards two constraints faced by parliamentarians: communication with citizens, and the demands of transparency (IPU 2010).

2.2. ICTs in Canadian Legislatures
ICT resources are made available to parliamentarians in the House of Commons of Canada and Legislative Assembly of Saskatchewan by the administration of their respective institutions. In the provincial Legislative Assembly in
Saskatchewan, MLAs are provided with "Payments and Allowances to Individual Members (Statutory)" with the objective “to provide compensation and expense funds to Members of the Legislative Assembly to enable them to fulfill their role as representatives of the citizens of Saskatchewan.” (Government of Saskatchewan 2017, 214). There is no dedicated allocation for software and specific ICT tools apart from Internet connectivity, smartphones, and desktop or laptop computers.

At the federal level, the "House of Commons Members' Allowances and Services Manual" details the funding available to MPs. Firstly, a direct and dedicated allowance is available to acquire necessary ICT tools at their office in Ottawa and in their constituency. Secondly, an indirect allowance via their political parties and according to the number of caucus members (see table 2.1, page 11) is available to members. Finally, infrastructure, applications, and equipment are provided by Parliament to all members and their teams (House of Commons, 2018a).

For the direct allowance, each MP is entitled to an annual budget for telecommunications and computer needs for Member, their office, and employees within two categories:

- Informatics and telecommunication equipment purchases: This sub-category includes the cost of computers, laptops, tablet devices, printers and other related equipment, as well as smartphones and related devices.
- Telecommunication services: This sub-category includes the cost of voice and data plans for various mobile devices, as well as the cost of Internet services in constituency offices. (House of Commons, 2018b)

Indirect funding via political parties comes in the form of research grants provided to each caucus by the Parliament of Canada according to the following scale:

**Table 2.1: Information Technology Budget** (source: House of Commons 2018a, 239)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>For each party with 12 to 25 Members</td>
<td>$61 110</td>
</tr>
<tr>
<td>+ For each additional Member, from 26 to 50</td>
<td>$6 110</td>
</tr>
<tr>
<td>+ For each additional Member, from 51 or more</td>
<td>$1 220</td>
</tr>
</tbody>
</table>

The secure infrastructure, applications, and technological equipment provided by Parliament is available within the House of Commons firewall and also accessible remotely via the "Secure ID access Card" that serves to encrypt and secure the exchange and transit of information to authorized remote users. Parliament also provides secure internal email; secure file storage space on the network, access to the electronic library database for basic searches, and the Constituency Connectivity Service (CCS) to connect the MP’s constituency office to their Ottawa office in a protected manner (House of Commons 2018a, 163).

The purchase of ICT equipment by MPs and their staff is regulated by administrative and security limits and restrictions. It is not permitted, for example, to charge the purchase of software to the Member’s Office Budget (MOB). Purchased computer equipment can only be used in the constituency office, not in the Members’ office on Parliament Hill where equipment provided by the
parliament administration must be used. In addition, any purchase must be authorized and validated in advance by the "IT Service Desk" (House of Commons 2018a, 75-77). For the MP’s website, the MOB can only be used to pay for web design and consulting services, hosting, domain registration, maintenance, and securing copyright material to use in the site content (House of Commons 2018a, 73).

Finally, the House of Commons’ strategic plan over the period 2016-2019 has one section dedicated to ICTs and innovation (House of Commons, 2016), referring to the development of a “Modern Technology and Information Infrastructure” designed to:

- Replace the Human Resources Management System and Financial Management System,
- Implement a mobile work environment for Members and the House Administration as they conduct their business in ways that reflect the growth of the Internet and mobile devices both in Canada and around the world,
- Develop and implement digital information systems, tools and processes and enhance how digital information is stored and improve how information can be shared (House of Commons 2016, 6).
2.3. The Work of Canadian Parliamentarians

Parliamentarians have many tasks to fulfill. They must work within the parliament while at the same time they must be responsive to the citizens who elected them as well as to their political party leader. MPs must spend the majority of the week in the provincial or federal capital when Parliament is sitting, and travel to their constituencies for weekends. During their presence in Parliament, MPs sit on committees to discuss and vote on proposed bills, play their role in overseeing government action, hear testimony, and make reports and recommendations in addition to sitting in plenary sessions. More than that, they attend their respective caucus meetings to discuss matters relating to collaboration with other members of the same political party. Finally, when they are in their constituencies, MPs and MLAs are involved within the various community events and activities as well as in their local offices to meet citizens from their ridings and hear their grievances and concerns.

Franks (1987) identifies four functions of parliament and of parliamentarians. The first is to establish a legitimate government following an election. The second is to procedurally vote funds and resources. The third is to provide oversight of the government’s actions. And finally, parliaments provide for an alternative government through the official opposition. In addition to these functions, parliamentarians play a very important role and dedicate much of their time to their constituents and “…consistently rate this work as their most important activity” (2007, 23) noting that it is the “most time-demanding” aspect of their work (2007, 27). To fulfill these responsibilities, parliamentarians are provided
with personnel and financial resources to undertake “constituency business, most of which is ombudsman-type services conducted by local offices” (Franks 2007, 23).

The history of parliamentary reform has been aimed at strengthening parliamentarians in the performance of their duties and the fulfillment of their responsibilities to meet the functions noted above. Canadian parliaments have seen several changes in their regulations and internal procedures during the last decades, as well as the emergence of new procedures to replace old traditions. However, academic research on the evolution of Canadian parliamentary experiences is rare, owing to a lack of interest in parliamentary work in Canada and in making comparisons with other parliaments. This deficiency in Canadian legislative studies is a consequence of the post-war, protective and island-like approach that has dominated the political and academic landscape of political science studies in Canada. Also, that the lack of literature in parliamentary work is due to the difficulty for Canadian researchers to compare data from the United States because of the differing parliamentary model in place between the two countries (Atkinson and Thomas, 1993).

Parliamentarians face many challenges in fulfilling their constitutional mission and in exercising their functions. Levy and White (1989) studied the territorial and provincial legislatures in Canada by describing the recent practices and developments regarding the work of parliamentary committees at the level of
these institutions, the internal regulations, the role of the Speaker and the resources made available to the members of these assemblies. It is clear that the ten provincial legislatures and the two territorial legislatures are working in a similar way and following a similar model. Indeed, they addressed some common themes, such as the social context of members, the committee system, services provided to members, mechanisms to promote government accountability, and recent reforms. However, they also emphasize the fact that each provincial and territorial legislative assembly is linked to its society and surrounding political culture. This observation has important implications for the comparability between institutions and differences in results obtained from one research setting to another.

Thomas’ (2007) exploration of the 38th Parliament (October 4, 2004 to November 29, 2005), with a minority government led by Prime Minister Paul Martin, assessed its behavior following six criteria. It shows that this legislature was not less effective than previous ones even if the government did not command a majority. With respect to the role of MPs in the 38th Parliament, the purpose of the procedural changes enacted around this time was to help MPs play a more decisive role in parliamentary minorities, thereby enhancing their ability to fulfill their duties. Unfortunately, according to the results obtained, no significant change was noticed in terms of legislative production. Indeed, the number of MP’s bills passed did not change and remained at the same level as previous parliamentary sessions. However, Thomas (2007) concluded from his research
that the experience of minority governments had a positive impact on Canadian democratic practice.

Docherty (1997) made several observations about the priorities and challenges faced by parliamentarians, analyzing the interactions between individual MPs and the institutional structure of the organization. Canada is considered to be one of the Western countries with the highest turnover rate in terms of its parliamentarians. In fact, during the 1993 federal election, nearly 70% of the members of the Commons committee were replaced. Also, during the 1980s, there were only three parties sitting at the House of Commons level while the 1993 elections saw the entry of two new parties with a considerable presence, namely the Bloc Québécois and Reform Party. Through his research, Docherty has studied different aspects of legislative life, candidates' expectations of legislative life, their ambitions and frustration, the impact of the arrival of new members on the functioning of the House of Commons as well as the fulfillment of the role of parliamentarians themselves and the relationships with their parties and their constituencies. He undertook a survey of candidates in 1993 and another round of follow-up interviews later in 1996 with what he called parliamentarian "Rookies". The data collected from the 95 open interviews, in addition to the other data collected on each MP, were a prime opportunity to study the change at the individual level of parliamentarians. The analysis of these data allowed Docherty to bring to light several conclusions. First, he has seen that the priorities of parliamentarians change over time in their constituency.
activities and that they prefer activities that are more community-oriented than individual-oriented. Also, parliamentary women were found to be more community-oriented rather than individual-oriented compared to their male counterparts. Regarding the increase in the percentage of women MPs in the House of Commons, Docherty points to the fact that the impact on women’s presence in party leadership was not yet on the agenda in the mid-1990s (a situation that has not changed much to this day). Lastly, he asserts that Canadian MPs need to use their relations and loyalty to the party to advance their career as the House of Commons is an executive-dominated parliament.

In subsequent research, Docherty (2001) identifies two types of obstacles that MPs, both men and women, face both in office and after leaving public life. The first obstacle is a structural one due to the style of the Westminster government such as lengthy sessions, strict discipline, inability to engage in change, dealing with a strong bureaucracy and powerless committees. The second challenge facing parliamentarians is the personal life of each member. Indeed, time away from the family, long weekly trips as well as being under the microscope of the media and the public makes them more vulnerable. According to the same research, structural barriers are less critical than personal costs. Due to long hours of work and traveling to and from the constituency, parliamentarians are sacrificing time with their families that they will never recover—a tremendous personal price to pay.
Being a parliamentarian involves a lot of sacrifices, such as unpredictable hours, balancing their work responsibilities with family and conjugal life under the pressure of meeting job performance expectations and managing often-vast geographical distances between the capital city and their constituency.

Parliamentarians face many challenges in maintaining work-life balance and their day-to-day responsibilities, in addition to completing their work requirements. Factors that increase the challenges of their job include raising children (especially younger and in-school children, where their parliamentary responsibilities limit the time available to spend with their children), balancing the demands of their work with their spouse’s professional career when the parliamentarian is frequently away for extended periods and must attend to a busy work schedule even when home, and the physical distance from the parliamentarian’s constituency to the capital (Koop, Farney and Loat, 2013). With respect to the distance separating them from the capital, long travel times can place a heavy burden on MPs as they struggle to balance both their constituency responsibilities in their riding and the Ottawa aspects of their jobs (Koop, Farney and Loat, 2013). In general, MPs who did not have a family or had adult children encountered fewer obstacles in meeting their mission. On the other hand, having young children is directly related to the difficulties encountered. The relationship is not obvious, but several researchers have encouraged further investigation of this issue (Koop, Farney and Loat, 2013). Lastly, note that the House of

---

3 On January 10, 2019, the President of the Treasury Board (and Minister of Digital Government) surprised many by resigning from Cabinet and announcing he would not seek re-election in order to spend more time with his family (see https://www.facebook.com/notes/scott-brison/open-letter-to-the-people-of-kings-hants/10155873153941641/).
Commons adopted a new parental leave policy for MPs in June 2019 as part of an effort to “try to make the Hill more family-friendly” (Wright 2019, np)

Finally, the "representational connections framework" (RCF) mentioned in Koop, Bastedo and Blidook (2018), as well as the different orientations of MPs according to four types of relations with their constituents: policy, service, symbolism, and partisanship. Representation is explored from the perspective of MPs by accompanying and observing, between 2012 and 2015, eleven MPs in their ridings and in Ottawa and through interviews with each MP. They found variability in the styles and practices of representation of Canadian MPs according to their constituency. The personal goals and backgrounds of the MPs themselves, characteristics of their constituency contexts and what they call MPs' “experiential learning” (Koop, Bastedo & Blidook 2018, 18).

2.4. The Parliamentarian in the Digital Era
The work of the parliamentarian is undergoing significant changes in the digital era. Indeed, the use of the Internet, especially e-mail and social networks, has had an important impact on the internal and external communication of parliamentarians. In addition, the concept of mobility has allowed the latter to be able to carry out their missions regardless of their presence in the capital or in their constituencies. These changes also concern the processing and analysis of data, accountability and citizen engagement.
Gibson, Römmele and Ward (2004) examined the various uses of ICTs in representative institutions, legislative assemblies, political parties, unions, etc., to fully perform their functions. They present four possibilities for the impact of ICT on representative institutions: erosion, limited erosion, modernization and revitalization. They argued that the advent of the new ICTs has substantially changed the management of the public service but without "erasing" or "eliminating" the traditional constitutional institutions from the decision circuit. While representative institutions have opted for the use of new technologies in their daily practices, this use has not radically transformed their operations or their relations with citizens, despite earlier speculation about the emergence of Democracy 2.0 on the practice of democratic exercises such as elections and referendums through the Internet and the potential for radical transformation of representative institutions and the government. However, although representative democracy has thus far been able to survive the digital revolution, the Internet certainly has had a disruptive effect. However, they also argue that the effects on representative institutions are limited to reducing the role of these institutions, modernizing them and revitalizing them through meaningful engagement with citizens through technology. The way a political institution and its members use technology in its daily activities depends on its unique institutional and organizational context. Small (2011), for example, presents the results of research on the use of Twitter in Canadian politics and the promotion of citizen engagement. Indeed, in 2010, only 37% of MPs had a Twitter account of which just 20% were active. Her analysis showed that basic information on daily
activities is the main function of the use of Twitter by Canadian politicians. However, she also noted the absence of dialogue and political debate online, as well as reporting and monitoring of commitments.

Technology can have a positive impact on the way MPs can do their work and can increase the time available to spend with their families. In addition, communication technology makes it easier for them to keep in touch with their constituency staff and deal remotely with requests while in Ottawa (Koop, Farney and Loat, 2013). However, advances in ICTs can increase expectations that the parliamentarian will be always available, everywhere, thus increasing the stress of their job. As Koop, Farney and Loat observed, “several MPs pointed to improvements in both communication and travel technology as a burden rather than an asset” (2013, 39).

Koop, Farney and Loat (2013) studied closely the life of MPs, highlighting the nature of the pressure they face during their public mission. In addition they have identified the strategies used by the parliamentarians to overcome the challenges encountered and lessen the impact of this pressure on their respective families. Indeed, they emphasized that MPs are aware of the pressure of political life on their personal lives, as well as the consequences for their families. They place parliamentarians into four categories according to their family and geographical situation and the family pressure they face. The first criteria is related to MPs with children or not and depending of their ages. Some parliamentarians think that
their career limits the time they could spend with their children, especially when they are young. However, parliamentarians with adult children or without children were less affected by this situation. MPs whose spouses are active in the political field are more stressed by the unavailability and the mutual absence of their partners. Alternatively, MPs whose partners are not involved politically or professionally have more availability to fill the void of the absence of one of the partners and therefore mitigate the consequences of a prolonged absence. The distance of electoral districts from Ottawa is another criterion mentioned by the authors, with MPs whose constituencies are far from Ottawa being forced to spend more time traveling and, therefore, having less time to spend with family which represents a high risk of imbalance between their professional and political life. The last criterion is the use of technology and the means of travel available, which have a significant impact on the daily lives of MPs and the way they ensure their work. Some respondents said that the use of ICTs facilitates contact with their constituencies and their families during their various trips. However, other members have confirmed that technology is also a source of constant stress because they are always on demand without any barrier and with high expectations (Koop, Farney, and Loat, 2013).

Legislative production through a jurisdiction’s parliament is an important governance function that involves numerous stakeholders (e.g., parliamentarians, civil servants, civil society organizations, private sector stakeholders, and citizens), each having different organizational, procedural, and technical
capacities. In addition, the importance of this research is related to the fact that ICT investments by parliaments are significant and it is important to understand how to use these resources effectively.

Assessing the above literature review, and the gaps in the research identified there, the following research question has been identified: **How do parliamentarians use information and communications technologies (ICTs) to carry out their legislative and representative functions? (RQ1).** Building on the foregoing literature review, the topics to be discussed in semi-structured interviews with parliamentarians were developed (see appendix 3 below).

### 3. METHODOLOGY

This research is based on semi-structured interviews with parliamentarians from the House of Commons of Canada and Legislative Assembly of Saskatchewan, looking across the different functions and roles of parliamentarians focusing on how the use and adoption of ICTs can improve their abilities, and investigating their perspectives on the changing nature of their work and the impact of ICTs on their role. The objective of this approach is to assess from a qualitative perspective how parliamentarians use technology to fulfill their responsibilities.

Semi-structured interviewing was selected as an open approach to gathering feedback from respondents, “allowing new ideas to be brought up during the interview as a result of what the interviewee says. The interviewer in a semi-
structured interview generally has a framework of themes to be explored.” (Edwards and Holland, 2013, 2). The interviews were recorded digitally and transcribed by myself. NVivo 2018, an advanced software tool that analyzes and explores a dataset containing data from interviews and supports automated coding and analysis, was used (Hai-Jew, 2017). The coding in NVivo 2018 was undertaken using inductive, grounded theory. Highlighting a specific word or phrase, which best represents a key point, creates a Node. I started with analyzing a single interview to formulate an initial theory, then, I analyzed the following interviews to test the theory.

3.1. Participants
I interviewed eight parliamentarians: four MLAs and four MPs. Candidates were segmented based on three characteristics: gender (male or female); constituency density (urban or rural); and government or opposition party.

<table>
<thead>
<tr>
<th>Table 3.1: Interviewee characteristic combinations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Male, government, urban</td>
</tr>
<tr>
<td>2. Male, government, rural</td>
</tr>
<tr>
<td>3. Male, opposition, urban</td>
</tr>
<tr>
<td>4. Male, opposition, rural</td>
</tr>
<tr>
<td>5. Female, government, urban</td>
</tr>
<tr>
<td>6. Female, government, rural</td>
</tr>
<tr>
<td>7. Female, opposition, urban</td>
</tr>
<tr>
<td>8. Female, opposition, rural</td>
</tr>
</tbody>
</table>

As of the 2015 federal election, there are 338 federal ridings in Canada. In the current 42nd Parliament, there are (at the time of writing) 177 government members, 159 opposition members, and two vacancies (one in Nova Scotia and
one in Quebec). The list of MPs available online notes the name of the MP, their gender, party affiliation, the constituency represented, the province in which the constituency is located, and their date of election.⁴

### Table 3.2: 42⁰ Parliament of Canada, By Party

<table>
<thead>
<tr>
<th>Party</th>
<th>Members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liberal</td>
<td>177</td>
</tr>
<tr>
<td>Conservative</td>
<td>97</td>
</tr>
<tr>
<td>NDP</td>
<td>41</td>
</tr>
<tr>
<td>Bloc Québécois</td>
<td>10</td>
</tr>
<tr>
<td>Independent</td>
<td>7</td>
</tr>
<tr>
<td>Green Party</td>
<td>2</td>
</tr>
<tr>
<td>Co-operative Commonwealth Federation</td>
<td>1</td>
</tr>
<tr>
<td>People's Party</td>
<td>1</td>
</tr>
</tbody>
</table>

### Table 3.3: 42⁰ Parliament of Canada, By Gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>91</td>
</tr>
<tr>
<td>Male</td>
<td>245</td>
</tr>
</tbody>
</table>

### Table 3.4: 42⁰ Parliament of Canada, By Province

<table>
<thead>
<tr>
<th>Province</th>
<th>Members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alberta</td>
<td>34</td>
</tr>
<tr>
<td>British Columbia</td>
<td>42</td>
</tr>
<tr>
<td>Manitoba</td>
<td>14</td>
</tr>
<tr>
<td>New Brunswick</td>
<td>10</td>
</tr>
<tr>
<td>Newfoundland and Labrador</td>
<td>7</td>
</tr>
<tr>
<td>Northwest Territories</td>
<td>1</td>
</tr>
<tr>
<td>Nova Scotia</td>
<td>11</td>
</tr>
<tr>
<td>Nunavut</td>
<td>1</td>
</tr>
<tr>
<td>Ontario</td>
<td>121</td>
</tr>
<tr>
<td>Prince Edward Island</td>
<td>4</td>
</tr>
<tr>
<td>Quebec</td>
<td>78</td>
</tr>
<tr>
<td>Saskatchewan</td>
<td>14</td>
</tr>
<tr>
<td>Yukon</td>
<td>1</td>
</tr>
</tbody>
</table>

⁴ The data for tables 3.2 – 3.4 are current as of May 7 2019 and do not reflect the results of the 43rd Canadian general election held on October 21 2019. Source: https://www.ourcommons.ca/Parliamentarians/en/members
As for the Legislative Assembly of Saskatchewan, there are 61 electoral districts, with the party breakdown shown in table 3.5. The list of MLAs available online mentions the title of the MLA, their party affiliation, and constituency. Gender was inferred from the list of MLAs.\(^5\)

**Table 3.5: 28\(^{th}\) Legislature of Saskatchewan, by Party**

<table>
<thead>
<tr>
<th>Party</th>
<th>MLAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saskatchewan Party</td>
<td>48</td>
</tr>
<tr>
<td>New Democratic Party</td>
<td>13</td>
</tr>
</tbody>
</table>

**Table 3.6: 28\(^{th}\) Legislature of Saskatchewan, by Inferred Gender**

<table>
<thead>
<tr>
<th>Gender</th>
<th>MLAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>16</td>
</tr>
<tr>
<td>Male</td>
<td>45</td>
</tr>
</tbody>
</table>

The remaining challenge was in defining whether the parliamentarian represented a rural or urban constituency. To do so, I adopted the definitions commonly used by Statistics Canada on its Population Centre and Rural Area Classification 2016\(^6\):

- Population center, defined as an area with a population of at least 1,000 and a density of 400 or more people per square kilometer. All areas outside population centers will continue to be defined as rural areas.
- Population centers are divided into three groups based on the size of their population to reflect the existence of an urban-rural continuum:

---

\(^5\) The data for tables 3.5 – 3.6 are current as of September 13 2018. Source: [http://www.legassembly.sk.ca/mlas/](http://www.legassembly.sk.ca/mlas/)

- Small population centers, with a population of between 1,000 and 29,999,
- Medium population centers, with a population of between 30,000 and 99,999,
- Large urban population centers, consisting of a population of 100,000 and over.” (Statistics Canada, 2016)

Subsequently, I checked every provincial or federal constituency that came out in the random draw to qualify it as urban or rural. First, I went to the Elections Canada Website for MPs or Elections Saskatchewan Website for MLAs to find the exact geographic boundaries of the constituency and, from there, determined its urban or rural status by retrieving its demographic characteristics from Statistics Canada based on the results of the 2016 census.

Potential interview candidates included all MPs and MLAs sorted into eight sub-categories (table 3.1, above at page 25), derived from the combination of three characteristics (e.g., gender, government/opposition, urban/rural). I then randomly sorted all candidate interviewees in each sub-category, and contacted the first candidate to request an interview (the invitation email is attached as Appendix 1). If the candidate declined or failed to respond, I asked the next one in the list, and so on, until I secured an interview. This was repeated until one interviewee was found for each sub-category. Across the eight categories, four respondents were Saskatchewan MLAs and four were federal MPs.
3.2. Interview Procedures

After confirming the willingness of the interview candidate, a participant consent form (attached as Appendix 2) was developed and sent by email prior to the scheduled meeting. Interviews were conducted in the Legislative Assembly in Regina with four Saskatchewan MLAs, in the House of Commons in Ottawa with two MPs, and through phone calls with the MPs who were not available for in-person interviews.

An interview protocol for the semi-structured interviews was developed (attached as Appendix 3). The first part of the interview asked respondents about their use of ICTs in their work, by starting with a general question about how they use technology currently. Several prompts were prepared to help guide the conversation including:

- What kind of technology were using?
- Whether the impact is similar across different functions and roles?
- What about social media usage?
- Advantages and disadvantages?
- Affect on daily life?

The second part of the interview explored parliamentarian’s recommendations and needs, by asking them about their parliament’s internal regulations to fully
adopt the application of ICTs on its processes. Different prompts were used to help with this section including:

- Recommendation/needs related to legislative role?
- Recommendation/needs related to the oversight of government action?
- Recommendation/needs related to the budgetary processes?
- Precautions and cyber security policy to put in place in order to save sensitive data, integrity and veracity of transactions?

I used two digital devices to record the interviews. I transcribed the interview recordings myself using the transcription software “Express Scribe”. After transcribing the audio recording, I read it again while listening to the audio to make sure the transcription was accurate. It should be noted that not all question prompts were answered depending on the direction taken by the interviewee and given the nature of a semi-structured interview.

3.3. Data Analysis Methods
The data analysis was done in several stages to organize and synthesize the data. I used NVivo 2018 to import and code transcripts according to a list of codes issued from the first interview, taking a grounded theory approach. The grounded theory method for qualitative data analysis starts with an analysis of a single case to be able formulate a theory, then, the following cases are analyzed to see if they confirm the theory (Dudovskiy, 2018). NVivo 2018 software allows
for highlighting words, sentences or paragraphs to be added to the code list ‘on the fly’.

After the coding stage, data analysis was undertaken with the reduction and display of data by transforming collected data into organized and meaningful reconfiguration and reducing it to have an organized set of data to be able to draw conclusions. More concretely, I conducted qualitative data analysis in three phases. I developed and applied codes to categorize data following an open coding approach, as a word or a short phrase that represents a keyword or an idea, as well as non-quantifiable elements such activities or meanings. Afterwards, I identified themes, patterns, and relationships in respect of the codes that have been applied before. Finally, I summarized the data and linked research findings to the initial theory (Dudovskiy, 2018).

After creating a project in NVivo software and using the “parent/child” feature to capture hierarchical relationships, major topics addressed in each of 8 interviews were identified. Indeed, three nodes were created:

- Current use,
- Needs, and
- Cyber-security.

Thereafter, many sub-nodes were made under each node in NVivo by capturing the number of times the keywords were quoted in the transcripts. This coding
work permitted the identification of patterns properly and the organization of the data into themes. I was able to understand the recent use and needs of each parliamentarian in terms of ICTs, to deduce the general trend at this level and to propose recommendations.

3.4. Ethical Considerations
The human research ethics application governing this research was approved by the University of Regina Research Ethics Board on June 27, 2018 (the application and the approval are attached as Appendix 4). The interviews and the whole entirety of the research process have respected the ethical conditions. All interviewees were sent a consent form prior to the interview, and were asked to orally affirm their consent to be interviewed and recorded. Given that all interviewees are public officials, and that the questions were about their political and professional role and about their work environment, the research is perceived as of minimal risk. I have attempted to ensure that the anonymity of the respondents was protected in the following analysis. However, given the small size of the total population of Canadian MPs and Saskatchewan MLAs, deductive de-anonymization cannot be entirely ruled out (McLain and Kim 2018).

3.5. Difficulties and Limits
The difficulties encountered during the research are mainly related to the availability of MPs and MLAs while managing the balance noted above in relation
to the opposition and ruling parties, rural and urban constituencies as well as female and male parliamentarians. Also, the length of time available for an interview was severely limited because of the pressing schedules of the population base.

Given the nature of semi-structured interviews and qualitative research, the data may be interpreted differently by different readers, thus calling into question the validity and reliability of the research findings. However, the methods and techniques employed in the data analysis process enhances the credibility of the results.

Finally, the results are limited to the Legislative Assembly of Saskatchewan and House of Commons of Canada contexts and are strongly influenced by the nature of semi-structured interviews and qualitative methods, and by the personality of the specific parliamentarians interviewed and their own experience. Future research might focus on other provincial legislative assemblies and other MPs / MLAs criterion, such as age, seniority, and distance between the capital and the member’s constituency.

4. Results and analysis
The responses of the participants were analyzed according to certain criteria, with both professional and personal implications explored. In addition to being a source of information based on real evidence, this research both confirms and
invalidates some of the hypotheses found in the literature in relation to MP’s work. It also raises new concerns about ICTs and parliamentarians.

4.1. The Use of ICTs by Parliamentarians

When participants were asked how they use technology in their parliamentarian work, all members affirmed that they use new ICTs to fulfill their mission. Interviewees from both jurisdictions mentioned simple and ordinary use of ICTs tools and from their own initiative. MPs and MLAs revealed important adoption of ICTs and Web 2.0 tools and affirmed that they are using laptops and smartphones devices for their basic treatment. When I asked parliamentarians which kind of technology they are using, they all confirmed that Internet and mobility are the main tools of communication with the parliament administration, their political party as well as with citizens and their families. In the words of one respondent,

For me, my email and my Facebook account represent more than 90% of my exchanges as an MLA! It allows me to stay in constant touch with my Caucus, my constituents and my family during my different trips, day and night, weekdays and weekends...

Another MP noted

My mobile phone, smartphone, is the main communication tool, by SMS, instant messaging or email. The important thing is that I am close to my
team and my electors when I’m in Ottawa, it became indispensable and unavoidable.

For some participants, technology and innovation is not just about the Internet but also about using tools and software on their computers and phone calls with better coverage than in previous years in remote areas. One participant stated that

When I travel from the north of the province to the capital, and I do that at least 4 to 5 times by month during sitting periods, I’m often on the road, the phone is my preferred mean of communication …

While another member said that

Office software…I use it on my computer and it is very useful for my work… I am able to organize my files, treat my data on the spreadsheet software, as well as I prepare my presentations on PowerPoint… I store my data and archive it on an external hard drive just in case...

In addition, most of the respondents said they are using videoconferencing to communicate remotely with citizens and their family members when away from home, electronic messaging for email exchanges, and social networks like Facebook or Instagram to inform their actions and receive feedback (e.g., complaints or requests for assistance) from citizens. Moreover, the interviewed parliamentarians use social media to communicate more broadly, to promote
their objectives, and influence parliamentary and public discussion. An MP shared that

*The most of technology that I use as a member of parliament would be communication…*using various different platforms to connect with constituents, traditional ones, email, messenger on Facebook and other way of using technology. As a Member of Parliament in Ottawa I use Skype and videoconferencing…
Figure 4.1: The most cited current ICTs used

The chart above, created with NVivo software, shows a quantification of the times that specific ICTs were mentioned by the interviewed parliamentarians. These NVivo codes are ranked according to the number of times the keyword has been quoted, while the size and position of the different boxes represent the frequency with which different tools were mentioned.
4.2. The Impact of ICTs and Social Media on Their Work

MPs were asked about the impact of using technology in their work. Respondents stated that the impact is generally positive and important in terms of communication and sharing with citizens and other stakeholders. An MLA noted that

Parliamentarians that are far away from their constituencies, the advantage is a low cost and a low barrier meant to reach citizens and to be visible and getting feedback…to stay connected.

However, Interviewees stated that the impact is not similar across their different functions and roles in parliament. This impact remains limited when it comes to the tools used for research and the analysis and processing of documents and data received from the government, all done within very tight timelines, as well as the follow-up of the actions and promises of the government. An MP said that

Each Member of Parliament has a budget to run his office, including normal IT tools, like high speed Internet and devices. We need more interactive technologies, to permit to be virtually present in our constituency or vice-versa in Ottawa to do their work and interact with people…and to be able to analyze the data collected from different sources too…

With respect to Social Media usage, participants were asked how they use these tools. All participants confirmed having at least one page or account on Facebook, and all respondents reported having a Twitter account. MLAs are
very active on Twitter, like their federal counterparts, as well as on Facebook. Only two of the eight MPs reported having a presence on Instagram. Facebook and Twitter are used by MPs and MLAs to communicate with their constituents and received their feedback. Three participants have more than one presence on Facebook, with a second personal account for family and friends. Male and female participants are equal at this level with a slight advantage for women having more than one account on Facebook and Twitter, one for professional use and the other for personal use. Also, MPs and MLAs from rural or urban constituencies are at the same level of presence on social networks. Communication is universal at this level. Participants claim to use the instant messaging service of Facebook and the direct message function on Twitter for private messages with their constituents who prefer to not put their messages in public space. Five of the participants use WhatsApp or another instant messaging software, but this is generally reserved for communication with their caucus colleagues, political party, or family.

While asked about the advantages and disadvantages of using Social Media in particular, all participants agreed that the benefits, as mentioned above, are very important in terms of communication, sharing with stakeholders as well as in terms of image and presence. An MLA noted that

*Social networks are also a place for political competition, whether we like it or not, we must ensure a permanent presence and especially a quality presence ... I personally monitor my Facebook page*
As for disadvantages, respondents noted the constant stress associated with social networks including too many requests and the high level of expectations on the part of the constituents as the most negative aspects. In this way, an MP stated

"I am solicited day and night by people, for questions, requests, it is their right, I understand, but it puts a huge pressure on us and impacts our family life ... It's like a double-edged weapon!"

4.3. Work/Life Balance and Distance Challenges
Reflecting on how technology affects their personal daily life, an MP mentioned

"My husband and children can reach me all the time using technology, Facebook, Skype and other communication software allow us to see each other in video ... but I do not think it replaces the presence of a parent especially when children are young and attend primary or secondary school ... It is true that technology helps in this way, but does not solve the problem!"

One parliamentarian, a father of young children, confirmed that:

"Since we are less often at home... we have to pay a private teacher!"

"Because we really want them to succeed!!"
Women MPs and MLAs mentioned also that they are affected by the pressure on them via the new means of communication. They think that time when they are busy or absent is irretrievable and irreplaceable for their children and families. As affirmed by this MLA:

... People come to me for all kinds of problems. You have to be able to handle this constant pressure and not take it personally...

One parliamentarian explained her situation with this statement:

... I want to be a good mother, but also a good MP, so my challenge is to be a good MP and to be present with my family.

With respect to the distance between their constituency and the capital city, one MLA offered the following

I travel thirty to forty thousand kilometers each year ... but every week I spend 2-3 days in my riding during sitting periods.

MPs confirmed being generally more affected by their absence from their provinces than MLAs, given the average distance to Ottawa. One MP stated

...Long journeys means a longer absence...

However, one of the participants noted

My district is large, but I do not suffer too much from travel because my previous job required me to spend a lot of time on the road...
4.4. Future Needs

Figure 4.2 (page 43), below, identifies the ICTs mentioned by the interviewed parliamentarians in terms of future needs. Codes are ranked according to the number of times the keyword has been quoted, while the size and position of the different boxes represent the importance of different tools in descending order.

With respect to how parliament should modify its internal regulation to fully adopt the application of ICTs on its processes, two MPs and three MLAs recommended that their respective parliaments officially include technology in their respective internal regulations in order to adopt the electronic exchange of data and documents within their parliaments.
In addition, the same interviewees suggested providing access to digital data and processing tools for all parliamentarians, whether government or opposition, in order to be able to exercise their role of providing oversight for government action and ensuring their mission of legislative production. The majority of respondents took stock of the need for parliament’s administration to play a greater role in the implementation and use of business applications to facilitate their daily work. Indeed, MPs and MLAs from government and opposition benches said that they
lack software applications to track governmental action and optimize their role in providing parliamentary scrutiny.

In terms of future needs, parliamentarians hope to get access, themselves, to interfaces and database tools to undertake deep research into specific subjects related to the budget lifecycle or ongoing projects or bills. Respondents expressed a wish to be at the same level as the government in term of available resources for legislative production and oversight. As one respondent noted

*We are overwhelmed by the time when it comes to processing the budgetary documents… and we are not very sure of the time we need to analyze the data… Advanced tools will be appreciated and our office assistants must also be trained to accompany and give the necessary support to the MLAs.*

Many opposition MPs and MLAs especially noted their inability to adequately review hundreds of pages of legislation with short turnaround times, and they think that technology can be helpful to achieve what they see as the main objective of their representative mission: analyzing government bills and providing counter-proposals. As for the budgetary process, one MLA said

*The budget is an example… we have as opposition … a short time to study the copy of the government and be able to prepare our comments and counter-proposals … it would be useful for us to have access to detailed data on electronic interfaces.*
Another major point, important for MPs and MLAs, is the confidentiality and security of data. This concern was raised by all the respondents—majority or opposition, MPs and MLAs—to protect their exchanges and flow of information transiting within the computer networks of their respective institutions. Confidentiality is an important concern for parliamentarians. As one MP noted:

That issue of cyber security has to be handled collectively for all parliamentarians within the House of Commons. I know that we have continuously some security upgrading and we use a remote VPN connection to access my office network.

All participants, MPs and MLAs proposed to put in place a strong cyber security policy in order to protect sensitive data and ensure integrity and veracity of transactions inside parliaments and between members.

All the interviewees noted their willingness to adopt more ICTs tools related to IT processing Tools, IT databases, collaboration, analytics and business intelligence in order to enhance their role in the governance process and to be at the same level of knowledge and insights.

4.5. Summary
It should be noted that, with respect to the professional implications, the responses collected highlight the important role of ICTs in the daily life of a
parliamentarian. All participants agree that ICTs exercise a major impact on their mission and that the quality of their work has improved after the use of technological tools. They also added that it is necessary to provide them with more resources at this level.

In addition, the testimonies collected illustrate the broad spectrum of the implications of the use of ICTs on the personal lives of MPs, but that in most cases refer to the same finding—namely the crucial and systematic lack of time to attend to all their responsibilities. Indeed, the work of a parliamentarian seems to take up a large amount of time which limits the probable positive impact of the use of technological tools. This phenomenon affects both men and women, opposition or government, rural or urban, MLAs or MPs.

With respect to the differences, most concede that the work of a parliamentarian is more difficult when the district is far from the capital. The time spent traveling is also an irritating point raised by several participants. Also, women parliamentarians seem to face more intense family-related impacts compared to men. For parliamentarians with a young family, as confirmed in the research and studies mentioned in the literature review, they continue to suffer from the problems caused by their absence despite the use of more advanced ICTs for easily staying in touch when away from home.
A perhaps surprising finding from the data is the consensus across respondents around their technology needs and wishes regardless of government or opposition status, or whether the parliamentarian is from a rural or urban constituency. Also noteworthy is the shared desire of all participants for an institutional framework, practical and above all secure, for the use of technology in their respective parliaments.

5. Recommendations
Based on the findings from the field research and literature review, I recommend that parliamentary administrations should adopt a continuous technological evolution and monitoring approach. The intent of this approach would be, in alignment with general e-parliament definitions, to strengthen democracy and encourage transparency and citizen political engagement. Indeed, an internal regulation should provide an incentive framework for the use of technology as the main and official tool for data exchange and workflow definition in Parliament.

It would be beneficial for the House of Commons of Canada and Legislative Assembly of Saskatchewan to consider investing in the acquisition of tools beyond basic software, such as word processing or spreadsheet software, and moving towards developing storage and data processing platforms in order to make them available to parliamentarians.
However, we must not ignore the complexity of a transition to a robust e-parliament. Like any digital transformation, beyond the computer systems, applications, hardware and infrastructure, we must see the other two pillars of a functional and professional information system; namely, the procedures and regulations on one side, and qualifications and training of the systems managers on the other. While it is important to provide parliamentarians with high-performance hardware as well as high-speed and secure Internet and mobile connectivity, no equipment is enough or useful if the content is not made available digitally, such as detailed bills, government proposals, statistical data, annual budget annexes, and audit reports. This situation is more problematic at the provincial level as most MLAs have complained about the large audit books to read and process each year. In addition, parliaments should develop capacity-building plans for employees, parliamentarian’s office employees, and the parliamentarians themselves, to take advantage of these smart solutions and software and to improve the responsiveness, efficiency, and innovation of the work of parliament and its members.

Moreover, the internal regulations of each parliament should seek to improve the use of ICTs in strengthening internal processes in parliaments and giving more options to members in term of processing and analysing data and insights. Many parliaments go so far as to establish a research center or to fund an independent research center, and forge links with civil society organizations to meet their research needs.
Each parliament studied is a case apart, having different needs according to their own specificities, role, and constitutional prerogatives. The Legislative Assembly of Saskatchewan, as a provincial parliament, must be able to formalize the use of ICT in its internal regulations. It is important to involve as many stakeholders as possible in the legislative production and oversight of government action at the same pace and with means available to all. With respect to the House of Commons of Canada, an even more democratically mature institution and innovation leader, it will need to improve some areas, especially data processing and data mining software, and renew and update some process rather than put in place legal frameworks from scratch.

6. Conclusion

This research has sought to shed light on some unknown aspects of the impact of new technologies on the professional and personal lives of parliamentarians. Through the generous testimonies of the parliamentarians who participated, it is now easier to get an idea of the work of parliamentarians in the digital era across genders, government or opposition status, or the density of its constituency. It is encouraging to note that many disparities and constraints among parliamentarians found in the literature seem less present today.

There appears, however, a remaining possible pressure that persists among female parliamentarians. These testimonies also reveal disparities between
parliamentarians with young children and those not responsible for childrearing. These issues, however, go beyond the scope of this analysis though will require particular attention in the future if Canada’s parliaments are to reflect the diversity of our wider populations.

Some aspects, however, were unanimous among participants such as the crucial lack of time. This latter aspect seems to be the source of the vast majority of the difficulties faced by MPs and MLAs in their jobs. Changing schedules, travel, constituency activities, and parliamentary work place considerable stress on parliamentarians. Although some progress has been made to improve the living and working conditions of parliamentarians, there is still a lot of work to be done. This issue is crucial for our parliaments if we aspire to attract the best elements of society.

Compared to what has been presented in the literature review, Canadian parliamentarians have more tools of communication and treatment that facilitate their daily work compared to their counterparts from the late last century and even compared to the early 2000s. The growing use of ICTs in parliamentary work is a positive development that parliamentary administrations must have the will and the means to continue pursuing. The tools of e-parliament help parliamentarians to fulfill their essential functions. Digital resources are useful to committees, information systems allow monitoring of parliamentary work, and parliament’s website contributes to communication and networking between
elected representatives and citizens. These systems help many parliaments cope with an ever-increasing workload. In addition, the rise of the Internet and broadband technologies allows parliament to connect to a global information network that facilitates legislative research and the sharing of best practices.

The use of ICT by parliamentarians facilitates the sharing of information with citizens, from a calendar of their meetings and activities to completed legislative projects and commissioned reports. The great potential accessibility of information is a boon for MPs who consider the participation of the population as vital to their work. On the other hand, this accessibility may be a source of concern for parliamentarians seeking to protect their interests by impeding the free flow of information. It is therefore important to consider not only the costs of ICT but also their political implications.

Whatever the affinities of the parliament for ICTs, its administration always needs qualified personnel to lead. An effective parliamentary administration must have strong management and research skills, as well as training capabilities to continuously update the skills of its staff, to ensure parliamentarians have the necessary information they need and to be able to analyze it, so that parliamentarians can make legislative decisions after properly assessing the long-term social and economic consequences of the proposed legislation or bill.
However, despite the technological evolution and the introduction of innovative tools within Canadian parliamentary systems, the same problems continue to arise in terms of the impact of the work of parliamentarians and their families. The issues that existed before the advent of the Internet, as presented in the literature review, are not necessarily mitigated by the use of technology in parliament and by parliamentarians, particularly the void created by the recurrent absence of parents from the family environment. Worse still, the use of the Internet can also be a burden to parliamentarians given the very high level of solicitation and instant expectations from their constituents.
References


Hai-Jew, S. (2017). Employing the sentiment analysis tool in NVivo 11 plus on social media data: eight initial case types. In Social Media Listening and Monitoring for Business Applications (pp. 175-244). IGI Global.


http://www.ourcommons.ca/Content/MAS/mas-e.pdf

House of Commons (2018b). MEMBERS’ EXPENDITURES REPORT APRIL 1, 2018 TO SEPTEMBER 30, 2018


https://www.ipu.org/our-work/strong-parliaments/setting-standards/criteria-democratic-parliaments

http://archive.ipu.org/english/Surveys.htm#e-parl2010


Posted: Jun 14, 2019 8:28 AM ET | Last Updated: June 14

Appendix 1: Invitation to participate to interview

[sent via email]

Subject: Request to participate in a Masters Thesis Research Interview

Dear [name of MP/MLA],

My name is Yassine EL BAHLOULI, a master of public policy student in the Johnson Shoyama Graduate School of Public Policy at the University of Regina. I am conducting research for my thesis: How Do Parliamentarians Use ICTs?

I am writing to ask if you would be willing to meet with me for a 30-minute semi-structured research interview.

I am planning to interview four MPs from the House of Commons and four MLAs from the Legislative Assembly of Saskatchewan for this research.

This research looks specifically at the use of technology by MPs/MLAs to optimize and enhance their role in the parliamentary processes, to meet their responsibilities, and to improve their capacity.

I would be pleased to receive an email response letting me know if you would be available for a 30-minute interview sometime during the next four weeks.

Yours sincerely,

Yassine

Contact:

MPP Student: Yassine EL BAHLOULI
Email: yass79@gmail.com
Telephone: 306-216-7896

Supervisor: Justin Longo
Email: justin.longo.phd@gmail.com
Telephone: 360-450-5345
Appendix 2: Participant Consent Form: Interview

Project Title: How Do Parliamentarians Use Information and Communication Technologies?

Researcher: Yassine EL BAHLOULI
Position: Graduate Student, Masters of Public Policy
Department: Johnson Shoyama Graduate School of Public Policy, University of Regina
Phone: +1 (306) 216 7896
Email: elbahloy@uregina.ca

Supervisor: Dr. Justin Longo
Position: Assistant Professor, and Cisco Research Chair in Digital Governance
Department: Johnson Shoyama Graduate School of Public Policy, University of Regina
Phone: +1 306 450 5345
Email: justin.longo@uregina.ca

Purposes and Objectives of the Research: My research premise is the impact of electronic technology on MPs / MLAs work and role in the House of Commons / Legislative Assembly of Saskatchewan. My research centers on two central questions: How do technology affect parliamentarians' production and control responsibilities? And how should parliament modify its internal regulation to adopt the application of information and communication technologies on its processes?

Procedures: If you agree to voluntarily participate in this research, your involvement in this research will centre on a 30-minute interview, conducted face-to-face or by telephone, following a number of semi-structured interview questions.

This interview is being recorded solely for the purposes of preparing a transcript of the interview. This transcript will be returned to you to allow you to amend anything you wish.

Potential Risks: There are no known or anticipated risks to you by participating in this research.

Confidentiality: I will be the only person on my side of the interview. No one other than me will have access to this recording. Recordings will be made directly to an encrypted computer disk that will remain in my control. The interview recording will be deleted once you have approved the final version of the transcript, or at your earlier request. The prepared transcripts will be stored on an encrypted computer disk, in my control, for five years (to January 2024) and then deleted. Your comments will be anonymized in my analysis and writing.
I also want to make you aware of any "limits to confidentiality" regarding this research:

- Limits due to context: Participants could be identified because of the nature or size of the sample.
- Limits due to selection: Procedures for selecting participants may compromise the confidentiality of participants (e.g. participants are referred to the study by a person outside the research team)
- Other limits: Interview respondents may refer to particulars about their position (e.g., an MLA/MP for a particular riding) or transcripts forwarded to participants work email account may be accessed by their employers.

**Right to Withdraw:** Your participation in this interview is voluntary and you can answer only those questions that you are comfortable with. You may withdraw from the research project for any reason, at any time, without explanation or penalty of any sort. Your right to withdraw data from the study will apply until October 1 2018. After this date, it is possible that some results have been analyzed, written up and/or presented and it may not be possible to withdraw your data.

**Follow up:** A summary of the research will be sent to you after it has been successfully defended.

**Questions or Concerns:** Please contact me or my supervisor using the information at the top of page 1.

This project has been approved on ethical grounds by the University of Regina Research Ethics Board on June 27, 2018. Any questions regarding your rights as a participant may be addressed to the committee at (306-585-4775 or research.ethics@uregina.ca).

**Oral Consent:** I will ask, at the time of the interview and if there are no other questions, that you verbally affirm that you have had an opportunity read and understand the contents of this consent form, and that you voluntarily agree to participate in this research subject to the terms described above. This affirmation will entail part of the audio interview recording.
Appendix 3: Interview Protocol

Legislative Assembly of Saskatchewan - MLAs
House of Commons of Canada - MPs

[Start by thanking the respondent for meeting.]

["Before we begin, I would like to review the consent form that I emailed to you."]

- **Purposes and Objectives of the Research:** My research premise is the impact of electronic technology on MPs / MLAs work and role in the House of Commons / Legislative Assembly of Saskatchewan. My research centers on two central questions: How do technology affect parliamentarians' production and control responsibilities? And how should parliament modify its internal regulation to adopt the application of information and communication technologies on its processes?

- **Procedure:** We are scheduled for a 30-minute interview, following a number of semi structured interview questions.

- **This interview is being recorded solely** for the purposes of preparing a transcript of the interview. This transcript will be returned to you to allow you to amend anything you wish.

- **Potential Risks:** There are no known or anticipated risks to you by participating in this research.
- **Confidentiality:** I will be the only person on my side of the interview. No one other than me will have access to this recording. Recordings will be made directly to an encrypted computer disk that will remain in my control. The interview recording will be deleted once you have approved the final version of the transcript, or at your earlier request. The prepared transcripts will be stored on an encrypted computer disk, in my control, for five years (to January 2024) and then deleted. Your comments will be anonymized in my analysis and writing.

  I also want to make you aware of any "limits to confidentiality" regarding this research:
  
  - Limits due to context: Participants could be identified because of the nature or size of the sample.
  - Limits due to selection: Procedures for selecting participants may compromise the confidentiality of participants (e.g. participants are referred to the study by a person outside the research team)
  - Other limits: Interview respondents may refer to particulars about their position (e.g., an MLA/MP for a particular riding) or transcripts forwarded to participants work email account may be accessed by their
employers.

- **Right to Withdraw:** Your participation in this interview is voluntary and you can answer only those questions that you are comfortable with. You may withdraw from the research project for any reason, at any time, without explanation or penalty of any sort. Your right to withdraw data from the study will apply until October 1, 2018. After this date, it is possible that some results have been analyzed, written up and/or presented and it may not be possible to withdraw your data.

- **Follow up:** A summary of the research will be sent to you after it has been successfully defended.

- **Questions or concerns:** Please contact me or my supervisor using the information at the top of page 1.

This project has been approved on ethical grounds by the University of Regina Research Ethics Board on (insert date). Any questions regarding your rights as a participant may be addressed to the committee at (306-585-4775 or research.ethics@uregina.ca).

- **Oral Consent:** I will ask, at the time of the interview and if there are no other questions, that you verbally affirm that you have had an opportunity to read and understand the contents of this consent form, and that you voluntarily agree to participate in this research subject to the terms described above. This affirmation will entail part of the audio interview recording.

---

**Section 1:** How do parliamentarians use ICTs?

- I would like to begin by asking you how do you use technology in your parliamentarians work.
  - **Prompts:**
    - Which kind of Technology are you using?
    - The impact is similar across different functions and roles?
    - What about Social Media usage?
    - Advantages and disadvantages?
    - How it affects your daily life?

---

**Section 2:** Recommendations and needs
● How should parliament modify its internal regulation to fully adopt the application of information and communication technologies on its processes?

Prompts:

● What about your recommendation/needs related to legislative role?

● What about recommendation/needs related to the control of government action?

● What about recommendation/needs related to the budgetary process?

● What are the precautions and cyber security policy to put in place in order to save sensitive data, integrity and veracity of transactions?
Appendix 4: Research Ethics Application and Certificate of Approval

Application for Behavioural Research Ethics Review

Evaluating Applications
The matters of greatest concern to the Behavioural Research Ethics Board (Beh-REB) are the issues of informed consent of participants, voluntary participation, protection of individual privacy (confidentiality and anonymity), and safeguarding participants from any harmful results due to participation or non-participation in the proposed investigation or research project. Our evaluation of an application is based on the degree to which each of these concerns are satisfied; when filling out the application, researchers are urged to consider these points, and to explain to the Beh-REB the steps they will take to address the concerns. Researchers are also urged to consult the Tri-Council Policy Statement 2 for more information and guidance.

The Beh-REB acknowledges the variety of paradigms and methodologies currently available to researchers, and that each of these paradigms entails its own particular ethical issues. Thus, there may be more than one way to address an ethical issue. Researchers should feel free to suggest alternative approaches or to explain why a particular requirement is not appropriate in the context of a given project.

**All text boxes will expand once <Enter> is selected and the cursor moves to the next section.**

<table>
<thead>
<tr>
<th>PART 1: IDENTIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 Project Title</td>
</tr>
<tr>
<td>How Do Parliamentarians Use ICT?</td>
</tr>
</tbody>
</table>

| 1.2 Principal Investigator | GN 1.2 |
| Full Name | YASSINE ELBAKLOULI |
| Mailing Address | 25-85 Munroe Place |
| Email | yassine70@gmail.com |
| Phone | 306-215-7866 |
| NSD number (U of S faculty only) | |

| 1.3 University/Institutional Affiliation of Principal Investigator | GN 1.3 |
| Position | MPP student |
| Department | Johnson Shymara Graduate School of Public Policy |
| Division | |

| 1.4 If this is a student/graduate/resident project, please provide the following information: | GN 1.4 |
| a) Student Name(s) | YASSINE ELBAKLOULI |
| b) Supervisor Name | Dr. Justin Long |

| 1.5 Project Personnel (include graduates/post graduates/residents): | GN 1.5 |
| Full Name | |
| Project Position/Role | |
| University/Institutional Affiliation | |
| Email | |
| Phone | |

<p>| 1.6 Primary Contact Person for Correspondence (if different than Section 1.2): | GN 1.6 |
| Full Name | |
| Mailing Address | |
| Email | |
| Phone | |</p>
<table>
<thead>
<tr>
<th>PART 2: CONFLICT OF INTEREST</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1.1 Is there any real, potential or perceived conflict of interest (any personal or financial interest in the conduct or outcome of this project)? GN 2.1</td>
</tr>
<tr>
<td>NO</td>
</tr>
<tr>
<td>2.1.2 Will any of the researcher(s), members of the research team and/or their immediate family members:</td>
</tr>
<tr>
<td>- Receive personal benefits in connection with the project over and above the direct costs of conducting the project, such as remuneration or employment?</td>
</tr>
<tr>
<td>- Receive significant payments of other sorts from the sponsor such as grants, compensation in the form of equipment or supplies or retention for ongoing consultation and training?</td>
</tr>
<tr>
<td>- Have a non-financial relationship with a sponsor (such as unpaid consultant, board membership, advisor or other non-financial interest)?</td>
</tr>
<tr>
<td>- Have any direct involvement with the sponsor such as stock ownership, stock options or board membership?</td>
</tr>
<tr>
<td>- Hold patents, trademarks, copyrights, licensing agreements or intellectual property rights linked in any way to the project or the sponsor?</td>
</tr>
<tr>
<td>- Have any other relationship, financial or non-financial, that if not disclosed, could be construed as a conflict of interest?</td>
</tr>
<tr>
<td>Yes: □ No: □</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PART 3: BRIEF OVERVIEW OF RESEARCH PROJECT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Briefly describe the project, its objectives and potential significance (250-500 words): GN 3.1</td>
</tr>
<tr>
<td>Legislative production through a jurisdiction’s Parliament is an important governance function that involves numerous stakeholders (e.g., parliamentarians, civil servants, civil society organizations, and citizens), each having different organizational, procedural, and technical capacities.</td>
</tr>
<tr>
<td>The proposed research will assess the federal and provincial level in the Canadian House of Commons and in Saskatchewan Legislative Assembly across the different functions and roles of parliamentarians focusing on how the use and adoption of information and communication technologies (ICTs) can improve their abilities The research question is:</td>
</tr>
<tr>
<td>- Q.1. How do parliamentarians use technology to fulfill their responsibilities?</td>
</tr>
</tbody>
</table>
Provide a description of research design and methods to be used: GN 3.2
Data Collection and Analysis: Semi-structured interviews with MPs and MLAs
For this research, parliaments' involvement in the parliament processes will be evaluated using data from semi-structured interviews with MPs from House of Commons of Canada and MLAs from legislative assembly of Saskatchewan related to the impact of electronic technology on their role.
According to Edwards & Holland: "a semi-structured interview is open, allowing new ideas to be brought up during the interview as a result of what the interviewee says. The interviewer in a semi-structured interview generally has a framework of themes to be explored." (Harrell and Bradley, 2000, Page 7 Edwards and Holland, 2013, Page 2).
I will interview eight parliamentarians, four MLAs and four MPs based on three categories:
- Gender: Male or Female
- Denial of the constituency: Urban or Rural
- Government or Opposition

With respect to the selection approach, I will compile a list of eligible MPs and MLAs in each category (e.g., all males, government, urban). Then I will make a random sorting before contact the selected MP/MLA to request an interview. If they decline or fail to respond, I will ask the next one, and so on until I get an interview. I will repeat until I have the number of interviews in each category.

- All category combinations:
1. Male, government, urban
2. Male, government, rural
3. Male, opposition, urban
4. Male, opposition, rural
5. Female, government, urban
6. Female, government, rural
7. Female, opposition, urban
8. Female, opposition, rural

A qualitative approach using NVivo 2017 software will be employed. Indeed, NVivo 2017 is an advanced software tool that analyzes and explores a dataset containing data from interviews and supports automated coding and analysis (Haslberg, 2017).

The coding in NVivo will be inductive, grounded theory, using appropriate word or phrase, which best represents a key point, a note.
Moreover, I will assess how these policy makers, the interviewed MPs and MLAs, use social media to communicate, promote their objectives, and influence the parliamentary and public discussion.
A draft interview protocol is attached.

Provide details regarding the duration and location of data collection event(s): GN 3.3
I will interview eight parliamentarians. Each interview is anticipated to last between 30 and 60 minutes. The interviews will be recorded using a recorder and a smartphone and I will transcribe the interview myself.
- Questionnaire
- Individual interviews
- Group interview
- Video/audio recording
- Home visits
- Other:

Participant Observation
Focus Groups
Non-invasive physical measurements
Secondary use of data or analysis of existing data
Ethnography

PART 4: PROJECT DETAILS
4.1 Will you have any internet-based interaction with participants? GN 4.1
- Yes
- No

4.2 Will your research involve Aboriginal People including First Nations, Inuit and Métis peoples? GN 4.2
- Yes
- No
4.3 4.1.1 Will the project involve community-based participatory research? 
☐ Yes ☒ No

4.4 Will deception of any kind be necessary in this project? 
☐ Yes ☒ No

4.5 Indicate how the participants will be debriefed following their participation (if applicable), and describe how the information on the results of the research will be made available to participants once the study has ended. Debriefing is particularly important if deception has been used. 
GN 4.5
Interview participants will be sent the transcript of their interview, and provided the opportunity to make corrections or deletions. The transcript file will be password protected, with the password communicated separately to the recipient. The final version of the thesis will be shared with all interview participants.

4.6 Will participants be compensated? 
☐ Yes ☒ No

4.7 4.7.1 Will participants be anonymous in the data gathering phase of the study? (Anonymous means that no link can be established between the participant and the research - no one including the researcher knows who has participated in the research): 
☐ Yes ☒ No

4.7.2 Will the confidentiality of participants and their data be protected? (Confidentiality means that no link can be established between the collected information and the participant's identity): 
☐ Yes ☒ No

4.7.3 If yes, are there any limits to confidentiality:
☐ Limits due to the nature of group activities (e.g. focus groups): the researcher cannot guarantee confidentiality
☐ Limits due to context: individual participants could be identified because of the nature or size of the sample or because of their relationship with the researcher.
☐ Limits due to selection: procedures for recruiting or selecting participants may compromise the confidentiality of participants (e.g. participants are referred to the study by a person outside the research team)
☐ Other:
Interview respondents may refer to particulars about their position (e.g., an MLA for a particular riding).

PART 5: ESTIMATION OF RISKS AND BENEFITS

5.1 5.1.1 Do you consider this project to be: 
☒ Minimal Risk ☐ Above Minimal Risk

5.1.2 Indicate if the participants might experience any of the following: 
☒ Risk of psychological or emotional harm or discomfort (e.g. trauma, anxiety, stress)
☐ No
Legal repercussions for participating in the study (e.g. possibility of being sued, charged with criminal activity, disclosure of past or future criminal records, etc.)
☐ No
Social repercussions (e.g. ostracized, being negatively judged by peers or employer, fired from your job)
☐ No
Risk of physical harm or discomfort (e.g. falling, muscle pain, tiredness, weakness, nausea)
☐ No

5.1.3 Describe how the risk will be managed (including an explanation as to why an alternative approach could not be used). If appropriate, identify any resources, e.g. physician or counselor, to which participants can be referred. 
GN 5.1.3
Minimal risk.

5.1.4 If above minimal risk, what are the likely benefits of the research to the researcher, participant, the research community and society that would justify asking participants to participate? 
GN 5.1.4
PART 6: PARTICIPANT RECRUITMENT

6.1 Describe the participants and the criteria for their inclusion or exclusion. Indicate the number of participants and a brief rationale for the intended number of participants. ON 6.1

The participants are from opposition and ruling parties, rural and urban constituencies as well as women and men.

6.2.1 Provide a detailed description of the method of recruitment. ON 6.2

With respect to the selection approach, I will compile a list of eligible MPs and MLAs in each category (e.g., all male, government, urban). Then I will make a random selection before contact the selected MPs/MLA to request an interview. If they decline/fail to respond, I will ask the next one, and so on until I get an interview. I will repeat until I have the number of interviews in each category.

- All category combinations:
  1. Male, government, urban
  2. Male, government, rural
  3. Male, opposition, urban
  4. Male, opposition, rural
  5. Female, government, urban
  6. Female, government, rural
  7. Female, opposition, urban
  8. Female, opposition, rural

6.2.2 How will prospective participants be identified?

Eight parliamentarians: four MLAs and four MPs based on three categories:
- Gender: Male or Female
- Density of the constituency: Urban or Rural
- Government or Opposition

6.2.3 Who will contact prospective participants? Describe the source of the contact information, how they will be contacted and as applicable, who originally collected the contact information. Ensure any letters of initial contact or other recruitment materials are attached, e.g., advertisements, flyers, telephone script, etc.

In cases where the research involves special or vulnerable populations, distinct cultural groups, or in cases where the research is above minimal risk, the researcher should describe their experience or training in working with the population. If none of these criteria apply, this section may be omitted ON 6.3

Where relevant, please explain any relationship (pre-existing, current or expected to have) between the researchers and the researched (e.g., instructor-student, manager-employee, co-workers, family members/intimate relationships, etc.). Please pay special attention to relationships in which there may be a power differential. Describe any safeguards and procedures to prevent possible undue influence, coercion or inducement. ON 6.4

None.

PART 7: CONSENT PROCESS

Describe the process that will be used to obtain informed consent. Please note that it is the content of the consent, not the format that is important. If the research involves collection of potentially identifiable information from a research participant or extraction of potentially identifiable information from an existing database, please describe how consent from the individuals or authorization from the data custodian will be obtained. If there will be no written consent, please provide a rationale for oral or implied consent (e.g., cultural appropriateness, online questionnaire, etc.) and explain how consent will be recorded.

7.1.1 Describe the consent process. ON 7.1

When the time of the interview is confirmed, the participant will be sent the attached consent form. At the beginning of the interview, they will be asked to affirm their understanding of the consent form and their agreement with its terms (including that they agree to the confidential recording of the interview for purposes of transcription.)

7.1.2 Who will ask for consent?

The principal investigator

7.1.3 Where, and under what circumstances will consent be obtained?

Every interview participant will be asked to consent to participate.

7.1.4 Describe any situation in which the renewal of consent for this research might be appropriate and how this would take place (e.g., longitudinal studies, multiple data collection events, etc.). Not applicable.

RE3 Application for Behavioural Research Ethics Review (last update 01-July-2015)
### PART 8: DATA SECURITY AND STORAGE

Indicate the procedures you plan to implement to safeguard and store the data. Identify the person who will be assuming responsibility for data storage (University policy requires the researcher or the supervisor, in the case of student research, to securely store the data at the University for a minimum of five years upon the completion of the study. For more information see U of S Responsible Conduct of Research Policy or U of S Records and Information Management Policy).

<table>
<thead>
<tr>
<th>8.1</th>
<th>Who will conduct the data collection? GN 8.1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The principal investigator</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>8.2</th>
<th>Who will have access to the original data of the study? GN 8.2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The principal investigator (transcripts will be prepared by the PI alone)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>8.3</th>
<th>Data security during transportation from collection site</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.3.1</td>
<td>Person responsible for data storage:</td>
</tr>
<tr>
<td></td>
<td>The principal investigator</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>8.3.2</th>
<th>Data security during transportation from collection site</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Recordings and transcripts will not be moved from the collection site (20 x 20).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>8.3.3</th>
<th>Means of location of storage (e.g. a locked filing cabinet, password protected computer files, encryption):</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Recordings will be made directly to an encrypted computer disk, in the control of the principal investigator.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>8.3.4</th>
<th>Time duration of storage (Must be &gt; 5 Years):</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Data will be stored on an encrypted computer disk in the control of the principal investigator, for five years (to January 2026).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>8.3.5</th>
<th>Final disposition (archival, shredding, electronic file deletion):</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Data will be deleted from the encrypted computer disk in January 2028.</td>
</tr>
</tbody>
</table>

8.4 Indicate how the data collected is intended to be used (thesis, journal articles, conference presentation, media, etc). GN 8.4

8.4.1 The data collected is to be used in the principal investigator's thesis, and subsequent conference presentations and journal articles.
PART 5: Declaration by Principal Investigator
(or Supervisor for student projects)

Project Title
The Role of Electronic Technology in Parliament: The case of house of Commons of Canada and Legislative Assembly of Saskatchewan.

I confirm that the information provided in this application is complete and correct.
I accept responsibility for the ethical conduct of this project and for the protection of the rights and welfare of the human participants who are directly or indirectly involved in this project.
I will comply with all polices and guidelines of the University and Health Region affiliated institutions where this project will be conducted, as well as with all applicable federal and provincial laws regarding the protection of human participants in research.
I will ensure that project personnel are qualified, appropriately trained and will adhere to the provisions of the REB-approved application.
I certify that any significant changes to the project, including the proposed method, consent process or recruitment procedures, will be reported to the Research Ethics Board for consideration in advance of its implementation.
I certify that a status report will be submitted to the Research Ethics Board for consideration within one month of the current expiry date each year the project remains open, and upon project completion.
If personal health information is requested, I assure that it is the minimum necessary to meet the research objective and will not be used or disclosed to any parties other than those described in the REB-approved application, except as required by law.
I confirm that adequate resources to protect participants (i.e., personnel, funding, time, equipment and space) are in place.
I understand that if the contract or grant related to this research project is being reviewed by the University or Health Region, a copy of the ethics application inclusive of the consent document(s), may be forwarded to the person responsible for the review of the contract or grant.
I understand that if the project involves Health Region resources or facilities, a copy of the ethics application may be forwarded to the Health Region research coordinator to facilitate operational approval.

Signature of Principal Investigator and/or Supervisor

[Signature]

Printed Name of Principal Investigator and/or Supervisor

Date (MM/DD/YYYY)

Signature of Student Investigator

[Signature]

Printed Name of Student Investigator

Date (MM/DD/YYYY)

Department Head (IfS and ROHR only): The signature/approval of the Department/Administrative Unit acknowledges that he/she is aware of and supports the research activity described in the proposal.

Signature of Department Head

[Signature]

Printed Name of Department Head

Date (MM/DD/YYYY)

REB Application for Behavioural Research Ethics Review (last update 03-July-2015)
<table>
<thead>
<tr>
<th>Document</th>
<th>Included?</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recruit Material(s)</td>
<td>☒ Yes</td>
<td>☐ N/A</td>
</tr>
<tr>
<td>Letter(s) of Initial Contact</td>
<td>☒ Yes</td>
<td>☐ N/A</td>
</tr>
<tr>
<td>Consent Form(s)</td>
<td>☐ Yes</td>
<td>☐ N/A</td>
</tr>
<tr>
<td>Assent Form(s)</td>
<td>☒ Yes</td>
<td>☐ N/A</td>
</tr>
<tr>
<td>Research Tool(s) (e.g. Questionnaires, focus group guides, interview scripts, etc.)</td>
<td>☒ Yes</td>
<td>☐ N/A</td>
</tr>
<tr>
<td>Transcript Release Form(s)</td>
<td>☐ Yes</td>
<td>☐ N/A</td>
</tr>
<tr>
<td>RQHR Operational/Departmental Approval Form</td>
<td>☒ Yes</td>
<td>☐ N/A</td>
</tr>
<tr>
<td>Other (please specify): none</td>
<td>☒ Yes</td>
<td>☐ N/A</td>
</tr>
</tbody>
</table>
Certificate of Approval

PRINCIPAL INVESTIGATOR
Yassine EL BAHLOULI

DEPARTMENT
Johnson Shoyama Graduate School of Public Policy

REB#
2018-093

SUPERVISOR
Dr. Justin Longo

TITLE
How Do Parliamentarians Use ICTs?

APPROVED ON
June 27, 2018

RENEWAL DATE
June 27, 2019

APPROVAL OF
Application for Behavioural Research Ethics Review
Participation Consent Form
Email Invitation
Semi-structured Interview Protocol

Full Board Meeting ☐ Delegated Review ☒

The University of Regina Research Ethics Board has reviewed the above-named research project. The proposal was found to be acceptable on ethical grounds. The principal investigator has the responsibility for any other administrative or regulatory approvals that may pertain to this research project, and for ensuring that the authorized research is carried out according to the conditions outlined in the original protocol submitted for ethics review. This Certificate of Approval is valid for the above time period provided there is no change in experimental protocol, or related documents.

Any significant changes to your proposed method, procedures or related documents should be reported to the Chair for Research Ethics Board consideration in advance of its implementation.

ONGOING REVIEW REQUIREMENTS
In order to receive annual renewal, a status report must be submitted to the REB Chair for Board consideration within one month of the current expiry date each year the study remains open, and upon study completion. Please refer to the following website for the renewal and closure forms: https://www.uregina.ca/research/for-faculty-staff/ethics-compliance/human/ethicsforms.html

Raven Sinclair, BA, CISW, BISW, MSW, PhD
REB Chair

Please send all correspondence to:
Research Ethics Office
University of Regina
Research and Innovation Centre 103
Regina, SK S4S 0A2
Telephone: (306) 585-4775 Fax: (306) 585-4893
research.ethics@uregina.ca

Certificate of approval