

How is the Appropriate Use of Enterprise Social Media
Determined? The Case of GConnex within the Canadian
Federal Government

by

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Abstract

The success of enterprise social media depends on users' social interactions. Individual users must determine how to use the system and whether or not their usage is appropriate. Governments are generally risk-averse, and missteps by public servants can have negative implications on their careers. This research explores how the appropriate use of enterprise social media is socially constructed in the use of GConnex within the Canadian federal government. It addresses two research questions: *What influences a public servant's individual judgment that a specific action is appropriate when using enterprise social media?* And *How are actions taken by public servants using ESM validated as appropriate?*

The use of an interpretive case study approach allowed for data collection from various sources, including organizational data, to capture the complexity of enterprise social media use in the Canadian federal government. Data sources included the results of 22 semi-structured interviews with federal public servants plus policy and help documents.

This research is guided by a conceptual process model that draws on the literature on legitimacy, IT value, IS use, enterprise social media and the social construction of reality. This study explores the first three stages of the Appropriate Use process model - *Individual Judgment*, *Innovation*, and *Local Validation*. The final two stages, *Diffusion* and *General Validation*, were out of scope for this study.

Our findings indicate that appropriate use is a continuous and dynamic concept that is socially constructed. Appropriate use also has multiple dimensions, and in this research, three were discovered: Task, Feature and Form. Employee judgment of

appropriate use is influenced by the affordances of the technology and the employee backgrounds and environment. Federal public servants carefully partition their use of social media. GCConnex is strictly for the benefit of federal public servants to share information and to collaborate. A specific appropriate use policy is not essential if there are other means to communicate and develop organizational norms. The Values and Ethics Code for the Public Sector is foundational in forming the organizational norms of behaviour. Although employees may be reticent to comment on other users' use, explicit validation is needed to legitimize new actions.

Keywords: appropriate use, legitimacy, enterprise social media, government, social construction of reality

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Learning is not a phase of life - it's the foundation of living.

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Chapter 1: Introduction

1.1 General

The Pew Research Centre reports that Americans' use of social media technologies has remained relatively constant over the last few years, with Facebook and YouTube being the most popular social media platforms (Pew Research Center, 2019). Canadian data are very similar, with more than 70% of Canadians using Facebook at least twice a week (McKinnon, 2016). Even into 2019, Facebook continues to be the most popular and most-used social media tool in Canada, followed by LinkedIn, Instagram, and WhatsApp (Canadian Internet Registration Authority, 2019).

Early research on social media focused on its use in non-work environments (Aoun & Vatanasakdakul, 2012), such as classroom learning, emergency management, political engagement, and public relations (Bertot, Jaeger, & Grimes, 2010). Social media has now moved out of the public-only domain into the work environment. The goals are to improve internal operations (Culnan, McHugh, & Zubillaga, 2010; Giermindl, Strich, & Fiedler, 2018), increase knowledge sharing (Aboelmaged, 2018; Oostervink, Agterberg, & Huysman, 2016; Sun, Zhou, Jeyaraj, Shang, & Hu, 2019), connect employees across hierarchical, geographical and organizational boundaries (Aoun & Vatanasakdakul, 2012; Davison, Ou, Martinsons, Zhao, & Du, 2014), and reduce employee turnover (Lee, Kramer, & Guo, 2019; Lu, Deng, & Pan, 2019).

Recent studies, specifically looking at enterprise social media (ESM), have covered diverse topics such as organizational commitment (Olfat, Shokouhyar, Ahmadi, Tabarsa, & Sedaghat, 2020), employee turnover (Lu et al., 2019), employee overload (Chen & Wei, 2019), and effect on employee performance (Giermindl et al., 2018).

Typical topics of interest for researchers continue to include information exchange (Aboelmaged, 2018), collaboration (Schiller & Meiren, 2018), and knowledge management (Archer-Brown & Kietzmann, 2018; Qi & Chau, 2018).

A study of 4200 companies determined that 72% used internal social media tools to facilitate employee communication (Leonardi & Neeley, 2017). Enterprise social media's (ESM) expected benefits include increased knowledge and social capital, but these benefits are challenging to measure. Their value in the short and long term has been impossible to quantify or measure reliably (Hinchcliffe, 2009).

Managers remain unconvinced that the investment in ESM is worth it, despite the increased dialogue concerning the potential benefits. Many other technologies, such as email and knowledge management systems, appear to overlap with ESM tools, but ESM's functionality is unique (Treem & Leonardi, 2012). Employees are also unsure about using ESM. They are concerned about privacy, security, and being surveilled by managers (Leonardi, 2014; Treem & Leonardi, 2012). Although many employees are also users of public social media such as Facebook, they often see social media as a social tool, not a work tool (Olmstead, Lampe, & Ellison, 2015). However, research has shown that ESM can also benefit employees through improved morale, enhanced internal communications, and increased knowledge generation and sharing (Bennett, Owers, Pitt, & Tucker, 2010).

Government organizations have unique challenges implementing ESM. The traditionally hierarchical structures in governments provide challenges and barriers to implementation. ESM use can result either in increased horizontal and informal communication and information sharing (Archer-Brown, 2012) or reinforce the existing

power and control mechanisms that limit informal exchanges (Orlikowski, 1991). The bureaucratic structures in governments are very well entrenched (Olsen, 2008), and the introduction of technologies, such as ESM, challenges these practices and hierarchical structures by encouraging changes in how service is delivered (Cordella & Tempini, 2015; Liu & Yuan, 2015; Olsen, 2006).

Organizations will only achieve the benefits of ESM systems if their use is *appropriate* (Turban, Bolloju, & Liang, 2011) – the question is, what does *appropriate* mean and who determines that a particular use is appropriate? Is it appropriate to actively use ESM to search for a new position? The tendency might be to say no; however, a dedicated space has been established in the Canadian federal government to allow public servants to look for new employment opportunities within the public sector. The use of the term *appropriate* implies that the use is suitable for a purpose. With social media, this purpose can be personal or task-related with a short-term focus or a long-term focus (Olmstead et al., 2015).

Although employees can receive training on ESM tools' mechanics, appropriate use is socially constructed and occurs at the intersection of the technology, the users and the tasks to be performed (Treem & Leonardi, 2012). Employees initially determine their use is appropriate based on individual judgment, but as employees interact with the technology and other users, appropriate use is determined dynamically through social exchanges.

Research in this area is still evolving, but previous ESM research is predominantly grounded in theory related to social capital and social networking (Aoun & Vatanasakdakul, 2012; Treem & Leonardi, 2012) and knowledge management

(Leftheriotis & Giannakos, 2014; Treem & Leonardi, 2012). “Managers and researchers alike still struggle with questions, such as why and how to interpret social software, what are the shared perceptions, how to appropriate potential business value, when to enact work practices involving social software, and where to align it with other business processes” (Haefliger, Monteiro, Foray, & von Krogh, 2011, p. 299). This research takes a new approach by focusing on how employees judge the appropriate use of ESM.

This study explores how the appropriate use of ESM is socially constructed, an area not previously studied. Because ESM success depends on user interactions, the context of ESM use is relevant. This study focuses on the hierarchical and bureaucratic environment of a Westminster parliamentary democracy, such as the Canadian federal government, seeking to maintain an independent, non-partisan civil service.

1.2 Research Motivation

The implementation of ESM is relatively new in companies and even less common in government organizations. Public servants are accustomed to receiving detailed training on using new technology as part of its implementation. If public servants use technology as trained, they expect it to perform as designed and achieve the predicted value. Unlike traditional organizational technology that is implemented to perform specific functions, ESM is very dependent on the users’ social interactions (Gibbs, Rozaidi, & Eisenberg, 2013). A great deal is left up to individual users to decide how to use the technology, and more importantly, if the planned use is appropriate. Potential missteps can negatively impact employee morale, interpersonal relationships, credibility, and completion of tasks (Archer-Brown, 2012).

Public servants in the federal government abide by a robust code of values and ethics (Treasury Board of Canada Secretariat, 2011c). This Code of Conduct outlines the values and expected behaviours of public servants to uphold the public trust. However, it is just one factor used by public servants in determining the appropriate use of ESM. Written policies and legislation, employee relationships with colleagues, pressures to accomplish work objectives and their understanding of the general use of social media all influence employee decisions. Government employees tend to be risk-averse where missteps can negatively affect their careers (Bozeman & Kingsley, 1998; Chin, Evans, & Choo, 2015b).

Shahsavarani (2014) surveyed Canadian federal government employees on their use of public social media. They discovered that “information flow within government ... is often highly restricted through regulation, slowed by a rigorously specified reporting structure and therefore, delayed by a pervasive bureaucratic government culture” (Shahsavarani, 2014, p. 169). Extensive reviews and approvals were required before employees could post content on the government official public-facing social media accounts. These restrictions are unlikely to change and will strongly influence the use of ESM.

In 2013, the Canadian federal government embarked on a significant effort to strengthen the public service, called *Blueprint 2020*. This plan’s guiding principles were to create an open and networked environment that supports a shared vision and collaboration across all federal departments, enabled by new technologies and a high-performing workforce (Government of Canada, 2013). This transformation effort faced significant resistive pressures from legacy systems that are “deeply embedded in the

structures, processes, incentives, and worldviews of the public service” (Clarke, 2019, p. 196). *Destination 2020* describes the actions required to achieve the objectives of *Blueprint 2020*. In this document, Treasury Board Secretariat (TBS) and Shared Services Canada commit to making further enhancements to two critical ESM tools (GCPedia and GCConnex) used by public servants (Government of Canada, 2014). *Beyond 2020* represents the refreshed vision for an agile, inclusive and better equipped public service (Privy Council Office).

GCPedia is a knowledge-sharing tool, while GCConnex is a professional collaborative workspace. The government launched both tools in 2009 (Allison, 2016). There are 270,000 public servants and about 95,000 registered users of GCConnex, but fewer than 20,000 users account for most of the data (Allison, 2016). “The tools were not widely used partly because of a lack of awareness among public servants about how such tools could be used” (Clarke, 2019, p. 135). Public servants understand that ESM tools (GCPedia and GCConnex specifically) are not like other software tools, and employees may need help figuring out how to use tools effectively. The problem is that although formal training may assist with the mechanics of using GCConnex, no course can teach how ESM tools’ affordances intersect with the users’ social context and the environment to accomplish particular tasks.

Appropriate use of ESM is a complex area that has not been previously studied. *Use* is a construct that commonly appears in IT value models but is not covered extensively in the literature. Although there have been some studies on social media use by governments (Mergel & Bretschneider, 2013; Shahsavarani, 2014), these studies were related to outward-facing or public social media and not ESM. The concept of system

use has only seen a shallow analysis and has failed to address the full range of possible ESM use. When a public servant is asked, “Do you use GCConnex?” the response is dependent on what is meant by *use*. A definition/ontology of system usage for ESM is needed to ensure a common understanding.

Wang, Deng, and Ji (2015) recommend several areas that require further study, including how users and organizations use specific ESM features, the strategies needed to achieve individual and organizational goals, and how employees self-organize within the online community.

1.3 Research Problem and Contribution

Researchers have done little work to understand the meaning of ESM use, particularly in a government context. Previous research on ESM has focused on one or more of the expected benefits and the decision to use ESM or not. There are significant gaps in the literature on the specific use of ESM features and how employees interact with the technology and other users to determine how best to use the tools. A review of the literature found no published research that focused on what *appropriate use* means and how it is determined.

The researcher was also unable to find any published research that explored the meaning of the events and actions as public servants use ESM. What are they thinking, and what is their intent as they take action with ESM? Public servants function within a structured government environment. How are the public servants influenced by their environment (e.g., values and ethics of public servants, the norms of the individual work units, and actions taken by other public servants)? From a broader perspective, there is little understanding of the process to determine if the use of ESM is appropriate (or not).

What are the actions and events that take place when appropriate use is constructed?

Practitioners that understand these actions can create the necessary conditions to ensure employees experience value from ESM use.

Research on Information Systems (IS) Value helps us understand how employees can use ESM appropriately to generate value for the organization. This body of literature often includes *use* as a construct for study but does not focus on the use itself. Few researchers have considered how system use must be appropriate to generate value, and no one has studied this in the context of ESM. Organizations are interested in ensuring that any investments in IT will deliver value. Appropriate use of ESM is a necessary condition to achieving value. However, appropriate ESM use is difficult to define because it is subjective and emerges as users interact with the system. Organizations need to understand how individual users determine that specific use is appropriate and how this use gains legitimacy.

Legitimacy theory has been applied extensively in the political, organizational and social literature. The work in interpersonal relationships and group dynamics has confirmed that it can also be applied to social objects, persons or actions (Berger & Zelditch, 1998)

This research has two high-level objectives. The first is to propose a theoretical model that describes how the appropriate use of ESM is socially constructed. The second is to determine if legitimacy is an appropriate theoretical lens to understand individual judgment on appropriate use.

Table 1: Research Questions and Contributions Map

| Research Questions | Contributions |
|--|---|
| <i>How is the appropriate use of enterprise social media socially constructed in a Westminster parliamentary democracy?</i> | Development of a conceptual framework to understand the social construction of appropriate ESM use. |
| 1. <i>What influences a public servant's individual judgment that a specific action is appropriate when using enterprise social media?</i> | Identification of elements that influence individual judgment of appropriateness. |
| 2. <i>How are actions taken by public servants using enterprise social media validated as appropriate?</i> | Model to describe the validation of enterprise social media use. |

The following research question guided the investigation into these objectives:

RQ: How is the appropriate use of enterprise social media socially constructed in a Westminster parliamentary democracy such as the Canadian federal government?

This research question is divided into two sub-questions:

1. *What influences a public servant's individual judgment that a specific action is appropriate when using enterprise social media?*
2. *How are actions taken by public servants using enterprise social media validated as appropriate?*

Table 1 above outlines the Research Questions that this study addresses and the contributions.

1.4 Contributions

This research provides valuable contributions to the research, policy and practitioner communities. Of primary interest is extending legitimacy theory beyond the political, organizational, and social literature to explain individual actions in the use of ESM, an area traditionally covered by research under information systems theories. This

study also adds to the current lack of research on understanding how individual users interpret the concept of appropriate use, how this use is validated and how appropriate use is socially constructed.

Unlike Enterprise Resource Planning Systems, which are purpose-specific solutions, ESM systems are often implemented in an ad-hoc manner, and their use is usually voluntary. The potential benefits are explored over time and emerge through experimentation and appropriation. Thus, organizations cannot thoroughly plan the path to how the system will be used (Greeven & Williams, 2017). Instead, users discover the benefits in the context of their work environment and practices (Richter & Riemer, 2013).

In addition to adding to the body of research on IS use, this study plays a crucial role in helping implementers of ESM in a government environment understand the context that public servants operate in and how employees interpret it to influence individual behaviour. This study helps practitioners understand how public servants interact to define appropriate actions in ESM use. Both benefits can enhance the planning, implementation, and training of future ESM implementations or enhancements. Finally, this work contributes to supporting the development of organizational policy to guide employee use of ESM.

1.5 Organization of Paper

This dissertation contains eight chapters. Chapter 2 provides the results of a literature review of the relevant areas including social media/social networking, IT value models, IS use, legitimacy theory, and the social construction of reality. Chapter 3 develops the research model that guided the research and details each of the elements. Chapter 4 outlines the research method used including specifics related to conducting the

interviews. Chapter 5 describes the case of the Canadian government employees' GCConnex use, while the research's main findings are presented in Chapter 6. Chapter 7 links the findings back to the research questions, their contributions to Policy, Research, and Practitioners, and the final chapter outlines the limitations of the research and finally makes recommendations for further research.

Chapter 2: Literature Review

2.1 Overview

This chapter presents a review of the relevant literature on social media, IT value, IS use¹, and legitimacy. This review aimed to identify previously conducted work, identify gaps in knowledge related to appropriate use of ESM and inform the development of a conceptual model that would guide this research.

2.2 Enterprise Social Media

Enterprise social media involves implementing social media technologies internal to organizations with access limited to members of the organization or specific trusted partners (Turban et al., 2011). Therefore, previous research on public-facing social media as well as enterprise social media is of interest. This section begins by discussing terminology and definitions related to social media and then presents the affordances of social media, the potential benefits of ESM, a summary of previous work on social media technologies, and research relevant to the use of both public-facing social media and ESM within government organizations.

2.2.1 Social Media Definitions

Several terms appear in the literature relevant to any discussion on social media that require clarification. The most accepted definition of *social media* is a “group of Internet-based applications that build on the ideological and technological foundations of Web 2.0 and that allow the creation and exchange of User Generated Content” (Kaplan &

¹ Both IT and IS appear throughout this paper. Information Technology (IT) is generally accepted to refer to computer-based information systems whereas Information System (IS) is generally accepted to include the people and the processes in addition to the technology. This study retains the term IT where it is specifically mentioned by an author in the literature as is the case with much of the IT value literature.

Haenlein, 2010, p. 61). ‘Social’ represents the 2-way interactions that are enabled between people, while ‘media’ refers to personal or mass media, including text, images, video, or documents (Hill, Dean, & Murphy, 2014). Tim O’Reilly (2007) first coined the term Web 2.0 at a conference to describe the new relationship between developers and end-users resulting from the World Wide Web’s technical innovations, where content is continuously and jointly developed (Kaplan & Haenlein, 2010). Web 2.0 is the foundation of social media technologies including, blogs (e.g., WordPress), microblogs (e.g., Twitter), wikis (e.g., Wikipedia), social networks (e.g., Facebook), virtual social worlds (e.g., Second Life), media sharing (e.g., YouTube) and ESM social media (e.g., Slack) as examples.

Social networking sites, a specific subset of social media, are “web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system” (Boyd & Ellison, 2007, p. 211).

Social media technologies are often categorized according to the functionality that they provide. However, they can also be classified according to the level of the user (individual, group, organization, society) (El Ouiridi, El Ouiridi, Segers, & Henderickx, 2014), or media richness and type of content (text, images, video) (Kaplan & Haenlein, 2010). Although not all social media technologies are the same, there are several functionalities they generally have in common. Users can create content and selectively make it available to other users, join in online groups with other users to share information, explore their connections as well as those of others, and engage in

conversations with users (Davies & Mintz, 2009; Kane, Alavi, Labianca, & Borgatti, 2014).

More recently, many of the core features of social network sites are also included in other social media technologies. For example, with Twitter, users can post multi-media content and build social connections, while with YouTube, users can subscribe or follow users in addition to posting original content. As a result, the semantic difference between the terms social media and social networking is increasingly blurred. This research paper utilizes the term social media to include the functionalities of social networking technologies.

The term enterprise social media (ESM) applies where social media technologies are implemented internally in organizations. Access is available only to users within defined boundaries (most often limited to the organization, while in some cases, the boundary could extend to include significant partner organizations) (Turban et al., 2011). Public-facing social media tools used inside organizations enable communications with customers, vendors and the public, while ESM tools enable interactions internal to the organization. More specifically, ESM allows employees to communicate internally, connect to co-workers, create and share content and see the messages, connections and content of others in the organization (Leonardi, Huysman, & Steinfield, 2013).

There are many commonalities between public-facing social media technologies used in organizations and specific ESM technologies. Therefore, research conducted on both is of interest for this study.

2.2.2 Public-Facing Social Media

A great deal of research on social media has been conducted since Internet tools like Facebook have reached the mainstream. A Web of Science search of the term *social media* from 2006 to 2020 returned nearly 77,672 entries, with more than a third of them in the last two years. The continually revolving door of new technologies entering the market and the availability and abundance of publicly available data have driven social media research interest (Lomborg, 2016). Early research focused primarily on non-work environments (Aoun & Vatanasakdakul, 2012) such as classrooms (Dabbagh & Kitsantas, 2012; Junco, Heiberger, & Loken, 2010; Wodzicki, Schwämmlein, & Moskaliuk, 2012), emergency management (Alexander, 2014; Yates & Paquette, 2011), marketing (Kim & Ko, 2012; Mangold & Faulds, 2009) political campaigning (Enli & Skogerbø, 2013; Larsson & Moe, 2011), or the social impacts of social media use (Kraut, Patterson, et al., 1998; O’Keeffe, Clarke-Pearson, Council on, & Media, 2011; Olmstead et al., 2015; Schurgin O’Keeffe & Clarke-Pearson, 2011).

How social media is used by companies and by government organizations has also attracted research interest. An early study looked at tools such as Facebook and LinkedIn to determine how employees used them (Skeels & Grudin, 2009). Employees used LinkedIn to look for jobs, maintain business connections and keep track of former colleagues. In contrast, employees used Facebook to reconnect with previous colleagues, maintain awareness, and build social capital with current colleagues. Research on social media inside organizations has also looked at user adoption (Harden, 2012; Mergel, Mugar, & Jarrahi, 2012; Skeels & Grudin, 2009), collaboration (Castillo-de Mesa &

Gómez-Jacinto, 2020), the benefits of knowledge sharing (Harden, 2012; Razmerita, Kirchner, & Nabeth, 2014) and governance (Vaast & Kaganer, 2013).

Research involving social media technologies, both inside and outside organizations, continues to grow. Table 2 shows examples of the diverse areas covered in social media research.

Table 2: Previous Research on Public-Facing Social Media

| | Focus | Reference |
|--|-------------------------------|--|
| Early SM Research | Classrooms | (Dabbagh & Kitsantas, 2012; Junco et al., 2010; Wodzicki et al., 2012) |
| | Emergency Management | (Alexander, 2014; Yates & Paquette, 2011) |
| | Marketing | (Kim & Ko, 2012; Mangold & Faulds, 2009) |
| | Political Campaigning | (Enli & Skogerbø, 2013; Larsson & Moe, 2011) |
| | Social Impacts | (Kraut, Patterson, et al., 1998; Schurgin O'Keeffe & Clarke-Pearson, 2011) |
| Social Media Use within Organizations | User adoption | (Harden, 2012; Mergel et al., 2012; Skeels & Grudin, 2009) |
| | Collaboration | (Castillo-de Mesa & Gómez-Jacinto, 2020) |
| | Benefits of knowledge sharing | (Razmerita et al., 2014) |
| | Governance | (Vaast & Kaganer, 2013) |

2.2.3 Affordances of Social Media

Gibson (1977) introduced the concept of affordance, using it to describe what the environment offers animals (e.g., water affords drinking and washing). The concept of affordance was extended to objects by Norman (1988). He described affordances as the perceived and actual properties that determine how items could be used, allowing objects to be more than one thing at a time (e.g., a rock can be a missile (when thrown), a paperweight, or a hammer (Gibson, 1977)). An affordance is a “relational concept that connects the materiality of a technological artifact with the subjective goals and perceptions of its users” (Mettler & Winter, 2015, p. 102).

Majchrzak, Faraj, Kane, and Azad (2013, p. 39) define a technology affordance as the “mutuality of actor intentions and technical capabilities that provide the potential for a particular action.” Given a door handle, it is the design of the handle itself and the person’s intention to use the handle that affords to open a door. This distinction is important when applied to technology because individuals will only use certain features when they perceive an action will be afforded (Leonardi, 2013). Affordances are different from both features (what you can do with technology) and outcomes (connected to the goals of the actor) (Evans, Pearce, Vitak, & Treem, 2017).

Treem and Leonardi (2012) analyzed studies looking at social media use in organizations to understand the behaviours afforded by social media technologies that differed from other organizational technologies. They identify four key affordances available in social media that they believe are not available in other technologies: *visibility*, *persistence*, *editability*, and *association*. *Visibility* is enabled by the ability to build a personal profile, establish a list of connections, post status updates, submit

comments and make content available to search engines. Thus, visible content may generate discussions across the organization. Because of this broad visibility, users may also be hesitant to post content and may limit sharing.

Persistence is implemented in social media through displaying previous content and activity and with content that does not disappear. This affordance enables organizations to build on the knowledge base and reuse the content over time. The challenge with social media from a knowledge management perspective is that the volume becomes large and unwieldy. Indexing and search engines ease this challenge. In response to privacy concerns, companies are designing social media technologies not to be persistent (e.g., Snapchat), although this limitation is easy to overcome (i.e., by taking a screengrab).

Editability of social media allows users to edit original content, delete if necessary, and limit what other content they see. Users are, therefore, able to better control how they present their persona. They can tailor messages to different audiences and can correct errors.

Finally, the affordance of *association* makes users' connections, including comments and submitted opinions, visible to others. These associations may be people-to-people, people-to-content or content-to-content (Treem & Leonardi, 2012).

Although Treem and Leonardi's work on social media affordances is commonly cited, other researchers have proposed differing affordances or conflicting positions. Majchrzak, Faraj, Kane and Azad (2013) suggest *metavoicing*, *triggered attending*, *network-informed associating*, and *generative role-taking* as alternative affordances relevant to workplace social media conversations. *Metavoicing* refers to the ability to

contribute to a broader discussion. *Triggered attending* relates to alerts for topics of interest, while *network-informed associating* allows employees to see how others are connected before engaging. *Generative role-taking* relates to roles users play to engage in conversations. Leidner, Gonzalez and Koch (2018) consider the role played by ESM in socializing new employees and identify networking, organizational visibility, information gathering/sharing, innovation, and interacting as high-level categories of affordances.

Other research on affordances proposes a typology based on *designed, improvised* and *emergent* affordances (Van Osch & Mendelson, 2011) and recognizes that affordances can be enacted by individuals, collective or shared (Ulmer & Pallud, 2014). Taking a unique approach, Giermindl, Strich and Fiedler (2017) look at how social media affordances can explain the non-use of ESM. They discovered that users are often unaware of the affordance, may have diverging goals (e.g., a pressing deadline), or there may be adverse effects of the affordance (e.g., concerns about data protection).

As a dissenting opinion, Gibbs, Rozaidi, and Eisenberg (2013) believe researchers put too much stock in social media affordances and that workers operate with a tension between visibility vs. invisibility, engagement vs. disengagement, and sharing vs. control. They determined that employees would openly share information sometimes, while other times, employees would make conscious decisions to limit what they were sharing, reinforcing the idea that it is insufficient for a system to afford an action. What is critical is how users choose to use it.

Hutchby (2001) believes that affordances provide a valuable mechanism to reconcile realism (where inherent properties of objects are considered constraints) with

constructivism (where the reality of objects is a result of human agency). According to Leonardi, “technologies have material properties, but those material properties afford different possibilities for action based on the context in which they are used” (Leonardi, 2011b, p. 153). Affordances represent ‘possibilities for action ... between an object/technology and the user that enables or constrains potential behavioral outcomes in a particular context’ (Evans et al., 2017, p. 36).

The work conducted by Treem and Leonardi on affordances looks broadly at social media in organizations, while the other work focuses on specific contexts such as onboarding employees or workplace conversation. Affordances of social media are context-specific and will vary by users; they link the technical features with the individual perceptions and goals of users and are “constituted in relationships between people and the materiality of the thing with which they come in contact” (Treem & Leonardi, 2012, p. 146). As a result, different users can understand and use social media differently, and workplace use can differ from public use. Although the affordances identified by Treem and Leonardi will inform this study, different affordances may emerge due to the unique way in which ESM is used.

2.2.4 Potential Benefits of Enterprise Social Media

Social media technologies have had a significant impact on how we communicate in society but have an even greater potential to be transformational within organizations in strategy, management, and organizational structures (Aral, Dellarocas, & Godes, 2013). The initial use of public social media was for marketing purposes, but organizations are now using social media to build human, social, organizational, economic, and symbolic capital (Mandviwalla & Watson, 2014).

Some of the benefits from the implementation of social media technologies in an organization can include connecting employees across geographical, departmental, and hierarchical boundaries (Aoun & Vatanasakdakul, 2012; Leftheriotis & Giannakos, 2014; Treem & Leonardi, 2012; Turban et al., 2011), enabling innovation (Aoun & Vatanasakdakul, 2012), and promoting knowledge generation and sharing (Leftheriotis & Giannakos, 2014; Treem & Leonardi, 2012; Turban et al., 2011). Ultimately, increased worker satisfaction and improved job performance will result from the employees' ability to engage with colleagues (Archer-Brown, 2012). The combination of speed of interaction, the scope of possible exchanges, and the richness of these exchanges can completely revolutionize internal organizational operations (Lange, Mitchell, Stewart-Weeks, & Vila, 2008).

Not all organizations have entirely bought into the idea that ESM will bring substantial benefits. There is concern from managers that employees will use ESM for non-work related discussions (Mergel & Bretschneider, 2013; Trimi & Galanxhi, 2014) and, therefore, waste time (Fusi & Feeney, 2016; Richter, Hetmank, Klier, Klier, & Müller, 2016; Skeels & Grudin, 2009; Turban et al., 2011), negatively affecting production (Archer-Brown, 2012). On the other hand, employees are concerned that managers will use their ESM engagement to monitor their actions (Choudrie & Zamani, 2016; Leonardi & Neeley, 2017; Leonardi, 2014; Treem & Leonardi, 2012) or control content (Omar, Scheepers, & Stockdale, 2014).

In a Pew Research Centre survey, 34% of employees admitted using social media at work to take a mental break. In comparison, only 12% used social media to ask work-related questions of colleagues inside their organization (Olmstead et al., 2015). It is

worth noting that this survey was specific to the use of public social media technologies and did not address the use of ESM, although a similar study would be useful.

Table 3: Expected Benefits and Concerns of ESM

| | | |
|--------------------------|---|--|
| Expected Benefits | Connecting employees across geographical, departmental, and hierarchical boundaries | (Aoun & Vatanasakdakul, 2012; Leftheriotis & Giannakos, 2014; Treem & Leonardi, 2012; Turban et al., 2011) |
| | Enabling innovation | (Aoun & Vatanasakdakul, 2012) |
| | Promoting knowledge generation and sharing | (Leftheriotis & Giannakos, 2014; Treem & Leonardi, 2012; Turban et al., 2011) |
| | Build human, social, organizational, economic, and symbolic capital | (Mandviwalla & Watson, 2014; Yee, Miquel-Romero, & Cruz-Ros, 2021) |
| | Increased worker satisfaction and improved job performance | (Archer-Brown, 2012) |
| | Revolutionize internal organizational operations | (Lange et al., 2008). |
| Manager Concerns | Employees will use ESM for non-work related discussions | (Mergel & Bretschneider, 2013; Trimi & Galanxhi, 2014) |
| | Employees will waste time | (Fusi & Feeney, 2016; Richter et al., 2016; Skeels & Grudin, 2009; Turban et al., 2011), |
| | Will have a negative effect on production | (Archer-Brown, 2012) |
| Employee Concerns | Managers will use ESM monitor employee | (Choudrie & Zamani, 2016; Leonardi & Neeley, 2017; Leonardi, 2014; Treem & Leonardi, 2012) |
| | Managers will control content | (Omar et al., 2014) |

Concerns related to privacy, security, accuracy, and archiving are common to companies and government organizations (Archer-Brown, 2012; Trimi & Galanxhi, 2014). Existing policies around information management, the privacy of information, access to information, and security already exist for government organizations. Changes to policies may not be needed to account for social media, but they will need interpretation in a new context (Fyfe & Crookall, 2010). Although there are high expectations for benefits to the organization, the concerns expressed by managers and employees indicate the potential for some use to be considered inappropriate (Table 3).

2.2.5 Examples of ESM Implementations

Several case studies have covered corporate implementations of ESM that have experienced varying success. DStreet was an ESM implementation in Deloitte that quickly brought new employees up to speed, enabled flexible work arrangements, and improved overall collaboration. The initial implementation of DStreet was slower than expected because employees did not initially personalize their profiles. However, the leadership continued to encourage employees to support the system, personalize their profiles and generate content (Brandel, 2008).

Alcatel-Lucent is a large multinational corporation that implemented a tool called Engage to break down the geographic and organizational boundaries that were impeding communications between employees (Friedman, Burns, & Cao, 2014). A Social Network Analysis of usage by country demonstrated that the tool supported communications across countries. Still, they could not determine if it was more or less effective than other communications means or what impact a downsizing might have had on the use of the tool.

In their implementation of Blueshirt Nation, Best Buy discovered that employees preferred to use ESM to talk about personal items instead of answering questions posed to them. As a result, Best Buy management realigned their original goals for the system (Brandel, 2008). In the end, managers let the employees determine how they would use the system with the result that the system became rich with employee-driven exchanges and discussions.

One of the more successful early implementations of ESM was an experimental implementation in IBM. Although they migrated through several products to find a working solution, the final ESM, called Beehive, engaged over 65,000 employees and ran live inside IBM from 2007 until 2011(IBM). The project's goal was to allow employees to express themselves so that other employees could get to know them. IBM recognized that employees had different motivations and that the technology had to be flexible (Brandel, 2008). One of the studies conducted on the Beehive implementation determined that "patterns of use and user motivations differ from users of Internet social network sites" (DiMicco et al., 2008, p. 719). Employees initially connected with close colleagues, but over time, decreased communication with immediate colleagues and instead began communicating more with colleagues they didn't know well or work with regularly.

The marketplace of ESM options has grown more extensive, with some of the biggest software companies offering new product solutions with G-Suite (Google), Workplace (Facebook), Yammer (Microsoft), and Jive (Jive Software) as examples available in the marketplace. Implementation of an ESM is not a guarantee that it will be successful. Developers and implementers need to consider that employees may not use it

in the way they initially envisioned. Instead, employees are determining for themselves how they will use it. These few case studies show that each ESM implementation could have various outcomes because of the different objectives of employees and the different operating environments.

2.2.6 Use of Public-Facing Social Media by Government

Public-facing social media such as Twitter and Facebook is increasingly changing how current event information is generated and consumed (Small, 2011). It has proven to be particularly valuable to politicians, playing a significant role in former President Obama's fundraising and volunteer coordination (Harfoush, 2009) and former President Trump's direct communication with his supporters (Ouyang & Waterman, 2020). Digital campaigning also became a key element of the Canadian election of 2019 with candidates supplementing their website presence with active engagements on social media including Facebook, Twitter, YouTube and Instagram (Pammett & Dornan, 2020).

Although politicians may have been first to embrace using social media, government organizations are increasingly using it as well. Governments primarily use public-facing social media to provide additional information to the public and to facilitate receiving comments from citizens (Shahsavarani, 2014). The nature of social media makes this two-way communication with stakeholders much easier. The primary tactics used by governments to engage citizens more broadly include using public-facing social media to broadcast current content available on websites (e.g., using Twitter as another channel to announce new funding), to solicit input from Canadians (e.g., recent defence policy review), and engage with Canadians (Department of National Defence, 2017)).

Social media is also used by government organizations as a tool to increase transparency of government operations and enhance engagements with citizens (Archer-Brown, 2012; Mergel, 2013a, 2013b). The Canadian Open Government Initiative is in line with Government 2.0 concepts drawing on the strengths of social media (Mergel, 2013b). This initiative focuses on providing access to raw data, access to information, and generating an open dialogue (McNutt, 2014). Two other recommended social media tactics include interactive engagement and service delivery through social media channels (Mergel, 2012). However the use of social media to support stakeholder engagement is progressing slowly in the Canadian federal government (Longo, 2017).

Despite these opportunities, governments are well recognized to be bureaucratic and hierarchical, and many government organizations limit employee access to social media (Gurzick & White, 2013). There is a risk that government practices and processes will not adapt to enable the benefits of social media use (Lange et al., 2008). A study in the Government of Canada conducted by Shahsavarani (2014) discovered that public servants use public-facing social media for official government business, professional development purposes, and personal reasons. Employees also saw value in the social media tools for communicating, sharing, and interacting with other users. Still, they identified the risk-averse culture of government as a barrier to further adoption and use (Shahsavarani, 2014).

2.2.7 Enterprise Social Media Use Inside Government

In May 2021, a search of Business Source Complete, an online database of business journals and magazines, for the subjects of “enterprise social media”, “enterprise social networking”, or “enterprise social software” resulted in 129 references. Only one

reference discussed the use of ESM by a government organization. This case study of the implementation of Microsoft's Yammer in an Australian state government noted that it took a "number of years" and involved "multiple engagement strategies" (Fabre, 2015). The Chief Executive was given credit for changing the organization's culture, and the community manager was recognized for helping build the employee network.

Although not a government organization, another study described the implementation of ESM in the MITRE Corporation. This not-for-profit organization supports US federal departments through the management of research and development funding. In this longitudinal study, Holtzblatt et al. (2013) looked at the implementation and use of ESM to determine if users experienced value from ESM use. The authors acknowledged challenges in conducting their research because of the time it takes for ESM benefits to emerge and the absence of appropriate metrics.

Because participation in ESM is principally voluntary, the extent to which employees will engage will vary according to their individual perspectives of value. Some researchers have found that ESM is primarily used to maintain existing relationships (Mergel, 2013b), while others have determined ESM is a valuable tool to connect with employees they did not know well (DiMicco et al., 2008). One key difference between public social media and ESM is that, unlike public social media users, employees are not always peers. Employees operate within a hierarchy that imposes organizational structures such as relationships and processes. Governments have strong hierarchies, and it is unclear how this hierarchical structure affects employees' ESM interactions (Cao, Gao, Li, & Friedman, 2013).

2.2.8 Summary of ESM Literature

The literature consistently considers ESM as representing social media technologies implemented internally in organizations where use is restricted to the organization or trusted partners. ESM implementations can include the full range of social media technologies found in public-facing social media tools. The most commonly cited affordances of social media technologies encompass *visibility*, *persistence*, *editability*, and *association* (Treem & Leonardi, 2012). Affordances represent possibilities for action – based on the technical capabilities and the intentions of the users and are also dependent on the context in which they are used. Although there is an abundance of research on public-facing social media or enterprise social media in companies, there is a lack of research that focuses explicitly on ESM use in government organizations.

2.3 Determining Value of ESM Implementations

The use of ESM in organizations is no different than other technologies – there will always be questions concerning the value of organizations investing in ESM. There are high expectations of the benefits of ESM, but there are also concerns with managers that employees will not use it appropriately. Similarly, employees are concerned that managers will use their participation with the ESM systems against them. Organizations expect that investments in IT will translate into increased value to the organization. This section looks at the literature on challenges measuring the value of IT investments and the role system usage plays in determining IT value.

2.3.1 Measuring Value

Despite a rich body of research, the results of IT value research are inconsistent and inconclusive. Empirical studies indicate not only some positive but also some negative returns on investment. This contradictory conclusion is known as the Productivity Paradox in IT. According to Brynjolfsson (1993), this is due to four reasons. First, it is impossible to measure all the inputs and all the outputs completely. Inputs refer to the various categories of resources such as financial, physical, human (e.g., technical skills), technological, reputation (trust, respect), and organizational (Barney, 1991; Grant, 1991; Ross, Beath, & Goodhue, 1996), and not all these resources are easily quantifiable. Output statistics are often unreliable because many of the benefits attributed to IT investments are less concrete and not easily measured or are based on productivity that has no standardized measures. Such statistics include “increased quality, variety, customer service, speed and responsiveness” (Brynjolfsson, 1993, p. 74).

Second, organizations may not realize benefits for many years after implementation. This time lag is because it takes time for employees to learn how to use the system and do their job using the system. It takes time to achieve a critical mass of ESM users and develop the necessary connections with other employees (Kügler, Dittes, Smolnik, & Richter, 2015). Achieving value is also not necessarily linear and often is only achieved after failures, setbacks, or much trial and error (Grant & Collins, 2016).

Third, firms may be redistributing profits from implementation. The benefits of ESM may be combined with other elements of the organization, such as business processes and relationships (Barua et al., 2010), giving the impression that the system is

unproductive. Implementation of IT is not an experiment where managers can control all of the variables. The real world is highly interdependent.

The final factor in explaining the Productivity Paradox involves the mismanagement of information and technology. Mismanagement includes not only problems with requirements definition or poor implementation plans but also a failure to use the resulting system as expected or in an appropriate way. Misuse, or using in a way not intended, is always a potential with technology, and social media is no different. Misuse can result in wasted productivity for both the employee and those who have to address the misuse. Despite the best intentions, mismanagement or misuse of ESM could explain why organizations do not realize the full value of ESM implementations.

An instrument developed by Mirani and Lederer (1998) to measure the benefits of a technology information project recognized that technology implementation could potentially affect organizations at three levels: transactional, informational and strategic. Hinchcliffe (2015) also determined that the value of digital collaboration extended beyond immediate benefits. First-order effects are fundamental to the organization, such as overcoming the barriers to communication (e.g., time, distance), reducing expenses, and completing work objectives. Second-order effects include more long-term benefits at the operational level resulting from previous collaborations, such as team building, harvesting innovation, or locating expertise. The final level of effects is at the strategic level and includes improving institutional practices, fostering an improved culture, and speeding up business decisions. Effects on business processes can relate to management and operational processes (Mooney, Gurbaxani, & Kraemer, 1995). They can include efficiencies (e.g., cost reductions), effectiveness (e.g., better quality decisions), or

organizational transformation (e.g., innovations through improved responsiveness) (Mooney et al., 1995).

Because of the number of potential combinations of variables available, establishing causality is a challenge. It may be clear that IT creates value, but only under the specific conditions studied (Barua et al., 2010), and results are often relevant only to the industry or case studied (Weill & Olson, 1989). Instead of looking for a causal link between input factors and value, researchers should focus on the conditions for creating value, for example, the process by which inputs influence intermediate processes to achieve impacts and are translated into organizational value (Banker & Kauffman, 1988). Examples of intermediate processes include information processing, coordination, and communication (Mooney et al., 1995).

Measuring and achieving value in social media poses a challenge to many organizations because the value comes more from how people use social media (Davies & Mintz, 2009) than what it offers. Organizations are also beginning to recognize that many of the beneficial outcomes are more long-term and depend on how employees use the ESM systems and how these same systems influence the work environment (Hinchcliffe, 2015).

Although much thought has been given to understanding and potentially measuring the value of IT investments in organizations, the Productivity Paradox presents one perspective on why results are inconclusive and inconsistent. Given the high expectations of the benefits to be accrued and the difficulty in identifying and measuring value, many organizations continue to question whether or not they can justify further investment in ESM.

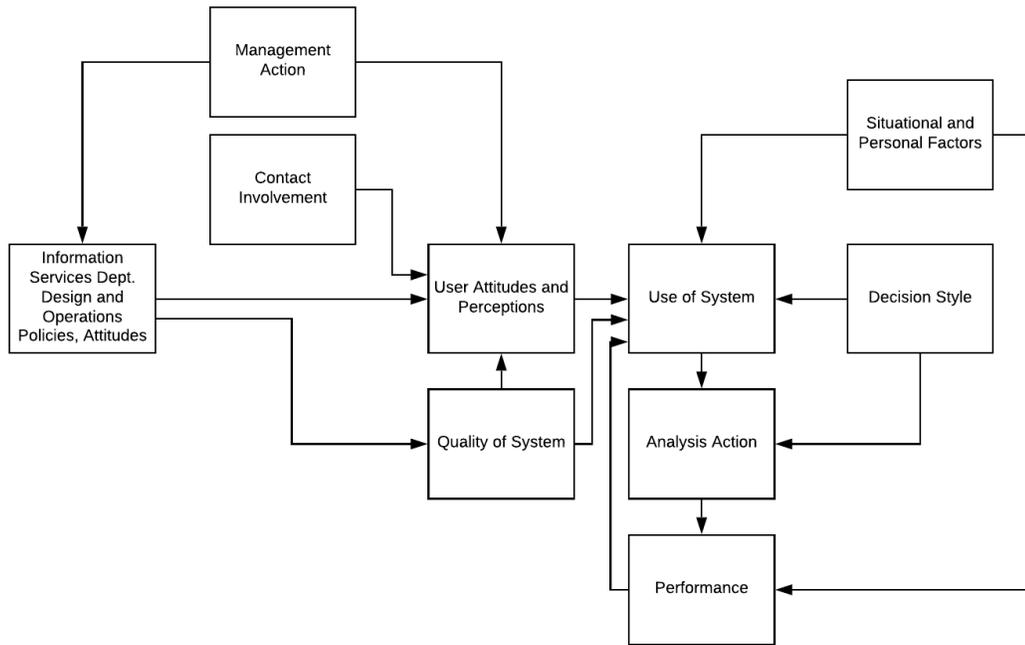
2.3.2 Role of System Use Within IT Value Models

Significant research has already been conducted on how organizations achieve value from their IT investments. This sub-section looks at some of these models to see what contribution they make to understanding how organizations might achieve value with ESM, with a particular focus on how these models engage system use.

Previous research on IT value has predominantly used the variance research approach. Variance research helps to validate specific models and specific relationships between variables but cannot investigate the sequence of events (Lucas, 1981; Markus & Robey, 1988). A process research approach assumes that humans are social actors that make choices to shape both the conditions and the outcomes (Bostrom, Gupta, & Thomas, 2009) and identifies the necessary conditions for an outcome to occur. Unlike with a variance approach, these conditions are not sufficient to deliver an outcome, and there is always a possibility that an outcome may not happen (Markus & Robey, 1988). The IT value literature contains examples of both variance models and process models.

In 1973, long before social media, Henry C. Lucas from Stanford University published a descriptive model of information systems in organizations (Lucas, 1973). He believes that information systems can create change in power relationships and create conflict in organizations. His variance model (Figure 1) was intended to frame future research on organizational information systems and recognizes system use as a mediating variable between attitudes and performance.

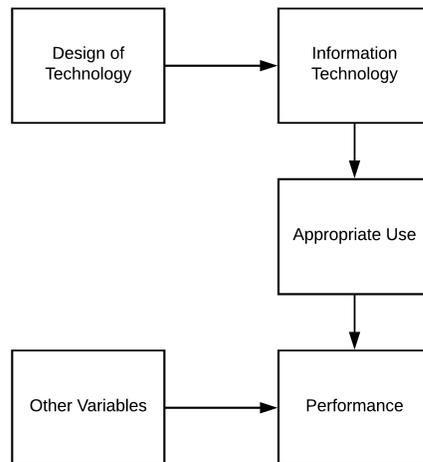
Figure 1: Model of Information Systems in Organizations (Lucas, 1973, p. 30)



Lucas recognizes that analysis action taken by decision-makers has an impact on performance, noting that “unless an action is clearly inappropriate, it should either improve performance or reduce declining performance” (Lucas, 1975, p. 736). He also notes that attitudes and situational or personal factors influence actions.

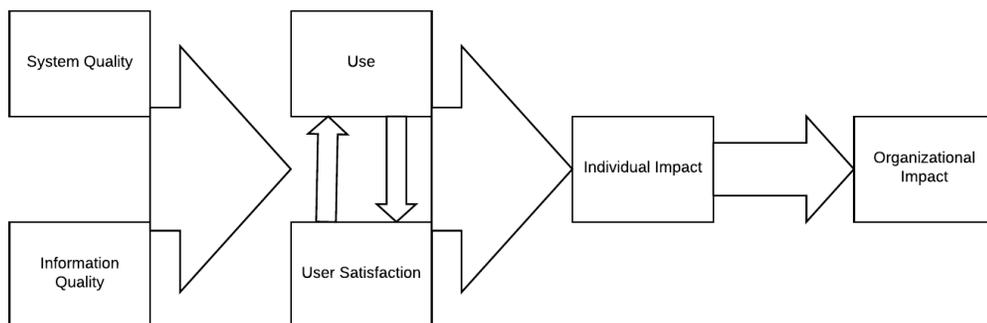
Lucas further updated and simplified his model in 1993 (Figure 2). He identifies ‘appropriate use’ as a necessary condition for IS Success (Lucas, 1993a), indicating his thinking was more about presenting system use from a process perspective. While many models suggest that perceptions of use and usefulness predict use, Lucas believes social norms and work requirements are better indicators (Lucas & Spitler, 1999).

Figure 2: Updated Lucas Model that includes ‘Appropriate Use’ (Lucas, 1993a)



As the questions continued about the link between investments and IT value, DeLone and McLean (1992) released their highly cited IS Success model. They identify six interdependent constructs: system quality, information quality, use, user satisfaction, individual impact, and organizational impact (Figure 3). The authors recommend that researchers select individual measures from each of the six categories to develop a combined measurement instrument.

Figure 3: IS Success Model (DeLone & McLean, 1992, p. 87)



Although they intended their model to reflect a process perspective, DeLone and McLean propose that success results from several interrelated components (indicating a variance perspective). Their initial treatment of use focuses on what recipients do with system outputs and takes the stance that monitoring patterns can objectively measure use. They take the simplistic view that, when voluntary, more use leads to more IS success.

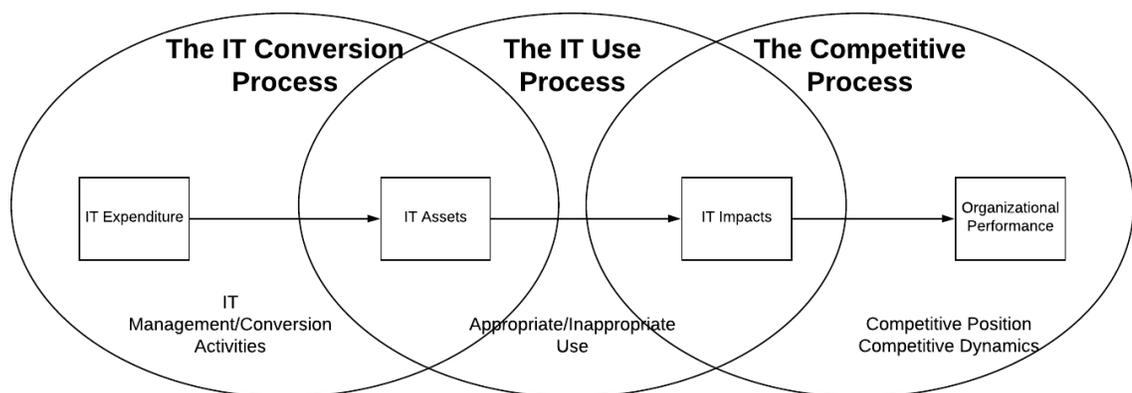
Seddon criticizes the DeLone and McLean model for combining both variance and process elements in one model. He believes that 'system use' does not belong in a causal model and is more appropriate for a process model (Seddon, 1997). He redefines the DeLone and McLean model into two variance models, one to deal with IS Use and the other to deal with IS Success. The IS Use model recognizes that *use* is a measure of behaviour and not of success. His proposed model is straightforward and makes no judgment about whether IS Use is good or bad but indicates that *use* has individual, organizational and societal consequences.

DeLone and McLean responded to Seddon's criticism reiterating that their original model is a process model, and disagreed with Seddon's decision to remove System Use from the IS Success model. In their updated paper, they recognize that it is insufficient to say that more use will lead to more benefits. They state that researchers must "consider the nature, extent, quality, and appropriateness of the system use" (DeLone & McLean, 2003, p. 16) and agree with other researchers that "use, especially informed and effective use, will continue to be an important indicator of IS success for many systems" (DeLone & McLean, 2003, p. 17). This position is another recognition that system use is complex and needs to be qualified.

A review of literature, following the introduction of the DeLone and McLean IS Success Model, identified 43 variables that influenced IS success organized in five categories: task, individual, social, project and organizational (Petter, DeLone, & McLean, 2013). The results of this study suggest that the strongest determinants of the System Use construct were task compatibility, extrinsic motivation, organizational competence, self-efficacy, IT infrastructure, and management support. It also noted that users involved in the design and implementation were more likely to use the system.

One of the richer process models that directly addresses the link between IT Expenditures and Organizational Performance is the model developed by Soh and Markus (1995) (Figure 4). Their process model identifies three relevant processes: the IT Conversion process, the IT Use process, and finally, the Competitive Process. The authors describe the IT Use process as the series of actions to convert IT Assets into IT Impacts and mention *appropriate use* versus *inappropriate use*.

Figure 4: How IT Creates Business Value (Soh & Markus, 1995, p. 37)



Although developed well before the introduction of current social media technologies, the Soh and Markus IT value model is still relevant and can be used to explain the conditions necessary for business value to result from investment in social media technologies. Interestingly, they recognize that ineffective or inappropriate use can prevent the desired impacts and that appropriate use can vary for different impacts (Soh & Markus, 1995). They note that organizational structures, internal processes, and culture affect this process.

Other researchers have extended the Soh and Markus model to look at performance impacts of information technology, calling for integrating technology into organizational capabilities (Bharadwaj, 2000). Others have determined that capturing actual usage is critical to assessing how IT implementation has had any effect (Devaraj & Kohli, 2003). Finally, work has been done on how organizations realize value from IT investments (Grant & Collins, 2016) and how use after implementation affects IT value (Zhu & Kraemer, 2005). This work tells us that although the literature does not describe use itself, it is key to understanding how organizations achieve value from IT implementations.

2.3.3 Summary of IT Value Literature

There are high expectations from ESM implementation in organizations, but both managers and employees have doubts. The Productivity Paradox explains some of the contradictory results of technology implementations. Misuse of the system is one factor contributing to lost productivity and failure of organizations to achieve desired results.

Table 4: IT Value Literature

| Author | Key Contributions |
|---------------------------|--|
| (Brynjolfsson, 1993) | Productivity Paradox indicates misuse can impede achieving system goals. |
| (Grant & Collins, 2016) | Value may only be achieved after failures, setbacks and much trial and error. |
| (Mooney et al., 1995) | System effects can be on efficiencies, effectiveness and transformational. |
| (Banker & Kauffman, 1988) | Researchers should focus on the conditions for creating value. |
| (Davies & Mintz, 2009) | Value of social media comes from how people use it, more than what it offers. |
| (Hinchcliffe, 2015) | Benefits of ESM are dependent on how it influences the work environment. |
| (Lucas, 1975) | Actions should improve performance unless they are clearly inappropriate. |
| (Lucas, 1993a) | Appropriate use is a necessary condition for IS success. |
| (DeLone & McLean, 1992) | More use leads to more IS Success. |
| (Seddon, 1997) | IS Use process makes no judgment of good or bad but recognizes there are consequences. |
| (DeLone & McLean, 2003) | Informed and effective use is an important indicator to IS Success. |
| (Petter et al., 2013) | Strongest determinants for System Use include task compatibility, extrinsic motivation, organizational competence, self-efficacy, IT infrastructure, and management support. |
| (Soh & Markus, 1995) | Ineffective and inappropriate use can prevent desired impacts. |

A review of the IT value literature (Table 4) reveals that system use is often considered as a mediating variable or process acting between IT investments and the resulting benefits. Some researchers initially considered *use* as a simple causal variable that can be objectively measured but subsequently recognized the existence of misuse, ineffective use or inappropriate use and how it could impact outcomes.

2.4 IS Use

This section explores the concept of *use* that is referred to in several of the IT value Models mentioned previously. It looks at the operationalization of *use* and explores different perspectives of *use*, then presents different views of how social media users are categorized based on how they interact with the system.

2.4.1 Operationalizing Use

Although the IT value models discussed previously have included *use* as an essential construct, there is little consensus about what is meant by *use*. Often the research looks at *use* at a snapshot of time and does not sufficiently address the complexity. Definitions of *use* are tautological such as “IS use means using the system” (Seddon, 1997, p. 246), where *use* is treated as a binary variable in that the system is either *used* or *not used*. Other models define *use* as “employing the technology in completing tasks” (Goodhue & Thompson, 1995) or consuming the information that results from the system (Burton-Jones & Straub, 2006). Burton-Jones and Straub (2006, p. 232) provide context around their definition where system usage is “a complex activity involving a user, IS and task over time.” The literature shows the terms *use*, *usage*, and *utilization* to have the same meaning. In this research, the term *use* represents the user’s interaction with an ESM system without any preconceived ideas of what that use should or could be.

Operationalizing the construct of *use* is highly context-driven. The literature review shows that *use* can appear as an independent variable (Brooks, 2015; Burton-Jones & Straub, 2006; DeLone & McLean, 2003), a dependent variable (Adams, Nelson, & Todd, 1992; Doll & Torkzadeh, 1998), or a mediating variable (Goodhue &

Thompson, 1995; Igarria & Tan, 1997; Lucas, 1973; Trice & Treacy, 1988). Although the IT value literature also defines *use* as an intermediate process, researchers have done little work to understand the *use* process. One exception is the work by Burton-Jones and Grange, who describe effective use as “using a system in a way that helps attain the goals for using the system” (Burton-Jones & Grange, 2013, p. 633).

Meister and Compeau have criticized the treatment of *use* as a dependent variable in many models because it assumes that more use is always better. Instead, they propose innovation infusion as a dependent variable and define it as “the extent to which the full potential of the innovation has been embedded within an individual’s work system” (Meister & Compeau, 2002, p. 24). Their use of “full potential” means “the usage in all possible and appropriate applications.” However, they fail to indicate what is meant by “appropriate applications.”

Use can be self-reported or determined based on system logs that record the duration and breadth of user interactions. As people use the system, they will adapt it to their needs, and the resulting impact may be different from the original intentions (DeSanctis & Poole, 1994). Besides, if asked to recall past usage, users may exaggerate their usage to meet expectations (Devaraj & Kohli, 2003). Unfortunately, it is not always possible to capture system data, or a more subjective perspective may be the goal. In these cases, self-reported measures are acceptable as relative measures (Davis, Bagozzi, & Warshaw, 1989). Also, while quantitative measures may simplify the construct, they fail to consider the organizational context fully (Doll & Torkzadeh, 1998).

2.4.2 Different Perspectives of Use

This sub-section presents different views of IS use in the literature, including how *use* can be categorized based on need. It then discusses different classifications of use including voluntary, unexpected, effective, misuse and appropriate and concludes by looking at use as a process.

2.4.2.1 Categories of Use

ESM use can be studied along three dimensions according to the need it fills. *Social use* refers to building and maintaining social relations (Ali-Hassan, Nevo, & Wade, 2015). This dimension is the most common use of public-facing social media tools like Facebook or LinkedIn. Professionals use LinkedIn to maintain contact with current and previous colleagues, whereas people use Facebook to maintain contact with family and friends. For both of these tools, it is the connections that are most important.

Hedonic use refers to use related to meeting a need for pleasure, for example, relaxation and entertainment (Ali-Hassan et al., 2015). Pinterest, Instagram, and, more recently tik-tok, are examples of public-facing social media tools that provide a means for people to pursue hobbies and be entertained by the content they find. Finally, *cognitive use* refers to the need to create and distribute information (Ali-Hassan et al., 2015).

Twitter is an excellent example of a social media tool that often fills the demand of users for information that is current. As an example, Twitter is often the first source of breaking news.

Some social media tools can fulfill multiple needs. For example, YouTube can meet both a *cognitive* need by providing a source of valuable and instructive videos and a *hedonic* need by providing entertaining videos. Twitter can also satisfy *cognitive* needs

as a source of news on current events and *hedonic* needs for users who are entertained by following the Twitter feeds of famous personalities. Facebook meets users' *social* needs to connect with friends and families and their *cognitive* needs for company information. Unfortunately, the nature of social media tools means that while they may be a source of information, it is often difficult to determine if the information is reliable. There are risks associated with absorbing social media content (as demonstrated by tik-tok videos encouraging others to perform dangerous acts) or exposing personal information (Kapoor et al., 2018). Social media users must use caution and consider the content and the source of the material they access.

2.4.2.2 Voluntary Use

There is a great deal of discussion in the literature about the importance of *use* to be voluntary. Voluntary use refers to the degree to which users have free will to use the system (Moore & Benbasat, 1991). It implies that the user personally sees a benefit to using the system (Lucas, 1978) and that users must be satisfied with the system to use it. Drawing on this idea, researchers have applied *use* as a proxy for system success (Iivari, 1985). The challenge faced is determining if *use* is genuinely voluntary. Where there are well-established organizational norms (Goodhue & Thompson, 1995), a user with no other options to complete the task may feel obligated to use the system (Adams et al., 1992). Some system use can be both voluntary and mandatory, adding to the complexity. Users may be required to enter data into the system (e.g., purchase order systems), but it could be voluntary to use the output (Lucas, 1978).

The concept of voluntary use of technology is of great interest to organizations because it influences the acceptance of new technologies and innovative use of

technology depends on users taking specific actions. While voluntary use can be perceived or actual, voluntary use influences behaviour (Moore & Benbasat, 1991; Tsai, Compeau, & Meister, 2017).

Venkatesh and Davis (2000) looked at the role social influence plays with the voluntary use of information systems. They determined that internalization of others' beliefs and identification with a reference group influenced an individual's belief structure. At the same time, a compliance mechanism caused individuals to change behaviour in response to social pressures. In a study of open systems usage conducted by Elbanna and Linderoth (2015, p. 95), the authors determined that user perceptions toward technology were "formed through a continuous interplay between users' technology mental models, professional identity, institutional traditions, and arrangements and work practices."

IS Use research needs to consider if the use was voluntary or mandatory, self-reported or system-generated, the individual's personality and experience, plus the social and organizational environment (Barua et al., 2010; Burton-Jones & Straub, 2006). In ESM, because use is generally voluntary, the tools are not adopted simultaneously by all users, and their use patterns emerge over time with experimentation (Greeven & Williams, 2017). Technology benefits are highly dependent on how and where used. If used as part of an efficient process, there will be a more significant benefit than if used with an inefficient process (Goodhue & Thompson, 1995; Lee, 2001).

2.4.2.3 Unexpected Use

In traditional IS, developers carefully design the system to build in desirable affordances to accomplish the principal system objectives. However, users do not always

use the system as expected (Orlikowski, 2000). Unexpected use can enable either *improvised* affordances that result when users discover unplanned use of the system or *emergent* affordances that are neither planned by system developers or intended by the users but result unexpectedly (Van Osch & Mendelson, 2011).

Because ESM use emerges as employees interact with the system, predicting the full range of possible use could be challenging. As an example, ESM can break down hierarchical barriers in organizations but could just as easily reinforce existing cliques if the system is used to create closed groups (West, Barron, Dowsett, & Newton, 1999).

2.4.2.4 Effective Use

Burton-Jones and Volkoff (2017) studied the effective use of e-Health records. Following a variance approach, they defined effective use as “effective actualization of affordances arising from the relation between the system and its users” (Burton-Jones & Volkoff, 2017, p. 470) within the combination of system, user, task, and time contextual factors. They propose a theory of effective use that ties effective use to performance, recognizing that users can adjust use based on comparing their goals and the perceived consequences of their actions (Burton-Jones & Grange, 2013). Based on their interpretation, effective use results if the end goal is achieved, although they note that the end goals can be flexible and that use can be adjusted accordingly.

Meister and Compeau (2002) use the term infusion to describe the situation where the full potential of an innovation in all possible and appropriate applications is permanently adopted to fulfill an organizational role. They suggest infusion should replace *use* as a dependent variable and propose three dimensions: intensity of use (i.e.,

amount of time), scope of use (i.e., number of tasks) and satisfaction (i.e., desire to continue using the innovation).

2.4.2.5 Misuse

Managerial concern over employee misuse of technology at work is not new. Concerns over misuse of the Internet in the workplace led to the development of acceptable Internet use policies in most organizations (Young, 2010). A study conducted by the American Management Association determined that 28% of employers who fired employees for misusing email systems did so because they violated company policy, used inappropriate language, had excessive personal use, or breached confidentiality rules (Young, 2010).

Misuse is described as using a system in an unintended way, resulting in wasted productivity or a failure to achieve desired results (Brynjolfsson, 1993). With most IS, misuse can be considered a failure during implementation to identify, communicate and enforce the norms of use (Iivari, 1985). Management strategies for addressing Internet misuse can be reactive or proactive and involve policies, training, enforcement and rehabilitation (Young, 2010). Misuse of ESM is no different than employee misuse of the Internet or email systems. Disrespectful language, as an example, could result in harassment of colleagues, creating a detrimental work environment (Turban et al., 2011), resulting in unnecessary and expensive labour relations problems. The management strategies for the Internet and other technologies are equally relevant to ESM to address misuse.

2.4.2.6 Appropriate Use

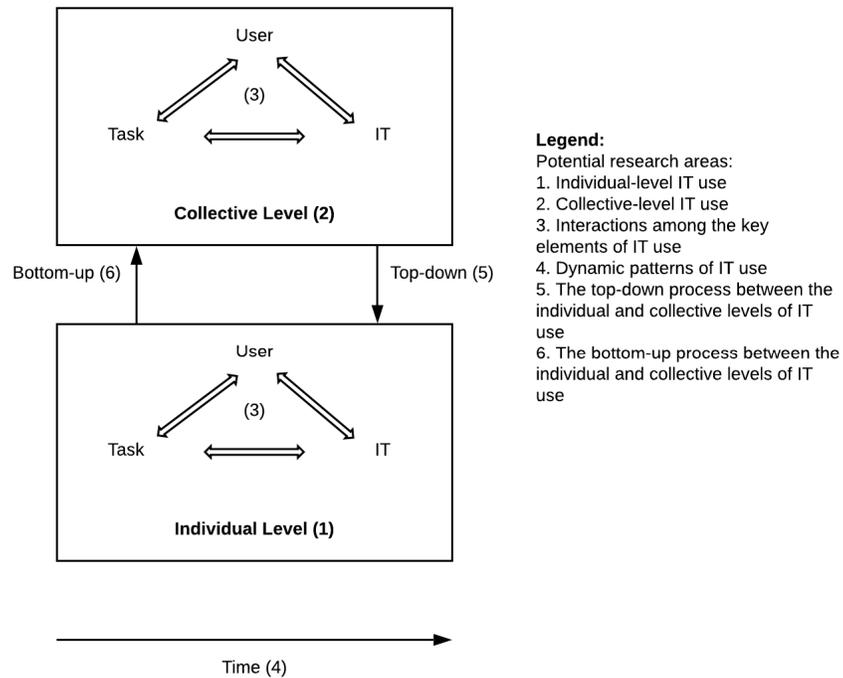
In their study, Chin, Gopal and Salisbury develop a scale to measure faithfulness of appropriation and define appropriate use as “using a system in the manner specified” (Chin, Gopal, & Salisbury, 1997, p. 363). Nance determines that appropriate use of IT “take[s] advantage of useful system capabilities for a task” (Nance, 1992, p. 45), where the appropriateness of use is a determinant of task performance. Nance’s research noted that inappropriate use of IT resulted in inefficiencies in completing tasks and had the potential to impact quality negatively, particularly over the long run.

These two references to appropriate use are related to general IT use and do not address the challenges of social media technologies. Although Chin et al. (1997) indicate that appropriate use is linked to using a system in the manner specified, the nature of social media technologies is such that minimal direction is given to users. Instead, technology use emerges as users interact with the system in the context of their work (Richter & Riemer, 2013). This indicates that any manner of use specified evolves as users engage with social media tools and employees will require support through an iterative process of discovery (Richter & Riemer, 2013).

2.4.2.7 Use as a Process

Nan (2011) has attempted to look more closely at the *Use* process and presents a conceptual model based on Complex Adaptive System theory. Nan notes that *use* is a “multi-level, interactive and dynamic” (Nan, 2011, p. 510) process, comprised of the engagement of three elements: users, IT, and task, as shown in Figure 5.

Figure 5: IT Use Construct (Nan, 2011, p. 507)



The multi-level aspect recognizes two fundamental processes – one top-down addressing how collective use influences individual use and the other bottom-up describing how individual use results in collective use (Nan, 2011). Complex Adaptive System theory recognizes that it is a learning system where the systems’ interacting components adjust behaviour due to an interaction. Understanding this interaction is critical, and Nan provides a theoretical model to study the agents of the complex system (both the user and the IT), the interactions between the agents, and the environment they operate in (Nan, 2011).

Table 5: IS Use Literature

| Author | Perspective of Use |
|--------------------------------|---|
| (Ali-Hassan et al., 2015) | Use can be categorized according to the need it fulfills (social, hedonic, cognitive). |
| (Moore & Benbasat, 1991) | Voluntary use is related to free will to use the system. |
| (Lucas, 1978) | Use is linked to perceived benefit and can be both voluntary and involuntary. |
| (Goodhue & Thompson, 1995) | Use may not be voluntary if there are organizational norms. |
| (Adams et al., 1992) | Use may not be voluntary if there are no other options. |
| (Venkatesh & Davis, 2000) | Social influence has a role in voluntary use of IS. |
| (Van Osch & Mendelson, 2011) | Unexpected use can result in improvised and emergent affordances. |
| (Burton-Jones & Volkoff, 2017) | Effective use is linked to performance. |
| (Meister & Compeau, 2002) | Infusion (intensity and scope of use, satisfaction) should replace use as a dependent variable. |
| (Brynjolfsson, 1993) | Misuse involves using a system in a way it was not intended. |
| (Iivari, 1985) | Misuse results from not communicating norms of use |
| (Chin et al., 1997) | Appropriate use involves using the system the way it was intended |
| (Nance, 1992) | Appropriate use involves taking advantage of system capability to perform a task. |
| (Nan, 2011) | Use process is comprised of Users, IT and task. |
| (Trice & Treacy, 1988) | Use can negatively affect productivity if it takes longer to do a task. |

Research that looks at use in the context of a process model recognizes that system use alone is insufficient to result in positive impacts (Table 5). Use of IT to perform a task could result in substandard performance if it takes longer to do the job or contribute to nonproductive use if employees spend unnecessary time in the system (Trice & Treacy, 1988). The Soh and Markus (1995) process model identifies the IT Use process as necessary to achieve value from IT investments. However, there must be

some level of use to achieve impact, and this use must be appropriate to achieve positive effects. They also recognize that some forms of usage can prevent positive impacts and suggest that IS use should be dealt with as a probabilistic process (Soh & Markus, 1995). Researchers could apply probabilities to determine the likelihood of a positive outcome.

2.4.3 Understanding Social Media Users

Social media use is as diverse as the users, and researchers have looked at how users interact with social media systems, both with public-facing and enterprise social media systems. It is worthwhile, when conducting research, to understand the degree to which the user engages with the ESM and the nature of that engagement. Several categorizations of users based on their interactions with systems have resulted from social media research.

Lamb and Kling (2003) note that IS users are primarily social actors that frame their IS use in the context of their inter-organizational and interpersonal interactions. They define four dimensions of a social actor's actions. *Affiliations* refer to the relationships that link individuals and organizations. The ESM supports the maintenance of these relationships, and these relationships influence ESM use. *Environments* include institutional practices, associations, and locations that frame organizational action. Employees are influenced by formal and informal organizational standards of ESM use if they exist. *Interactions* refer to the information, media of exchange, and resources used to engage with colleagues. With ESM use, interactions encompass posts, messages and other information shared with other users. The *Identities* dimension of IS use relates to actions to construct identities and control perceptions. Within an ESM, it is linked to employee profiles and how employees present themselves in exchanges. By design,

social media is social, and the determination that social media users are social actors is appropriate in this case. The four dimensions identified by Lamb and Kling are particularly relevant to ESM use.

Fyfe and Crookall (2010) conducted a series of round-table consultations to explore the role of social media in government. They categorized their participants according to their attitudes towards social media: *resistors* (i.e., those that were concerned with policy violations and the changing organizational culture), *collaborators* (i.e., those that see the value of social media as a tool to improve work), and *zealots* (i.e., those who love social media for its value as a tool but also love the experience of interacting with social media). All three types of attitudes towards ESM use could be apparent among federal public servants.

Li and Bernoff (2011) provide a more detailed typology of social media users to help organizations develop strategies to adopt Web 2.0 technologies. They propose a “Social Technographics Ladder” where each level on the ladder (*Inactives, Spectators, Joiners, Collectors, Critics, Conversationalists, Creators*) represents an increasingly engaged user. This typology is particularly interesting because it clearly shows that not all users interact with the system in the same way or to the same degree. Each ESM user will have different motivations and different objectives that will drive their use of the system. In order to understand the context that influences the individual judgment of appropriate use, the diverse interactions with the ESM should be captured.

Holtzblatt et al. (2013) extracted system log data to categorize ESM users at MITRE according to their level of contribution (i.e., *active, moderate, or readers*) and their regularity (i.e., *active or occasional*) using the system. They observed that users’

perceived value was related to their activity patterns with ESM – they perceived more benefits the more they accessed the system. This categorization depends on access to system log data and assumes that lumping all users together tells us something about a ‘typical’ user.

Van Osch, Bulgurcu, and Kane (2016) determined that ESM users differ from external social media users because they contribute in the context of their work and would be motivated by the need to build reputations. They identified four classes of ESM users (Figure 6) based on usage behaviours of posting and viewing: *Super-promoters* who are interested in building their reputation; *Promoters* who are interested in building the reputation of themselves and their teams; *Core Users* who focus on using ESM to support work activities; and *Peripheral users* characterized by passive consumption and a lack of contribution.

Figure 6: ESM User Behaviours (Van Osch et al., 2016, p. 9)

Explaining User Behaviours

| | | | |
|----------------|------|---|--|
| | High | <p>Super-Promoters (post frequently, but read rarely)</p> <ol style="list-style-type: none"> 1. personal reputation building 2. networking 3. information broadcasting | <p>Core-Users (post and read frequently)</p> <ol style="list-style-type: none"> 1. open innovation 2. project work and coordination 3. resource sharing |
| Posting | Low | <p>Promoters (post occasionally and read rarely)</p> <ol style="list-style-type: none"> 1. personal reputation building 2. team reputation building 3. sharing news, ideas and best practices | <p>Peripheral Users (post occasionally and read regularly)</p> <ol style="list-style-type: none"> 1. searching for relevant content 2. reading corporate news to feel connected 3. looking up people |
| | | Low | High |
| | | Viewing | |

Enterprise social media enables users to interact at different levels, for different purposes, based on different interests and expertise, and at different rates. Members have differing values, and researchers cannot assume homogeneity of users (Klein, Dansereau, & Hall, 1994). Collectives of users comprise subgroups of users whose use may be heterogeneous but may emerge in distinct patterns. It is the interaction of individual users through a series of actions and events that creates the context for their interaction (Morgeson & Hofmann, 1999). In this case, understanding the context is informative and critical to understanding the behaviour of individuals within a larger group (Klein et al., 1994). Although little work has been done to identify constructs for different use configurations, these configurations can emerge from individual or collective decisions, assignments from agents in authority, or evolutionary forces (Burton-Jones & Gallivan, 2007).

Table 6: Categorization of Users

| Author | Categorization of Users | Context |
|---------------------------|---|--|
| (Lamb & Kling, 2003) | Affiliations, Environments, Interactions, Identifies | Dimensions of IS user based on actions; not unique to social media technologies |
| (Fyfe & Crookall, 2010) | Zealots, Collaborators, Resisters | Series of round-table consultations; based on attitudes towards social media |
| (Li & Bernoff, 2011) | Creators, Conversationalists, Critics, Collectors, Joiners, Spectators, Inactives | Based on degree and nature of ESM use |
| (Holtzblatt et al., 2013) | Contribution (Active, Moderate, Reader) and Regularity (Active, Occasional) | ESM users at MITRE; based on system log data |
| (Van Osch et al., 2016) | Super-promoters, Promoters, Core-Users, Peripheral Users | ESM users at multinational corporation; based on system log data for viewing/posting supported by interviews |

2.4.4 Summary of IS Use Literature

Based on the literature, there is no overarching theory, definition, or empirical study to explain IS *Use*. Researchers include the concept of *use* in their IT value models even though they do not fully explain its meaning. ESM *use* is assumed to be voluntary, and as a result, benefits result at different rates with different people at different times. Individual use can affect collective use, just as collective use influences individual use.

The literature describes the meaning of effective use, linking the system, the users, and the effect. However, *effective use* may not be the same as *appropriate use* because users can still achieve a positive outcome through inefficient or misuse of systems. No research was found that looks at the meaning of *appropriate use*. The literature clearly shows that *use* is a valuable construct in understanding how IS delivers value to the organization and to provide value, *use* must be appropriate. In trying to understand appropriate use, the theoretical work on legitimacy theory that has been used previously to understand organizational structures and group dynamics is informative.

2.5 Legitimacy

This section determines how legitimacy is defined, and presents a typology of the bases of legitimacy and the stages of the legitimation process.

2.5.1 Defining Legitimacy

In the study of IT value, several researchers have identified *use* as a necessary condition to achieve business value from IT investments. Some have also specified that use must be *appropriate* (DeLone & McLean, 2003; Lucas, 1993a; Lucas, 1993b; Rogers, 1983; Soh & Markus, 1995). What researchers have failed to do is to explain what is meant by *appropriate*. “Legitimacy is a generalized perception or assumption

that the actions of an entity are desirable, proper, or *appropriate* within some socially constructed system of norms, values, beliefs and definitions” (Suchman, 1995, p. 574) (emphasis added).

Legitimacy has been covered extensively from a political perspective to explain the existence and functions of political institutions (Beetham, 1991; Clark, 2005; Gilley, 2009). It has also been used to study organizational structures and institutions (DiMaggio & Powell, 1983; Meyer & Scott, 1983; Parsons, 1960; Pfeffer & Salancik, 1978) and interpersonal relationships and group dynamics (Ridgeway & Berger, 1986; Tost, 2011).

Although commonly applied at the organization or institution level, researchers can also apply legitimacy to nearly any social object, person, or action (Berger & Zelditch, 1998). Johnson (2004) provides a diverse list of entities that could be considered legitimate:

act, rule, procedure, routine, distribution, position, group or team, group’s status structure, teamwork, a system of position, an authority structure, organizational symbols, an organization’s form, practices, services, programs a regime, a system of power and a system of inequality.

(Johnson, 2004, p. 10)

The rules, procedures, and practices of ESM use exist within a system of norms, values and beliefs and, according to Johnson et al., are valid entities that could be considered legitimate by employees.

When the discussion relates to a social act’s legitimacy, legitimation can come from three sources (Dornbusch & Scott, 1975). First, the individual taking action deems the action to be legitimate (i.e., *propriety*). Second, a peer or social group can *endorse*

the action as legitimate, and finally, superiors or those with more power can *authorize* or deem the action legitimate (Walker, Thomas, & Zelditch, 1986). Walker, Thomas and Zelditch studied endorsement effects of persons, positions and acts in the context of collective tasks and power relationships. However, their results were inconclusive because they could not control all the sources of variation in their experimentation, which indicated the complexity of the legitimation and that perhaps a process approach would be more revealing. Their situation demonstrates the complexity involved in understanding how ESM is used and how interactions influence this use.

2.5.2 Typology of Legitimacy

Although several typologies are available to understand legitimacy (Aldrich & Fiol, 1994; Beetham, 1991; Easton, 1965; Scott, 2001; Suchman, 1995; Tost, 2011; Weber, 1947), there is some consistency in the identification and definitions of the bases of legitimacy (i.e., the source of evidence that allows us to determine an entity is legitimate).

Regulative legitimacy is easily recognized as grounded in legality through existing rules and laws (Aldrich & Fiol, 1994; Beetham, 1991; Scott, 2001), including sanctioning those that do not comply. *Pragmatic legitimacy* has a self-interest perspective and is determined based on its benefit to the assessor (Suchman, 1995; Tost, 2011). *Cognitive legitimacy* results when the action is taken for granted based on existing cognitive models and shared frames of reference (Scott, 2001; Suchman, 1995). *Relational legitimacy* results from trustworthiness, interpersonal respect, and individual charisma (Suchman, 1995; Tost, 2011; Weber, 1947) and results when an individual's sense of self-worth is validated. The final basis of legitimacy and the one most often referred to in the

literature is *normative legitimacy* that links shared beliefs (convictions), values (conceptions of the preferred), and norms (the way things should be done) (Beetham, 2013; Scott, 2001; Suchman, 1995; Weber, 1947).

Legitimacy can have three configurations: as-property, as-process, and as-perception (Suddaby, Bitektine, & Haack, 2017). Legitimacy-as-property is an outcome of interactions of actors. Legitimacy-as-process considers the actors as change agents as it is primarily interested in how legitimacy is socially constructed. Legitimacy-as-perception considers actors in an evaluation role where legitimacy is established primarily through cognition. In their paper, Suddaby et al. (2017) demonstrate that each configuration has value in identifying the What, Where and How of legitimacy.

Researchers have looked at how legitimacy is gained, maintained, or lost from a dynamic process perspective (Gilley, 2009). Berger, Fisek, Ridgeway, and Norman (1998) see legitimation as a macro and micro process. At the macro level, the larger social framework supports the existence of social entities (including social practices), whereas at the micro-level, “actors mediate the process by which social reality is redefined to create legitimacy” (Tosi, Klein, & Kozlowski, 2002; Zucker, 1989). The continuous interactions of the macro and the micro-processes are critical to understanding how appropriate use is socially constructed. The interactions of these two levels provide complementary and interdependent perspectives.

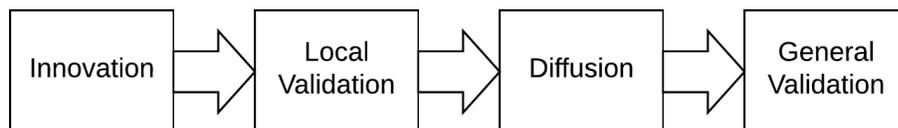
This research is interested in the legitimacy-as-process perspective to understand how appropriate use is socially constructed and the legitimacy-as-perception perspective to understand individual judgment of appropriate use.

2.5.3 Legitimation process

The foundation of legitimacy is the construction of a social reality based on the presumption of shared norms, values and beliefs (Johnson, Dowd, Ridgeway, Cook, & Massey, 2006). Johnson et al. (2006) studied the legitimation of social objects such as norms, values and beliefs, in the context of group and organizational status and authority. They identify four stages (Figure 7) in legitimating social objects: *innovation*, *local validation*, *diffusion*, and *general validation* (Johnson et al., 2006).

The first stage, *innovation*, involves taking action to fulfill a need, purpose, or goal. Laïfi (2016) equates this stage to achieving pragmatic legitimacy because it recognizes the innovation's utility. In the second stage, *local validation*, an individual believes an action is legitimate because it is either authorized by a higher authority or endorsed by colleagues and subordinates (Walker et al., 1986). This validation can be *explicit* (i.e., actions of the second actor are similar to or confirm the actions of the first) or *implicit* (i.e., the second actor does nothing inconsistent with or contradictory to the actions of the first). If a second actor contradicts the initial action, it is not validated (Berger & Luckmann, 1966).

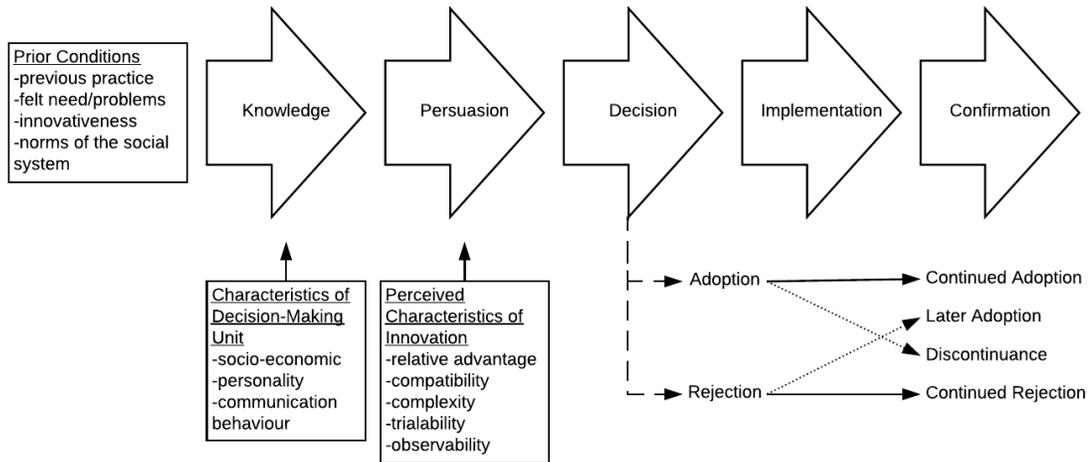
Figure 7: Stages of Legitimation Process (Johnson et al., 2006)



The third stage, *diffusion*, implies some consensus about the action (Laïfi & Josserand, 2016) and will manifest as either someone else adopting the same action or adapting the action in a similar but different context (Johnson et al., 2006). The final stage is *global validation* that involves a collective belief that the social action is legitimate and manifested in norms. Suppose a larger group validates a specific action or routine. In that case, an employee is more likely to see this action as legitimate, and other employees will also behave as if it is legitimate (Walker, Rogers, & Zelditch, 1988). The visibility affordance of ESM means that any explicit validation is visible to other users.

Rogers' Theory of the Diffusion of Innovations (Rogers, 1983) presents an alternative perspective to explain how an innovation is adopted. He defines diffusion as the "process by which an innovation is communicated through certain channels over time among the members of a social system" (Rogers, 1983, p. 5). Diffusion is communicating about a good idea and manifests as a social change. It comprises four elements: innovation, communication, time, and the social system. The innovation-decision process contains five steps (Figure 8): *Knowledge* or awareness of the existence of the innovation; *persuasion* by forming an attitude (favourable or not) towards the innovation; a *decision* to adopt (or not) the innovation; *implementation* of the innovation; and finally, *confirmation* of the innovation-decision (Rogers, 1983). A key consideration is that the innovation can be rejected or discontinued at any point in the process.

Figure 8: Stages in the Innovation-Decision Process (Rogers, 1983, p. 165)



Many people assume that once an organizational practice has spread through diffusion that it is also institutionalized. However, the practice may fade away and never become institutionalized (Colyvas & Jonsson, 2011). An example would be how quickly the Pokemon GO app diffused through marketing and word of mouth. However, users rapidly lost interest resulting in only a percentage of people retaining the app (Nel, 2016). There is also the potential for organizations to legitimize a management practice through policy, but it may never fully diffuse. An example in the workplace could be the requirement to use an online knowledge base for official records management that few employees use. In order to understand how practices achieve widespread acceptance and become integrated in the organizational culture, managers need to consider how these practices become legitimate.

Legitimation is a dynamic concept, so there is no reason to expect that an action will always be legitimate once deemed legitimate. Smoking is an excellent example of a social habit legitimized by broader society in the mid-20th century. Smoking in private, in public, at work, and in restaurants was entirely appropriate behaviour. However, as

Cummings & Proctor (2014) report, there has been a drastic change in attitudes towards smoking. Although smoking continues to be a legal activity in most countries, some countries, like Canada, relegate smoking to private spaces, and the act of smoking is often negatively perceived.

From the perspective of modern technology, changes in social norms are constant and rapid, and what is legitimate today may not be legitimate in the future. Consider, as an example, the use of cell phones in public or schools. Although access to cell phones is widespread, it is questionable whether having conversations over cell phones in public places is considered legitimate or if children should use them in the classroom. Attitudes, beliefs, and norms influence these changes in legitimate action, and they can evolve.

Research on legitimacy in organizations, including organizational processes, is founded in Institutional Theory. In their foundational work on Institutional Isomorphism, DiMaggio and Powell (1983) describe three isomorphic processes: *coercive*, *mimetic*, and *normative*. Although their work explained why organizations in a given field were similar, their work can be extended to understand how organizational practices become similar or how group consensus is achieved on appropriate use. *Coercive isomorphism* results from formal and informal pressures and is commonly linked to threats of punishment. For an employee, government policy related to security and the threat of criminal charges is a powerful coercive force to motivate employees to comply.

Mimetic isomorphism results in highly ambiguous situations where employees decide to model or copy previously-used practices (Fulk, 1993; Rogers, 1983). The final process is *normative isomorphism*, where an actor will act “in accordance with a norm, value, belief, practice or procedure” (Zelditch, 2001, p. 13). Although DiMaggio and

Powell describe normative isomorphism in the context of a profession, socialization of employees to the organizational and social norms influences employees to adopt already accepted practices (Fulk & Boyd, 1991; Lucas & Spitler, 1999).

Research indicates that actions need to be validated to be considered legitimate. The term *propriety* refers to situations where individuals believe their actions to be legitimate (Walker et al., 1986), while *authorization* relates to the beliefs of superiors or persons in authority and *endorsement* to the beliefs of colleagues or subordinates in the legitimacy of actions (Dornbusch & Scott, 1975). The Theory of Validation presented by Berger, Fisek, Ridgeway, and Norman (1998) to describe power and prestige relationships outlines in detail how validation can be *explicit* (through words or action) or *implicit* (through the absence of contradictory words or actions).

2.5.4 Summary of Legitimacy Literature

When applied to a concept such as IS use, the literature on legitimacy tells us that the actions of using ESM can be perceived as being legitimate based on the perception of appropriateness and that this perception is a product of interactions between the individual and their environment (Suddaby et al., 2017). Researchers cannot lump ESM users together to create a representative user. ESM users make individual judgments based on their own cognition and motivation and within the context of institutional pressures (Bitektine & Haack, 2015). These individual judgments are continually negotiated, and the process by which they are formed has roots in the social construction of reality which is discussed further in the next chapter.

Because *legitimation* is a dynamic, iterative, and interactive process highly dependent on context, the most effective approach to its investigation is an interpretive

one. This approach recognizes that people discover reality through “a process of enactment in which perceptions, attention and interpretation come to define the context for the organization” (Pfeffer & Salancik, 1978, p. 260). As people take action and interact with IS, they interpret that action and their experiences in a specific context.

2.6 Summary of Literature Review

There is increased interest in how ESM is used within organizations. The affordances of ESM are context-specific and will vary by user. Not everyone believes ESM will benefit them, and getting a sufficient foothold is a challenge in some organizations. ESM use is often voluntary, is dependent on individually perceived value (Davis et al., 1989), and engages the user, technology, and task. ESM users are not all equal, and their use can be categorized according to their degree of engagement, ranging from Inactive to Creators of content (Li & Bernoff, 2011).

The value of ESM use can be immediate to overcome problems of time and distance. The value can also contribute to more long-term objectives such as improved employee relationships, team dynamics, or the value could benefit the organization more strategically. The IT value literature has introduced the concept of *use* as a condition or process needed to obtain value for the organization. It recognizes that impacts will only result when the technology is used appropriately.

There has been significant research on legitimacy in the political, organizational, and social domains and we can see how appropriate use of ESM is determined within a larger social framework. In addition, employees will consider the functionalities afforded by ESM in the context of their work environment and the task to be accomplished.

This chapter looked at previous research to understand enterprise social media, how *use* and more specifically *appropriate use* is relevant to IS value, and how legitimacy theory can help explain the social process of legitimation. The next chapter ties together the work of others to present a conceptual process model of the appropriate use of enterprise social media. This conceptual model will provide the framework for the specific research conducted under this study.

Chapter 3: Conceptual Framework

3.1 Overview

This chapter builds on previous work on legitimacy, affordances of ESM, IT value, and IS use to understand how appropriate use of ESM develops. It covers the relevant theories that informed the study, presents the research questions, develops the conceptual framework that guided the work and specifies the scope of the research.

3.2 Social Construction of Reality

This section explores the literature related to the social construction of reality concerning the individual judgment of appropriate use and its relationship to environmental and social norms. The section begins with the foundational work by Berger and Luckman, then looks at how attitudes and perceptions influence system use as described by various technology adoption theories and innovation theories.

3.2.1 Berger and Luckman's Social Construction of Reality

In the foundational book authored by Berger and Luckman (1966), the authors provide an in-depth theoretical look at how social actions and interactions determine social reality. They present the world as both an objective reality founded on institutions and legitimation and a subjective reality that is a product of socialization. Society is characterized simultaneously by *externalization*, *objectivation* and *internalization* – where individuals “construct and externalize phenomena, which then take on an objective reality of their own and which then are internalized by us and thus play a key role in the process of externalization” (Parton, 2008). The dialectic relationship people have with the world around them is constantly in motion, with each influencing the other. The

authors also look at the role that legitimation plays in explaining or justifying the institutional order through cognitive means such as language, explicit action and frames of reference. They emphasize the role that symbolic universes play in framing the totality of all subjective and objective meaning.

Socialization is a crucial element of the social construction of reality. It recognizes that all individuals are born into a social structure where someone is responsible for socializing them to the roles and attitudes of others and helping with the internalization of applicable norms. Although the example provided by Berger and Luckman relates to the development of a child, this same concept can apply to new employees who need to be socialized to the new organizational norms beginning with the language and terms in use. Interestingly, they note that “socialization is never total and never finished” (Berger & Luckmann, 1966, p. 157).

The subjective world we live in is one shared in time and space with others’ subjective worlds. It is through interactions between us and them that we come to understand others’ subjective worlds. The closer in time and space we are, the easier it is to understand other’s perspectives. For example, frequent face-to-face interactions allow the sharing of information as well as non-verbal cues. Indirect exchanges done remotely and separated by time still influence our subjective world but to a different extent.

We take for granted that our knowledge of the world around us is valid until we face a situation where what we know about the world is insufficient, supporting the idea that the entirety of knowledge is distributed among social entities. It is unnecessary to know everything, but it is beneficial to know “which types of individuals may be expected to have which types of information” (Berger & Luckmann, 1966, p. 61). By

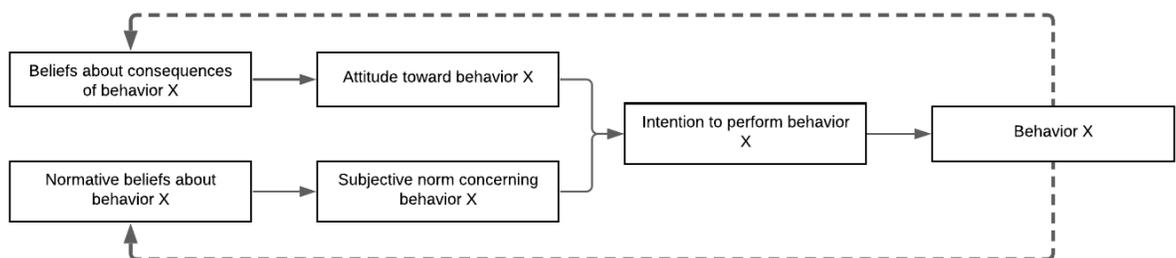
interacting with others and accessing their information, we can expand our understanding of the world.

3.2.2 Role of Attitudes in Technology Use

Berger and Luckman discuss the importance of socializing the attitudes of others and the norms of society as part of the socialization process. In the Lucas model described in Figure 1, attitudes and perceptions drive their proposition that “favorable user attitudes and perceptions of information systems and the information services staff lead to high levels of use of an information system” (Lucas, 1973, p. 33). Attitudes and norms also appear in several other models linked to technology adoption and use.

Fishbein and Ajzen’s Theory of Reasoned Action (TRA) describes a causal relationship between Beliefs, Attitudes, Intentions, and Behavior (Figure 9). They identify *attitude* as a feeling of favorableness or unfavorableness towards an object, whereas a *belief* represents the information a user has about an object. Similar to the socialization identified by Berger and Luckman, Fishbein and Ajzen note that people develop beliefs about an object based on either direct observation or information they receive from outside sources. They present the case that people are rational beings who use “the information at [their] disposal to make judgments, form evaluations, and arrive at decisions” (Fishbein & Ajzen, 1975, p. 14).

Figure 9: Theory of Reasoned Action (Fishbein & Ajzen, 1975, p. 16)



The TRA theory fails to account for unforeseen events that could prevent intention to behave in a particular manner or influences from others that could prevent someone from following through on their intention. For example, an employee may believe sharing a draft document on an ESM will have a positive effect and is aligned with accepted practices. However, circumstances could result in them being denied access to the system or his manager requesting the document be sent out by email instead. Fishbein and Ajzen later extended their model by incorporating a construct for Perceived Behavioral Control to account for situations where individuals may not have the opportunity or resources to follow through on their intentions to act (Figure 10).

Figure 10: Theory of Planned Behavior (Ajzen, 1991, p. 182)

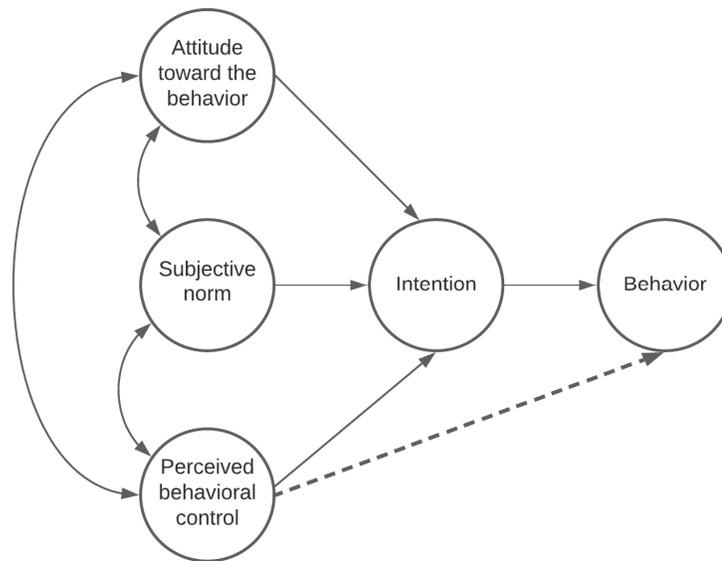
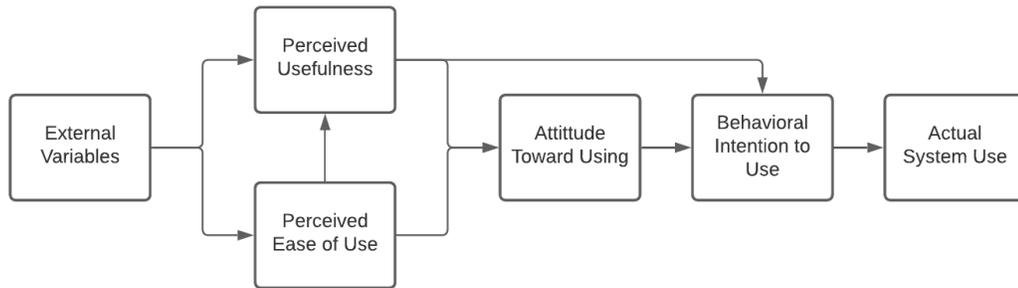
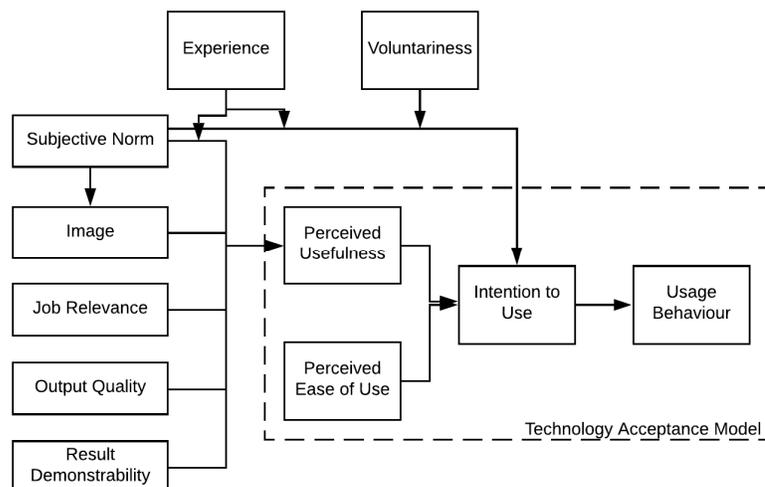


Figure 11: Technology Acceptance Model (Davis et al., 1989, p. 985)



Another variation of the TRA model is the Technology Acceptance Model (TAM) that explores factors that would predict actual system use (Davis et al., 1989) (Figure 11). Under TAM, attitudes towards use are influenced by perceived usefulness and perceived ease of use. The model predicts that individuals will have positive intentions to use a system if they expect it to have a positive effect. When applied to an organization, people will use technology that they believe will enhance their job performance (Davis et al., 1989).

Figure 12: Extension to Davis TAM (Venkatesh & Davis, 2000, p. 188)



Venkatesh and Davis (2000) extend the TAM to look at the role of social influence processes (Figure 12). This model recognizes that three social forces influence individuals: *subjective norms*, *voluntariness*, and *image*. *Subjective norms* refer to the individual's perception "that most people who are important to him think he should or should not perform the behaviour in question" (Fishbein & Ajzen, 1975, p. 302). The degree to which individuals believe their use is voluntary (i.e., they perceive their use is non-mandatory) moderates their intention to use a system. The final social factor looks at the degree to which the system use can influence an individual's image in a social group.

The ESM literature also identifies the types of agents whose attitudes are part of the socialization process mentioned by Berger and Luckman. *Opinion leaders or salespeople* are well connected and regularly sought after for their input (Gladwell, 2002; Rogers, 1983). They play an informal role based on their expertise, accessibility and conformance to the system's norms unconnected with any formal position they occupy (Rogers, 1983). Their ability to influence the narrative gives them power over how ESM is used (Treem & Leonardi, 2012). *Change agents* perform a formal function in a change effort. They play a role in influencing ESM use in the direction desired by the organization by defining the need, influencing action, and helping to stabilize the implementation (Rogers, 1983).

Moderators help to control bad behaviour by fostering a positive online environment. This can be either an official role assigned to an individual or a role adopted by one or more users (McGillicuddy, Bernard, & Cranefield, 2016). With social media, moderators often respond quickly to remove inappropriate content. It is unclear how a moderator's role manifests in ESM or whether it is even a necessary formal role.

Connectors have a crucial role in ESM by building relationships with many contacts, while *Mavens* are users that know a lot about specific subjects and are eager to share what they know (Gladwell, 2002). A *maven* is an expert in the use of ESM, including developing new methods and sharing these methods with other users. A *maven* is subtly different from an *opinion leader* in that although employees seek out an opinion leader's perspective, they are not necessarily experts. A *maven* with sufficient exposure may also become an *opinion leader*.

3.2.3 Summary of the Social Construction of Reality Literature

The social construction of reality literature emphasizes how knowledge is distributed among social entities and describes how the world is characterized simultaneously by an objective and a subjective reality. What is known about technology is learned through a process of socialization of attitudes and norms. Both attitudes and norms have appeared in technology adoption models to explain factors that increase system use. These technology adoption models assume a causal relationship between intention and behaviour and mention influences that could lead to ineffective or inappropriate use.

3.3 Relevant Concepts and Theories

This section discusses how ESM systems are different from transactional systems and why they are worth studying. It also differentiates appropriate use from other kinds of use and examines why legitimation is a suitable theoretical lens for this study.

Transactional IS in organizations are relatively common and can include financial, human resources or even production systems that merely automate existing processes. These systems are most often considered mandatory because there are no

other options to accomplish the necessary task. For example, managers must use human resource and financial systems to ensure employees are paid, and employees must use purchasing systems to obtain supplies essential to the business. Organizations may also have some systems that are not mandatory, such as email or knowledge management systems. There may be other ways to accomplish the task in these cases, such as speaking to someone in person or maintaining a paper filing system. The difference between mandatory and voluntary systems most often rests with the consequences of not using this system, how this affects the organization's core mission and whether or not there are alternatives available.

ESMs are often considered voluntary systems because employees may find alternative ways to achieve their objectives. Unlike knowledge management systems where implementers can fully define the protocols for their use and staff can be trained, ESM systems are designed to be more flexible in meeting the employees' needs, giving them choices. Employees can interact with the tools and other employees, and their use can evolve as employee needs evolve and they interact with other users (Richter & Riemer, 2013). Previous implementations tell us that although management may have preconceived ideas about ESM use, employees will explore the system features available and incorporate them over time within their personal work environment (Richter & Riemer, 2013). It is, therefore, challenging for organizations to thoroughly plan the use of ESM systems (Greeven & Williams, 2017).

The literature review has shown that although a large body of research on ESM in businesses exists, there is very little work on ESM use in government or public organizations. Implementing new technologies in government organizations is an

expensive and complex endeavour due to the government's size and the diversity of the functions performed. There are also pressures for governments to adapt and transform their culture in response to the digital era (Clarke, 2019). However, the nature of government organizations with well-entrenched bureaucratic structures (Olsen, 2008) and a risk-averse culture (Shahsavarani, 2014) may be a barrier to the full adoption and use of ESM. The use of ESM in a government organization merits further study.

This study focuses on the *appropriate use* of ESM and how *appropriate use* is socially constructed. There is little mention of *appropriate use* in the IS literature. Both Lucas and Soh and Markus mention its critical role in achieving value and how ineffective or inappropriate use can prevent the desired impacts. However, they don't look at how *appropriate use* is determined.

TRA, TPB and TAM mention *intent* to use, but there is no qualification as to whether this intention to use is good or bad, and these models do not consider the impacts of use. Designers build in affordances to technology; however, when people use technology in a manner that was not intended or predicted, improvised and emergent affordances can result, and some of the emergent affordances can be undesirable (Van Osch & Mendelson, 2011).

Burton-Jones and Volkoff's (2017) work on *effective use* is similarly insufficient. Although they recognize that an employee can achieve their desired outcome through alternate means, they exclude deliberately destructive use from their study. In addition, they only consider what effective use affords and not how effective use is constructed. From their perspective, if employees achieve their goals, the use must have been effective. *Effective use* focuses on the outcome, whereas *appropriate use* focuses more

on how the outcome is obtained. *Appropriate use* of ESM involves interactions of users with the ESM system in a manner that is legitimated through propriety (i.e., individual judgement), endorsement (i.e., validated by peers) or authorization (i.e., validated by those in positions of authority).

A process perspective is required to look at how *appropriate use* is socially constructed. Both Rogers' Theory of the Diffusion of Innovations (1983) and work on legitimation by Johnson et al. (2006) can be considered to answer the research questions. Both are process models used to explain how something can achieve broad acceptance in a larger population. They both recognize that once a decision is made to innovate, it must be implemented and validated or confirmed. This validation is not an instantaneous action but instead an iterative process that takes place over time.

Rogers' model has seen success in looking at how technical innovations are broadly adopted. Examples could include the broad adoption of cell phone technologies (Comer & Wikle, 2008) or even a more current example in the growth of cyber currency (Yoo, Bae, Park, & Yang, 2020). If this study focused on how ESM systems are broadly accepted, then the use of his model would be a good match. Rogers' model focuses on innovations and applies to introducing new technologies, explaining how a good idea can manifest as a social change. This model could address the question of how ESMs become integral to the organization's business. Although it does provide value in recognizing the social norms' influence as initial conditions to innovative action, it does not fully address the interactions among various users of ESM.

This research is not looking at the acceptance or diffusion of ESM systems in organizations. It considers their appropriate use and how that appropriate use is socially

constructed. The Johnson et al. (2006) model, previously presented in Figure 7, has been used to look at social objects and how they are legitimated.

The Johnson et al. (2006) legitimation process considers legitimation as a problem in constructing social reality. It is a collective process mediated by the perceptions and behaviours of individuals. Examples of other social objects in the workplace could include establishing seating in meeting rooms, adopting dress codes in the office, or using honorifics for superiors. Because the legitimation process proposed by Johnson et al. draws on both social psychology and what we know about organizations, it can help us understand the social process involved in *appropriate use*.

Employees need to build knowledge and understanding about what they can potentially do with the ESM tools. Fishbein and Ajzen (1975) describe sources that influence belief formation from direct observation, information from outside sources, or inferred from other related beliefs. They also note that there is a normative element to beliefs as reflected in expectations of a group where “the consequences of performing a given act are that the act may please or displease relevant reference individuals or groups and that it may lead to reward or punishment” (Fishbein & Ajzen, 1975, p. 304). Employees will draw on multiple sources of information, including observing and modelling others’ behaviour. They will then need to form an attitude that what they are planning will be aligned with the expectations of referent groups.

Once employees take action with the ESM tools, they confirm that they believe what they’ve done qualifies as appropriate use, and their actions will be confirmed or validated by peers or someone in authority. Depending on the response the employee receives, the action is either validated or rejected. Social Influence Theory can explain

what is happening in the validation phase of diffusion and legitimation. This theory assumes that users' perceptions are subjective and socially constructed through either overt interactions or covert observations (Fulk, Schmitz, & Steinfield, 1990).

How individuals use a new system is related to how the system is evaluated in the broader social system, including organizational policies and managerial pressures (Fulk & Boyd, 1991). Employees can be influenced by direct statements and judgments from co-workers or persons in authority (Fulk & Boyd, 1991; Fulk et al., 1990) and by learning through observing others and modelling observed behaviour (Fulk, 1993; Fulk et al., 1990; Rogers, 1983). These interactions help employees understand the organizational norms related to using the technology (Fulk & Boyd, 1991; Kraut, Rice, Cool, & Fish, 1998) and the broader social system values (Kwahk & Park, 2016).

3.4 Research Questions

Research questions need to identify those things researchers want to understand. They are informed by what is already known of the subject and the researcher's goals (Maxwell, 2005). This section presents the research questions for this study.

This research has two high-level objectives. The first is to propose a theoretical model that describes how the appropriate use of ESM is socially constructed within the workplace. The second is to determine if legitimacy is an appropriate theoretical lens to understand individual judgment on appropriate use.

Table 7: Research Questions

| Research Questions | Contributions |
|--|---|
| <i>How is the appropriate use of enterprise social media socially constructed in a Westminster parliamentary democracy?</i> | Development of a conceptual framework to understand the social construction of appropriate ESM use. |
| 1. <i>What influences a public servant's individual judgment that a specific action is appropriate when using enterprise social media?</i> | Identification of elements that influence individual judgment of appropriateness. |
| 2. <i>How are actions taken by public servants using ESM validated as appropriate?</i> | Model to describe the validation of ESM use. |

Organizations implement ESM with an expectation that they will achieve value from the investments. The IT value literature tells us that *use* is an essential construct to achieving value, but more importantly, *appropriate use* is a necessary condition for success (Lucas, 1993a). To realize value from their ESM implementations, organizations need to understand how their users determine their ESM use is appropriate. This research considers that *appropriate use* of ESM needs to be better understood so that organizations can benefit fully from ESM implementations. This study looks at the appropriate use of ESM in a specific context, that of the Canadian federal government.

As indicated in Table 7, this study addresses *How the appropriate use of Enterprise Social Media is socially constructed in a Westminster parliamentary democracy* such as the Canadian federal government. This question is best understood by breaking it down into two components - the first dealing with the individual judgment of federal public servants and the second dealing with the validation of users' actions.

It is crucial to understand how employees view *appropriate use* because it influences their individual decision of how or whether they will use the ESM tools and how the actions of others are validated. Employees will not want to use the system if

they cannot determine a use that they deem appropriate. Inappropriate use can have consequences on the user, other employees, and the organization. Employees could be professionally embarrassed or face disciplinary measures. They could also alienate other users impacting their willingness to collaborate. Consequences could also affect the organization's core business and leave employees and managers believing the investment was wasted. Understanding how employees view the appropriate use of ESM will help organizations guide existing employees and new employees to use the ESM in a manner that will lead to value attainment.

3.5 Conceptual Framework

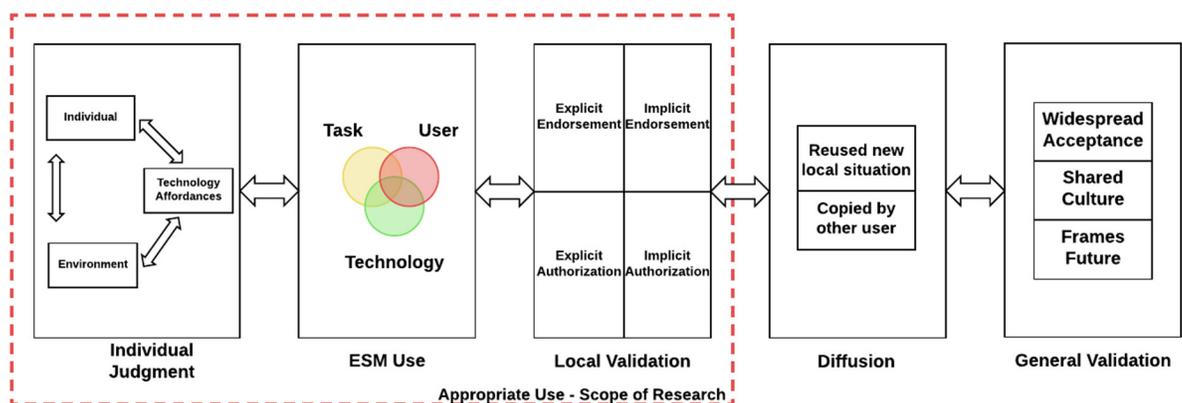
A conceptual framework presents the “concepts, assumptions, expectations, beliefs and theories” (Miles & Huberman, 1994, p. 33), often in a graphical form, that describes what the researcher believes is going on in the topic under study (Maxwell, 2005). This framework is an “anchor” for the data collection and analysis, describing who and what is included in the study (Baxter & Jack, 2008, p. 553). Although the researcher will draw on theory and research conducted by others, they will also draw on their experiences and research. Most research will rely on a deductively developed model based on literature and then, through study, will look to confirm, refine or expand on the model based on what is discovered (Shaw & Jarvenpaa, 1997). The initial lens guiding the research will be dynamic and extended as data are analyzed (Weick, 2007).

A conceptual framework built by and for practitioners will differ from one for scientists. Lundberg (2004) argues that managers take a pragmatic approach and look for prescriptive models that will help them achieve their goals. On the other hand, scientists want to build on a body of knowledge and aim for a descriptive (or explanatory) model.

This research considers HOW appropriate use of ESM is constructed in an organization. It does not try to explain WHY something happens, so a process approach is more suitable than a variance approach. Using a process approach to describe what is happening results in a model presenting multiple stages of activity. Each stage represents a necessary but insufficient condition for the subsequent stage. A process approach recognizes that experiences are dynamic and can change over time (Bansal, Smith, & Vaara, 2018).

The Johnson et al. (2006) model identifies the legitimation process stages as *innovation, local validation, diffusion, and general validation*. Their model begins with the innovation action but stops short of considering how the employee determines their planned action is appropriate and how their context influences this decision. A stage is added to the Johnson et al. model to represent individual judgment (i.e., propriety) that the action is legitimate or appropriate. It is particularly crucial for the voluntary use of ESM because the employee is free to determine their intended ESM use is appropriate.

Figure 13: Appropriate Use Model



Related References

Berger & Luckman, 1966
 Dornbush & Scott, 1975
 Lamb & Kling, 2003
 Nan, 2011
 Treem & Leonardi, 2012
 Elbanna & Linderoth, 2015
 Suddaby et. al., 2017

Nance, 1992
 Johnston et. al, 2006
 Burton-Jones & Straub, 2006
 Nan, 2011

Dornbush & Scott, 1975
 Walker, 1986
 Fulk & Boyd, 1991
 Zelditch, 2001

Saga & Zmud, 1993
 Laif & Josserand, 2016

Suchman, 1995
 Kraut et. al, 1998
 Johnson et. al, 2006
 Nan, 2011

Table 8: Literature Contributions to the Model

| Stage | Reference | Contribution |
|---------------------|-----------------------------|--|
| Individual Judgment | Berger & Luckman, 1966 | Employee projects their own meaning on what they observe and experience. |
| | Dornbusch & Scott, 1975 | A source of legitimacy is the individual (propriety). |
| | Lamb & Kling, 2003 | Employee exchange of information and ESM use is influenced by Affiliations and Environment. |
| | Nan, 2011 | Collective use influences individual use. |
| | Treem & Leonardi, 2012 | Affordances of ESM include visibility, persistence, editability and association. |
| | Elbanna & Linderoth, 2015 | User perceptions are formed through continuous interaction of institutional traditions and work practices, professional identity and mental models. |
| | Suddaby et al., 2017 | Perception is a product of interactions between individual and environment. |
| ESM Use | Nance, 1992 | Appropriate use takes advantage of system capabilities for a task. |
| | Johnson et al., 2006 | Actions address some need, purpose, goal or desire of individual. |
| | Burton-Jones & Straub, 2006 | Use occurs at the intersection of the user, the technology and the task. |
| | Nan, 2011 | Use engages user, IT, task. |
| Local Validation | Dornbusch & Scott, 1975 | <i>Authorization</i> : beliefs or actions are legitimated by a superior or person with authority. <i>Endorsement</i> : when colleagues or subordinates believe an action is legitimate. |
| | Walker et al., 1986 | Achieved through endorsement or authorization. |
| | Fulk & Boyd, 1991 | Employees can be influenced by colleagues or superiors. |
| | Zelditch, 2001 | Behavior is interpreted as being aligned with beliefs, values and norms. |
| Diffusion | Saga & Zmud, 1993 | ESM can be used by more employees in a similar way or in different ways. |
| | Laif & Josserand, 2016 | Implies social consensus as to value of innovation. |
| General Validation | Suchman, 1995 | Practices achieve cognitive legitimacy. |
| | Kraut et al., 1998 | People developed shared understanding through time and exposure. |
| | Johnson et al., 2006 | Practices become part of shared culture and will frame future actions. |
| | Nan, 2011 | Organizational and social norms are broadly embraced through a bottom-up process. |

The conceptual model for this research (Figure 13) builds on the Johnson et al. model and other research (Table 8). It recognizes the innovation relevant to our study involves ESM use or action taken by employees using the ESM. This use does not need to be the initial use of the ESM or the first time doing something new using the ESM because each time they use the ESM, they form the opinion that their action is legitimate or appropriate. Legitimacy can help describe both the broader process of interaction that normalizes appropriate use and users' determination that their ESM use is appropriate from the outset.

Describing the proposed model reading from left to right runs the risk of the reader interpreting the model as one of sequence. It would potentially be misinterpreted as a causal model. As Soh and Markus (1995) recommended, a process model is best understood, working backwards from the planned outcome to identify the intermediate steps necessary for success. Each of the stages in the process model is described below, moving backwards from right to left.

The desired outcome for appropriate use of ESM would be for practices and routines to emerge and be adopted globally by all employees. *General validation* represents the activity in which organizational and social norms are broadly embraced through a bottom-up process (Nan, 2011) and implemented to guide ESM use. "Over time and with sufficient exposure to the experiences of others ... people [will develop] shared understandings about acceptable behavior" (Kraut, Rice, et al., 1998, p. 448). At this point, ESM use is appropriate because the actions have been internalized (i.e., subjective knowledge is internalized as objective reality) (Berger & Luckmann, 1966) and institutionalized as taken-for-granted. The ESM use at this point has achieved

cognitive legitimacy (Suchman, 1995) and is part of the shared culture (Johnson et al., 2006) and will, therefore, serve to frame future actions.

Diffusion is a necessary condition for *general validation* to occur. *Diffusion* can manifest as a practice in two ways. Either more employees will use the ESM in a manner similar to the original behaviour, or it will be used differently by building on the original behaviour in a new context (Saga & Zmud, 1993). This step is routinization, where structures emerge such as policies and formal rules that establish the ESM use as standardized. This stage also includes the concept of infusion introduced by Meister and Compeau to indicate that the practice reaches the system's full potential and is incorporated into the work environment. New users of the system will observe how their colleagues use the ESM and embrace the same practices they. Also, employees will feel free to expand their use of the ESM to new areas.

Local validation is a necessary condition for *diffusion* to occur. For the employees' actions using ESM to be accepted, others must interpret them as aligned with the "existing, widely accepted cultural framework of beliefs, values, and norms" (Zelditch, 2001). *Local validation* is achieved through either endorsement or authorization (Walker et al., 1986), and this validation can either be explicit or implicit. Employees are influenced by either statements or actions of colleagues and superiors that confirm that their ESM use was appropriate or indicated inappropriate use (Fulk & Boyd, 1991). Implicit validation is the absence of words or actions from either superiors or colleagues. In this situation, it is up to the employee to determine that ESM use is endorsed and authorized implicitly. Where specific actions are validated as appropriate use, innovation infusion or expansion into all employee work processes will follow.

ESM Use is a necessary condition for the next stage, *local validation*. An employee new to the organization may wish to connect with others with similar jobs to learn more about their job. Therefore, they may create a profile outlining their expertise and then search for groups with topics relevant to their jobs. To connect to others, they may message other users directly or make comments on posts they have made. Another employee may be looking for specific information or files and may post their request on a message board but make no effort to ensure their profile is complete and may not join any community groups. However, another employee may wish to solicit input on a draft policy document from different employees and, therefore, decide to create their group and invite others to join and comment on the draft. Employees may consider each of these actions as appropriate use of the ESM. Hence the innovation represents the intersection of the individual and their motivation, the task they would like to accomplish, and the ESM features chosen to achieve the goal.

ESM use represents actions taken using an ESM “to address some need, purpose, goal or desire at the local level of actors” (Johnson et al., 2006, p. 60). It occurs at the intersection of the user, the ESM technology and the task (Burton-Jones & Straub, 2006). An employee uses ESM technology in a certain way to accomplish a task or achieve a specific goal, and this task can be either work or personal-related (Shahsavarani, 2014).

The *individual judgment* that the specific use of ESM is appropriate is a necessary condition for the next stage, *ESM Use*. This study focuses on the individual level of analysis and initial decision to use ESM. Unlike many transaction systems, ESM use is generally assumed to be voluntary. Employees can be either very active, creating lots of

rich content and engaging with others on an extensive basis or completely inactive and not use the system. The employee judges that their planned use is appropriate.

Legitimacy is “a generalized perception or assumption that the actions of an entity are desirable, proper or appropriate within some socially constructed system of norms, values, beliefs and definitions” (Suchman, 1995, p. 574). Although commonly applied to political or organizational systems, the role of the context of a socially constructed system is equally of value when considering social objects or actions (Berger & Zelditch, 1998; Lamb & Kling, 2003). Propriety represents the employee’s judgment that the social norms and procedures are appropriate (Johnson et al., 2006) and can equally apply to employee’s judgment that their ESM use is appropriate.

Dornbusch and Scott (1975) recognize that one of the sources of a legitimacy assumption is the individual themselves, while Fishbein and Ajzen (1975) note that a person’s intention to behave in a certain way is influenced by attitudes towards the behaviour and subjective norms. The expected ESM benefits influence attitudes for a particular purpose that the ESM will afford. At the same time, subjective norms are an element of the environment within which people work. Employees’ decisions are influenced by their attitudes, affordances of ESM and the subjective norms that develop from the work environment. Affordances of ESM include visibility, persistence, editability and association (Treem & Leonardi, 2012). In contrast, the environment is defined by the organizational norms as provided in existing policies, procedures, guidelines, and any unwritten norms communicated to employees (Lamb & Kling, 2003).

The conceptual model developed for this study draws on legitimation as a theoretical lens and provides a process perspective of how appropriate use is socially constructed. This model provides a basis for the design and execution of this research.

3.6 Scope of Current Research

The first two stages of this model, *individual judgment* and *ESM Use*, relate to individuals' actions and therefore, are suitable for study at the individual level. The third stage, *local validation*, can be studied at the individual level if the interest is primarily in individuals' actions. The third stage could also be considered at a group or organizational level if there was interest in understanding group validation or the effect of individual actions on validating group norms. The final two stages of the proposed process, *diffusion* and *general validation*, address how organizational and social norms are embraced through a bottom-up process and are suitable for examination at the group/organizational level. Questions related to *diffusion* and *general validation* could also examine how organizational policies and norms change over time due to employee use and engagement.

This research focuses on understanding appropriate use from the perspective of the federal public servants. Although they function within the broader government system, it is the individual perspective positioned within the larger context that is of primary interest to this study. Therefore, this research will be constrained to focus on the individual level implications of the first three stages of the proposed model, as indicated by the dotted line in Figure 13. Future research could further explore how individual determinations of appropriate use evolve into broader policies and formal organizational rules/norms and become broadly embraced.

Organizational and social norms characteristic of the study environment are essential elements influencing individual judgment of appropriate use (Lamb & Kling, 2003). This research will bound the environment to consider the specific case of ESM use in a Westminster democracy such as the Canadian federal government. The use of social media technologies in the Canadian government has been studied previously (Shahsavarani, 2014), including within the context of the broader digitization and open government objectives (Clarke, 2019). The Treasury Board Secretariat (TBS) has conducted surveys, most recently in 2016, to measure the usability of the GCTools. In these surveys, they collected information on demographics, work environments and the user (Treasury Board of Canada Secretariat, 2016).

This study looks specifically at the appropriate use in one context – the use of GCConnex by employees in the Canadian federal government. The level of analysis is the individual, and the unit of analysis is ESM use in the government context. More details on the context for this research are presented in Chapter 5, where a complete chapter is dedicated to describing the case.

3.7 Summary

Informed by previous research in IT value, IS use, the social construction of reality, ESM and legitimacy, a conceptual model anchors the research study. Legitimacy theories provide a foundation for exploring how federal public servants determine that their ESM use is appropriate. The Canadian government's use of GCConnex offers an opportunity to understand what influences employees' individual judgment and how it is validated. The next chapter presents the research approach and method to respond to the research questions.

Chapter 4: Research Design and Methodology

4.1 Overview

This research explores how appropriate ESM use is socially constructed, which elements help employees determine that their use is appropriate, and how their actions are validated. This chapter presents the research design selected for this study, explains the value of using a case study, and outlines how data was collected through organizational data and semi-structured interviews. It then discusses how the data analysis was conducted. The research context is presented in detail in Chapter 5 - Case Presentation. Table 9 summarizes the design used for this study.

Table 9: Overall Research Design

| | |
|-------------------------------|---|
| Ontology | Subjective |
| Epistemology | Interpretivist |
| Methodology | Exploratory Nested Multi-Case Study |
| Case Environment | Government of Canada GCConnex |
| Level of Analysis | Individual public servants |
| Unit of Analysis | Federal Public servants using GCConnex |
| Data Collection Techniques | Organizational Documentation, Interviews |
| Data Analysis Approach | Inductive Template Analysis |

4.2 Research Design

This section presents the philosophical positioning for the research and discusses the suitability of a case study design and method, single versus multi-case studies, how cases were selected, and the role of the researcher in the study.

4.2.1 Philosophical Positioning

A carefully chosen research design is an early step in the analysis because it reduces the amount of collected data by eliminating certain variables and relationships. This conscious reduction and condensation of data allow the researcher to focus on what is vital to the study (Miles, Huberman, & Saldaña, 2014). This study followed the approach proposed by O’Gorman and MacIntosh (O’Gorman & MacIntosh, 2015) to develop a research design by first framing the research question in a research paradigm and then making decisions on methods and techniques for data gathering followed by approaches to data analysis.

Researchers cannot assume that employees are homogenous agents because they come with their backgrounds and life experiences and are capable of independent thinking and actions. They also exist within an extensive social system, and their immediate work environment can easily influence their decisions. How they represent their social judgments and behaviour adjusts according to their “current social goals, communicative contexts and bodily states” (Smith & Semin, 2007, p. 132).

This study takes a subjective stance assuming that facts are “culturally and historically located, and, therefore, subject to the variable behaviours, attitudes, experiences and interpretations ... of both the observer and the observed” (O’Gorman & MacIntosh, 2015, p. 57). Employees using ESM are “active makers of their physical and social reality” (Orlikowski & Baroudi, 1991, p. 12). They are “actors, not variables” (Myers, 1997, p. 196), and as they interact with the world around them, they create their subjective understanding. There is no assumption that what is learned can be applied

equally to all. To understand how appropriate use of ESM is generated, it is essential to understand the users' context.

An interpretive approach was necessary to understand the complexity faced by users of ESM. Interpretive research involving information systems is “aimed at producing an understanding of the context of the information system, and the process whereby the information system influences and is influenced by the context” (Walsham, 1993, pp. 4-5). An interpretive approach begins with the appreciation that our “knowledge of reality, including the domain of human action, is a social construction by human actors ... thus, there is no objective reality” (Walsham, 1993, p. 5). Those subscribing to the interpretivist tradition believe that reality can only be accessed through “social constructions such as language, consciousness, shared meanings and instruments” (Myers, 2009). In this case, the researcher recognizes the importance of individual perspectives and context (O’Gorman & MacIntosh, 2015) in the employees’ actions, their explanation of what they observed or experienced, and how they interpret this.

Although positivist approaches predominate in the IS literature, interpretive research is seeing increased acceptance in top business journals (Myers, 2009). Several examples of interpretive studies of information systems demonstrate the diversity of methods available. Boland (2002) studied how 67 experienced managers read and interpreted performance reports of two divisional personnel managers to decide who merited a promotion. He notes that each participant had a different interpretation of the performance reports, and there was no easy way to combine them into one consensus opinion. His work demonstrates that different people can attach different meanings to written text and that there is no singular objective meaning.

Walsham and Waema (1994) use an interpretive case study to present their work related to IS strategy development within a United Kingdom building society. Their framework includes three interrelated elements: the content of strategy, the process of IS strategy formulation and the organizational context. They consider context “phenomena at different levels that affect and are affected by the strategy process” (Walsham & Waema, 1994). The dynamic interplay between content, process and context are equally relevant to a study of appropriate ESM use.

Orlikowski (1991) studied how the introduction of technology in a production system influenced organizational control mechanisms. She used observation, interviews, document review and informal social contact with employees of a large, multinational software consulting firm to understand the control mechanisms in place and how information technology influenced them. Due to her highly participative approach, she had inside access to observe how the implementation of technology “embodies existing forms of knowledge, legitimacy and authority” (Orlikowski, 1991, p. 39).

Finally, Myers (1994) presents a case study of a centralized pay system's failed implementation in the New Zealand Education Department. He took an interpretive approach to look at the meaning and interpretation of interview transcripts, unpublished documents, and newspaper reports to explore the social and political implications of IS implementation. His approach recognizes that “social reality is historically situated” (Myers, 1994), requiring that social structures also need to be considered in addition to studying the subjective perspective of participants.

An interpretive approach to understanding the context and the IS use process relies on qualitative research methods. Qualitative studies are best suited to situations

when the goal is to understand meanings, context and processes (Maxwell, 2005). To fully understand this context, it is essential to let the employee tell their story in a way that makes sense to them.

4.2.2 Case Study Methodology

Case studies are often conducted in cooperation with practitioners and deal with real management situations (Gibbert, Ruigrok, & Wicki, 2008). They are instrumental in areas where theory is still emerging and where the actors' experiences and context are critical to understanding what is taking place (Benbasat, Goldstein, & Mead, 1987). A case study is often a preferred method for IS because it is most in harmony with the reader's experience and includes complex and holistic descriptions (Stake, 1978). The case study is well-suited to capture multiple perspectives of ESM use in government, drawing on various data collection techniques and presenting the information in a way that will resonate with both researchers and practitioners.

The main advantage of a case study is its ability to examine a contemporary phenomenon in its natural setting (Benbasat et al., 1987). This advantage allows a detailed investigation of the situation's complexity and permits gathering multiple perspectives for the same events (Klein & Myers, 1999) using various data-gathering techniques (Benbasat et al., 1987; O'Gorman, Lochri, & Watson, 2015). Case studies are often used to inductively develop theory by recognizing patterns of relationships among constructs (Eisenhardt & Graebner, 2007). Exploratory case studies are beneficial when knowledge of the subject is inadequate, while explanatory case studies can test theory, and descriptive case studies present a comprehensive description of the study topic (O'Gorman et al., 2015; Schram, 2003).

Despite the benefits of case studies, positivist researchers argue they provide no opportunity to manipulate variables (Benbasat et al., 1987). Interpretive case studies are also criticized because they don't subscribe to positivist expectations for generalizability and validation. The other main criticism relates to the engagement of the researcher in the study. Interpretive case studies value the involvement of the researcher as an instrument of data collection and analysis. However, this engagement is often criticized by those who prefer a positivist approach and a detached researcher (Klein & Myers, 1999). The richness of case studies also comes at a cost as qualitative studies are often time-consuming and generate a high volume of data (O'Gorman et al., 2015).

An interpretive case study needs to address a well-articulated problem that is also relevant, timely and significant (Rocco, 2010; Tracy, 2010) and must be conducted in a humane, respectful and honest way (Cohen & Crabtree, 2008). The chosen methods need to be appropriate to the research question and described in sufficient detail (Berg, 2001; Rocco, 2010).

For interpretivist researchers, to confirm the quality of the research, the investigation involves a repeating cycle of checking, reflecting and understanding. The interpretivist researcher aims for *credibility*, *transferability*, *dependability*, and *confirmability* (Lincoln & Guba, 1985). To achieve *credibility*, researchers can include a prolonged engagement or observation of the subject to learn the culture and build trust with the participants. They can also check with stakeholders to confirm analytic categories, interpretations and conclusions.

Transferability is achieved by presenting direct quotations and thick descriptions that are interpreted to understand the study's context (Anderson, 2017). The

dependability of interpretive research relies on the researcher being reflexive in discussing their context and standpoint and how this could influence the results (Anderson, 2017). Finally, *confirmability* requires the researcher to maintain an audit trail of the original data, data reduction, notes and materials (Lincoln & Guba, 1985).

Creswell et al. (2000) present a framework to address questions of validity and quality. They consider quality through three perspectives – the researcher, the study participants, and the people external to the study (e.g., reviewers and readers). The researcher uses their lens to determine the theoretical themes, how much data to collect, and how to conduct the analysis. Some criticize the researcher’s role in an interpretive study as evidence of bias and, therefore, flawed research, but for an interpretive study, “prior knowledge is a prerequisite for understanding” (Myers, 2004, p. 109).

From the viewpoint of the study participants, the researcher needs to build credibility with the participants, and the study needs to address the “researcher’s context, positionality, or standpoint and the possible effect of this on the research process and outcomes” (Anderson, 2017, p. 129). Participants should also recognize their perspectives in how the researcher captures the information (Welch & Piekkari, 2017). Self-reflexivity involves the researcher being transparent about their subjective values, biases and inclinations (Tracy, 2010).

The principal means of establishing the study’s credibility for an external audience, such as readers and reviewers, is to provide a sufficiently thick description of the theoretical themes, the setting, the participants, and the methods used. Acceptance of the work by the scientific community is an indication of validity - “if fellow scholars find

meaning in the research, it is deemed valid and worthwhile” (Lacity & Janson, 1994, p. 149)

This research does not test the relationships of variables or theories. It is the quest to understand better the use of ESM that leads to the selection of an exploratory case study. How appropriate ESM use is socially constructed is a contemporary question involving technically savvy employees operating within bureaucratic organizations, yet influenced by the fast-changing environment of social media technologies. A case study design is appropriate for this study because it allows for the data collection on the appropriate use of ESM from multiple stakeholders and to capture the complexity of ESM use in government.

4.2.3 Single vs Multi-Case Studies

The single case approach allows the researcher to focus on specific ideas, but careful attention is required to ensure the results’ proper representation. A multi-case study provides a solid base to support theory-building (Eisenhardt & Graebner, 2007) and the opportunity to develop a deeper understanding of the processes and outcomes (Miles et al., 2014).

A case study can consider sub-units within a larger case, in addition to a single case or multiple cases. This approach recognizes that “micro phenomena are embedded in macro context and that macro phenomena often emerge through the interaction and dynamics of lower-level elements” (Kozlowski & Klein, 2010, p. 5), where top-down processes represent contextual influences. This powerful approach allows analysis to be conducted on the sub-units individually, between different sub-units or across all of them (Baxter & Jack, 2008).

Selecting the case at the organizational level assumes that all users are similar. Similarly, selecting the individual employees alone would assume that the employees make decisions independent of either other employees or the organization (Klein et al., 1994). Choosing a nested-case approach recognizes that federal public servants are heterogeneous and that knowledge of the organizational context is essential to the study.

This research uses a nested-case approach that recognizes cases as “complex systems, which are nested in, have nested within them, and intersect with other complex systems” (Pel, 2014, p. 312). To address the research questions identified in Chapter 3, the primary focus is on the perspectives of individual users of ESM. However, these employees do not work in a vacuum. They are part of the Canadian federal bureaucracy (environment) and interact with other federal employees (affiliations), and they all operate within the structures of the federal public service (environment).

Federal public servants (as individual cases) exist within the broader case of the federal government. In line with the model presented in Chapter 3, the appropriate use of ESM recognizes the need for a multilevel perspective. It acknowledges an interdependence between ESM users that creates the context for their interaction (Morgeson & Hofmann, 1999) and that research on micro phenomena should be informed by more general macro theories (Walsham, 1995). A nested-case methodology is well-suited to meet the challenges of the influences of multiple levels within an organization.

4.2.4 Case Selection

The case represents the unit of analysis in a case study and is defined as “a phenomenon of some sort occurring in a bounded context” (Miles & Huberman, 1994, p.

25). Cases can be bound by time, activity, and context (Baxter & Jack, 2008), but bounding the case is critical to ensure the study has a reasonable scope. The case is bound by context, and the context selected is individual employees working for the Canadian Federal Government who use GCConnex. The topics of interest in the conceptual framework are also suited to an individual level of analysis. Information on the larger context is available from the organizational structures, legislation, policies, directives and guidelines and the employees.

There are several approaches available to select which cases to include. Sampling is the term used to describe the decisions made about who to include in the study. The decision on who is part of the sample under study is necessary to make the study achievable by bounding how data are collected within the time and budget available (Miles et al., 2014).

Unlike statistical sampling, qualitative sampling has a specific purpose, allowing the researcher to focus on cases that contribute rich data to the theory (Eisenhardt, 1989b). The process is known as purposeful selection, where “particular settings, persons, or activities are selected deliberately to provide info that cannot be gotten from other choices” (Maxwell, 2005, p. 89). The selected cases present different perspectives (Myers, 2009; Patton, 1980), focusing on representative cases and those considered exceptional or those that disconfirm the research model (Miles & Huberman, 1994). Sampling for qualitative research tends to be driven by theory to best address the research question because the interest is more in “the conditions under which the *concept* or theory operates, not with the generalization of the findings to other populations” (Miles et al., 2014, p. 28).

The focus of this study is the federal public service, so the sampling frame consisted of informants from across the entire federal public service. The interest is also in how the context influences decisions; therefore, only employees in this context will be of interest. Also excluded are academia, industry and provincial employees. Similarly, this study excludes military and RCMP regular members because they are part of a different culture.

Students and casual employees are not part of this study. Students tend to be employed annually for a single academic term, while casual employees work for a maximum of 90 days in a calendar year. As a result, they are only occasionally in the workplace or are there for short periods. It would be difficult to determine to what degree the federal government work environment influences them. In addition, students tend to 'friend' everyone, and the number of students could significantly impact the analysis (Allison, 2016). Term employees are included in the sampling frame because they are often employed full-time for between 1 and 3 years and, therefore, become more integrated into the work environment. Future work could consider how the use of ESM differs for these students and casual workers.

There is no consensus on the required number of cases or interviews needed with a qualitative study. The optimum number is dependent on whether it is single or multiple cases, the complexity of the subject under investigation, how rich the collected data are, how much experience the researcher has and pragmatically, the cost and other logistical considerations involved in data collection (Marshall, Cardon, Poddar, & Fontenot, 2013; Miles et al., 2014). Qualitative studies often rely on data saturation, where participants are added to the study until further data does not provide additional insight (Marshall et

al., 2013). Based on a review of IS qualitative studies, Marshall et al. recommend that case studies have 15-30 interviews, and Creswell suggests 3-5 interviewees per case study with no more than 4-5 cases (Creswell, 2013). Walsham and Waema (1994) conducted 34 interviews with 12 employees, Markus (1983) interviewed 30 designers and users, and Boland and Day (1989) conducted a series of in-depth interviews with a single subject.

The sampling strategy must consider the number of contacts with the participants and the length of each engagement. Longitudinal data collection involves collecting data from the same participants multiple times over a period of time to capture real-time perspectives and is an excellent approach to explore sequences of events and how things change over time (Singleton & Straits, 2010; Van de Ven & Poole, 2005). Conducting a longitudinal study on appropriate ESM use would be problematic because the adoption of specific use varies by employee and progresses at different rates. It can also take years for a particular ESM use to achieve widespread acceptance, if it ever does, making a longitudinal study logistically problematic. The researcher collected retrospective data from participants based on their recollections and perceptions. Because employees are very busy and their time is valuable, the study was designed to obtain the information necessary in a single interview with a commitment to keep the interviews to one hour. As a federal public servant, the researcher for this study was very aware of the difficulties of getting access to participants for this study.

Twenty-two interviews were conducted with indeterminate and term employees from 15 different federal departments. The interviews were all conducted in English between June and October, 2019. Participants ranged across multiple ages and years of

service categories and included a balance of males and females to get diverse perspectives. More detail on the selection of participants is provided in Section 4.3.3.2.

4.2.5 Role of the Researcher

From the perspective of the interpretivist, researchers are always subjective, and this subjectivity should be “used actively and creatively through the research process” (Cohen & Crabtree, 2008, p. 72). The interpretivist researcher has personal biases and experiences that will influence how they interpret documents and interviews (Lacity & Janson, 1994), and this lens is critical to understanding. Therefore, the researcher’s “context, positionality, or standpoint” must be thoroughly discussed.

Walsham (1995) distinguishes between an outside and an involved interpretivist researcher. An outside researcher would be someone who participates in interviewing but is not directly engaged with participants in the field. Participants would see this researcher as being neutral in the organization. An involved researcher would be either a participant-observer or an action researcher and would have a clear goal of influencing or changing things. In this study, the researcher is considered an informed outsider and although not unbiased, their engagement is limited to conducting interviews with participants.

In interviews, the researcher plays a specific role in gathering as much information as possible. The researcher’s ability to build a rapport with participants depends on their “appearance, accreditation, sponsorship, and characteristics” (Berg, 2001, p. 87). In the analysis stage, the researcher actively identifies patterns and themes and relies on their judgment (Braun & Clarke, 2006). Data collected in a qualitative

study tend to be messy and require the researcher to apply their experience and imagination to find patterns (McCracken, 1988).

It is impossible to separate the researcher's background and experiences from the analysis in conducting an interpretive study. The researcher's background influences the selection of questions, how the researcher interacts with study participants, and how the responses are interpreted during analysis. In addition to being a Ph.D. student, the researcher for this study is also a federal public servant with more than 37 years of combined service as a military officer and a senior manager in the federal government. Over a long career of service, the researcher has developed a strong feeling about integrity and service. These foundational values have guided their decision-making throughout their career and attracted them to the topic of appropriate use. Although the researcher has some experience with GConnex, they would not consider themselves to be an advanced user and does not use it daily.

4.2.6 Summary of the Research Design

This research takes a subjective stance, recognizing that how appropriate use is socially generated cannot be objectively measured and is very context dependent. It also appreciates that the individual perspectives and experiences of the public servants must be considered to fully understand the context within which their use of ESM occurs. The contemporary challenges of ESM use within the Canadian federal government make using an interpretive case study appropriate. A nested case study methodology was selected, drawing on federal public servants as individual cases operating within the broader case of the federal government. Participants were selected from indeterminate and term employees from across the federal public service. The researcher has

significant experience with the federal public service that will influence data collection and analysis.

4.3 Data Collection

This section provides an overview of the two principal data sources used in the study (i.e., organizational data and semi-structured interviews) and how the information was collected. Section 4.4 provides detail on how the data was analyzed.

4.3.1 Organizational Data Review

Documents are one element of the sense-making of employees that helps them “construct, sustain context and changes [their] sense of social reality” (Miller, 1997) and may influence actions taken by employees. The documents also inform the social and historical environment the employees work in (Klein, 1999). As data sources for research, documents are relatively cheap and more accessible than other data sources, such as interviews. Documents can be a rich data source, particularly in providing background context, and the content can be easily verified with other sources (Myers, 2009). Some document types are more challenging to access than others (e.g., emails vs. meeting minutes). If the original is not available, the credibility and meaning of a document may be difficult to assess (Myers, 2009).

This study relied on three sources of documents that were readily available to federal public servants. Most of the reviewed documents were policies administered by the Treasury Board Secretariat (TBS) that apply to all federal public servants and are available on their website. Because they apply to all federal public servants, they are unclassified and readily available. The Values and Ethics Code for the Public Sector is the foundation of other policy documents, and agreeing to it is a condition of employment

for all public servants. The documents reviewed covered specific policy areas such as security, people, information, assets, communications, and financial management. The reviewed list of federal policy instruments is in Appendix I.

The second source of formal documents was departmental policies or internal documents provided by study participants. These documents were not readily available to the researcher, so they were solicited from study participants during the interviews. The majority of supplemental documents came from one department. A request (Appendix E) was made to GCTools Ambassadors through the GCTools Ambassadors GCConnex page looking for documents from additional departments, but no responses were received. Appendix J includes those departmental policies and guidelines made available by the participants.

The third category of reviewed documents came from GCConnex itself. The GCTools team has made information available to help users of GCConnex. These documents were readily available through the GCConnex tool as web pages (Appendix K). The method of analysis for the three types of organizational data is described in section 4.4.

These three data sources of federal, departmental and GCConnex documents collectively represent the primary means of communicating the formal organizational norms expected of all employees. They are easily accessible by employees, and their importance is communicated to staff in the context of their jobs.

4.3.2 Semi-Structured Interviews

This sub-section provides the details on how the semi-structured interviews were conducted, including how participants were solicited, the use of a pilot interview and the

interview protocol. Also, the resulting participant sample and the ethical considerations for the study are described.

4.3.2.1 Overview

Interviews are a standard qualitative method that results in rich contextual data generated through interaction between the interviewer and the interviewee (Kvale, 2007) and are the primary source of case study research data (Walsham, 1995). Interviews are the best means available for researchers to “access the interpretations that participants have regarding the actions and events which have or are taking place” (Walsham, 1995, p. 78).

Despite their rich value, interviews are not without challenges. It is often difficult to access appropriate respondents, and limited time availability may mean that crucial information is not collected (Myers & Newman, 2007). Interviewers are often strangers to the interviewees. As a result, interviewees may not be willing to be completely open or honest in their responses and may provide the answers they believe the interviewer wants to hear. Although interviews may provide rich information, they can be very time-consuming and result in large quantities of data, much of which may be irrelevant (Lochri, Curran, & O’Gorman, 2015). Because interviews are also highly reliant on the interviewer’s skills, they are also susceptible to interviewer bias.

The use of semi-structured interviews allowed the researcher to cover the main points and follow subjects of interest that emerged during the interview. The researcher was able to explore topics of interest with the interviewee using natural language with the possibility of building a relationship to gather further information in the future (Lochri et al., 2015).

4.3.2.2 Participant Solicitation

Participants were solicited for this study by placing an invitation to participate on GCConnex (Appendix A). The invitation to participate was posted in the Women in Science, Technology, Engineering, and Mathematics (STEM), Blueprint 2020, Welcome to GCConnex, and GCTools discussion groups. In reading the posting for Women in STEM, one colleague shared it on the Wire (equivalent to Twitter). In following this example, the researcher also re-shared it to the Wire on two other occasions to solicit additional participants. The invitations were tagged with the following terms to aid searches: social media, ESM, appropriate use, Ph.D., study and GCConnex. Following a conversation with a GCTools team employee, the researcher reached out and posted the invitation on the GCCollab site. GCCollab is another ESM tool used by some public servants and accessible to non-federal employees, such as academia. In all cases, employees were free to read the invitation and respond or not. There was no way of determining who had ignored the invitation, and therefore, employees were under no pressure to participate.

As per the invitation, interested employees were invited to contact the researcher at their Carleton email address (to differentiate from their Government of Canada role) who then responded with a more detailed letter (Appendix B) and two attachments: a letter for their manager (Appendix C) and the Research Ethics Consent Form (Appendix D). It was expected that most participants would see participation as an extension of their work responsibilities and would prefer to participate during the workday. Only two interviews took place outside of the workday at the request of the participants. A positive response from participants led to the scheduling of a phone, Webex-audio or in-person

interview. Several students and casual employees also contacted the researcher, expressing interest. They were thanked for their interest and advised they were outside of the current study's scope but would be kept in mind if the scope expanded.

4.3.2.3 Pilot Interview

Conducting a qualitative study that relies on numerous interviews is a time-consuming activity (Berg, 2001). Therefore, it is necessary to ensure that all potential practical issues are identified and resolved before wasting time and other resources. A pilot of the interview is a best practice (O'Gorman et al., 2015) and is helpful to determine an interview protocol's suitability and appropriateness (Lochri et al., 2015) and is particularly beneficial for novice researchers in preparing their interviewing techniques. Conducting a pilot of the interview allows the researcher to get a sense of the time required for the interview and the ease with which participants will respond to the questions (Castillo-Montoya, 2016).

The researcher conducted a pilot study to validate the interview protocol, including the interview script, questions and tools to refine the questions and resolve any issues before the primary data collection effort. Pilot study participants should be similar to those desired for the study (Turner, 2010). One co-worker who used GCConnex was solicited to participate in the pilot interview as per the protocol. A second planned pilot study participant did not materialize, and opportunities to proceed with the interviews emerged. Following the interview, the pilot participant provided feedback that helped us fine-tune the interview questions' wording to make sense to the participants. The interviewer also appreciated how challenging it was to identify and follow up on promising lines of enquiry.

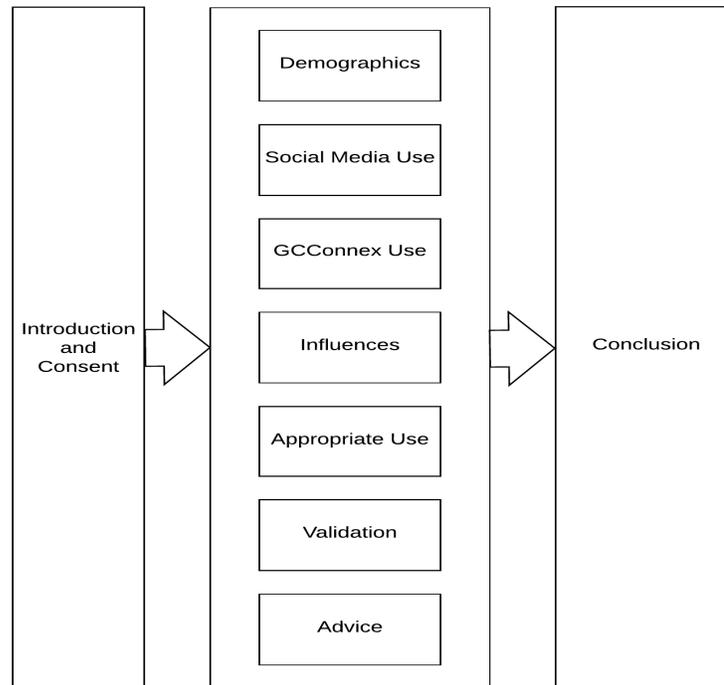
The researcher recorded and partially transcribed the pilot interview to verify the tools and planned techniques. Because the interview was recorded over the Internet, the researcher discovered the importance of not talking over the participant (even using simple utterances) to preserve the recording quality. A test of recording long sessions using a digital recorder such as on a cell phone was also conducted. Using a cell phone was a clumsy way to record and resulted in a lower quality recording. As a result, the preference was to use Webex and this was used in all but two cases where one participant asked the interview not to be recorded and another requested an in-person interview that was digitally recorded.

4.3.2.4 Interview Protocol

The research questions outlined in Chapter 3 describe what the research is about, whereas the questions asked as part of an interview try to understand the subject area (Maxwell, 2005). Interview questions are primarily structured to gain the maximum possible information related to the focus of the study. However, the interview will also contain questions to build rapport with the interviewee, to obtain demographic information or probing questions to draw out more information. Additional questions may also be asked to check on the reliability of previous responses.

Figure 14 shows the general structure for the questions used for the semi-structured interview. The researcher began the interview by introducing their background and confirming the participant's informed consent. If participants provided consent, the interview questions were posed along the identified inquiry lines. At the end of the interview, the researcher thanks the participant for their time and responded to any further questions they may have had.

Figure 14: Interview Structure



Interview questions should be clearly worded (Turner, 2010), understandable, and accessible to participants (Castillo-Montoya, 2016). They should be open-ended and posed one at a time to allow the interviewee time to respond. As a good practice to understand intentions, the researcher should ask for specific examples or occasions and reasons for actions (Behrendt, Richter, & Trier, 2014).

Brinkmann and Kvale (2015) describe nine types of questions researchers can ask during an interview (Table 10). In addition to the study-specific questions and answers, the researcher must note the interview's date and location, the respondent's relevant demographic data, and any other documents or references that may form part of the interview.

Table 10: Types of Interview Questions (Brinkmann & Kvale, 2015)

| Question Type | Description |
|----------------------|--|
| Introductory | Initial approach to a question on a topic of interest. |
| Follow-up | Directly questioning what has been said. |
| Probing | Asking general questions to get detailed information. |
| Specifying | Following up for more specifics on actions of the interviewee. |
| Direct | Directly introduce topics. |
| Indirect | Asking for interpretation of others' reactions or actions. |
| Structuring | Politely breaking long answers to move to a new topic. |
| Silence | Allowing pauses so that the interviewee can reflect on either the question or the response provided. |
| Interpreting | Rephrasing the response to confirm understanding. |

Leading up to and during the interviews, the researcher needed to balance between gaining the confidence of the participants by making sure they knew the researcher was a public servant and influencing their responses. The researcher ensured the basics of their GCConnex profile were completed (e.g., education and experience), so the information would be readily available if participants wanted to know more about who was conducting the research. The extensive experience of the researcher in the federal public service would also give the participants confidence that the researcher would understand their circumstances and what they would have to say.

Because the invitation was posted by the researcher on GCConnex and only federal public servants would have access to this system, it was reasonable that participants would infer the researcher was an active public servant. However to ensure independence, the researcher used their Carleton University email address and not their work address.

In addition, the researcher was able to draw on their experience to review relevant policy documents prior to the interviews and understand some of the context that was expected to come out during the interviews. Some documents were expected to be more relevant than others during the interviews.

At the beginning of the interview, the researcher introduced themselves as a federal public servant, but did not offer details. This allowed the researcher to maintain some independence but also reassured the participants. Understanding the researcher's background helped put the participants at ease and create trust between the researcher and the participant. Putting too much emphasis on the role of the researcher as an executive in government could have resulted in participants being reluctant to be open during the interviews. However, the experience of the researcher also allowed them to understand the position of the participants and interpret their responses and to more easily identify items of interest for further exploration.

The interviews were recorded using the Shared Services Canada Webex system using audio-only. One participant was interviewed in person, and one requested no audio recording, so the researcher took notes of the responses. The in-person interview provided valuable content, but there were difficulties with ambient noise that made transcription very challenging. Participation was also encouraged from the entire Canadian federal public service, however travel outside of Ottawa to conduct interviews was impractical. The use of Webex was an efficient, effective and reliable solution to conducting the interviews.

If the participant did not return a signed research Consent Form, the researcher obtained verbal consent before starting the recording or the interview. Upon completing

the interview, the Webex file was downloaded from the server and converted to a .WAV file to separate the audio track into a format that the transcription software could use.

The researcher manually transcribed all the interviews using ExpressScribe to prevent unnecessary access and make it easier to review the information provided.

Transcriptions were of content only and did not include utterances or body language.

Braun and Clarke (2006) impressed the need to “retain the information needed in a way that is true to the original.”

After the first three interviews, the survey instrument required some minor changes. First, it was clear that some participants were in positions directly related to the creation, implementation and support of the GCTools. They were responsible for using and promoting GCConnex as part of their responsibilities. It was apparent that their perspective may not be the same as other users and could be considered mandatory and not voluntary use. Therefore, a question was added to determine the nature of the participant’s job so responses could be coded to one of three states: responsible for GCConnex, GCConnex is core to their job, and personal choice to use GCConnex.

Second, it appeared that participant perspectives on appropriate use could evolve somewhat during the interview. Besides clarifying their interpretation of *appropriate use*, another question was added early in the interview that specifically asked them how they defined *appropriate use*. Third, several early participants mentioned discussion group moderators, so a question was added to capture other examples of moderator influences.

Finally, one of the questions asked, “*What is your personal approach to dealing with perceived risks to using GCConnex?*” This question’s language was awkward and

challenging for the participants to understand what was wanted, requiring rephrasing during the interview. The question was rephrased to: “*What is your personal philosophy as to how GCConnex should be used?*” This wording better resonated with participants and let the participants think about the use of GCConnex from a more strategic perspective. The final interview protocol is in Appendix F.

The use of a semi-structured interview allowed the researcher to pursue promising avenues of investigation. For the most part, the researcher was able to follow through with the interview’s main elements. In one case, the participant was very animated and engaged in the topic. Because the content was valuable, the researcher allowed the participant to tell the story in their way and only interjected for clarification. In this situation, the interview guide was to ensure all areas were covered to some degree. However, some elements were covered in an order different than planned in the interview protocol.

In another case, the richest material was obtained when the researcher asked the participant at the end of the interview if they thought something might have been discussed that was not. This interjection resulted in a natural exchange of personal challenges they were hoping GCConnex might help them with.

When conducting a virtual interview, it is more challenging to put the participant at ease. Typical body language showing support is not available, and monosyllable showing of support can negatively affect the flow and quality of the recording. The researcher had the best success waiting for natural pauses to reflect the participant’s words or probe for further information. In general, the researcher felt comfortable with the conduct of the interviews. However, a connection was not made with the participant

in one interview, resulting in a shorter than expected interview with less-than-hoped-for richness in content. It is impossible to know to what degree the use of audio-only for interviews helped put the participant at ease or created an artificial distance from the researcher.

Table 11: Description of Participant Sample

| Participant Code | Department | Age | Years at Dept | Years of Svc | Gender | HQ/Region | Education | Employment Status |
|------------------|------------|-------|---------------|--------------|--------|-----------|-----------|-------------------|
| Q1 | Q | 50-54 | 5-10 | >20 | F | HQ | Bachelor | indeterminate |
| P3 | P | 30-34 | 0-5 | 0-5 | F | Region | Bachelor | term |
| P2 | P | 50-54 | 5-10 | 10-15 | M | HQ | Masters | indeterminate |
| P1 | P | 50-54 | 0-5 | 0-5 | F | HQ | College | term |
| N1 | N | >54 | 5-10 | 5-10 | F | HQ | College | indeterminate |
| M1 | M | 50-54 | 5-10 | >20 | M | HQ | Masters | indeterminate |
| L2 | L | <30 | 0-5 | 0-5 | M | Region | College | indeterminate |
| L1 | L | 30-34 | 5-10 | 5-10 | M | Region | College | indeterminate |
| K2 | K | 30-34 | 0-5 | 5-10 | F | HQ | Bachelor | indeterminate |
| K1 | K | <30 | 0-5 | 0-5 | F | HQ | Masters | indeterminate |
| J1 | J | 30-34 | 0-5 | 0-5 | F | HQ | Doctorate | indeterminate |
| H3 | H | 35-39 | 0-5 | 10-15 | M | HQ | Bachelor | indeterminate |
| H2 | H | 44-49 | 0-5 | 15-20 | F | HQ | Bachelor | indeterminate |
| H1 | H | 40-44 | 0-5 | 5-10 | F | Region | Masters | indeterminate |
| G1 | G | 50-54 | 0-5 | 5-10 | F | HQ | Masters | indeterminate |
| F2 | F | 35-39 | 0-5 | 10-15 | M | HQ | College | indeterminate |
| F1 | F | 35-39 | 0-5 | 0-5 | F | HQ | Masters | indeterminate |
| E1 | E | 30-34 | 0-5 | 10-15 | M | HQ | Bachelor | indeterminate |
| D1 | D | 40-44 | 0-5 | 15-20 | F | HQ | College | indeterminate |
| C1 | C | <30 | 0-5 | 0-5 | F | HQ | Masters | indeterminate |
| B1 | B | 35-39 | 10-15 | 10-15 | M | HQ | Masters | indeterminate |
| A1 | A | 44-49 | 0-5 | 15-20 | M | Region | Bachelor | indeterminate |

4.3.2.5 Participant Samples

Appendix G contains the detailed distribution of the study participants. The 22 employees who participated in the study represented 15 different organizations. Six participants were on an assignment or a secondment away from their primary departments, giving an even broader perspective (Table 11 above).

Table 12: Public Service Classifications

| Classification Abbreviation | Classification Name | Occupation Group Abbreviation | Occupation Group | Number of Participants |
|------------------------------------|------------------------------|--------------------------------------|--|-------------------------------|
| AS | Administrative Services | PA | Program and Administrative Services | 2 |
| AU | Auditing | CRA | Canada Revenue Agency classification | 1 |
| CO | Commerce | AV | Audit, Commerce and Purchasing | 1 |
| EC | Economics and Social Science | EC | Economics and Social Science | 5 |
| EX | Executive | EX | Executive | 1 |
| IS | Information Services | PA | Program and Administrative Services | 2 |
| LP | Law Practitioner | LP | Law Practitioner | 1 |
| MA | Mathematics | RE | Research | 1 |
| PE | Personnel Administration | HM | Human Resources Management | 1 |
| PM | Programme Administration | PA | Program and Administrative Services | 4 |
| RCO | Research Council Officer | NRC | National Research Council classification | 1 |
| SP | Services and Programs | CRA | Canada Revenue Agency classification | 1 |
| Other | | | other | 1 |

For federal public servants, collective agreements provide information on working conditions, pay and terms and conditions of employment that correlate to their job classifications. Job classifications within an occupational group are sufficiently similar to allow us to use occupational groups for this study (Table 12). Ten different classification groups (representing more than 13 individual classifications) were represented in the participant sample, although a significant proportion (eight) were from the Program and Administrative Services occupation group. This group is also the largest occupation group in the federal public service.

Study participants were categorized in several ways based on information related to their use of GCConnex. Three participants either currently or previously worked on federal or departmental teams responsible for rolling out GCConnex. Although their use of GCConnex in this context might not be considered entirely voluntary, each participant was interested enough in using ESM tools that they volunteered for these notable roles. Of the remaining participants, three were in positions that required them to use GCConnex as part of their job responsibilities based on functions they inherited from predecessors (e.g., maintaining pre-existing groups).

These participants were not excluded from the study because although their use may not fit traditional definitions of voluntary use, their contributions to appropriate use are still valid. Employees who previously worked with GCTools would take their experiences to their new work team. When it was discovered they were experienced GCConnex users, they often played roles in their new organizations with helping others use GCConnex.

Those employees who inherited tasks involving GCConnex could have received information about how to use GCConnex from their predecessors or their supervisors and this information would help inform their understanding of how GCConnex could be used. In addition, few employees are genuinely free to choose their technology (Lamb & Kling, 2003). Instead, organizations provide them with a limited number of technologies that are available for use. Within the federal government, this is particularly true because employees cannot install their own tools.

Only three participants had been using GCConnex for less than six months, while the remainder had been using GCConnex for more than a year. Fourteen of the participants used it daily, three a few times a week, three a few times a month, and two used it rarely. Responses for those that used it daily tended to be richer, and they had stronger opinions than those who used it less frequently.

Five of the participants worked with a regional office, while the other 17 worked within a headquarters. Because of the expected differences between work practices, whether the participant was from a regional office or headquarters was considered an element of *environment*.

The researcher also attempted to categorize the participants according to the role and the behaviour they demonstrated using GCConnex based on the categorizations developed by Li and Bernoff (Li & Bernoff, 2011) and Van Osch et al. (Van Osch et al., 2016). Both of these models assume social interaction as being a primary motive for the use of ESM. As will be explained later in section 6.3.7, the coding of the participants against these dimensions did not prove productive.

For this study, participation was restricted to indeterminate or term public servants. The sample participants also covered a broad range of educational backgrounds, ages, years of service, gender, and previous social media experiences, as shown in Appendix G.

With an interpretive study, the sample needs to provide sufficient diversity to enable rich data collection. The 22 interviews resulted in 12 hours and 11 minutes of audio and 236 pages of transcribed notes. The longest interview resulted in a 56 min recording and involved a participant that had strong opinions on how employees should leverage GCConnex to solve problems in government. The shortest interview resulted in only 22 minutes of recording. It involved a relatively new employee who rarely used GCConnex and where the interviewer could not build a rapport to generate a rich discussion. Participants covered a broad spectrum of employment experiences within the Canadian federal government. Their experiences using GCConnex also proved to be diverse, enabling the collection of a rich dataset to help understand their experiences using GCConnex. No follow-up interviews were conducted.

4.3.2.6 Ethical Considerations

This research was conducted with the approval of the Carleton University Research Ethics Board-A (CUREB-A) and in compliance with the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS2). The Tri-Council policy is founded on the principles of respect for persons, concern for welfare and justice. It establishes the “principles to guide the design, ethical conduct and ethics review process of research involving humans” (Canadian Institutes of Health Research, Natural

Sciences and Engineering Research Council of Canada, & Social Sciences and Humanities Research Council, 2018, p. 13).

It is insufficient to conduct research, especially qualitative research about people, without considering its effect on the individuals under study. There are four main ethical elements to consider before conducting interviews: Has the interviewer provided informed consent? How is confidentiality being assured? Have all consequences to participants been considered? What is the role of the researcher (Brinkmann & Kvale, 2015)?

The purpose of informed consent is to ensure interviewees are fully aware of the intention of the study, the effort required of them, the sponsor for the study, how the data are being collected and safeguarded, and what feedback they will receive related to their participation (Gibbs, 2007; Miles et al., 2014). Once participants expressed an interest in participating in the study, they were provided with a copy of the Research Consent Form (Appendix D) by email to give them sufficient time to review it and ask any questions. If participants did not return the form before the interview, their consent was obtained verbally before proceeding with the questions (Appendix F).

The confidentiality of the information provided during the interview needs to be adequately protected. All but one of the interviews was recorded, and the recordings were password protected and only available to the researcher. Each participant was assigned a pseudonym code, and the master list linking these codes is also password protected.

While there are no anticipated emotional or psychological risks associated with this study, the interview questions required participants to reflect on their work and

discuss examples related to their use of GCConnex. The researcher was initially concerned that their position as a director in the public service could be intimidating for some participants. At the time of the interviews, the researcher was not in a director position but informed participants that they were a federal public servant working at National Defence. Besides, the researcher had previously met only one of the participants and had no working relationship with any of them, reducing the risk of participants perceiving that their responses could negatively impact their careers.

The final ethical consideration mentioned by Brinkman and Kvale (2015) is related to the researcher's role in the study (previously discussed in Section 4.2.5). The researcher for this study is a federal public servant. This means they are bound by the Carleton University Research Ethics Board and the federal public service Code of Values and Ethics.

4.3.3 Summary of the Method of Data Collection

Data for this study was collected from two sources. Organizational data was obtained from federal and departmental policies, and guidelines, and information directly related to GCConnex, made available through the online help function. The researcher also collected data from semi-structured interviews conducted with 22 indeterminate and term federal public servants. The next section discusses how the data was analyzed.

4.4 Data Analysis

4.4.1 Overview

Interpretive approaches to data analysis assume that the meaning of the data is subjective and that context is relevant to both the sources of data and the researcher's interpretation of the data (Lacity & Janson, 1994). Deductive reasoning moves from

more general observations to more specific (i.e., top-down in an approach). In contrast, inductive reasoning moves from detailed observations to broader generalization (i.e., bottom-up) (Trochim & Donnelly, 2008). The analysis in this study followed an inductive approach, where the data was organized into more abstract patterns and categories through an iterative process (Creswell, 2014).

The data analysis for this study followed an inductive template analysis approach. Thematic analysis is a foundational method used for qualitative analysis and involves identifying themes in the data. Grounded Theory and Interpretive Phenomenological Analysis (IPA) are not tied to any particular theoretical framework and look to generate theory inductively. However, thematic analysis is informed by the research questions and theory. Unlike Grounded Theory, template analysis is an approach to thematic analysis that uses a hierarchical coding schema. The initial coding template is developed in advance – it is informed by the conceptual framework and themes in the data.

Data analysis involves three concurrent actions: data condensation, data display, and drawing and verifying conclusions (Miles et al., 2014). Data condensation is considered part of the analysis and begins during the early planning phases in the decisions on the research scope, occurs during data collection with coding and the creating of analytic memos, and continues through to the writing of the final report. Data condensation is significant for qualitative studies that produce large amounts of data. How you display the data is also part of the analysis, and careful presentation makes it easier for the researcher to see what is happening and for the reader to access the information. The final action in data analysis involves drawing conclusions and verifying them from the data by extracting patterns and explanations.

This study followed the template analysis process described by Brooks, McCluskey, Turley and King (2015). The researcher first needs to become familiar with the data to be analyzed before carrying out preliminary coding. They then organize the codes and themes into clusters based on meaningful relationships. They next apply the initial coding template to the remainder of the data and modify the template as necessary. The finalized codes used for the organizational data and interviews are in Appendix M and Appendix N.

The use of analytic memos was key to capturing interpretations through each step of the data analysis. According to Saldaña (2016), the generation of analytic memos takes place concurrent to coding. While field notes represent the documentation of what is observed by the researcher, analytic memos represent the researcher's reflection on the data, the coding, the coding process, themes, or concepts (Saldaña, 2016). The researcher generated analytic memos for some of the documents reviewed, for each case, and throughout the analysis.

A code is simply a label attached to a portion of data to link it to a theme of interest for the researcher. Codes can be attached to a single word, a paragraph, or an entire page. Coding is an iterative process, as the data are reviewed, coded, and recoded. As the researcher becomes familiar with the data, patterns emerge. Saldana (2016) recommends several methods for approaching data coding, split into First Cycle Coding and Second Cycle Coding. First Cycle Coding methods are applied as the initial coding, while Second Cycle methods require more synthesis and abstraction.

4.4.2 Analysis of Organizational Data

Document analysis is often a vital element of a qualitative case study because organizational documents can provide valuable information as primary data and the context for other data collected (Bowen, 2009). However, getting access to the necessary organizational documents can be challenging if they are not publicly available.

Documents are artifacts of organizations generated for a specific purpose, and they need interpretation in the context where they are created and used (Miller, 1997). Some examples of organizational documents relevant to a case study include letters, communique, annual reports, minutes of meetings, progress reports, or other internal records (Yin, 2009). In addition to considering these documents' content, the researcher should also consider how, why, for whom they are produced (Coffey, 2014).

The documents that are part of this study represent the policy framework applicable to all public servants, localized policies, and GCConnex help files. These documents guide the actions and decisions of federal public servants. Those policies under the mandate of the Treasury Board Secretariat apply to all employees. In contrast, departmental policies apply only to those employees in that department, and GCConnex help files assist users of GCConnex.

The researcher's role is to determine the relevance of the documents to the study and identify, as an initial step, which documents could contribute to the research question (Bowen, 2009). The unit of analysis for this study is individual public servants working within the Canadian federal government. Therefore, the documents were selected and analyzed with this in mind. In addition to the content of the documents, their purpose formed part of the analysis.

Bowen (2009) identifies three stages of document analysis. First, a superficial examination is conducted of the documents to understand the bigger picture to gain a holistic understanding of the material presented in the documents. Second, a more thorough review of the documents is required to code the content. The final step in the iterative process is to interpret the categories in the context of the research questions.

The analysis of the organizational documents began with a review of the TBS document About TB Policy Suite that describes the mandate of TBS concerning policies and outlines the documentation structure and hierarchy. This document also gives regulative legitimacy to the TBS role through references to applicable legislation. This document referred to other relevant documents, including the Management Accountability Framework. The researcher reviewed both to understand the context of the policy suite.

The summary of each document in the policy suite was then reviewed and determined the document's relevance to the research study based on its scope. Although there is an extensive list of policies and guidelines, none explicitly cover ESM use. The closest one is the Policy on Network and Device Use (Treasury Board of Canada Secretariat, 2013) that applies to all Government of Canada electronic networks being used for business, professional or limited personal use.

The relevant documents were downloaded from the TBS site and uploaded into NVivo, the tool used for qualitative analysis. The high-level review of these documents was relatively easy because they followed a consistent format, and the researcher was already familiar with most of them. The table at Appendix I summarizes who the document applies to, what the goal is, what legislation is referenced and whether or not

the document connects to the Values and Ethics Code for the Public Sector. Because of the extensive referrals to legislation, the researcher then reviewed the referenced legislation to identify penalties that could apply. This additional information is included at the end of Appendix I. Although the original intention was not to review legislation, the existence of penalties related to a government policy would give regulative legitimacy to the policy statement.

The researcher conducted an initial coding in NVivo using the template codes in Appendix N. Analysis of the departmental documents could not begin until they were discovered and made available by participants. As indicated previously, the majority of these documents were only relevant to one department.

The GCConnex Help Files were readily available as web files, and they were extracted as PDFs and uploaded into NVivo for analysis. Most of these documents were tactical and explained how to do specific tasks in ESM.

A more detailed coding of the policy documents and the help files was conducted following the interviews so that the context of the interviews could inform the coding. This approach allowed the researcher to try and interpret the documents considering the meaning described by the participant.

4.4.3 Analysis of Interview Data

The initial analysis of the interview data happened immediately following the interview to produce notes of the overall first impressions of the interview. As soon as practical after the interviews, the Webex files were transcribed, loaded into NVivo, and a case was generated for each participant. The researcher transcribed the interviews personally, creating an analytical memo for each one summarizing the information

provided by the participant according to the blocks of the interview (as described in Figure 14). This analysis required the researcher to draw on their personal experiences and expertise and synthesize the entire interview to find meaning.

After the first three interviews were transcribed, the researcher coded them using the initial coding template. The coding template was adjusted to add zones of use, and greater detail on the influences, particularly with the role of the GCTools Ambassadors. The remaining interviews were coded in batches based on time available but as close as possible to the conduct of the interviews.

There were two areas of the coding that required multiple passes of the data to verify the interpretation. The first was in the assignment of types of legitimacy, particularly concerning normative and regulative. Although the literature provides clear definitions of the differences, applying these definitions to practical applications was more challenging. For example, *regulative legitimacy* is linked to rules and laws where the fear of sanctioning motivates compliance, while *normative legitimacy* is linked to shared beliefs, values and norms. So, if an employee believes a specific action is legitimate, is the reason because they are afraid of sanctions (such as disciplinary action) or because they want to align their actions with the organizational norms?

The second area of analysis that evolved as the interviews progressed was related to the classification of the participants GCConnex use according to User Behaviour (Van Osch et al., 2016) and User Roles (Li & Bernoff, 2011). The researchers' initial understanding of these classifications evolved as other participants described their engagement with GCConnex. This coding was particularly problematic because, in some cases, similar actions from two participants might be interpreted differently based on the

bigger context of their use of GCConnex. It became clear that categorizing based on a single-use described by participants failed to provide the complete picture while making a collective assessment resulted in a loss of data related to individual actions. Although codes could be assigned to the text, in some cases, the coding changed frequently. In the end, the researcher determined that both sets simplified the nature of the participants' use of GCConnex without adding to understanding.

The coding of the first sets of interviews also influenced the conduct of the remaining interviews. Initial interviews provided valuable insights on how participants viewed appropriate use and the role that GCConnex should play in government. By reviewing the initial coding and doing the initial analytical memos, the researcher was able to identify some areas for potential investigation and were able to probe for different information if the participant intimated relevance. An example was to understand better the role of group moderators in setting and enforcing internal discussion group norms.

After the initial coding, the researcher reviewed the results collectively based on the research questions and the conceptual framework. NVivo was a valuable tool to support this effort, although the version used was NVivo for Mac which does not have the same functionality as the Windows version. Matrices and tables were used to organize and present the information in an easy-to-understand format and word clouds and word trees to identify connecting ideas. In presenting the findings, extensive use of direct quotations provides the reader with access to the participants' own voice.

4.4.4 Summary of Data Analysis

An inductive template analysis approach was used to conduct the data analysis for this study. This approach relies on a hierarchical coding scheme that is initially informed

by the research questions, literature review and conceptual framework. An initial review and coding of the organizational data were done prior to interviews to provide us with the context of the applicable organizational norms. The researcher coded the first three interviews before making adjustments to the initial template. Shortly after the other interviews, the researcher coded the other transcripts and used previous material to ask specific probing questions. Organizational data was coded more completely following the interviews with the lens of the participants being considered.

4.5 Summary of Research Design

Understanding how appropriate ESM use is socially constructed is context-dependent and suits a subjective, interpretivist research paradigm. An exploratory case study allows for the collection of multiple perspectives of a complex situation. This research draws on the strengths of case studies to address the research question through a multi-case, multi-method exploratory case study, drawing on data from documentation and semi-structured interviews.

The context chosen for this study is the Canadian federal government's use of GCConnex and a total of 22 participants from federal public service across Canada. The analysis followed an inductive template analysis approach.

A nested-case, multi-method exploratory case study was chosen to address the research questions raised in line with the conceptual model presented in Chapter 3. Individual employees of the Canadian federal government represent individual cases, and multiple cases were selected that are embedded or nested in a setting identified as the federal public sector. Data was collected using documents and semi-structured interviews, and the data analysis followed an inductive template analysis.

Chapter 5: Case Presentation

5.1 Overview

In qualitative studies, the assumption is that context is socially constructed, and the goal is to observe and analyze this context to understand how reality is constructed (Harvey & Myers, 1995). This chapter presents the context for the study, covering the policy framework for the Canadian Federal Government and information about federal public servants. It also describes GCConnex, the ESM system used by federal public servants. Finally, it presents findings from the review of the organizational documents.

5.2 Canadian Federal Government Policy Framework

This study specifically looked at the use of ESM in a Westminster parliamentary democracy using the case of the Canadian federal government. One feature of the Westminster model is that vertical responsibility is vested in ministerial portfolios and departments with high-level decision-making structured horizontally around Cabinet (Brown, 2013). Under the Westminster system in Canada, individual ministers are responsible for portfolios to deliver government services and programs where they are personally accountable for setting the environment and addressing issues (Brown, 2013). There are 204 departments and agencies in the Canadian federal government (Government of Canada) organized along three lines: program delivery, central agencies (supporting horizontal decision-making) and common service organizations (Brown, 2013).

Table 13: Represented Departments

| Department Name |
|--|
| Agriculture and Agri-Food Canada |
| Canadian Institutes of Health Research |
| Crown-Indigenous Relations and Northern Affairs Canada |
| Canada Lands Company Ltd |
| Canada Revenue Agency |
| Employment and Social Development Canada |
| Immigration, Refugee, Citizenship Canada |
| Department of Justice Canada |
| National Research Council Canada |
| Natural Resources Canada |
| Canadian Heritage |
| Public Service Commission of Canada |
| Public Services and Procurement Canada |
| Service Canada |
| Statistics Canada |
| Western Economic Diversification Canada |

The Financial Administration Act (FAA) identifies those departments and agencies that form part of the federal government ("Financial Administration Act, Revised Statutes of Canada," 1985 c.F-11). More specifically, organizations that comprise the core public administration are outlined in Schedules I and IV, while Schedule V of the Act identifies the separate agencies. In this study, employees came from both the core public administration and separate agencies. Table 13 lists the departments represented in this study, and Appendix H describes their mandates.

The FAA assigns responsibility for effective management of the government to the Treasury Board of Canada. There are three elements of effective management of government: "sound management practices, strong public service values, and clear rules" (Treasury Board of Canada Secretariat, 2017a). The Management Accountability Framework (Government of Canada, 2016) outlines expectations for management

practices such as accountability, stewardship, values and performance. The Values and Ethics Code for the Public Service (Treasury Board of Canada Secretariat, 2011b) recognizes that “the manner in which results are achieved is an important reflection of the democratic, ethical, professional and people values described in the Code” and that “Canadians will look to both the results achieved and the means used to assess their trust in the competence and integrity of the government” (Treasury Board of Canada Secretariat, 2017a). Finally, the rules are set out in a series of policy instruments approved by the Treasury Board and administered by the Treasury Board Secretariat (TBS).

Policy instruments provide direction to departments with the objective of an integrated approach to public sector management with three goals: preserving public trust, enhancing efficiency and effectiveness, and ensuring transparency and accountability (Treasury Board of Canada Secretariat, 2017a). Policies and directives include mandatory requirements and support public sector values such as “respect for Parliament, people, integrity and stewardship” (Treasury Board of Canada Secretariat, 2019a). They also support management values such as good governance, transparency and value for money.

TBS generates policy instruments to ensure a consistent approach across all departments and agencies to help manage risk and demonstrate the values of “probity, prudence, equity and transparency” (Treasury Board of Canada Secretariat, 2017a). *Policies* are documents that provide formal direction and impose specific responsibilities; *directives* provide formal instruction that obliges department heads to take specific actions; *standards* provide more detailed information about how managers or specialists

are to execute their duties; *guidelines* are documents that provide guidance or advice. Unlike policies, directives and standards, which are mandatory, guidelines are voluntary.

On the TBS website, the policy suite reminds employees that: “when applying TBS policy instruments, and in all their duties, public servants must reflect the values and uphold the behaviour articulated in the Values and Ethics Code for the Public Service” (Treasury Board of Canada Secretariat, 2017a). For federal employees, the Values and Ethics Code for the Public Sector is the foundation – all other policy instruments refer back to it (Treasury Board of Canada Secretariat, 2019b).

Collectively, these policy instruments contain the rules applicable to management in government and outline the organizational norms for employees’ work environment. However, no policy or guideline exists that explicitly relates to the use of ESM. This study is concerned with understanding how employees interpret the existing policy instruments and how they guide the thinking and actions of employees in the specific case of ESM use.

5.3 Canadian Federal Public Service

A strong and high-performing Public Service is foundational to ensuring Canadians’ way of life and Canada’s role on the world stage (Government of Canada, 2014). The Public Service focus is expected to be professional and non-partisan, work within the public interest, ensure sound stewardship and deliver quality results. The government’s institutional structures are typical bureaucracies and are often well documented, which provide easy access to a wealth of formalized material. The informal, internal dynamics among employees are more complex and less accessible, making their study more challenging.

The Public Servants Disclosure Protection Act (PSDPA) (Government of Canada, 2005) defines a public servant as “every person employed in the public sector” (this includes the core public administration, Crown corporations and separate agencies). The Public Service “provides continuity and coherence in addressing long-term challenges and in the stewardship of public funds, while at the same time supporting government effectively and efficiently”(Government of Canada, 2013, p. 2). The public service does not include exempt ministerial staff, RCMP Regular Force members, RCMP Civilian members or Canadian Armed Forces members, even though the definition of a public servant under the PSDPA does include them.

The Canadian federal public service is the country’s largest employer (Edwards, Fritz, & Kehoe, 2015). The most recent demographic snapshot of the federal public service indicates a strength of more than 287,000, where 83% are indeterminate (i.e., permanent) employees and nearly 11% are term employees (Treasury Board of Canada Secretariat). Students and casual employees comprise only 6% of the employee population.

The work of Canadian federal employees is organized by an occupational group structure, and all positions are classified according to this structure. A job evaluation standard is applied to each position to ensure that the work done is valued equally across the public service. Employees consider their job classification as part of their employee identity. They will use this as part of their introduction because it succinctly identifies their area of expertise and general responsibilities. However, employees can move to a new position with a different classification if they meet the qualifications.

In some cases, the job classification may also define their *environment*, particularly if there are unique policies and directives that apply primarily to them (e.g., procurement or finance). Their job classification may also be an indication of their potential *affiliations*. For example, a procurement officer will be interacting with other procurement officers, clients within government and industry representatives.

Employees also identify with the department they belong to even though they are free to move between departments. A secondment or assignment is a temporary, professional development move that enables information sharing between employees, including best practices. When the employee returns to their regular position, they bring back insights and experiences from their assignment to their home department's benefit. In some cases, this movement is encouraged to help employees develop professionally and to promote horizontal cooperation. Employees on assignment or secondment will have *affiliations* with both their substantive and their assignment organizations and work teams.

There are three meanings of bureaucracy that apply in the context of the Canadian federal government. First, *bureaucracy* refers to a formalized, hierarchical organization with responsibilities functionally distributed. Second, *bureaucracy* refers to a professional workforce, and finally, *bureaucracy* refers to a larger normative structure founded on legitimate authority (Olsen, 2006).

In bureaucracies, such as the Canadian federal government, employees are expected to follow the rules with integrity and loyalty. However, the degree to which employees follow the rules can be influenced by other pressures such as pragmatic and personal goals (Olsen, 2006). Therefore, public servants can adapt to continually

evolving organizational norms through on-the-job training and peer support or mentoring (Rhodes, Wanna, & Weller, 2008). These organizational norms can develop and transform over time when influenced by policy changes or societal or leadership influences.

The federal public service is a vast professional workforce. Employees are organized in a typical bureaucracy and identify closely with the department where they work. Horizontal collaboration is not built into the bureaucratic structures, and therefore collaborating outside their department is not a practice of all employees. However, ESM systems are designed to overcome traditional barriers to collaboration by enabling employees to connect and share knowledge.

5.4 GCConnex

In 2013, the Clerk of the Privy Council launched a transformation initiative called *BluePrint 2020*, which aimed to make fundamental changes to how the federal public service would do business in response to increased globalization, complexity and Canadians' expectations (Edwards et al., 2015). The results of this exercise are presented in *Destination 2020*. They include plans to continue modernizing the internal ESM tools to enable employees to share information and collaborate across departments (Government of Canada, 2014). The Government of Canada ESM Tools are collectively referred to as GCTools. These web applications, built on open-source principles (Mergel, 2016), enable collaboration among federal public servants within the Government of Canada information technology network. Access to these tools is available to employees of all federal departments and agencies.

Figure 15: GCTools Suite Info-graphic (Treasury Board of Canada Secretariat)



Treasury Board of Canada
Secretariat

Secrétariat du Conseil du Trésor
du Canada



GCTools

Your knowledge at work



REGISTER
GCconnex.gc.ca
GCpedia.gc.ca
GCcollab.ca

- Connect
- Collaborate
- Engage
- Communicate
- Network
- Share



GCconnex
 A professional networking and collaborative workspace for all public service, allowing people to connect and share information, leveraging the power of networking towards a more effective and efficient public service.



GCpedia
 An essential knowledge sharing tool, designed to facilitate collaboration, co-creation of information and providing access to subject matter experts across all of government.



GCcollab
 A professional collaboration platform connecting information and people from across the Government of Canada. Open to academics and students from all Canadian Universities and Colleges. Open to federal, provincial and territorial public servants.



GCintranet
 An authoritative, central communications channel to reach all public servants. Making it faster and easier for people who work for the GC to find the information and tools they need to do their jobs and collaborate across institutions via a single entry point.



GCdirectory
 An internal directory of all federal public servants that integrates with the GCTools to improve knowledge sharing, networking with colleagues, and access to data.

Work on the GCTools suite began in 2008, and as of 2020, the suite contains five separate but interrelated tools described in Figure 15. GCConnex is a tool for public servants to connect and to share their knowledge and expertise. GCConnex can be used to improve team dynamics, enable employees to find like-minded peers and interact openly. It provides chatrooms, virtual meetings and supports collaboration between meetings and information related to a project or activity can be stored in one location easily accessible to all participants. Group discussions make interactive exchanges available to all group members and potentially remove the need for email conversations. GCConnex has rich functionality.

Figure 16 shows the GCConnex Newsfeed page for the researcher, while Table 14 describes some of its key features.

Figure 16: GCConnex Profile Page

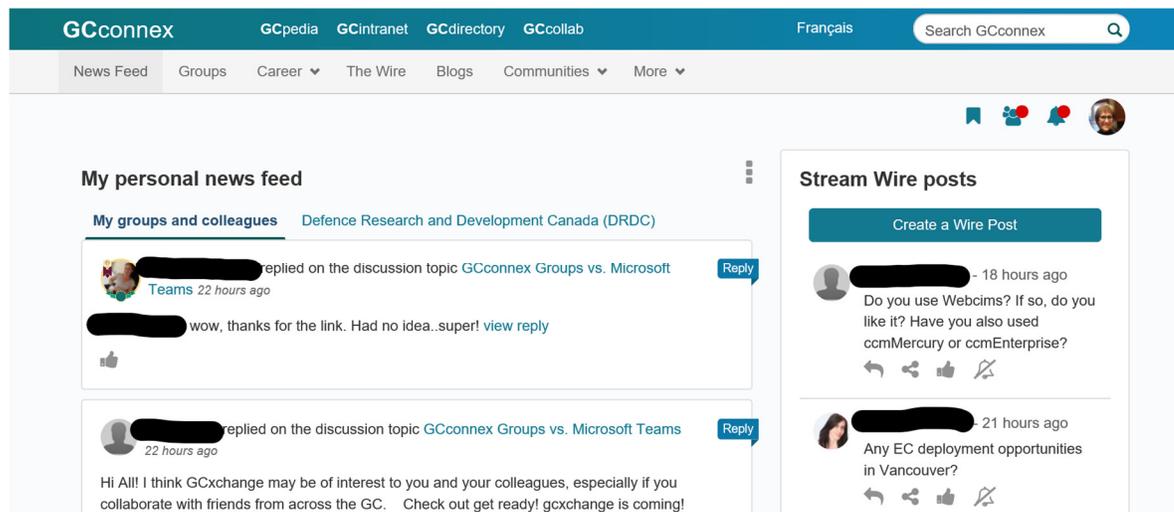


Table 14: GConnex Features

| GConnex Feature | Description |
|------------------|---|
| Blogs | Blogs can be made available to the entire GConnex community or limited to a group. |
| Bookmarks | This provides quick access to favourite content. |
| Communities | Approximately 16 different communities have been created, and presented content is filtered by tag appropriate to the community. |
| Dashboard | Each user can have a personalized view of GConnex content. |
| Event Calendar | Events can be posted to groups or GConnex-wide. |
| Groups | These are purpose-built and are a good way to share information. |
| Jobs Marketplace | This forum enables employees to network across departments. It also has an automatic matching tool to support at-level mobility and supports both employees and managers. |
| Message Board | This is a widget that places a message board on a user's profile that others can post to. |
| Newsfeed | This provides the latest activity from the user's connections. |
| Polls | This feature can support group decision-making by creating a polling question. |
| The Wire | This micro-blog has a 250-character limit, but employees can post text, images or gifs. |

The functionality inherent in GConnex has the potential to afford specific capabilities for federal employees. There are four affordances (*visibility*, *persistence*, *editability*, and *association*) available in social media technologies that are unavailable in other technologies (Treem & Leonardi, 2012). These affordances are also part of the design considerations of GConnex. *Visibility* of users is enabled by the user's ability to define in detail their profile so that other users will see their experience, expertise and interests. Their content is also *visible* to other users when they submit comments.

The GTools team policy is that all users of GConnex must use their real names, making them and their actions fully visible to other users and removing any expectation of anonymity. The use of real names is different from public social media

tools where, although the content may be visible, the accounts could easily be fake. This policy is explicitly addressed in the GCTools Frequently Asked Questions, explaining why users cannot use pseudonyms:

Collaboration is based on trust and we should all be easily identifiable. Don't forget that your user profile is linked to your email address, and that your full user name (usually RealFirstName.RealLastName) appears anyway in the address bar; Therefore, there is no point in trying to hide behind a screen name (Treasury Board of Canada Secretariat).

GCConnex offers *persistence* by ensuring content does not disappear, allowing employees to build on each other's content. Older information is available to all users and is accessible using the search engines and filtered by community, author or type (Treasury Board of Canada Secretariat). Content posted in GCConnex is considered transitory for record management, although the information is releasable under the Access to Information Act and the Privacy Act (Treasury Board of Canada Secretariat). Employees control what information remains in the system because GCConnex also permits users to create, edit and delete their content, thus affording *editability*. This ability is helpful to allow employees to correct or remove posts that contain errors.

The final affordance of *association* in GCConnex manifests at three levels. The *people-to-people association* occurs through connections via profiles and membership in various communities and groups. The GCTools team's vision of the people-to-people association is in the About GCConnex Help file:

It features dynamic online communities where public servants can collaborate on projects, blog, chat via instant messaging, carry on discussions, ask and answer

each other's questions about anything from learning to technology. It is a professional platform to create your professional C.V., share ideas on The Wire, and connect you with people and information that you need (Treasury Board of Canada Secretariat).

The *people-to-content association* is achieved through liking and commenting on posts throughout the tool. Finally, the *content-to-content association* is achieved using tags that link content to communities, groups and themes. This content-to-content association makes the information *more* easily findable.

Use of GCConnex is voluntary for all federal public servants. Although a government email address is required, every user is assigned a separate login account for GCConnex. As a TBS-supported tool, it is not part of any department's baseline software and, therefore, does not automatically appear when users log in. However, the employee can configure it locally. The GCConnex interface is a web service displayed in the user's browser. While much of the information on GCConnex is viewable without logging in, to comment or to create new content, employees must log in to the system.

The GCTools team has identified several areas where GCConnex can positively impact employees' work. These include enhancing team dynamics through open interaction, enhancing meetings by supporting virtual meetings, facilitating collaboration between meetings, improving sharing of information within a group, and centralizing information for given projects in one place. They also make several recommendations on where employees should start using GCConnex, which are as follows: join a group and participate in its discussions, comment on postings or post original content on The

Wire, share thoughts by writing a blog, and ask questions or share expertise (Treasury Board of Canada Secretariat).

GCCollab is a separate ESM tool that is accessible to a broader community than GCConnex. While GCConnex use is restricted to those on the federal government network, GCCollab offers the same functionality but allows access to provincial, territorial and municipal public servants, academia and students and all Canadians by invitation. This study looked specifically at the bounded use of GCConnex by federal public servants. However, GCCollab sees increased use by federal public servants and several study participants raised the availability of two products with very similar interfaces and functionality as an item of confusion.

The GCTools are continually evolving. Work is underway to migrate these tools to a new product called *gcxchange* developed on the Microsoft Office 365 platform (Treasury Board of Canada Secretariat, 2020). This new version will provide employees with a “one-stop shop to collaborate, create, curate” (Treasury Board of Canada Secretariat, 2020).

5.5 GCConnex Users

The Treasury Board Secretariat GCTools Team conducted their last GCTools user study in 2016. Their survey included responses from both users and non-users and indicated that GCConnex had reached a high level of awareness within the public service, with 83% of the respondents revealing they were aware of GCConnex - an increase of 18% since the first study in 2013 (Treasury Board of Canada Secretariat, 2016, p. 13). Compared to the other GCTools, GCConnex has the most registered users with more than

100,000 accounts (Treasury Board of Canada Secretariat, 2016, p. 4), representing fewer than 40% of all public servants.

Of those responding to the TBS survey, 22% indicated they used GCConnex regularly, which equated to at least a few times a week (Treasury Board of Canada Secretariat, 2016, p. 21). This result compares with 23% of the users who indicated they use public social media like Facebook (Treasury Board of Canada Secretariat, 2016, p. 11) for either work or personal reasons.

The top three reasons respondents used GCConnex were to find and re-use information (53%), to find and connect with people (32%), and to find official content (27%) (Treasury Board of Canada Secretariat, 2016, p. 16). In the survey, 27% stated they had not used GCConnex, while 32% had been using GCConnex for at least a year (Treasury Board of Canada Secretariat, 2016, p. 14). Also, those who self-identified as advanced social media users were more likely to be daily users of GCConnex.

Respondents to the TBS survey that did not use GCConnex stated that they did not know why they would use it (51%), the people they collaborate with do not use it (47%), and they did not see its value or purpose (30%) (Treasury Board of Canada Secretariat, 2016, p. 15). Separate interviews with employees revealed that the tools were not widely used “partly because of a lack of awareness among public servants about how such tools could be used” (Clarke, 2019, p. 137). These results indicate that perhaps public servants are struggling to understand what is appropriate use of GCConnex.

The TBS survey also provided a snapshot of the respondents’ demographics and compared these numbers to the general distribution of public servants. The top ten departments using GCConnex are among the largest departments comprising between 3%

and 16% of all public servants. Most of the respondents were from the National Capital Region, with Ontario and Quebec providing the most input to their study, representing 69% of all public servants (Treasury Board of Canada Secretariat, 2016, p. 40). Based on their survey responses, the communities with the highest percentage of long-time GCConnex users (i.e., longer than a year) belonged to the Administration and Operations, Human Resources and Information Technology Communities (Table 15).

Several resources are available to employees new to using GCConnex, including training, GCTools Ambassadors, online help files, the GCTools helpdesk, Group leaders and other users. There do not appear to be any current formal courses offered by the Canada School of Public Service (CSPS). However, they have hosted several seminars in the past. There is a CSPS Series offered on the GCTools where additional information is available on GCConnex and GCPedia. However, the CSPS reference material primarily points to the existing online GCConnex help files.

Table 15: TBS Survey Results - Work Communities of GCConnex Users
(Treasury Board of Canada Secretariat, 2016)

| Top 10 Work Communities | GCConnex Long-Term Users (>12 mos) |
|--|--|
| Administration & operations | 15% |
| Human resources | 15% |
| Information technology | 12% |
| Communications or public affairs | 8% |
| Compliance, inspection and enforcement | 6% |
| Information management | 5% |
| Financial management | 3% |
| Real property | 3% |
| Federal regulators | 3% |

The TBS team responsible for maintaining the GCTools suite has identified a voluntary role of GCTools Ambassador, of which there are approximately 240 listed from 50 different departments. Ambassadors have a mandate to promote collaboration using the GCTools. They must have a good knowledge of GCPedia and GCConnex and a passion for collaboration and innovation in the workplace (Treasury Board of Canada Secretariat, 2021). These Ambassadors are expected to champion the tools proactively and to communicate with the GCTools team. In the early years of the GCTools' expansion, the role of the Ambassadors appeared to be more prominent and was more active than it is currently. The researcher attempted to contact several of the Ambassadors listed for National Defence but was unsuccessful in reaching anyone. Most had moved on and were no longer with the department, indicating that perhaps the need or interest for Ambassadors had waned or become irrelevant. A post in the GCTools Ambassadors discussion forum (Appendix E) looking for internal departmental information received zero response or engagement from the group.

5.6 Organizational Documents

This section presents the review of the organizational data and how they establish the organizational norms and expectations of employees.

5.6.1 Federal and Departmental Policies and Guidelines

Policy documents are one of three instruments of effective management used by the federal government (with the Management Accountability Framework and the Code of Values and Ethics being the other two). TBS' policy instruments cover several functional areas, including financial, human resources, information management, information technology, assets, service, compensation, and official languages.

Department heads are held accountable for applying these policies and will often expand on what is provided in the TBS policies to provide local context. Individual public servants are expected to uphold the principles outlined in the Values and Ethics Code for the Public Service when applying these government policies. This code, and any additional departmental code on values and ethics, fills a critical gap because no policy document could address every potential issue a public servant could face. Mitigation and resolution of problems require employees to use judgment (Natural Resources Canada, 2012).

Table 16 provides a high-level description of the values from the Values and Ethics Code for the Public Service expected of federal public servants. The language used in the Values and Ethics Code for the Public Sector (Treasury Board of Canada Secretariat, 2011c) indicates how public servants should interpret and apply it. This document “outlines the values and expected behaviours that guide public servants in all activities related to their professional duties.” It reminds them that “these values are a compass to guide public servants,” that “codes of conduct are important sources of guidance for public servants,” and that “organizations are expected ... to integrate these values into their decisions, actions, policies, processes and systems” (Treasury Board of Canada Secretariat, 2011b, p. 3).

Table 16: Values and Ethics Code for the Public Sector - Statement of Values

| Value | Key Ideas |
|-----------------------|---|
| Respect for Democracy | Democracy and its institutions are fundamental to serving the public interest. A non-partisan public service is essential to our democratic system. |
| Respect for People | Treating all people with respect, dignity, and fairness is fundamental. Diversity of our people is the source of our innovation. |
| Integrity | Cornerstone of good governance and democracy. Upholding the highest ethical standards enhances public confidence. |
| Stewardship | Federal public servants are expected to use and care for public resources responsibly. |
| Excellence | Excellence in delivery of policy, programs and services benefits Canadian society. Engagement, collaboration, teamwork and professional development are essential to a high-performing organization. |

The information provided in departmental codes of values and ethics is consistent with the TBS document. The Employment and Social Development Canada (ESDC) Code of Conduct helps employees “understand what is meant by ethical behaviour in our workplace” and “offers guidance on what is expected” (Employment and Social Development Canada, 2016). The Natural Resources Canada (NRCan) Values and Ethics Code states that values and ethics are “the compass that must guide our daily actions and decisions” and “our foremost obligation.” Both codes cover situations unique to each department.

The various codes describe the organizational norms for employees and what is needed for actions to have *normative* legitimacy (Scott, 2001). However, respecting the Values and Ethics Code for the Public Sector is also a condition of employment for every public servant. Failure to follow the Code can result in disciplinary action up to and including termination. These consequences are significant, and the Code could have

regulative legitimacy because organizations can sanction employees who do not comply with the Code (Scott, 2001). The use of the word “shall” throughout emphasizes the non-optional nature of the behaviours.

New employees receive a letter of offer that includes the Terms and Conditions of Employment, and these Terms and Conditions refer to the Value and Ethics Code. When a new employee signs their letter of offer, they also sign that they agree with and accept the Terms and Conditions of Employment. They are reminded annually of this obligation on their performance management agreement, where they sign to acknowledge they have read and will abide by the Values and Ethics Code for the Public Sector.

The importance of the Values and Ethics Code for the Public Sector is reinforced by its reference in several policies and guidelines (Appendix I), including the Policy on Acceptable Network and Device Use, Policy on Official Languages, and Policy on Harassment Prevention and Resolution. In addition to referencing the Values and Ethics Code for the Public Sector, TBS policies also make extensive reference to relevant legislation. Appendix I lists Acts identified in the reviewed policy documents. These acts clearly outline the penalties that could be imposed by failing to comply with the legislation (e.g., a Privacy Act or Access to Information Act violation could result in a fine of up to \$1000 on summary conviction, whereas a Security of Information Act violation could result in a prison term of up to 14 years).

If a violation of the Values and Ethics Code is not linked to any legislative requirement, it is dealt with administratively under the authority of the Financial Administration Act. Discipline is progressive within the federal government, ranging from an oral reprimand to termination (Treasury Board of Canada Secretariat, 2011a).

An verbal reprimand does not go on an employee's record and is the first step to allow an employee to correct their behaviour. Termination is the most severe measure reserved for either serious misconduct or a series of incidents of misconduct.

While the Guidelines on Discipline describe the measures that can be taken against individuals, potential consequences extend to the department or the Government of Canada. Behaviour that could embarrass or criticize public service members or the government could easily harm public confidence in the government (Natural Resources Canada, 2012). Should employees encounter a situation that they believe contravenes the Values and Ethics Code, they are encouraged to discuss with their supervisor or get assistance from responsible authorities in their organization (Treasury Board of Canada Secretariat, 2011b). There is also recognition that an organization's culture can influence how employees interact (Treasury Board of Canada Secretariat, 2012).

Of all the policy documents reviewed, the Policy on Acceptable Network and Device Use is most directly related to the *appropriate use* of GConnex. This policy indicates the importance of access to government and public networks and Web 2.0 tools to enhance communication and collaboration and as a critical requirement for transforming the public sector work environment (Treasury Board of Canada Secretariat, 2013). It identifies use for "conducting government business and professional and limited personal use" and is applicable at all locations and devices. This policy becomes all-encompassing because it applies to more than just work done at the office or during the standard workday.

The Appendices of the Policy on Acceptable Network and Device Use contain detailed definitions and extensive examples of acceptable and unacceptable use (extracted

and included in Appendix L). This policy describes acceptable use as “permitted use of Government of Canada electronic networks and devices by authorized individuals” in three specific scenarios: activities related to official duties, career development and other professional activities, and finally, limited person use conducted on personal time.

Definitions further clarify *authorized individuals* and *electronic networks*. This policy defines unacceptable use to mean “any activity that violates TBS or departmental policy instruments or other published requirements” (Treasury Board of Canada Secretariat, 2013). In all cases, employees using Government of Canada networks or devices must ensure their use complies with the Values and Ethics Code for the Public Sector.

Work-related and professional development examples help public servants work more effectively and efficiently and cover such things as internal consultation, sharing between departments, leveraging expertise across government, collaborating on joint initiatives, or discussing professional issues. Personal use is constrained to permit activities conducted on personal time that do not interfere with official duties. Examples include keeping up-to-date with news, making personal travel arrangements, online banking, visiting personal social networking sites and online shopping.

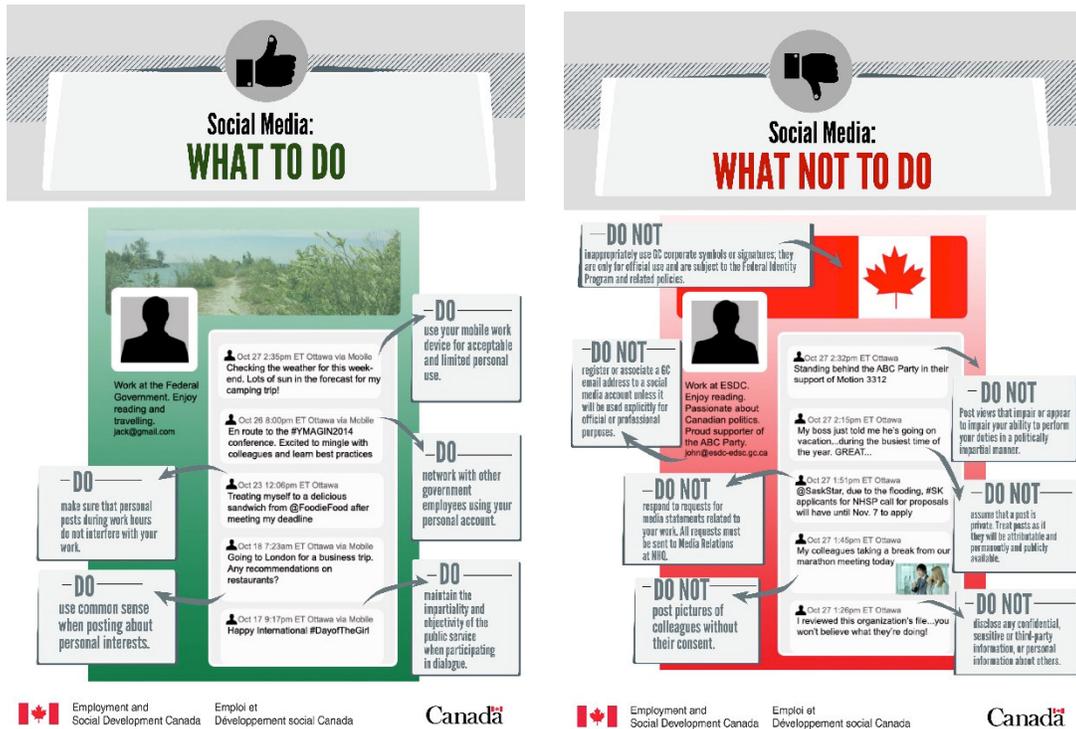
The policy provides some clear examples of unacceptable use, including criminal activity, such as child pornography or harassment, illegal (but not criminal) activity such as disclosing sensitive or personal information, activities that contravene policies such as sending chain letters, commenting publicly on government policies, or representing personal opinions as the organization’s. The ESDC Code of Conduct, Service Canada Guidelines of Professional Conduct, and the ESDC Web Handbook for Employees provide additional specific examples consistent with TBS’s.

The wording used in this policy is “acceptable use” and refers to the use of network devices permitted by public servants. This wording indicates that the use is authorized by someone in authority instead of use endorsed by a peer. While it clearly states that the list is not exhaustive and employees need to behave within the Values and Ethics Code, there is sufficient detail in the examples to know the lanes within which they can safely operate.

The language used to describe acceptable and unacceptable use in this policy is linked to *regulative* legitimacy and is not considered the same things as appropriate. Although the term *appropriate* appears in this policy, it is not connected to *use* and is unmistakably linked to a judgment. Examples, where *appropriate* is used, include “appropriate remedial action,” “appropriate in the circumstances,” “appropriate organizational human resources,” and “appropriate authority” (Treasury Board of Canada Secretariat, 2013).

One of the participants also made available two valuable infographics that describe what *To Do* and what *Not To Do* (Figure 17). Although they were produced for only one department, employees could interpret these infographics as policy guidance. The wording used in these policies is explicit about expected behaviour. There are consequences for non-compliance, fitting the definition of *regulative legitimacy* where expectations are grounded in rules and laws supported by an ability to sanction (Beetham, 1991).

Figure 17: ESDC Infographic on What To Do and What Not To Do



The other types of legitimacy include *cognitive*, *pragmatic* and *relational*.

Cognitive legitimacy results when the action is taken for granted, based on shared frames of reference (Scott, 2001; Suchman, 1995). Policy documents do not address this specifically, but this is understandable because actions that have *cognitive legitimacy*, by definition, are taken for granted and, therefore, would not need mentioning. An example could be that Government of Canada resources can be used to achieve the Government of Canada objectives.

It also appears that actions with *pragmatic legitimacy*, i.e., benefit the employee, could be considered counter to the policy framework’s intent. It clearly states that employees cannot use government resources for personal financial benefit (Treasury Board of Canada Secretariat, 2013). A grey area could be the case where employees use

resources for professional development purposes. There would be benefits to the individual in these circumstances, but there would also be benefits in the longer term to the government and the federal public service. An example might be to use GCConnex to look for developmental opportunities or training.

Actions that have *relational legitimacy* result from the charisma of individuals and the interpersonal respect they have generated. There is often a foreword in government documents by very senior personnel providing a personal perspective of the documents' value and giving the document more credibility. The former Clerk of the Privy Council, the most senior federal public servant, highly endorsed the *Blueprint 2020* and *Destination 2020* work. In addition to providing the forewords to these documents, the Clerk actively supported these efforts in public. Therefore, employees who take action because the Clerk's message resonated with them could rationalize the legitimacy of their actions based on their respect for the Clerk. Policy documents are issued by TBS as an organization and follow very structured formats. There are no personal messages and no connection to specific individuals; therefore, there is little indication that relational legitimacy is a factor in the policy documents.

In addition to providing broad guidance and specific requirements to support public servants' actions, TBS policies also outline the expected value from using government IS, including GCConnex. The consistent message in these documents refers to providing results for (Treasury Board of Canada Secretariat, 2009, 2017b) and being accountable to Canadians (Treasury Board of Canada Secretariat, 2007a) by ensuring efficient and effective management of allocated resources (Treasury Board of Canada Secretariat, 2007b, 2014). The use of Government of Canada platforms should be

“values-based, business-driven and policy-compliant (Employment and Social Development Canada, 2019). Collectively, the suite of policy documents generated by TBS provides a framework to enable public servants while giving them the latitude to act within the framework, guided by the Values and Ethics Code. The information provided describes the cultural norms that all employees are expected to abide by.

5.6.2 GCConnex Help Files

GCConnex Help Files are part of the application. They are available online to assist employees with specific tasks such as managing account settings, using filters and The Wire, interacting with colleagues via posts and messages and using the Career Marketplace. Appendix K lists the GCConnex Help Files reviewed under this study. The majority are technical, providing specific help on how to use the application (e.g., the GCConnex help file on Widgets includes a list of widgets that are accessible, and the Manage Account Settings helps manage settings and change passwords).

The guidance provided to employees is both broad and specific. Users “are free to use GCConnex as they see fit, within the codes of conduct of their respective organizations” (Treasury Board of Canada Secretariat) with a reminder to be “respectful and make sure [their] content is professional” (Treasury Board of Canada Secretariat). They are reminded that their communications “should be the same as they would be in a business meeting or professional email” (Treasury Board of Canada Secretariat).

The authors of the GCConnex files take for granted that public servants know how to communicate in a business meeting and professional email. Applying the same cognitive models to GCConnex use would be an example of *cognitive legitimacy*. Employees can trust that their actions are legitimate if their online actions are consistent

with their offline actions. As with the policy documents, the help files remind employees that they are “responsible to conduct [themselves] in accordance with the Values and Ethics Code for the Public Sector at all times” (Treasury Board of Canada Secretariat).

The help files remind employees not to post any content above Protected A (Treasury Board of Canada Secretariat) and “that content intended for broad dissemination [should] be provided in both official languages” (Treasury Board of Canada Secretariat). All users are responsible for their content and are reminded that they do not have anonymity because their profile is linked to their real identity (Treasury Board of Canada Secretariat). In addition to removing offending content, administrators could suspend a user’s account, or management could take other administrative action.

Employees who come across what they believe to be inappropriate content are encouraged to discuss it with the contributor or contact the GCTools help desk. The GCTools team takes the position that “we are all responsible for monitoring these tools and ensuring a positive and productive collaborative environment” (Treasury Board of Canada Secretariat). Although group administrators will not be held responsible for material posted in their group, they are encouraged to “actively moderate and monitor comments” (Treasury Board of Canada Secretariat).

The GCConnex help files reinforce the message that increased networking and interdepartmental collaboration can result in a more effective and efficient public service (Treasury Board of Canada Secretariat). They also provide several references to the potential benefits, such as raising ideas to improve the work environment, resulting in better service to Canadians. One key advantage identified is enabling new employees or team members to access historical information easily. The About GCConnex file

identifies some of the things employees achieve, including collaborating on projects, blogging, chatting, asking each other questions, and ensuring critical information is not lost. The GCTools can connect employees to the people and information needed (Treasury Board of Canada Secretariat). Employees are encouraged to provide content that can be accessed and used by their colleagues.

5.7 Summary of Case Presentation

The Canadian federal government is a Westminster parliamentary democracy characterized by vertical responsibility vested in ministerial portfolios. Effective management of government is achieved through sound management practices, shared values and clearly communicated rules. The Values and Ethics Code for the Public Sector emphasizes that the means (i.e., the how) used by employees are just as important as the results (i.e., the what) and is foundational to the other policies. Building on this Code, the TBS policy instruments provide direction to departments to enhance efficiency and effectiveness, support transparency and accountability and preserve public trust. Federal public servants are expected to follow the established rules with integrity and loyalty.

GCConnex, a professional networking and collaboration workspace, was one of the GCTools identified as critical to supporting *BluePrint 2020*, a transformation initiative to fundamentally change the federal public service's business. Public servants can use the rich functionality of GCConnex to share their knowledge and expertise and break down barriers between departments.

Federal public servants do not make decisions or take action in a vacuum. They are heavily influenced by the policy documents' expectations and are generally aware of

the consequences of acting counter to the established rules. On initial hiring and annually during performance reviews, employees must confirm their understanding of the Values & Ethics Code for the Public Sector. The collection of official policies and the guidelines outlined in the GCConnex Help Files provide a context that is unique to the federal government. This context must be understood and considered when interpreting responses in this study.

Chapter 6: Interview Findings

6.1 Overview

This chapter presents the findings of the interviews conducted with the participants. It begins with a description of the participant sample and then discusses their experiences using both public-facing social media and GCConnex. The participants' opinions on the use of public-facing social media and their perspectives on appropriate use are then presented. The chapter concludes by describing how the participants' use of GCConnex is validated.

6.2 Description of Participant Sample

For this study, the researcher looked for diverse perspectives and experiences to get as rich responses as possible. Table 11 summarizes the participant sample while additional information on the participants is available in Appendix G. Of the 22 participants in this study, 13 (59%) identified as female, with the remainder, nine (41%) identified as male. Participants covered various ages (Figure 18) and years of service (Figure 19).

Figure 18: Age Distribution of Participants

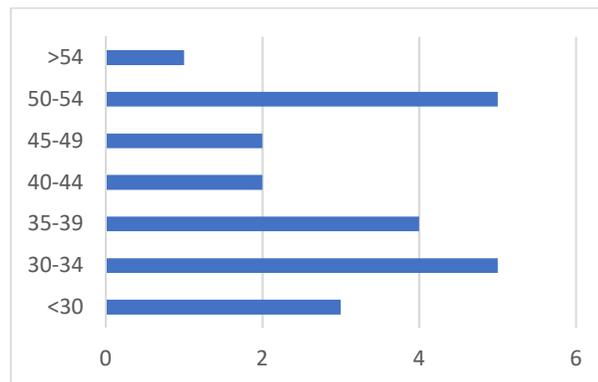
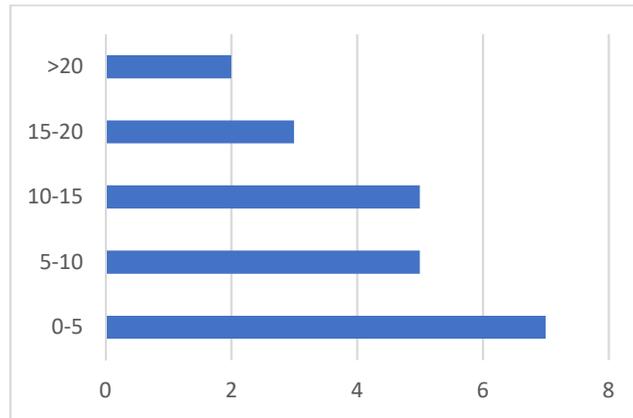


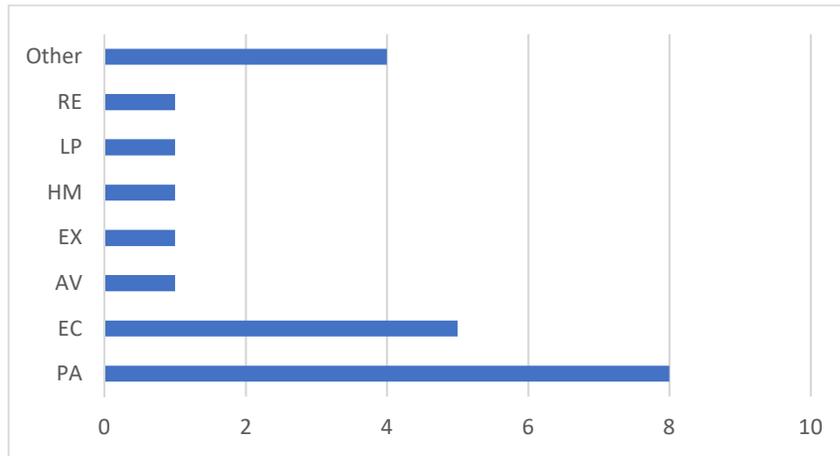
Figure 19: Years of Service of Participants



Many people assume public servants join the government early in their careers and stay until retirement. This generalization does not consider the many employees who leave the public service to work in industry or join the public service after initially working in the private sector. One participant (PARTICIPANT P1) joined the federal public service as a term employee fewer than five years ago after a private-sector career. Another participant (PARTICIPANT B1) has been with the same department for their entire career.

Participants came from several different classification groups, as outlined in Figure 20. The participants all had post-secondary education ranging from a college diploma to one participant with a doctorate. Some public service classifications require a minimum of a bachelor's degree in a relevant field, so this level of education of the participants is not surprising. In comparison, 54% of the Canadian population have college diplomas or higher (Statistics Canada).

Figure 20: Participants' Job Classification Groups



- Other Departments with their own classifications
- RE Research
- LP Law Practitioner
- HM Human Resources Management
- EX Executive
- AV Audit, Commerce and Purchasing
- EC Economics and Social Science
- PA Program and Administrative Services

As indicated previously, most federal public servants are indeterminate employees (Treasury Board of Canada Secretariat), meaning they have permanent jobs with the federal government. A term employee is hired for a specific period (generally between one and three years) and has full employment benefits except for job security. Two term employees were interviewed for this study (PARTICIPANTS P1 and P3), and the remainder were indeterminate employees.

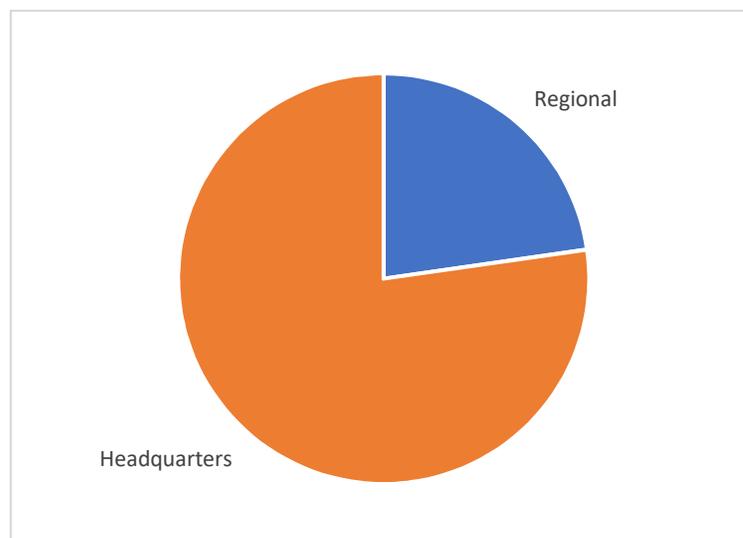
Participants came from 15 different departments and agencies. Appendix H describes the departments represented along with their mandates. However, participants had varied work experiences linked to additional departments. Five participants (PARTICIPANTS A1, C2, K2, P3 and Q1) were on secondments from their primary

departments. A sixth participant (PARTICIPANT M1) was on an Interchange Canada assignment with a Crown Corporation and had previously worked in several federal departments.

Four participants self-identified as employees working in a regional office (Figure 21). A fifth participant (PARTICIPANT A1) was coded as regional because although they were currently in a headquarters function, they had spent most of their career in the region, and their responses reflected a regional perspective.

Employees located in regional offices of the federal government often deliver specific services directly to Canadians, while headquarters employees may be more involved in planning and policy development. The responsibilities of the regional participants in this study include working in a call centre (PARTICIPANT P3), auditing claims (PARTICIPANT L2), conducting evaluations (PARTICIPANT H1), coordinating training (PARTICIPANT L1), and working as a business analyst (PARTICIPANT A1).

Figure 21: Regional vs Headquarters Employees



Participants were asked to identify whether they were beginner, intermediate or advanced users of public-facing social media. The majority indicated they were intermediate or advanced users (Figure 22). Because the researcher asked them to self-evaluate their use subjectively, some may have considered an answer based on the number of different tools they used, how comfortable they were with the features, or how much time they spent on social media. One participant (PARTICIPANT J1) has no personal social media accounts but indicated they are very good with technology and can use it for research if necessary. Another participant (PARTICIPANT P2) considers themselves an advanced social media user but had recently quit social media entirely.

Figure 22: Public-Facing Social Media Experience

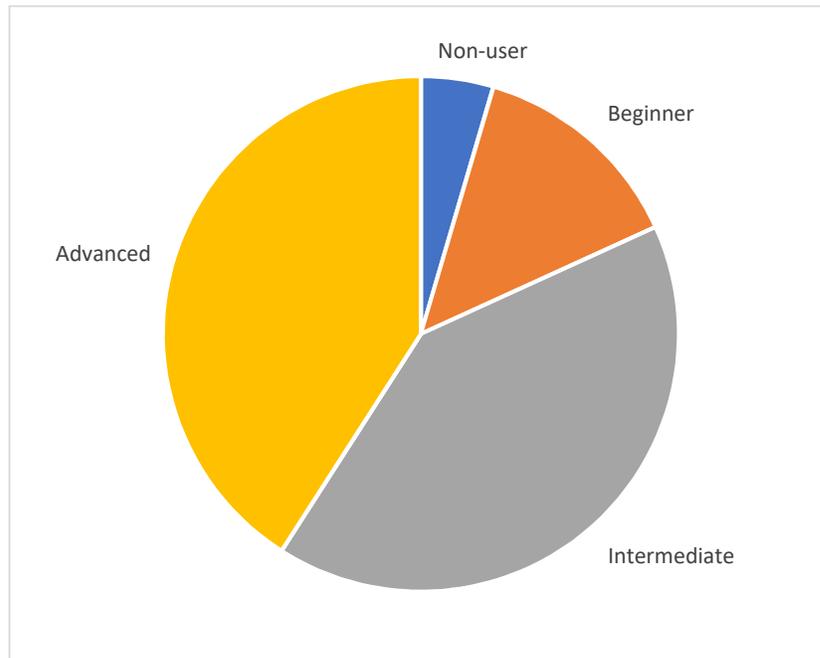


Table 17: Participant Use of GCConnex

| Length of Time Using GCConnex | | Frequency of Use | | | |
|-------------------------------|-------------|------------------|--------------|-----------------|----------|
| | | Daily | Few times/wk | Few times/month | Rarely |
| Previous GCTools Member | 1-6 months | 0 | 0 | 0 | 0 |
| | 6-12 months | 0 | 0 | 0 | 0 |
| | >12 months | 3 | 0 | 0 | 0 |
| Work Requirement | 1-6 months | 0 | 0 | 0 | 0 |
| | 6-12 months | 0 | 0 | 0 | 0 |
| | >12 months | 3 | 0 | 0 | 0 |
| Voluntary Use | 1-6 months | 0 | 1 | 0 | 2 |
| | 6-12 months | 0 | 0 | 0 | 0 |
| | >12 months | 8 | 2 | 3 | 0 |
| TOTAL | | 14 | 3 | 3 | 2 |

As expected and indicated in Table 17, the participants interviewed for this study tended to be regular users of GCConnex. Because the call for participants was posted on GCConnex, participants would have had to use GCConnex to come across the invitation. Besides, it is less likely that non-users of GCConnex would volunteer their time for an interview about GCConnex if they were not sufficiently interested in GCConnex to use it.

6.3 Participants' Use of Social Media and GCConnex

This section further explores some of the characteristics of participants' use of public-facing social media tools and GCConnex, beginning with their public-facing social media use through the kinds of tools they use and the value they get. It then discusses the meaning of voluntary use of GCConnex, which features of GCConnex the participants used and how their environment and affiliations influenced them in their use of GCConnex. Finally, it presents findings related to categorizing user behaviour.

Participants used Twitter both for personal interest and for professional reasons or public advocacy. They would follow public figures, get news updates or follow and post on topics of professional interest. A couple of participants observed that some government personnel also have and use Twitter to communicate with other public servants and the general public. This use of Twitter moves it from personal use of public social media into official use. Participants could identify what they did with each of the social media tools they used, but the purpose and reason could differ among participants.

6.3.2 Dimensions of Social Media Use

This study also explored the reasons why participants used public social media tools. The reasons were categorized according to whether the social media fulfilled social, hedonic or cognitive needs (Ali-Hassan et al., 2015). The *social use* of social media affords to build and maintain social relations, while *hedonic use* affords entertainment and relaxation. The *cognitive use* of social media affords access to knowledge and expertise. Table 18 provides examples of responses provided by participants according to the need the system fulfilled.

Table 18: Dimensions of Social Media Use

| Dimension of Social Media Use | Participant Observations |
|-------------------------------|--|
| Social | “LinkedIn is just how I stay connected with my network” (PARTICIPANT H1) “for Facebook, I’m using to maintain connections and relationships” (PARTICIPANT G1) “Facebook I use for communicating with family and friends” (PARTICIPANT M1) “I have an ID in Twitter as well. It’s mostly social for family” (PARTICIPANT N1) “Instagram seems to be focused more on purely social lifestyle sharing” (PARTICIPANT A1) |
| Hedonic | “it’s also for mindless distraction” (PARTICIPANT C1) “I also like reading politicians twitter feeds because sometimes I find ... ironic statements, that are humorous to me” (PARTICIPANT L1) “I actually tend to enjoy some of the debates that can occur on Facebook or Twitter” (PARTICIPANT A1) |
| Cognitive | “I mostly use it as a kind of public journaling” (PARTICIPANT D1) “I find some interesting information through those feeds” (PARTICIPANT L1) “the most convenient way to tell them that their product ... isn’t meeting the standard” (PARTICIPANT A1) “I will post if there is a social justice need” (PARTICIPANT P1) |

Uses and Gratification Theory (Katz, Haas, & Gurevitch, 1973) explains how social and psychological needs lead to different use patterns. Participants chose which public-facing social media tools to use based on how the tools would satisfy their needs (Table 19). When asked, participants could easily articulate the reasons for using public-facing social media tools and the needs they fulfilled. Based on participants’ responses, the more popular tools were able to meet participants’ multiple needs.

Table 19: Needs Met by Social Media Use

| | Facebook | Instagram | LinkedIn | Twitter |
|------------------|----------|-----------|----------|---------|
| Cognitive | 5 | 2 | 4 | 10 |
| Hedonic | 2 | 3 | 0 | 3 |
| Social | 16 | 8 | 8 | 7 |

6.3.3 Determination of Voluntary Use

The researcher initially believed that all GCConnex use would be considered voluntary. Based on the responses of the first few participants, it became clear that the determination of voluntary use was not apparent. Three different use categories emerged, with two of them not meeting the traditional understanding of voluntary use.

The first category is the traditional voluntary user who had free will to use GCConnex or not. Most participants were in this category, where GCConnex use was not directly related to their responsibilities. The decision was a personal one, with no impact if they decided not to use it.

The second category of use that emerged involved employees who currently or had previously supported GCConnex (i.e., developing, supporting or marketing the tools). One participant (PARTICIPANT A1) used to be part of the GCTools team at TBS, and in this role, they worked daily to build communities, showcase the features and create content. This use is not entirely voluntary because, although the participant volunteered for their assignment at TBS, it was their job to use GCConnex daily and help determine how employees should use it. At the end of this assignment, the participant continued to use GCConnex in their daily work. Their experiences as part of the GCConnex team framed their ideas on the use of GCConnex.

I used it to get information out because I was building communities. I was building the GCConnex engagers. You know, I was trying to showcase the

features. Whereas now I'm more just, you know, trying to have stuff come in rather than push information out. (PARTICIPANT A1)

A second participant in this category (PARTICIPANT P2) could be considered an early adopter of ESM in government. They were very involved in using GCForums, a predecessor to GCConnex, and became a GCTools Ambassador. A third participant (PARTICIPANT G1) was previously a member of the GCTools team and worked to enhance and promote the tools and engage employees across government. Participants in this category appreciated the benefits of GCConnex during their time at TBS. Still, they would feel obligated by organizational norms (Goodhue & Thompson, 1995) to continue to use it when they move to a new position.

The final category of use included those employees whose job responsibilities appeared to require them to use GCConnex. One participant (PARTICIPANT N1) is responsible for managing a community of practice on GCConnex, while another participant (PARTICIPANT F1) maintains a presence on GCConnex on conflict resolution. In these cases, their work in GCConnex was more of an assigned task by a supervisor than an independent choice to use GCConnex, and they may have felt they had no other choice (Adams et al., 1992). These participants were not excluded from the study because although they appeared to be obligated to use GCConnex, they had latitude in how they used it. It was also valuable to get their insights into how they interpreted the work they inherited and the managers' expectations.

Table 20: Features Used by Participants

| GCConnex Feature | Time Using GCConnex | | | Total |
|------------------|---------------------|-------------|------------|-------|
| | 1-6 Months | 6-12 Months | >12 Months | |
| | | | | |

| | | | | |
|------------------|---|--|----|----|
| Blog | | | 3 | 3 |
| Bookmarks | | | | |
| Chat-Messages | 2 | | 5 | 6 |
| Communities | | | 1 | 1 |
| Dashboard | 1 | | 2 | 3 |
| Event Calendar | | | 4 | 4 |
| Groups | 1 | | 16 | 17 |
| Jobs Marketplace | 2 | | 8 | 10 |
| Message Board | | | | |
| Newsfeed | | | 3 | 3 |
| Polls | | | 1 | 1 |
| Search | | | 4 | 4 |
| The Wire | 1 | | 11 | 12 |

6.3.4 Use of GConnex Features

GConnex provides an extensive range of features that are available for users. Participants were asked which features they used (Table 20). The different GConnex features and how participants used them are described in this sub-section.

When GConnex users open the application, they will start their session with either the Newsfeed or the Dashboard, depending on their selection in the initial configuration. Only three participants (PARTICIPANTS B1, H1, and K1) mentioned using the Newsfeed, and two (PARTICIPANTS L1 and P1) mentioned the Dashboard as features they used. Because these were the landing pages, it is possible that participants took them for granted as evident and, therefore, did not bring them up. Another explanation is that both the Dashboard and the Newsfeed deliver information from other features. The other features provide value to the user, not how they present as landing pages.

Users can configure GConnex to receive an email summary of activity for the Groups they are part of. While one participant (PARTICIPANT B1) indicated that they started their day checking the daily digest email for items of interest, another

(PARTICIPANT E1) strongly cautioned that users need to be careful in asking for notifications for all of their groups so as not to become overwhelmed.

Participants mentioned Groups and the discussions within groups most often, reflecting their primary interest in using GCConnex. Communities are pre-defined by the GCTools team according to generalized job functions (e.g., finance), whereas Groups are purpose-designed by users (e.g. Women in STEM). Some of the groups the participants were involved in included values and ethics, mental health, artificial intelligence, social media, innovation, change management, and positive space/LGBTQ+. Participants generally were involved in multiple groups where they followed the discussion groups or contributed to the conversations. In one interesting example, a participant was responsible for regularly creating a post that discussed different topics of interest related to conflict resolution. While the discussions were the most common feature mentioned by participants, the file feature allowed participants to share drafts and templates with other users.

Three participants mentioned using the Blog feature, but only one indicated that the blog was the feature that most interested them. This senior executive (PARTICIPANT M1) used the GCConnex blog as a supplementary communications channel to other more traditional internal communications newsletters and emails. It was essential to this participant that during a strategic planning exercise involving an organization of 1600 people spread across the country, they can “reach people and to communicate to them.” The blog feature enabled them to create multiple posts “for those people who were interested, a better vehicle to communicate with them and to get feedback” (PARTICIPANT M1).

The Wire is a micro-blog that behaves a lot like Twitter. Its use was primarily passive, with several participants indicating they read the information on the Wire to help understand what is going on (PARTICIPANT G1) or get updates to groups they are part of (PARTICIPANT A1). In contrast, others used The Wire more actively to post specific messages such as job opportunities (PARTICIPANTS G1 and L1), promoting events (PARTICIPANT G1), advertising courses (PARTICIPANT K2), or simply sharing information they feel public servants would find interesting (PARTICIPANT L1). The Wire has a specific advantage over official channels such as emails or notices to deputy ministers because “those take time before a public servant can actually see them, whereas the Wire offers that real time awareness and outreach that we’re looking for.” (PARTICIPANT K2).

However, the participants did not find the Wire always helpful. One participant said, “I tried, looked through the Wire and I don’t feel like the ‘bang for the buck’ is really there on the Wire, so I occasionally do it on a lark” (PARTICIPANT B1). A regular and active user of the Wire (PARTICIPANT L1) commented that people had begun to post resumes looking for jobs on the Wire. They felt this was annoying because there was another more suitable place to post resumes. This practice became quite frequent and was distracting from other use of the Wire. On the other hand, this same participant remembered a recent post on the Wire looking for anyone with experience with indigenous communities to help provide context to support an outreach activity and felt this was a constructive use of the Wire. Although they found postings of resumes annoying, the participant continued to contribute content on the Wire and had recalled recent productive use.

Career Marketplace (also referred to as Jobs Marketplace) enables the matching of employees with job opportunities. Participants used it to look for people to fill vacancies and find new positions. One manager has used Career Marketplace extensively to find new staff, stating: “The jobs marketplace is the feature that allows me as a manager to recruit individuals, search and browse the postings of different individuals and also to post opportunities to recruit individuals.” (PARTICIPANT G1). They posted the requirement, marketed it on The Wire, uploaded documents and responded to queries from interested parties. This advanced user was also able to track the number of users that clicked on the post because “it was interesting to see if this was the right avenue to post this opportunity or if [they] should explore some other avenues as well” (PARTICIPANT G1). Although they ended up not hiring anyone through GCConnex, they were pleased with the responses received to the job posting.

Only one participant mentioned using the Poll functionality in GCConnex. This participant ran a group supporting the LGBTQ community in their department and used the Poll to keep people engaged and help set the direction for the group. This participant and several others used the Calendar feature to create and promote events and get people to show up. They provided an example that used multiple features demonstrated together for a richer experience:

I set up a calendar event in the group’s calendar saying when the call is, what the agenda is and encouraging people to go to a thread associated with the calendar event to tell me if they want to speak at the conference call. Then we’d set up a second thread, the crowd-sourced minutes’ thread for people during or after the call. Post what they said, put their name there, put the contact information and

any links they want to put - the discussion thread to use links through there. We kind of presume everybody has access to the Internet so we can post broader Internet links. And I have little templates on my personal drive, the boilerplate call, date, time. So I'll copy it into the box and create the event, tag it up and off it goes. (PARTICIPANT B1)

Participants did not mention using either Bookmarks or the Message Board. The Message Board is a widget installed on a user's profile, so possibly none of the participants have yet set up this feature.

Based on the responses provided, participants most frequently accessed and found value in the Groups and Discussions. Their use of the GCConnex features was primarily to accomplish a work-related task. Participants also used the system to support their career development, including finding positions. There are additional features in GCConnex that participants did not mention, indicating they were less relevant or prominent in their use.

6.3.5 Influence of Environment

During the interview, the researcher explored several influences to see how they may have affected how GCConnex was used. Lamb and Kling identified *environment* as “the stabilized, regulated, and/or institutionalized practices, associations and locations that circumscribe organizational action” (Lamb & Kling, 2003, p. 206). In the context of the environment, participants were asked about GCConnex training, online help files, and the federal and departmental policies. Appendix P shows extracted comments from participants on each of these potential influences.

6.3.5.1 Training

Participants generally do not have any formal training in using GCConnex, although a few participated in orientation sessions. Also, those that were part of the GCTools teams or were Ambassadors assisted in developing and leading local training or orientation.

The impression participants gave is that they can self-teach or figure it out on their own. Some of the comments along these lines include: “I just got on it and tried to learn the platform on my own” (PARTICIPANT F1), “push all the buttons” (PARTICIPANT F2), “I kind of picked it up as I’ve gone along” (PARTICIPANT B1), “I’m sort of a self-taught type of guy” (PARTICIPANT P2), “I really learned the tool by simply exploring it” (PARTICIPANT K1) and “All my training has just been me poking around and kind of doing my own investigating” (PARTICIPANT P1). Unlike other work-based software, participants did not expect training to be available or suitable: “you’re never going to see a Facebook seminar on how to create your own Facebook account. They didn’t grow that way. They just made their service available and it spread by word of mouth and it engaged people because it was immediately useful to them” (PARTICIPANT A1).

There was an indication that some participants would welcome training: “I probably should take some training. I would like to, but I just never have got around to that and I’m not aware of any training courses they’re offering” (PARTICIPANT N1) and “I had signed up a few times and I was told to cancel my training” (PARTICIPANT H3). Another participant reached out for training, but in the absence of a response, determined “the system was not for me” (PARTICIPANT L2). Lack of time for training

was recognized by another participant (PARTICIPANT P1) who had several courses they would have liked to pursue, including something on GCConnex.

6.3.5.2 Online Help

The use of online help files and support from the GCTools team at TBS was the exception, even though two participants had previously assisted in creating, updating or reviewing help materials. One participant (PARTICIPANT B1) recalled referencing the help materials on GCPedia covering setting up and maintaining a group, and another looked up file size limits (PARTICIPANT P2).

6.3.5.3 Policies

Participants were asked what policies they thought should influence employee use of GCConnex (Table 21). The intent was not to get a complete list of policies but to understand how participants felt policies influenced their use. The most commonly mentioned policies were the Values and Ethics Code for Public Servants, Policy on Acceptable Network and Device Use, Policy on Privacy Protection and the Policy on Government Security. No participants mentioned that the absence of a targeted policy on ESM use impeded their judgment of appropriate use, indicating that other policies available satisfied their requirement.

Table 21: Mention of Policy by Occupational Groups

| | EC n=5 | EX n=1 | H M n=1 | PA n=8 | RE n=1 | LP n=1 | CRA-AU n=1 | CRA-SP n=1 | Othe r n=2 | Tota l n=21 |
|------------------------|------------------|------------------|-------------------|------------------|------------------|------------------|----------------------|----------------------|----------------------|-----------------------|
| Accessibility | 1 | | | | | | | | | 1 |
| Access to Information | 1 | | | 1 | | | | | 1 | 3 |
| Communications | 1 | | | 1 | | | | | 1 | 3 |
| Conflict of Interest | | | | | | | | 1 | | 1 |
| Departmental Policies | | | | 1 | 1 | | | | | 2 |
| Diversity | 1 | | | | | | | | | 1 |
| Info Management | 1 | | | 1 | | 1 | | | | 3 |
| Language | 1 | | | 1 | | | | | | 2 |
| Privacy | 3 | | | 3 | | | | | 1 | 7 |
| Security | 2 | | | 2 | 1 | | | 1 | 1 | 7 |
| Use of Network Devices | 1 | 1 | | 3 | 1 | 1 | | | 1 | 8 |
| Use of Social Media | 1 | | | 2 | | 1 | | | 1 | 5 |
| Values and Ethics | 1 | 1 | 1 | 7 | 1 | 1 | 1 | | | 12 |

Individual responsibilities may explain why some participants were more aware of some policies than others. Employee classification groups describe the kinds of work and responsibilities the employees may have. The Economics and Social Science Services (EC) group includes positions primarily involved in work concerning surveys, studies, research and analysis in the social science area. Participants in this group were responsible for strategic planning and training, community relations, partnership design, evaluation policy, and innovation. As a group, they covered an extensive selection of policies of interest.

The Program and Administrative Services (PA) group includes positions responsible for planning and delivering government policies and programs. Participants in this group were responsible for business transformation, change management, conflict management, case processing and call centre operations. All but one of these participants mentioned the Values and Ethics Code for the Public Sector.

Participants recognized that GCConnex “is an officially sanctioned space, it’s under government policy and they kinda get to set the rules as opposed to something like facebook or linkedin where we’re just hooking whatever they offer us and it might not be compliant with federal rules necessarily” (PARTICIPANT E1). However, they were generally unfamiliar with any departmental policies except for a document expanding on Values and Ethics for Natural Resources Canada and another set of documents sourced from Employment and Social Development Canada.

6.3.6 Influence of Affiliations

Lamb and Kling recognized that technology users are influenced by *affiliations* that are “networks of relationships that link organizations and individuals within and across industries” (Lamb & Kling, 2003). Participants gave insight into how the Treasury Board Secretariat GCTools Team, GCTools Ambassadors, Group Moderators, Peers, and Senior Management influenced their use.

6.3.6.1 GCTools Team

Participants’ perceptions of the GCTools team were positive, with participants using their pre-built materials and reaching out for assistance. Examples of interactions with the GCTools team involved getting help linking their GCConnex profiles to the government directory, troubleshooting problems in creating accounts, getting statistics,

and making suggestions for enhancements. One participant contacted them frequently for guidance: “essentially, I would call and say, I want to be able to do this. And he would tell me the two or three ways that you could do it and which platform it would be most appropriate on and why” (PARTICIPANT C1).

6.3.6.2 GCTools Ambassadors

The majority of the participants had never heard of the GCTools Ambassadors and were not aware whether their department had one or not (Table 22). Participants who were GCTools Ambassadors or were helped by the GCTools Ambassador were well aware of the assistance available and recognized the role's importance.

Early in the rollout of GCConnex, the GCTools Ambassadors played a more prominent role, but there has not been “as much activity ... in recent times” (PARTICIPANT A1). They recognized that the Ambassadors “tend[ed] to be young, ambitious types that hop from different departments” (PARTICIPANT B1). Of those participants who had been using GCConnex for less than six months, no one was aware of the GCTools Ambassadors’ role. When the researcher reached out to the GCTools Ambassadors group on GCConnex, there was no response, further supporting the concept that the GCTools Ambassadors are not as active now as they perhaps were during the initial rollout of GCConnex.

Table 22: Use of GCTools Ambassador by Job Responsibility

| n=20 | Current or Previous GCTools Team | Job Requires use of GCConnex | Voluntary Use of GCConnex |
|------------------------------|----------------------------------|------------------------------|---------------------------|
| Was a GCTools Ambassador | 2 | 0 | 1 |
| Helped by GCTools Ambassador | 3 | 0 | 1 |
| Aware of but did not use | 0 | 0 | 1 |
| Unaware | 0 | 2 | 10 |

6.3.6.3 Group Moderators

The foundation of GCConnex is the Groups feature, and each group is created and run by a GCConnex user. As indicated by the GCConnex help files, “good practice for group administrators is to actively moderate and monitor comments and activity within your group. You are also free to have your own rules of engagement for any group that you administer” (Treasury Board of Canada Secretariat). Several of the participants were moderators of Groups. Based on their experience, moderators step in and poll members on various things and update the definition or scope of the group and how they will present themselves to the organization. One participant (PARTICIPANT B1) noted: “I consider myself a moderator of the group, a facilitator, a promoter, an engager, a leader, all of those. Part of my moderator roles are to keep the conversation civil and I only have had to intervene three times” (PARTICIPANT P2).

Moderator roles included assisting someone with a support question by directing them to the help desk (PARTICIPANT F2), muting inappropriate comments, giving guidelines if needed (PARTICIPANT P3), redirecting a discussion if somebody’s getting off-topic (PARTICIPANT E1), helping users connect and share resources (PARTICIPANT K2), and conducting general outreach to build the community and to make it more active (PARTICIPANT D1). For example, one moderator (PARTICIPANT H3) regularly worked with their communications staff and even arranged to have some content summarized and translated to be more accessible in both languages. Although there were some ‘superstar’ groups, one participant noted that there appears to be a “vast amount of underused and unpopulated and like ugly groups” (PARTICIPANT K1), so perhaps the moderators may themselves have abandoned the group.

6.3.6.4 Peers and Senior Management

During the interviews, it became clear that both peers and senior management also influenced some participants. In some cases, peers made participants aware of GCConnex as an option, but their most significant role was to provide informal information to work colleagues. Several participants mentioned that GCConnex did not seem to be in common usage among their direct work colleagues.

While peers seem to provide mainly informal and ad-hoc assistance, comments from participants indicate that senior leadership has a critical influence role in demonstrating to employees the legitimacy of GCConnex as a tool. Wayne Wouters, the former Clerk of the Privy Council, was the principal champion of the initial launch of *BluePrint 2020* efforts. He “was unequivocal and very strongly encouraging public servants to work across organizational silos to collaborate and to make use of these tools available to use” (PARTICIPANT H1). The CIO of TBS and an ADM were also recognized as champions. One participant noted that “people generally work from example, so having managers and directors and director generals on GCConnex actually interacting, putting stuff out ... would actually allow people to say, ok this use is proper use and not proper use” (PARTICIPANT H3). A senior executive (PARTICIPANT M1) noted that a reverse mentor influenced their use of social media technologies. A reverse mentor is a junior/younger employee assigned to an executive to guide them on topics (e.g., cultural or technology-related) relevant to junior staff.

6.3.6.5 Summary of Influences

Users of GCConnex have opportunities to be influenced by several groups when they become public servants. Policies influenced the day-to-day work of public servants,

but in the absence of a specific policy on ESM use, policies generally influenced their work environment. Peers and superiors both had roles in creating an environment that encouraged employees to experiment in their use of GCConnex. Neither formal training nor the official help files provided much guidance to employees. However, there was general respect for the assistance provided directly by the GCTools team at TBS. The role of GCTools Ambassador seemed to be significant early in the rollout of GCConnex but does not appear to have much relevance currently.

6.3.7 Categorizing GCConnex User Behaviours

Based on the participants' responses, the researcher attempted to categorize their use of GCConnex against the ESM User Behaviours identified by Van Osch et al. (2016) and the Social Technographic ladder proposed by Li and Bernoff (2011). This categorization was only partially successful.

Van Osch et al. (2016) conducted a mixed-method study that expanded on the binary categorization of core vs periphery users. This study's results were obtained from a cluster analysis of blog posts, supplemented by interviews with employees in a company. In addition to core and periphery users, they also identified another category of users, i.e., the promoter, whose primary purpose is self-presentation and promotion. They also determined that this new type of user was predominant in their study and that their self-promotion behaviour was intentional. An interesting observation they made was that other users criticized this self- and team-promotion behaviour and indicated it discouraged their use of the system, suggesting that some users could perceive overt self-promotion as inappropriate.

The information from the interviews did not provide any insight into the applicability of the model of core/periphery and promoter/super-promoter users in the context of ESM users. There was no evidence of a group of promoters in this study. Initial thinking would indicate that a periphery user accesses the system infrequently. Several participants fit this category (PARTICIPANTS J1 and L2). However, some participants accessed GCConnex more frequently, but primarily in a passive mode and could also be considered periphery users based on their model.

Core users were easier to recognize because they regularly accessed GCConnex and interacted actively by generating content for others to consume and by interacting with other users. They were likely to use a broad selection of the features available. It was challenging to extract promoter and super-promoter behaviour from the interviews. One participant (PARTICIPANT G1) actively works to build and maintain connections and build relationships, including attracting new hires, while only one (PARTICIPANT Q1) recommended its value for reputation building. Although categorizing participants according to core and periphery was relatively straightforward, the evidence did not clearly show employees whose motivation involved either self- or team promotion making it challenging to determine if the roles of promoter or super-promoter were present.

In the Van Osch et al. study (2016), the researchers categorized users based only on their blog entries and confirmed their motivations through interviews. This study relied on interviews and did not focus on only one type of interaction with GCConnex. ESM user categorization could vary depending on the ESM feature used, so categorizing users based on only one ESM feature provides an incomplete picture. However, blog

entries would allow for more extensive discourse than The Wire or Discussion Groups, thus making motivation more evident. It is also possible that users' behaviours would change based on context, which could only be verified through in-depth content analysis.

The Social Technographic Ladder (Li & Bernoff, 2011) study focused on the communities generated by social media technologies instead of the technologies themselves. Li and Bernoff looked at categorizing clients and not employees so that firms could segment their customer base. In their model, users progress up the ladder through increased social engagement from Inactives to Creators. According to their ladder model, users would represent their ESM behaviour at a snapshot of time. The model recognizes that users will move up or down the ladder. Based on the information provided by participants in this study, it was relatively easy to identify those who were Creators based on their active use of GCConnex to create content, including blogs and discussion posts, their leadership of groups and their uploading files. Likewise, the entry levels of Inactives and Spectators were similarly evident based on their passive use of GCConnex, such as just reading content. However, categorizing users as Conversationalists, Critics, Collectors, or Joiners was problematic because it required observing social interactions that did not come out in the interviews. This model would be more suited to a study on the content of ESM use and perhaps as part of a longitudinal study studying how roles and behaviours change over time.

The researcher hoped that categorizing GCConnex users would help provide insight into participants' perceptions of appropriate use. Based on the difficulties of applying both models, this study cannot determine a link between ESM user categorization and appropriate ESM use using either model.

6.3.8 Summary of Participants Use

Participants use various public-facing social media tools and can clearly describe what tool they use for what purpose and needs (i.e., social, hedonic and cognitive) they meet. Based on the responses from the participants, voluntary use is not as straightforward as expected. The researcher identified three categories of use, including voluntary, use influenced by being a member of the GCTools team and finally use that is a factor of assigned work responsibilities. Participants discussed using many features of GCConnex, but they primarily use Groups and Discussions. Peers and supervisors, the Values and Ethics Code, and job-relevant policies that guide their work environment influence their use of GCConnex. Finally, the researcher explored two models to categorize ESM user behaviour, but neither model adequately described the dynamic nature of participants' use of GCConnex.

6.4 GCConnex Use Philosophy

This section explores the participants' philosophy towards public-facing social media, the values and benefits perceived from GCConnex and their overarching philosophy of GCConnex.

6.4.1 Public-Facing Social Media Philosophy

As indicated previously, participants use four public-facing social media tools (Facebook, Twitter, LinkedIn, and Instagram) more than others. They were able to identify how they use these tools and what needs they fill. This study also explored how their attitudes towards social media (i.e., their personal guiding principles) varied according to their self-assessed level of experience with social media (Table 23).

Table 23: Public Social Media Use Philosophy

| Subjective Social Media Use | Comments on Public Social Media Philosophy |
|-----------------------------|---|
| Beginner | “I’m not a big social media kind of person” (PARTICIPANT P3) “I’m not the kind of person that will post anything” (PARTICIPANT P3) “I’d like to try to keep home and work separate and blending of the two too much by using these kinds of platforms ... could cause problems and confusion and could even risk putting people’s privacy at risk” (PARTICIPANT H3) |
| Intermediate | “I use them outside the workplace, but related to my professional interests” (PARTICIPANT H1) “I’ve tried to maintain kind of a facebook/professional, personal/professional split from how I use web tools, but it’s merging a bit” (PARTICIPANT A1) “So of the three, each of those platforms to me has a distinct function” (PARTICIPANT M1) “It’s too easy to just get sucked in” (PARTICIPANT E1) |
| Advanced | “Is there an all of the above? ... I’m debating getting rid of my data plan so I can kind of get the problem under control” (PARTICIPANT D1) “So I use them on a personal basis to either blog or simply to connect with people in different ecosystems” (PARTICIPANT K2) “It’s a mix of consuming information from all over the place and keeping people up to date and occasionally expressing myself” (PARTICIPANT B1) |

Participants who indicated they were beginner social media users expressed a cautious perspective towards social media. They seemed to make conscious decisions to limit their social media use. Participants who indicated they were advanced social media users were confident in their use and articulated the diversity and richness of their social media interactions.

6.4.2 Perceived Values and Benefits of GConnex

Participants could articulate some of the value or benefits they had received or expected to receive from GConnex. The researcher explored these benefits along the lines (*tactical, long-term, and strategic*) identified by Hinchcliffe (2015) and the four affordances (*visibility, persistence, editability, and association*) identified by Treem and

Leonardi (2012). Exemplar responses are in Appendix O. The researcher also looked at the use according to the need dimensions (*social, hedonic, and cognitive*) identified by (Ali-Hassan et al., 2015).

At the tactical level, GCConnex helped participants to complete work, including using it to publicize and support learning events (PARTICIPANT P2), sharing information with people that requested it (PARTICIPANT G1) or troubleshooting with the assistance of the GCConnex developers (PARTICIPANT G1). GCConnex also played a crucial role in helping overcome barriers. The ability to edit information allowed a participant to easily remove sensitive information posted in error (PARTICIPANT G1). Another participant could use GCConnex as another channel to communicate with a large distributed organization. One participant recognized the value in being able to connect with colleagues and indicated:

It's the only place where federal public servants really, from all organizations, departments, agencies that can go online and actually truly communicate with each other. It's not siloed in any way. It's available to absolutely everyone ... It's the one-stop shop for finding other public servants or meeting other public servants. (PARTICIPANT B1)

One of the values identified by Hinchcliffe that was not evident in the interviews was cutting costs, and no participant mentioned this as a potential benefit of GCConnex. It is a common perception that cost savings are not of concern to public servants. However, stewardship, i.e., responsible use and care of public resources, is one of the values expected to be upheld by public servants (Treasury Board of Canada Secretariat,

2011b). There is a potential that cost savings may be a driver for those in management, but this was not evident in this study.

There was some evidence that GConnex would provide more long-term benefits such as harvesting innovation by providing a “sounding board for leaders to talk about impacts that are happening to staff” (PARTICIPANT H2) or letting users “see what tools already exist so that we can just modify for our use rather than developing from scratch” (PARTICIPANT D1). Several participants noted that GConnex could also support building relationships between employees (PARTICIPANT A1) or between leaders and their staff (PARTICIPANT M1). Although it was convenient to use the information available to contact individuals in charge of specific committees (PARTICIPANT P3), having everything available also proved to be a challenge for one participant who indicated “it’s really hard to sometimes sift through to find the right people you’re looking for” (PARTICIPANT K2).

There was also some value at the more strategic level, particularly related to institutional practices and improved culture. A senior executive (PARTICIPANT M1) supplemented traditional communication channels to reach out to their large organization. They felt it was imperative to communicate their message directly instead of being ‘edited’ by professional communication staff. They wanted to create a space where employees would feel comfortable responding. Avoiding the formalized reviews of information before distribution would speed up the distribution of information to employees. Another participant was motivated to reach out in person for coffee after an online exchange to develop the relationship further.

Although Hinchcliffe noted that one of the potential benefits of digital collaboration tools could be to speed up decisions, there was no evidence that this influenced participants to use GCConnex. One participant noted, “we don’t tend to be on it all the time, so it’s more something, you have a question you can post it out there and people will get back to you in a day or two or whatever” (PARTICIPANT F2), meaning the collaboration enabled by ESM is primarily asynchronous.

The researcher also explored the needs that GCConnex satisfied according to the three dimensions identified by (Ali-Hassan et al., 2015). Some of the observations are in Table 24. Every participant noted that GCConnex provided them with an opportunity to create, distribute or access information (*cognitive use*). However, there were a couple of mentions that indicated either a *social* or *hedonic* use was possible.

Based on one comment made by a participant (PARTICIPANT H3), the positive space group may be one of the locations where employees have a more open dialogue and where they share personal information that would not be shared with other employees. The possibility of GCConnex filling a more social need for a portion of the public service that needs/wants mutual support could be explored in future research. The conversations that would take place in this kind of group would be more sensitive. Employee willingness to share is not constant, and they will make strategic decisions on whether or not they are willing to share in specific circumstances (Gibbs et al., 2013).

Table 24: Dimensions of GCConnex Use

| Dimension of GCConnex Use | Participant Observations |
|---------------------------|---|
| Social | "...personal stories on the positive space group..." (PARTICIPANT H3) "we had a great conversation, now I want to email them or have a coffee with them or something" (PARTICIPANT F2) "It's the one-stop shop for finding other public servants or meeting other public servants" (PARTICIPANT K1) |
| Hedonic | "maybe I put a fathers' day quote up there from a tv show. Again humour but not targeting anyone" (PARTICIPANT L1) |
| Cognitive | "It helps me tremendously with hiring, recruiting, being aware of what's going on across public sector and also sharing or gathering best practices on different topics" (PARTICIPANT G1) "We use it more or less as a communications tool and to help each other." (PARTICIPANT N1) "I'm an observer on several different groups. I monitor the traffic and then respond from time to time if there's something" (PARTICIPANT H3) "if I'm kind of stumped on a project I can go perusing through posts and, say the policy function, and see what other people are doing" (PARTICIPANT C1) "I find it really useful for non-technical training topics. I can find that sort of information and try to adapt it to our purposes" (PARTICIPANT L1) |

There was also one mention by a participant (PARTICIPANT F2) who, after having an online exchange with another GCConnex user, wanted to contact the individual to meet in person for coffee in the future. Both of these are examples where GCConnex could have the potential to support more social interactions. One participant also commented on posting humour on The Wire, indicating potential *hedonic use*. They rationalized their use was appropriate but understood how others could interpret it as inappropriate, suggesting they may have felt guilty at entertaining or relaxing use of GCConnex.

6.4.3 Overarching Philosophy of GCConnex

When the researcher reflected on the responses from the first three interviews, they recognized the need to explore participants' general philosophy of GCConnex

because this seemed to influence their ideas related to appropriate use. The researcher was interested in understanding their attitudes towards GCConnex and their personal guiding principles. Some of their responses to this question are in Appendix Q.

The specific cases of the two participants that indicated they rarely use GCConnex are worth consideration. If they rarely use GCConnex, what motivated them to participate in the study to explore something that might have little influence on their work-life? One participant is a young, regional employee, relatively new to the public service who is comfortable using public social media tools and is motivated to use GCConnex to better communicate with coworkers and other federal employees. They noted: “when you have to work with others for goals, it is a relationship, and a relationship needs good communications.” Their observation that others in the region did not access GCConnex, combined with difficulty using the system, led them to determine that system was “not for me” (PARTICIPANT L2).

The second employee who rarely uses GCConnex has consciously decided not to use public social media, despite being very comfortable with technology. Their primary motivation is related to how traces and evidence online can be used in litigation. This position parallels concerns about GCConnex information that is releasable under the Access to Information and Privacy Act. The participant is a “naturally cautious person” (PARTICIPANT J1), and this perspective influences their public social media use and GCConnex use. In this example, the potential adverse consequences prevented the employee from using the system (Giermindl et al., 2017).

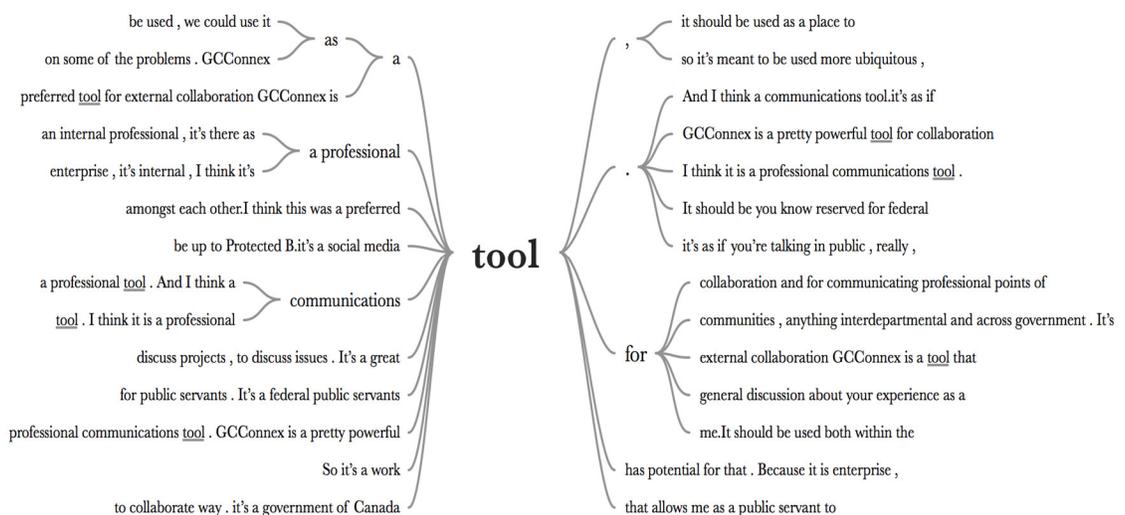
Table 25: Differences in the Regions

| Regional Participants | Headquarters Participants |
|--|---|
| <ul style="list-style-type: none"> • “The government doesn’t need another speech about the power of collaboration. The government actually needs collaboration. It needs to reach into those regions where end users are trying to deliver the programs directly to the public and then use these better tools to help staff members do their work”(PARTICIPANT A1). • “when we looked at the map of the country and the usage of the GCTools, back then BC was very low. Like the further away you got from the NCR, the lower the usage rate was” (PARTICIPANT H1). • Participant L2 wanted better communications with coworkers but noted others in the region do not use GCConnex. • “So I sometimes think there’s that bubble in Ottawa where everyone in Ottawa works for the government. Whereas here in the regions, it’s not the same thing, right? If I want to move to a different position, I can do it in my office and that’s pretty much it” (PARTICIPANT L1) | <ul style="list-style-type: none"> • “It’s the only place where federal public servants really, from all organizations, departments, agencies that can go online and actually truly communicate each other. It’s not siloed in any way” (PARTICIPANT K1). • “I’ve heard from three or four colleagues now that they really like GCConnex as a tool to move around internally” (PARTICIPANT C1). • “On one platform I can have these calendar events, these discussions and they can reach people at the Crown Indigenous Relations or DND Halifax or StatsCan regional offices” (PARTICIPANT B1). • “as Senior ADM regional operations ... I needed as their leader to be able to reach people and to communicate to them...So I used the blogging tool in GCConnex to kind of communicate through a series of posts” (PARTICIPANT M1). |

Participants from the regions provided a unique perspective from some of the headquarters participants (Table 25). All but one regional employee commented on their environment's differences using GCConnex in comparison to a headquarters. Their comments indicated that the uptake in the use of GCTools was less in the regions than in the National Capital Region or that some of the most commonly used features, such as

The five most common terms used in their description of an overarching philosophy of how GCConnex should be used were: tool, information, public, share, servants. Combining them would indicate that GCConnex is a tool for public servants to share information. This understanding differs from the definition of social networking sites provided by Boyd and Ellison (2007) that focuses on constructing a profile, connecting to other users and viewing other users. There was no indication from the study participants that these elements were the essential contributions of GCConnex that motivated their use. The affordances of *persistence* and *visibility* would be more prevalent with GCConnex than public-facing social networking where the affordance of *association* would be more prevalent. The terms related to GCConnex would also support a higher level of *cognitive use* compared to expected *social* and *hedonic* use with other social media tools.

Figure 25: Understanding of 'Tool' in Overarching Philosophy



‘Tool’ is the word most frequently used by participants in describing their philosophy on how GCConnex should be used. The participants described GCConnex as a work tool, a public servants’ tool, a social media tool, a professional tool, and a professional communications tool (Figure 25).

Participants qualified that GCConnex was a tool for communities, interdepartmental, external collaboration, communication and general discussion. Referring to GCConnex as a ‘tool’ links it to a utility purpose and not a strategic or social objective. The language used around ‘information’ also provides insight that the information is related to their jobs and is shared between groups and peers to help each other. Their mention of external collaboration did not mean collaborating with people outside government, but rather with employees from different departments (i.e., external to their own organization). However, even internal collaboration would be influenced by *affiliations*.

6.4.4 Summary of GCConnex Use Philosophy

Participants view GCConnex as a tool for public servants to share information. GCConnex provides value to participants at the tactical, long-term and strategic levels. Examples included publicizing and supporting learning events, sharing information with other employees, harvesting innovation and providing a supplemental communications channel to staff. There is no indication that cost-cutting or speedier decision-making is one of the benefits either sought or realized. Employees working in the regions bring a unique perspective that would merit further investigation.

6.5 Perspectives on Appropriate Use of GCConnex

This section explores the various examples of appropriate and inappropriate uses of GCConnex and their link to legitimacy, potential consequences of inappropriate use and how participants judge appropriate use. Finally, recommendations from participants on the use of GCConnex are presented.

6.5.1 Appropriate and Inappropriate Uses

The definition of legitimacy provided by Suchman (1995) recognizes that the perception of the appropriateness of an action exists within a set of norms, values, beliefs and definitions, indicating that each person may start in a different place and ultimately end in a different place in their individual decision on what is appropriate.

Understanding the appropriate use of ESM requires us to explore the norms, values, and beliefs within the federal public service and how the work environment influences them.

There was evidence that appropriate use has *cognitive legitimacy* (i.e. actions are taken for granted), with statements like “it’s difficult not to use it properly” (PARTICIPANT J1) indicating that appropriate use should be obvious to everyone. One participant implied *relational legitimacy* (i.e. connected to the interpersonal validation of an individual’s self-worth) by recognizing that use needed to “always [meet] your immediate manager’s expectations” (PARTICIPANT E1) and that there was a desire of the employee to please the manager.

The most common understandings of appropriate use were related to *pragmatic* (i.e. based on self-interest) and *normative legitimacy* (i.e., founded on shared beliefs, values and norms). Comments leading to a *pragmatic legitimacy* referred to the importance of using it to accomplish a work-related goal: “if it’s relatable to your work

and your work objectives, then it's appropriate" (PARTICIPANT K2), indicating that if an employee was able to accomplish what they needed, then it was ok. Comments leading to a *normative* understanding referenced values and ethics, GCConnex use as a tool for the workplace, and using GCConnex as it was designed or intended to be used. In establishing what is appropriate, the role of others was recognized: "I find just the participation itself and just the communities that already exist on there, tend to set the standard on what's acceptable and what isn't" (PARTICIPANT H3). This perspective reinforces the idea that organizational norms frame appropriate use.

References to *regulative legitimacy* (i.e., grounded in rules and laws) were more challenging to recognize. One participant referenced what is "allowed vs. not allowed" (PARTICIPANT F2), while another indicated that GCConnex use needed to be "policy-appropriate" (PARTICIPANT B1). Although the policies may outline the values and norms expected of federal public servants, severe consequences (including fines, jail and loss of employment) are more in line with a *regulative* basis. Going against social norms may have social repercussions or impact career development but would rarely be interpreted as punitive.

Some examples of GCConnex use provided by the study participants were appropriate in their minds, while others were inappropriate. Also, there were several situations where either one participant deemed it appropriate and another inappropriate or where the participants themselves were uncertain. All three categories of examples are essential to understand how participants determined the use was appropriate.

Participants felt that looking for expertise was an appropriate use of GCConnex. They would use the networking feature to connect with people with common interests for

future benefits, ask specific questions in relevant groups, or even post queries on The Wire. As explained by one participant, they were able to “go into GCConnex, and quickly key word search and pull up relevant groups where we could connect with that group of stakeholders” (PARTICIPANT D1)

The features of GCConnex made exchanging information easy for users. They interpreted this use of GCConnex as appropriate, and as one participant noted, “GCConnex can be used ... to interact with your colleagues in the government community to share best practices with one another, to bounce ideas off one another, to collect opinions from people and share information that is not normally accessible through other means, especially interdepartmentally.” (PARTICIPANT H2) When looking for information to set up training on discrimination and harassment prevention a participant began “poking around the different mental health groups ... and just doing searches on those words, discrimination and harassment” and located a Powerpoint presentation that met the need (PARTICIPANT L1).

Another appropriate use involved the planning, organizing, marketing and supporting of events. Participants scheduled events in the group calendar, providing the logistic details and agenda. A group discussion thread supported collaborative planning for the event, while another discussion thread accepted input from participants to capture the minutes. Planners uploaded files and links to external materials to support the meeting or event and shared post-event materials such as videos and recordings. As was explained, GCConnex could be used “both within a closed group as a planning tool to keep the organizers apprised of our progress ... [and] in a broader sense as an open

communications platform to share information with our intended audience”

(PARTICIPANT A1).

Participants felt the creation and use of the Groups feature was generally appropriate. Groups directly supported specific work objectives such as planning meetings or events or making information available for employees who provided direct support to Canadians. Groups also advanced broader work agendas such as responding to the public service employment survey and supporting employees under transformation efforts. Other groups addressed organizational issues common to many departments, such as conflict management, harassment and discrimination. Groups also supported particular categories of employees such as the LGBTQ2+ community or women in Science, Technology, Engineering, and Mathematics (STEM). Other members in these groups are also recognized *affiliations* to participants.

Not all of the groups had the expected take-up. A GCConnex group that was “set up, specifically for leaders in the department to talk to each other about this massive service transformation ... was kind of meant to be a sounding board for leaders to talk about impacts that are happening to staff ... and it didn’t get a lot of take up, I guess because for one thing, the main audience doesn’t have a lot of time to go on and use it.” (PARTICIPANT H2). The department subsequently repurposed the group to support employee engagement more broadly. So although the participant initially described this particular group as an appropriate use of GCConnex, it failed to achieve the desired result. The participant further rationalized that this specific use was not wholly appropriate because it did not consider the work practices of the targeted users (i.e., executives).

Participants were also able to give some very unique and specific examples of how they used GCConnex. One participant (PARTICIPANT F1) worked with their internal communications staff to set up a page on GCConnex to support conflict management. They used this space to address typical questions or issues that might be of interest to employees. They received positive feedback because the material was presented in a conversational tone people could relate to, making it look like the questions came from real people.

Another participant (PARTICIPANT M1), a senior executive, used a regular blog to engage their physically distributed employees. The intent of using a blog was to allow the executive to present the information in an informal way that complemented more formal communications channels to reach and engage with as many employees as possible. They also hoped to encourage more dialogue among staff by removing the barriers to communications afforded by the power imbalance.

The examples provided by participants representing appropriate use of GCConnex (i.e., looking for expertise, exchanging information, planning events, communicating to staff) could be classified as *cognitive* use (i.e., connected to creating and distributing information) (Ali-Hassan et al., 2015). Although one participant recognized the importance of connecting with other colleagues, the purpose of connecting was to share information and not to build a social relationship (i.e., *social* use). The examples of appropriate use also did not indicate filling a need for relaxation or entertainment (i.e., *hedonic* use).

While participants provided abundant examples of appropriate use of GCConnex, truly inappropriate use of GCConnex was rare. Generally, they struggled to think of any

inappropriate use they had observed directly, and the inappropriate use examples are worth consideration to understand what made them inappropriate.

One employee used inappropriate language and an inappropriate conversation style directed at the GCTools team when they had difficulties accessing information. This behaviour contravened the Values and Ethics Code for the Public Sector that requires employees to treat everyone with respect and fairness (Treasury Board of Canada Secretariat, 2011b). The employee was reminded to engage respectfully (PARTICIPANT G1). In another situation, an employee posted information above the classification level allowed by the system (PARTICIPANT G1). This action violated security policy, and the resolution involved removing the sensitive data and educating the user. Depending on the information posted, it may have also resulted in a formal security investigation.

One participant questioned a situation they encountered where someone promoted information on GConnex about an offsite meditation retreat run by a private entity for a fee (PARTICIPANT B1). They felt this was not entirely appropriate because it appeared to use a government network to support a for-profit company in contravention of the Policy on Acceptable Network and Device Use. However, this employee believed they were a bystander to this posting and did not take any specific action.

A typical example observed was when users posted questions or information in the wrong groups or discussion threads. One participant received an invitation to a work lunch at the other end of the country from where they worked. In these cases, either the moderator or another user advised where would be more appropriate for that posting. Another participant cross-posted an event they were organizing in multiple locations on

GCConnex and received a comment from another user that this was spamming (i.e., wasting government resources) (PARTICIPANT P2). The new employee who decides “they’re going to expand their network by adding literally every person on their list of colleagues” (PARTICIPANT A1) would receive the same response.

The most unexpected example provided by a participant was one about which they had forgotten entirely. A new, young employee that the participant did not know repeatedly messaged them and their co-worker, asking quite personal questions. They were uncomfortable, so they brought the situation to the attention of the support staff, “we don’t know what his intentions were, really, so that’s why we need to escalate it” (PARTICIPANT K1). This behaviour was potentially in violation of the Values and Ethics Code for the Public Sector and the Policy on Harassment Prevention and Resolution. These documents emphasize the role of every employee to maintain a workplace free of harassment.

Those employees who had not directly observed inappropriate use described behaviour that they would deem inappropriate. Their examples included an employee promoting their personal business, trying to ‘hook-up’ with other users, sharing confidential or very personal information, using profanity or openly questioning government policy. These examples would lack *regulative legitimacy* or *normative legitimacy* and would violate several policies such as the Policy on Acceptable Network and Device Use, Policy on Harassment Prevention and Resolution, Policy on Government Security and the Values and Ethics Code for the Public Sector.

Although not directly observed, one participant cautioned that the shorthand language used on Twitter or other public social media tools would look unprofessional

while perhaps not explicitly inappropriate (PARTICIPANT M1). Similarly, several participants felt that postings looking for jobs that included spelling and grammar errors or posted to the wrong location would leave a negative impression and do more harm than good for those looking for jobs. These examples could violate *normative legitimacy* because although there is no formal policy covering this, there is a workplace expectation to communicate professionally.

There were additional examples of the use of GCConnex where one participant had an issue with what they observed, and yet other participants may have done the same thing. In one example, a participant (PARTICIPANT H1) had observed another user sharing the resume of someone who was not already a public servant. The participant said, “I don’t know that it is or not but I’ve seen it several times now,” indicating uncertainty. However, during the interview, they gave the action *cognitive legitimacy* by saying that “it’s not different from what we would do in the offline world” and *pragmatic legitimacy* by saying, “there’s constantly a demand and a need for people to work in the public service.” Responding to a similar scenario, another participant observed:

One thing that I came across that I didn’t appreciate about GCConnex and that was mostly in the jobs marketplace area was messages that were being posted *[for]* friends and family members of public servants. Employees or public servants were posting messages from their acquaintances, from friends and family members and listing their resume. I think honestly this should be reserved for public servants. (PARTICIPANT F2)

This participant felt that this action lacked *regulative legitimacy* and violated the Policy on Acceptable Network and Device Use by using a government network to give friends and family an advantage to try and find a government job.

Several participants observed that the incidents of “job-shopping” had increased, diluting the relevance of other material. “Spamming The Wire, begging for jobs, is not appropriate in my view because it’s kind of getting in the way of more relevant content” (PARTICIPANT A1). This participant felt this spamming violated the norms established, indicating that employees should post resumes in the Career/Jobs Marketplace part of GCConnex. The situation also demonstrates that perceived inappropriate use can taint how other users perceive the system. The “job-shopping” actions appeared to interfere with this participant’s use of The Wire resulting in their frustration.

In another example, a participant (PARTICIPANT L1) admitted using the Wire to share memes and other humorous material that could be “kind of on the line.” The employee indicated that “it wasn’t targeting anyone. It wasn’t making fun of anyone; it’s just a humorous statement”. In this situation, the participant rationalized that it was not at the expense of one of the designated groups, did not violate values and ethics and was not illegitimate. However, they recognized that other employees might perceive this behaviour as inappropriate because it was not directly work-related.

One example of inconclusive use raised by multiple participants involved the way GCConnex users shared their resumes to look for new positions. Although several participants indicated that using the Career Marketplace was one of the features they used most frequently and a manager had successfully recruited new staff using GCConnex,

they observed that increasingly, these actions had not been limited to the Career Marketplace area of GCConnex. Instead, users had begun posting their resumes in groups and on The Wire. One participant referred to it as “employment pan-handling” (PARTICIPANT L2), giving the practice a negative perception as an unwelcome behaviour.

The similarities between GCConnex and GCCollab were also an area of much confusion. Although only federal public servants can access GCConnex, GCCollab is also open to provincial, territorial, and municipal employees, academia and students and others by invitation. One participant observed that GCCollab has more appealing content than GCConnex (PARTICIPANT L2). Other participants have begun to migrate and use GCCollab more than GCConnex either because they believe that is the direction the systems are going (PARTICIPANT H1) or because their work responsibilities require this broader engagement (PARTICIPANT H3, PARTICIPANT E1). Several expressed a desire to understand better the differences between the two systems and which system is being used more. “I’m wondering if people, because of this new open and transparent open government, are people now just being included to constantly post on GCCollab and the usage is fading from GCConnex” (PARTICIPANT K2)? With the increased use of GCCollab, participants noted the increase in people looking for jobs and believed it to be less appropriate on GCCollab than GCConnex, but more prevalent. One example involved a private-sector consultant promoting their services (PARTICIPANT H1). Someone in the group informed the individual that this was not in line with the intent of GCCollab.

6.5.2 Consequences of Inappropriate Use

Study participants agreed that there could be consequences to inappropriate use of GCConnex. At the individual level, they noted that “behaviour online whether it’s internal or external, if it’s inappropriate it has similar consequences to what happens in the offline world as well.” (PARTICIPANT H1). Consequences could be as simple as embarrassment leading to a lack of personal credibility or as severe as employment termination. The risk of embarrassment or damage to reputation was not trivialized and could potentially have a long-term career impact. For this reason, “people tend to behave more professionally and more courteously on these types of accounts” (PARTICIPANT K2).

There was a clear expectation that the individual manager would be involved in taking appropriate action, whether providing additional training and guidance or taking the necessary disciplinary action in line with the government human resources policy. Most participants appreciated that corrective action taken in response to the inappropriate action would be scaled according to the severity of the inappropriateness, indicating that both appropriate use and inappropriate use are not absolute. This observation is discussed in more detail in Section 7.2.2. A mistake involving posting draft documents before they are ready could result in the removal of the document and a reminder to the employee for the future. Behaviour that involves serious negligence is a security violation while harassing behaviour could easily lead to employee termination. The degree of inappropriateness and the degree of action would be very situation-dependent.

Consequences could also occur at the organizational level. However, participants did not expect them to be significant because the information is internal to the

government, even though GConnex content is subject to release under the Access to Information and Privacy Act. One participant felt there was a possibility that adequately dealing with inappropriate use may not always be negative:

It can provide a positive perception to the specific organization, department or agency because, in that sense, people might see this organization or the people who are leading this organization are serious, and they're people of character and integrity, and they take the code of values and ethics for the public sector seriously because they're actually treating this matter and they're not closing a blind eye to it. (PARTICIPANT F1)

The other perspective provided was that it could easily cause embarrassment to the organization, depending on the severity of the inappropriate use, mainly if it regularly happened. As a result, organizations might limit the use of GConnex, increase oversight on use, and add to user training. One participant noted that in the longer run, "that would just make it harder for little groups to get going and run in that kind of free and organic way they do now" (PARTICIPANT B1).

6.5.3 Judgment of Appropriate Use

How employees act in their offline world significantly influences how they determine that their online behaviour is appropriate. The "general values and ethics training and information that people get on joining the public service should be strong enough, a complete enough foundation" (PARTICIPANT M1). They should then be able to take these and apply them in the online world. One participant, who worked as an ethics advisor, noted that it was not always that simple and that "sometimes we forget as

public servants that we actually serve the public ... and we don't always have a full understanding of our organizational code of values and ethics" (PARTICIPANT F1).

A participant noted that "the users learn from one another; that's the first source of information about what is GCConnex, how to use it and how they should engage" (PARTICIPANT G1). Another participant chose to see "what other people are doing already and just using [their] best judgment of that" (PARTICIPANT H3). They noted that the GCConnex population is relatively homogenous and that "the communities that already exist on there tend to set the standard on what's acceptable and what isn't" (PARTICIPANT H3).

However, there is a difference, between online and offline, with one participant observing that GCConnex exists "somewhere between a less formal meeting and the lunch table in terms of how people end up behaving" (PARTICIPANT B1). The expectation is greater for senior managers to have competencies and judgment to differentiate and modulate their messages depending on the audience and the medium used, skills that they would develop through training and work experience (PARTICIPANT M1).

Their experiences in public social media were separate and distinct from their behaviour on GCConnex. One participant specifically cautioned that employees who actively discussed policy issues as students "have to be able to kind of check their ethical boundary between, what [they] are saying as part of a person and what [they] are saying as a public servant" (PARTICIPANT M1).

The majority of participants were highly confident in their ability to use personal judgment to determine appropriate use of GCConnex as evidenced by wording such as:

“I’m confident that I know what I’m doing” (PARTICIPANT D1), “I’m a professional person with a habit of testing personal boundaries” (PARTICIPANT L2), “I’m just judging it based on my own perception of what is right or wrong” (PARTICIPANT K2), “I feel like I have a good conscience and have a good gut check” (PARTICIPANT K1), “I expect myself to have the judgment” (PARTICIPANT A1), and “I’ve some of the competencies you expect to have in a [senior executive]” (PARTICIPANT M1).

How individuals determine their appropriate use of GCConnex is sometimes challenged by how they see others using GCConnex or could result in them second-guessing their use. One participant noted that some of their use could be considered “very radical and very very ahead of the curve” that could result in “a slap on the wrist” (PARTICIPANT H1). Another rationalized what they observed: “I’ve never done it myself and I wouldn’t ever feel comfortable doing it but I’ve seen it enough times that it must be ok because people are doing it on The Wire, they do it in the career marketplace” (PARTICIPANT H1). Another observed that discussions in one particular group [a pride group] could get quite critical on policies and reasoned that “maybe that’s fine actually ... that group is allowed on GCConnex so maybe once we’re in that narrowly defined space it’s ok, I don’t know, but it seems like a grey area” (PARTICIPANT E1).

The appropriate way to look for jobs created the most disconnect. One participant was finally able to find an indeterminate position thanks to persistent posting in various GCConnex groups, but had issues with others posting resumes in the Jobs Marketplace on behalf of friends and families (PARTICIPANT F1). They believed it should be reserved for public servants. Another observed that “this is part of that grey zone but I don’t personally have a problem with it” (PARTICIPANT H1). Also, even though the

Jobs Marketplace is available for all employees to use, one participant felt guilty and somewhat disloyal looking for another position until a colleague told them explicitly never to stop looking for new opportunities (PARTICIPANT C1).

6.5.4 Recommendations (Do's and Don'ts)

The researcher asked participants what kinds of things they would include in a recommendation for GCConnex Do's and Don'ts. Extractions of their responses are included in Appendix R. These recommendations essentially outline what could be considered normative use of GCConnex and covers both appropriate and inappropriate use.

There was strong consistency in many of the recommendations from the participants. From a values and ethics perspective, appropriate use was aligned with respectful, collaborative and open-minded behaviour. In contrast, behaviour that was illegal, discriminatory or harassing would be considered inappropriate. Participants felt employees should use GCConnex for connecting/finding colleagues, keeping abreast of recent work-related developments and professional development. While it was appropriate to use GCConnex for personal advancement in the public sector, it was inappropriate for personal use or to recruit for the private sector.

Participants provided some valuable and specific recommendations on the content or how to use GCConnex, such as ensuring their profiles were fully completed and up-to-date and creating an introductory post when first joining a group. Users should actively engage in productive discussions while being mindful of their tone and the language used. They should not share materials that the department is not ready to share or contain sensitive, personal or overly critical content.

There were also several areas where participants had different perspectives. On the one hand, users should not be afraid to explore and try things out. On the other hand, they should see how others were using it first and carefully think about their objectives.

Study participants were eager to assist other GCConnex users and thought a guide for users would be handy. One participant suggested this guide should also cover how GCConnex could promote people's work, leverage the value of groups, and how users could connect with others across the departments. Another participant (PARTICIPANT A1) (PARTICIPANT K2) believed users should be doing something concrete. "Don't have big conceptual discussions about the power of collaboration, actually do it."

6.5.5 Summary of Perspectives on Appropriate Use

There are cases where appropriate use is easily recognizable, such as using GCConnex to look for expertise, information, or assistance to plan and organize an event. There are also cases where inappropriate use is just as easily recognizable such as using GCConnex to conduct a personal business or sharing classified information in contravention of government policy. However, there were several examples where participants struggled to identify an action as appropriate vs inappropriate or where there were differences of perspective. Inappropriate use can have negative consequences for the individual, such as career or disciplinary action but can also cause organizational embarrassment.

Participants were confident in their ability to use personal judgment to determine the appropriateness of their or others' use of GCConnex, distinguishing between the online and offline worlds.

6.6 Validation

How participants use GCConnex is influenced by both peers and superiors. Observing how others use GCConnex and modelling their behaviour or paying attention to direct statements helps inform employee judgment of appropriate use (Fulk et al., 1990). Even though employees will seek knowledge before engaging in appropriate use, they will also look for validation of these decisions (Rogers, 1983). If use is passive, such as reading content only and not making original contributions, their use may be validated internally by accomplishing what they intended. Their objective could be getting information on an upcoming event or topic of interest, finding a new job posting, or getting the contact information for a subject matter expert. Failure to accomplish the goal can result in a participant abandoning the system, such as the participant who determined GCConnex “was not for them” (PARTICIPANT L2) or the participant who was disappointed that other employees in the region did not seem to be using it, preventing them from accomplishing the information exchange they were hoping for (PARTICIPANT L2).

Active use of GCConnex is more likely to result in the external validation that the use is or is not appropriate. If this validation comes from a peer, it is considered *endorsement*, and if the validation comes from someone in authority, it is considered *authorization* (Walker et al., 1986). This validation can also be *explicit* (i.e. through words or actions) or *implicit* (i.e. in the absence of contradictory words or actions) (Berger et al., 1998). The intersection of examples of explicit and implicit authorization and endorsement is in Table 26.

Table 26: Validation of Appropriate Use

| | Explicit | Implicit |
|----------------------|---|---|
| Authorization | <p>“I did inform the support staff and they just told him ... that’s not how you speak” (PARTICIPANT K1)</p> <p>“I would guess they would ... possibly just answer directly in the comments” (PARTICIPANT H3)</p> <p>“The tool team would decide if the content needs to be removed ... and then maybe go with a general statement” (PARTICIPANT G1)</p> | <p>“would expect their manager to have a private conversation with them ... I’ve been raised on the idea you praise in public and criticize in private” (PARTICIPANT M1)</p> |
| Endorsement | <p>“Well I’ve seen cases where if somebody posts for example a questionable comment or a report on a post, other users will jump on there and ... comment against that person or kind of correct them” (PARTICIPANT H2)</p> <p>“it’s not being monitored so I think users need to hold other users to account and if they see something that is disrespectful ... I think it’s up to us to moderate the use of the platform” (PARTICIPANT K2)</p> | <p>“Somebody on their team who’s not their manager ... I would expect them to have a private kind of corrective ... conversation ... not in the open shaming someone” (PARTICIPANT M1)</p> <p>“They won’t necessarily engage in any way online through GConnex but they will talk to me verbally or in person ... and say hey I really appreciate all that you’re doing” (PARTICIPANT H1)</p> |

The researcher saw evidence of *endorsement* when participants solicited advice on their use from colleagues, when questions posted in discussions received answers, and when they received feedback that information they shared was useful. This feedback can be positive confirmation that what they are doing is appropriate and can just as readily be feedback that their use has been ineffective, such as using the wrong language or tone or posting in the wrong location. Ideally, this observation would be accompanied by advice

on more appropriate action. One common mechanism in GCConnex to indicate agreement with information provided in posts is to give a thumbs-up or ‘like’ to the post.

Examples of *authorization* provided by participants most often referred to escalating problems to managers or the GCTools team to be addressed, but they also referenced the importance of senior executives in TBS and other departments to set the example. The positive support from the former Clerk of the Privy Council was validation that GCConnex was a vital tool for public servants.

One participant was aware “that some employees aren’t allowed, are told not to use GCConnex because they’re not using it wisely or management isn’t comfortable with it” (PARTICIPANT A1). While this was minimal, several mentioned the importance of management to support their use of GCConnex, “You know if you have a manager or a director who’s really saying you should be using this, who is actually on there and leading by example, then that’s much more likely to happen, that you’ll actually use it and feel comfortable using it” (PARTICIPANT E1). It was also not uncommon for participants to get confirmation from management that specific information was ready for sharing or have an official post reviewed before posting. As one participant noted, “Before I ever publish anything ... I want to go through every single layer of management before I go ahead and even think of that” (PARTICIPANT N1). With ESM, managers must not only support the use of the tools, but they must also “model the behavior they would like to see” (Leonardi & Neeley, 2017, p. 126). The attitudes of senior leadership are reflected in the strategic choices they make and are critical to successful IT innovations (Karahanna & Straub, 1999).

When users put comments or feedback directly on posts visible to other users, they demonstrated *explicit validation*. In contrast, *implicit validation* resulted in the absence of explicit action where a position was either assumed or expected that offline activity was visible to other users. An example of explicit action would be removing inappropriate content and adding a post to remind users of expected behaviour. All participants expected any disciplinary action to be taken offline only and not visible to other users. Where material remains online, users will implicitly assume that it is appropriate. The best example of implicit validation would be the increased use of The Wire to post looking for jobs. While it may have been questionable to some participants, when it remains online, and no one has said it is explicitly inappropriate, users feel that the action is implicitly appropriate.

Explicit authorization could come from the GCTools team, whereas *explicit endorsement* was more often from the regular exchanges between users. *Implicit authorization* also took place offline and involved support from managers to use GCConnex, and could include disciplinary action.

6.7 Summary of Findings

This chapter presents a summary of the findings from this study. The participant sample included term and indeterminate federal public servants from various genders, ages, years of service and departments. The researcher discovered three categories of users based on the degree of voluntariness.

Participants used a broad selection of GCConnex features. However, the groups and discussions provided very detailed descriptions of their use. Generally, participants viewed GCConnex as a tool for public servants and accrued benefits at the tactical, long-

term and strategic levels. They clearly articulated examples of appropriate use, such as looking for expertise, information or assistance, and using GCConnex to plan and organize events. There were few examples of genuinely inappropriate use, but participants were confident they would recognize them, such as using inappropriate language or actions counter to government policy. Several examples indicate appropriate use is not universally interpreted. Most commonly, participants' actions related to job-shopping or resume-sharing and the sharing of memes were viewed differently.

Chapter 7: Discussion

7.1 Overview

The IT value literature tells us that *appropriate use* is a necessary condition to achieve IT success (Lucas, 1993a). The objective of this research was to understand how employees determine that their ESM use is appropriate. This qualitative case study focused on how *appropriate use* of ESM is socially constructed in a Westminster parliamentary democracy such as the Canadian federal government. This chapter discusses the findings of this study in the context of previous research done on legitimacy, social media, the social construction reality and IT value. Also included is a discussion of the understanding of the *appropriate use* concept and how legitimacy theory is an effective lens to understand the process of social construction of *appropriate use*. Finally, this chapter presents the implications of the results to research, policy, and practitioners.

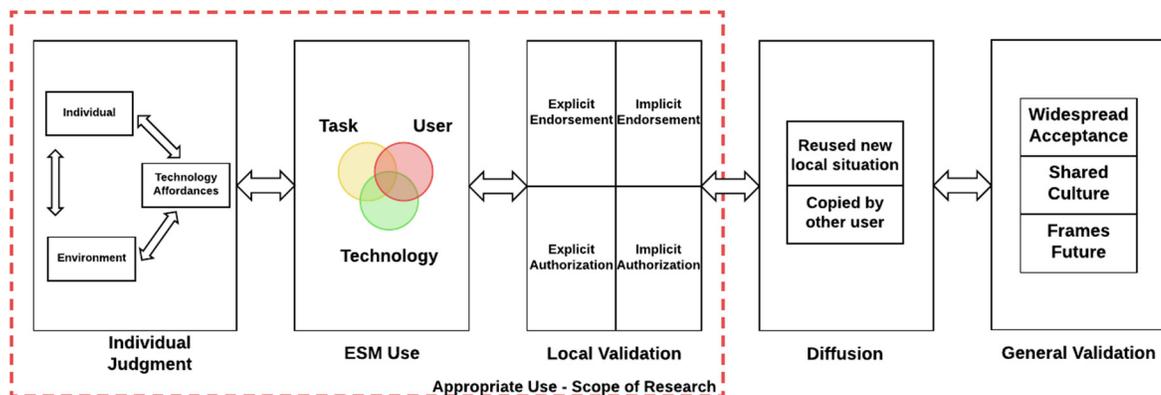
This chapter discusses the implications of the findings as they relate to the following research questions: *How is the appropriate use of enterprise social media socially constructed in a Westminster parliamentary democracy such as the Canadian federal government?*

1. *What influences the individual judgment of a public servant that a specific action is appropriate when using enterprise social media? and*
2. *How are actions taken by public servants using enterprise social media validated as appropriate?*

The conceptual framework developed in Chapter 3 (repeated here in Figure 26) describes how *appropriate use* is first determined by the individual based on their background, their unique work environment and the affordances of the ESM. Employees will use their ESM in specific ways based on their individual judgment that the use is appropriate. Either peers or superiors then validate this use through explicit or implicit actions. The complete framework draws on literature related to legitimation to show that use validated as appropriate will diffuse to other users and other situations and eventually be widely accepted. This study explores the first three stages of the process in this research to understand how *appropriate use* is socially constructed at the individual level.

This chapter begins by discussing appropriate use, then addresses how the research responds to the research questions and concludes by discussing the suitability of legitimacy theory as a lens to understand appropriate use.

Figure 26: Appropriate Use Process Model



Related References

Berger & Luckman, 1966
 Dornbush & Scott, 1975
 Lamb & Kling, 2003
 Nan, 2011
 Treem & Leonardi, 2012
 Elbanna & Linderroth, 2015
 Suddaby et. al., 2017

Nance, 1992
 Johnston et. al, 2006
 Burton-Jones & Straub, 2006
 Nan, 2011

Dornbush & Scott, 1975
 Walker, 1986
 Fulk & Boyd, 1991
 Zelditch, 2001

Saga & Zmud, 1993
 Laif & Josserand, 2016

Suchman, 1995
 Kraut et. al, 1998
 Johnson et. al, 2006
 Nan, 2011

7.2 Appropriate Use

The concept of appropriate use has not previously been thoroughly studied. This section differentiates appropriate use from other work on intended use and effective use. Then it discusses three elements that determine appropriate use is continuous and dynamic, multi-dimensional and socially constructed.

7.2.1 Other qualifiers of use

Previous research has emphasized the importance of *appropriate use* to achieve value but does not fully explain the meaning of *appropriate use*. Many models focus on the intent to use and pay little attention to describing *use* itself (Davis et al., 1989; Lucas & Spitler, 1999). However, some work has been done on the concept of *effective use* by Burton-Jones and Grange (2013). The understanding of *appropriate use* in this study differs from previous research for both *intended use* and *effective use*.

Intended use appears in several IS use models such as the Technology Acceptance Model (Davis, 1985), the Theory of Planned Behaviour (Ajzen, 1991), and the Theory of Reasoned Action (Fishbein & Ajzen, 1975). These models apply *intended use* to link IS use with cognitive factors such as beliefs, attitudes, perceived usefulness, perceived ease of use, and perceived control. Several researchers have also extended these models to also look at the role of perceived system quality (Davis et al., 1989), subjective norms (Venkatesh & Davis, 2000), and information or service quality (DeLone & McLean, 2003). However, these models do not deal with the judgment required to determine that the specific use or intended use is appropriate. They also fail to address the dynamic exchange that results.

Burton-Jones and Grange (2013) studied effective use to demonstrate how system use helped users attain their goals, and they focused on the rewards that stemmed from using the system. Burton-Jones and Volkoff (2017) studied *effective use* in the context of health care records and specifically noted the relationship between *effective use* and outcomes. They assumed “effective use helps attain desired outcomes, not that it guarantees them.” An outcome could also be achieved without effective use through other mechanisms. If employees used other systems parallel to GCConnex, success in terms of the ultimate goal was still possible independent of GCConnex. Their resulting model considered how the information system affordances were actualized to achieve *appropriate* clinical decisions. This idea correlates with the definition of affordance as a “relational concept that connects the materiality of a technological artifact with the subjective goals and perceptions of its users” (Mettler & Winter, 2015, p. 102).

Appropriate use differs from *effective use* in that *appropriate use* focuses less on the immediate task result and more on how the result is obtained. As reinforced by government policy, “Canadians will look to both the results achieved and the means used to assess their trust in the competence and integrity of the government” (Treasury Board of Canada Secretariat, 2017a). Previous research fails to address the idea that *use* can be effective and efficient, yet may not be appropriate.

7.2.2 Understanding the Appropriate Use Concept

Our study reveals two things about *appropriate use*. First, it is not a static, dichotomous construct, i.e., it is not a simple case of use being either *appropriate* or *inappropriate*. Instead, use exists on a continuum between appropriate and inappropriate.

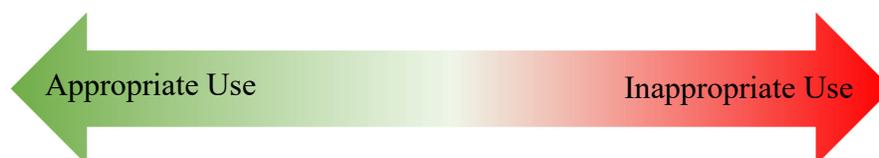
Second, appropriate use has multiple dimensions, and the three dimensions discovered in this study relate to Task, Feature and Form.

7.2.2.1 Appropriate Use as a Dynamic Construct

ESM use exists on a scale somewhere between appropriate and inappropriate (Figure 27). Where specific use exists in this range is highly subjective. Each individual may interpret an action differently depending on their background, experiences and context. An employee who has faced difficult challenges in their personal life may make comments in a Positive Space group that they would not consider in another group. Gibbs et al. (2013) noted that although employees will share information, in some circumstances, they will conceal information and a tension exists between these two dimensions. Similarly, when use is not obviously appropriate or inappropriate, employees will experience tension in making a judgment.

An employee's individual judgment that an action is appropriate is influenced by their background and experiences, their work environment and the affordances of the ESM. Employees who identify themselves as advanced social media users will be more at ease using the technology than someone with little or no experience with social media. Similarly, employees with long careers in the same organization will be more aware of the organizational norms and expectations than a recent hire. Employee decisions on appropriate use will be very context-specific, and given two employees faced with the same situation, they may arrive at different determinations.

Figure 27: Appropriate Use Range



Appropriate use is also a dynamic construct and can vary over time, even with the same individual. As employees experience their personal and work lives, their attitudes towards actions may change. Consider the example of the participant who felt it was disloyal to use the ESM to look for a new position, and therefore inappropriate. Their judgment changed following interactions with a co-worker (affiliations). Also, a participant interpreted sending a meme as appropriate, but during the interview adjusted their position to a more neutral one recognizing that in some circumstances, this action could be construed as inappropriate. Employees continuously influence their environment, just as their environment affects them (Berger & Luckmann, 1966). This constant change affects how employees interpret what they see, hear and experience and how they determine ESM use is appropriate.

7.2.2.2 Appropriate Use Dimensions

The results of this study indicate that appropriate use has multiple dimensions. It is not sufficient to perform the right *task*, have the right motivation, or achieve the desired result. Which *features* of ESM employees use and the *form* that the use takes are two other dimensions from this research. Figure 28 shows the three dimensions of *appropriate use* that resulted from this study - *Task, Feature and Form*. These different dimensions can be understood by considering previous research on Task-Technology-Fit (Goodhue & Thompson, 1995) and the engineering framework for Fit-Form-Function (Hillier, 2014).

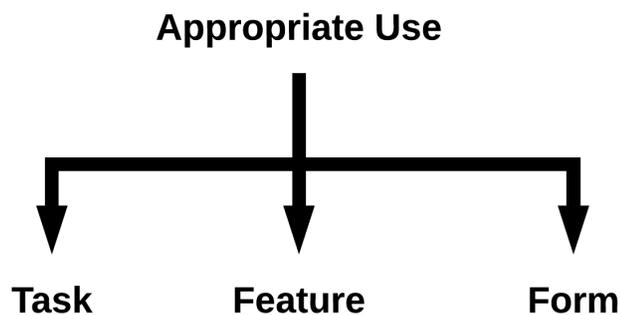
The Task-Technology-Fit theory states that the technology must be a good fit with the task it supports to have a positive effect (Goodhue & Thompson, 1995). According to this theory, the characteristics of the task must match with the characteristics of the

technology. However, this model does not address the importance of message content and the unique social aspects of ESM.

In engineering, designers refer to a component's *fit*, *form*, and *function* (F3) as a framework for managing a bill of materials (Hillier, 2014). *Fit* refers to the attributes of a component that allow it to connect with another, *form* describes the characteristics, dimensions or appearance of the part, and *function* refers to what the piece is designed to do. Sarkar (2016) proposes that the F3 framework has application beyond engineering and applies it to eLearning where *form* would describe the visual interface and course design, *fit* would consider the instructional approaches and *function* would map to learning outcomes.

These two models help explain the findings in this study, as shown in Figure 28. Each of the dimensions of appropriate use (*Task*, *Feature*, *Form*) is discussed in the following paragraphs.

Figure 28: Dimensions of Appropriate Use



This study's findings reveal an element of *appropriate use* is connected to the purpose or output (i.e., the *task*). Is that task an appropriate one to be performed by a federal public servant? Some tasks appear to be appropriate to some users and inappropriate to others.

GCConnex is a professional workspace allowing employees "to connect and share information, leveraging the power of networking towards a more effective and efficient public service"(Treasury Board of Canada Secretariat). There is a great deal of latitude in determining task alignment, and employees are encouraged to use their judgment and experiment. As long as what they are trying to do is not in conflict with policies, including the Values and Ethics Code for the Public Sector, employees are encouraged to try using GCConnex.

Posting resumes and looking for a new position did not contravene any policies. There were no established organizational norms or guidelines, so it would appear that sharing of resumes would be appropriate use. However, some employees might perceive this as being disloyal to their current work unit.

One participant expressed concern about employees posting resumes for friends or family on GCConnex because they felt the system should only be for public servants. However, they then rationalized that in the non-GCConnex world, a friend or family's resume would often be distributed among managers. They questioned if using GCConnex was any different. They also reasoned that if a hiring manager needed someone with the skillset, it was positive for the government to find someone but remained unconvinced that it should be allowed on GCConnex.

Based on the information provided by participants, some employees believe it is appropriate to share resumes while others are less sure. However, it is more appropriate to share employee resumes than those of non-employees, indicating that the purpose or type of task to be performed in GCConnex is one dimension of appropriate use.

Tasks may be legitimate if they are allowed by the rules (*regulative legitimacy*), aligned with organizational and social norms (*normative legitimacy*), achieve a valid outcome (*pragmatic legitimacy*), involve take-for-granted actions (*cognitive legitimacy*) or contribute to an employee's status or feeling of self-worth (relational legitimacy). If the task is not deemed legitimate for federal public servants using government systems, it may not be appropriate use from other public servants' perspectives.

There was evidence that the *feature* of GCConnex used was another essential element of appropriate use. Although a dedicated feature existed for employees to look for a new job or hire someone, resumes appeared in several other locations of GCConnex, including the Welcome to GCConnex discussion group. Instead of a place to share tips on using GCConnex, the Welcome to GCConnex discussion group became crowded with resumes. The Wire was deemed inappropriate for posting resumes because participants found the volume of resumes distracting from the main content on The Wire.

Participants also gave examples where GCConnex users posted questions in the wrong forum. Posting a message looking for Data Analytics experts in a Change Management discussion group may not have the desired results. Results indicate participants felt that some features were more appropriate than others.

Nance (1992) conducted a field study that looked at the appropriateness of system use from the perspective of task/technology fit. In the context of an accounting data

processing task, this study looked at the impact on technical efficiencies and systems cost when users selected a less optimum technology solution. His results indicate that inappropriate use, although rare, did occur where users made less optimum technology choices among options available. This study supports the idea that while there may be preferences, the selection of ESM features is subjective. Knowing which feature is the most appropriate can be challenging for employees.

The *Form* dimension refers to the content, such as the language, tone, grammar, spelling, and even medium. Users often communicate using short forms (e.g., lol for laughing out loud) and emojis (i.e., a small digital image representing emotions) on public social media. Although GConnex is a social media tool, participants felt employees' posts should contain proper spelling, grammar, and terminology suitable for professional purposes. They also felt that excessive short forms and colloquialisms come across as unprofessional and should not be used. Users will negatively perceive a job-search post full of spelling or grammar errors or that fails to adopt a proper tone. Participants also indicated that users should avoid overly formal language. Instead, the language in posts should reflect natural conversation. Another example that some users may have interpreted as inappropriate involved posting memes (i.e., humorous images). Although they were meant as jokes, sending the wrong meme could be offensive to some users.

ESM requires trust in the sender (i.e., individual trust) (Kelton, Fleischmann, & Wallace, 2008) and trust in the information's content. Some of the message attributes that contribute to quality include relevance, accuracy, completeness, coherence, validity

and format (Miller, 1996), indicating that the message's content and the form it takes are also factors for the use to be judged appropriate.

An action taken on GCConnex for a valid *task* and using the appropriate *features* of GCConnex could still be inappropriate if the *form* of the message is incorrectly constructed. The Values and Ethics Code for the Public Sector reminds employees to have Respect for People and the need for Excellence that requires them to approach their work in a manner reflective of a high-performing organization.

7.2.2.3 Social Construction of Appropriate Use

The final element of *appropriate use* that emerges from our research is confirmation that *appropriate use* of ESM is a subjective concept that is socially constructed through users' interactions with each other and their environment. These interactions require a dialogue and for the users to communicate. Employees' understanding of appropriate use is constructed "through the daily interactions between people in the course of social life" (Burr, 1995). There are parallels between the three processes of social construction as identified by Berger and Luckmann (1966) (i.e., externalization, objectivation, and internalization) and the legitimation process proposed by Johnson et al. (2006) used in the conceptual model.

The initial stage in the legitimation process involves individual employees making the judgment that the intended action is appropriate (i.e., from the perspective of *pragmatic, relational, regulative, normative* or *cognitive* legitimacy) or internalizing their understanding of the world around them. This judgment reflects reality as experienced by the employee. The employee sees this as an objective reality and acts on it by "projecting his own meaning" (Berger & Luckmann, 1966, p. 218). This judgment

manifests as an innovation that is objectified for other users. The validation by other users reinforces the employee's action and supports the internalization for other users.

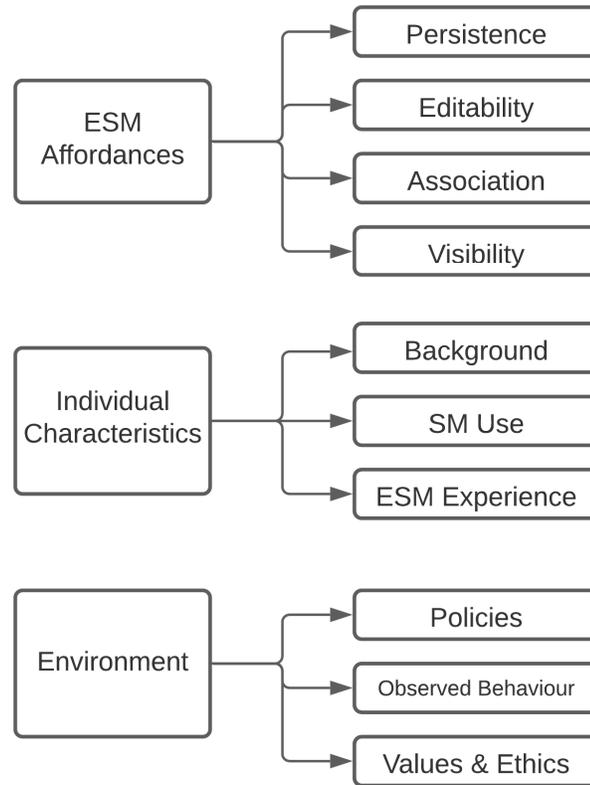
7.2.3 Summary of Appropriate Use

This section discusses how appropriate use is a continuous and dynamic variable. It is multi-dimensional with three dimensions that were identified in this research: Task, Feature and Form. Finally, appropriate use is socially constructed through employee interactions with other users and their environment.

7.3 Individual Judgment

The first research question in this study was *What influences a public servant's individual judgment that a specific action is appropriate when using enterprise social media?* From the conceptual model, the researcher expected to see evidence that the affordances of GCConnex, the background and experiences of the employees, and their work environment influenced how GCConnex users determined their use was appropriate. This section discusses how each of these characteristics affects employees' judgment of *appropriate use*. Figure 29 provides a high-level summary of the criteria that will be discussed in the following subsections.

Figure 29: Summary of Individual Judgment Influences



7.3.1 ESM Affordances

An affordance is a “relational concept that connects the materiality of a technological artifact with the subjective goals and perceptions of its users” (Mettler & Winter, 2015). Treem and Leonardi (2012) describe four affordances of social media: *persistence*, *editability*, *association*, and *visibility*. These affordances are context-specific and vary by user because they are connected to subjective goals and user perceptions. Although ESM systems have particular characteristics, the potential for action is dependent on the context where they are used (Leonardi & Vaast, 2017).

The *Persistence* of the GCConnex content allows users to access information posted previously and exploit indexing and search engine capabilities. However, several

participants expressed dissatisfaction with the search engine returning a large proportion of irrelevant content. Although *editability* is also one of the affordances of GCConnex, users are not in the practice of removing obsolete, incomplete or irrelevant content. The presence of a large amount of potentially valuable information that users cannot distinguish from the useless information results in frustration. One example was the large number of dormant discussion groups, with only one member or members no longer with the federal government.

One of the values of *persistence* is the ability to build a knowledge base. A knowledge base is potentially valuable to the workforce to address the need to access corporate knowledge. It can help overcome hierarchical barriers by reducing the effort needed to locate information (Behrendt, Klier, Klier, Richter, & Wiesneth, 2015). The organization and retrieval of this information is a valuable feature of the organizational knowledge management system (Alavi & Leidner, 2001). However, the value of the knowledge base cannot be realized if users are bombarded by obsolete or incomplete information.

The inability to find the required information using a Search feature is an example of an appropriate use where value is not realized. Appropriate use is a necessary condition for IT Value attainment. There is no direct causal relationship between appropriate use and value, and not achieving value is always a possibility (Markus & Robey, 1988). An employee may initially determine that searching for information is appropriate use. However, based on their poor results, they may determine that using the Search engine is inappropriate. Next time, they may decide to post a question in a discussion group instead of locating information.

A large number of participants noted *association* as an affordance that allowed them to do something they could not do with other corporate systems. GCConnex was recognized as the only system that would enable employees to reach out to employees in all other departments. However, the benefit of this affordance was constrained to those employees that also used GCConnex. Users will only interpret this affordance as valuable if they know that the employees they want to connect with are also on the ESM.

A critical mass of users, particularly crucial users such as experts and senior managers, is necessary to ensure quality contributions (Chin, Evans, & Choo, 2015a). However, early in ESM implementations, there is a tension between the benefits users get from the content and the effort they must expend to create content (Markus, 1987). Social media requires enough users to contribute content to keep others contributing content. Rogers suggested a tipping point would be reached if 10-20% adoption was achieved (Rogers, 1983). However, other indications are that once 15% of a community signs up and uses a social network regularly, adoption will continue until saturation is reached (Geddes, 2011). It is insufficient to have an account, and users also need to be regularly active and visible. Adding senior managers and experts as active users will increase the quality of content and the value to other users (Chin, Evans, Choo, & Felix B, 2015).

The final affordance noted by participants was *visibility*. Participants' perspective of *visibility* was different from that intended by Treem and Leonardi, who described visibility as a positive affordance where "posts, comments, status updates, votes, friending, revisions, or pictures, contributions to social media are visible to all who have access to the system" (Treem & Leonardi, 2012, p. 150). Participants were particularly

concerned about the potential for information shared on GCConnex being inadvertently made available to the public or the media. Some participants would ensure managers approved documents before sharing them. Also, the executive writing a blog faced pressure from their staff to have communications staff edit his posts. This situation indicates that employees were still concerned that any missteps using GCConnex could negatively affect their career and credibility (Archer-Brown, 2012).

Access to GCConnex is restricted to only federal public servants, and the limitations placed on *visibility* gave public servants some assurance that the information would be adequately protected. This partial visibility lets employees know that they have complete access and freedom to share with other federal public servants who are bound by the same Values and Ethics Code. At the same time, the information they share is protected from inadvertent release to outsiders.

GCCollab was introduced as another ESM tool available to federal public servants to support collaboration with academia, municipal and provincial employees and other Canadians by invitation. Participants were confused over the role of this new system and whether it was to replace or supplement GCConnex. Several participants had begun using GCCollab more frequently than GCConnex. Still, they expressed concern over the expanded access and the potential that posted information could be visible beyond the federal public service. These two systems have very similar interfaces and names but different audiences, introducing confusion with employees. As a result, employees may be sharing information on GCCollab intended for only federal public servants without appreciating who the other users are.

ESM systems, by design, provide social media functionality internal to organizations with their use restricted by defined boundaries. The affordance of *visibility* is restricted with ESM systems, and it is this restriction that gives the employees confidence in the system. They know the system was implemented for their use and that all other users must abide by the same use norms. The shared identities as employees of the organization contribute to building the trust necessary for sharing work-related knowledge (Dawes, Cresswell, & Pardo, 2009). Developers need to carefully consider the defined boundary of an ESM to not deter employees from actively sharing, and they must also clearly communicate this boundary to employees.

Different organizations will have different levels of risk related to sharing information with outsiders. For example, industry research organizations very closely protect their intellectual property to maintain a competitive advantage, and medical organizations are similarly very conscious about the need to protect patient confidentiality. In the government context, the inadvertent release of policy documents or internal information before it is ready for release can negatively impact the government's ability to control the messaging and ultimately implement the policy agenda. Other organizations that depend on intra-organizational collaboration and cooperation may have lower demands for information protection and, therefore, be less concerned about the information reaching unintended audiences. Even within a given organization, the affordance of *visibility* may be valued differently by different teams or groups, meaning that each employee must carefully assess their personal context and the importance of information protection vs the benefits of information sharing.

A design experiment conducted by Mettler and Winter (2015) demonstrated that privacy concerns negatively affected employee willingness to share information. As a result, they recommended that ESM providers be clear about where the data are stored and who will access it. This recommendation supports previous work done by Constant, Kiesler and Sproull (1994), who determined that “the stronger an employee feels that the information he or she is supposed to share belongs to the company, the greater are his or her concerns about actually disclosing the information” (Mettler & Winter, 2015, p. 104).

Future implementations of ESM should recognize that the affordance of *visibility* may be interpreted differently according to the context the employee works in. Making all information available to all employees may deter employee use. Instead, employees should have some control over the circumstances under which their content is visible.

The second aspect of the *visibility* affordance is the lack of anonymity of the ESM users. A benefit of requiring that all content be attributable to an employee is that it contributes to trust in the content by making available information about the creator. If users perceive the information to be high-quality and from a reliable source, they will pay more attention to the shared content (Dedeoglu, 2019).

The use of real identities reminds employees that they cannot hide behind a pseudonym and that they will be held accountable for their contributions, moderating how employees use it. Users who are not anonymous are less likely to violate the norms of ESM usage (Kiesler, Kraut, Resnick, & Kittur, 2012).

Because mistakes can easily be traced back to individual employees, ESM users may be hesitant to take risks with the system, constraining the overall use of the system and resulting in a lower level of contributions (Treem & Leonardi, 2012). Employees

may prefer to be passive users to not risk their reputation due to errors in use. If many employees take this perspective, then the richness of content on the system will be lower and overall, the system will be underutilized. The value in an ESM is the rich and dynamic information exchange. In addition to getting employees to establish GCConnex accounts, proactively encouraging active contributions will also be necessary (Holtzblatt et al., 2013).

This research determined that the affordance of *persistence* could be a detractor if there is no practical way to filter and sort search results adequately. While the information is persistent, it is not always accessible. The affordance of *visibility* through the lack of anonymity of users influences users' behaviour resulting in less inappropriate use because all action can be traced back to an individual. However, it is the *limitation on visibility* that was the most critical aspect. Employees had faith in GCConnex because the content is only accessible to other employees who must abide by the same norms of use.

7.3.2 Individual Characteristics

The second category of influences is related to the individual. Three particular aspects are salient to the study of *appropriate use*: employee backgrounds, social media use and experiences with GCConnex.

The first aspect is the employees' backgrounds. The study participants' diverse backgrounds demonstrate that each employee has a unique story influenced by years of service, education, job classification, and previous work experiences. Their attitudes towards ESM use are learned based on previous experience, with the result that employees may be predisposed to certain use behaviours based on their previous

experience (Fishbein & Ajzen, 1975). “Broad attitudes and personality traits have an impact on specific behaviors only indirectly by influencing some of the factors that are more closely linked to the behavior in question” (Ajzen, 1991, p. 181).

In addition to the general background and experiences that are relevant to all employees, there are three unique elements of the federal public servants’ work backgrounds that influence their beliefs about the use of GCConnex: their experience on secondments, if they have worked with the GCTools team, and if they had experience in the region vs headquarters.

Several participants were on secondments, meaning they were not working in the same department as their indeterminate positions. A secondment is a temporary employment mechanism that supports career development opportunities and mobility between departments where employees return to their substantive positions at the end of the secondment. While the primary benefit is for the individual employee’s professional development, a secondary advantage supports expanding the employee’s network. These relationships result in stronger horizontal linkages and trust between organizations. An employee can draw on these relationships either inside an ESM or outside to find information and gain cooperation.

Several participants described their experiences with GCConnex in the context of more than one position or department, indicating that they identified with more than one department or work team. One participant had used GCConnex in a previous job to hire new employees. In their current organization, this method was novel, and the participant had to adjust how they approached the task based on the different organizational norms. This employee adapted their ESM use to better align with their new organization.

Another participant had previously helped a manager by writing regular blog entries. When their new organization discovered their experience with GCConnex, they were asked to assist their new manager. This employee was able to influence their new organization based on how they had previously used GCConnex. They recognized that the local norms for using GCConnex differed, but they could also influence their local teams directly.

Participants who worked either as part of the GCTools team or supported GCConnex implementation as a GCTools Ambassador bring a unique perspective. These participants believe strongly in horizontal collaboration in government and are eager to try the tools and be part of the future. Even when they moved on to another department, they continued to champion and act as exemplars for GCConnex use. These employees were also highly engaged and passionate about the potential afforded by GCConnex, even influencing the policies and methods around the use of GCConnex. These results are consistent with the literature that shows if users are involved in the design and implementation, they will be more likely to use the system (Petter et al., 2013). Also, the more users access the system, the more value they will perceive (Holtzblatt et al., 2013).

Although only a few participants brought forward a regional perspective, it was evident that these participants felt strongly that the role of regional employees is unique from those in the headquarters. They also felt GCConnex had the potential to significantly increase information sharing to improve service to Canadians. Further research would be required to fully understand these differences so they can be incorporated into any changes to the GCTools.

Employees working in geographically dispersed organizations often have difficulties locating expertise in the organization or building relationships that encourage information sharing (Ellison, Gibbs, & Weber, 2015). Differences between geographically dispersed offices can include availability and quality of equipment, local practices, pressure from supervisors or coworkers, and competing responsibilities. Expertise that exists in regional offices is often taken for granted (Cramton, 2001).

In a distributed Russian telecommunications company, initial ESM implementation increased communication across the hierarchical and geographic boundaries (Gibbs, Eisenberg, Rozaidi, & Gryaznova, 2015). Over time, communication across hierarchical boundaries decreased while communication across geographic boundaries continued to increase slower. The researchers noted that managers were early adopters and most active, commenting on lower-level employees' posts.

The second aspect of individual influence is related to employees' experiences with social media. All study participants had previous experience with public social media tools, although two had consciously stopped using social media. Employees carefully partition their use of social media according to the purpose. Public-facing social media tools primarily build social capital, entertainment and maintain social relationships, while ESMs help employees accomplish work-related tasks (Ellison et al., 2015). Employees carefully manage the boundaries of their personal and professional lives on social media (Lee et al., 2019). Participants see GCConnex clearly as a work tool addressing their need to connect and share information with other federal public servants. As several participants noted, GCConnex is the only tool that seamlessly connects all public servants across all departments and regions.

Several participants noted that how they behave with GCConnex should be no different from how they would behave in a meeting. To these participants, appropriate use of GCConnex had *cognitive* legitimacy. They determined that if they knew how to act in a meeting, they would know how to use GCConnex appropriately. Several participants found it unthinkable that GCConnex could be used inappropriately. Another participant noted that “GCConnex exists somewhere between a less formal meeting and the lunch table in terms of how people end up behaving” (PARTICIPANT B1). Their opinion of appropriate use of GCConnex is influenced by their view of appropriate action in their offline work lives.

There are hundreds of social media options in the public domain for people to use. However, they have limited time and energy and will use framing as a mechanism to “[shape] action because they guide both selection and salience” (Leonardi, 2011a, p. 349). By framing ESM as a work tool, and other social media tools for personal use, employees attach meaning that guides their actions. These frames help employees understand ambiguous situations and reduce complexity (Kaplan & Tripsas, 2008). However, employees in the same organization may attach different frames to the technology to guide how they interpret the system’s functionality (Orlikowski, 1992).

Applying a frame to the use of GCConnex (i.e., as a tool for public servants to share information) includes “not only of the nature and role of the technology itself, but the specific conditions, applications and consequences of that technology in particular contexts” (Orlikowski & Gash, 1994, p. 178). Students and casual employees may have a different frame of GCConnex, one as a tool for making connections across the public service in their search for an indeterminate position. The frame employees use will be an

articulation of the attitudes they have towards the technology and the norms around its use. Because users develop their frames around social media use, including GCConnex use, and they can have individual variations, there are still elements that can be common with other users (Orlikowski & Gash, 1994). These shared elements need to be identified through socialization, interaction or negotiation (Weick & Bougon, 1986).

The final aspect of individual influence is their previous ESM use will influence their future use. As employees use ESM and receive local validation on their use, they absorb this feedback and adjust their beliefs about appropriate use (Walker et al., 1988). Employees will change their perspectives if they are told a valid action is different from what they initially believed. This feedback loop is not always obvious and can influence employee beliefs either consciously or unconsciously (Venkatesh, Morris, Davis, & Davis, 2003).

The mobility of federal public servants exposed them to different perspectives in other departments. When they change organizations, they take with them their understanding of appropriate use but also demonstrate an ability to adapt to any norms in their new work unit. Employees exercise agency when they carefully manage the boundary between their personal and professional use of social media. GCConnex is framed as a work tool to support the information exchange and collaboration among federal public servants. Finally, employees receive feedback on their ESM use that influences their beliefs on appropriate use.

7.3.3 Environmental Influences

The third and final area of influence explored was the environment. This area of influence was characterized by policies and legislation, observed behaviours, and values

and ethics. Many of the examples of inappropriate behaviour violated existing policies and legislation, such as sharing classified information (Security of Information Act), sharing personal information (Privacy Act) or using harassing language (Canada Labour Code, Policy on Harassment Prevention and Resolution). The behaviours guided by policies and legislation have *regulative legitimacy* because of the ability to sanction employees that do not comply (Scott, 2001).

The importance of policies, particularly the Values and Ethics Code for the Public Sector, was firmly in the participants' minds when considering the *appropriate use* of GCConnex. The GCConnex help files expressly point out to employees that they are "free to use GCConnex as they see fit, within the codes of conduct" (Treasury Board of Canada Secretariat). The codes of conduct referred to include the foundational Values and Ethics Code for the Public Sector supplemented by any developed by the departments. Public servants understand that this Code should guide their behaviours "in all activities related to their professional duties" (Treasury Board of Canada Secretariat, 2011b, p. 3). Several participants noted that if an action did not go against either the Values and Ethics Code for the Public Sector or official policies, it could be considered appropriate from a policy perspective.

Other policy documents such as the Directive on Management of Information or the Policy on Acceptable Network and Device Use, or internal guidance documents, do not include fines or jail sanctions but outline the organizational norms and, therefore, have *normative legitimacy*. Although non-compliance could affect an individual's performance evaluation, it would unlikely lead to dismissal, and employees want to behave in a way that aligns with the organizational norms or practices (Zelditch, 2001).

Depending on the employee's job responsibilities, different policies would be more salient. When faced with a large number of potentially relevant policy instruments, employees create frames that help guide them to select those policies that are more important and meaningful (Leonardi, 2011a). So, although all policies are available to all employees, they will pay more attention to those directly influencing their work. Employees do not have full awareness of the full suite of policies. However, they tend to understand those policies relevant to their position, and they recognize that there is likely a policy to cover most things that impact their jobs. An employee responsible for managing a harassment program would be very aware of the related harassment policy. At the same time, someone working in communications would be more informed of the information management requirements and the importance of official languages. They are comfortable that their actions have *normative legitimacy* as long as their behaviour is aligned with TBS policies.

The second aspect of the environment that influenced participants' appropriate use of GCConnex was connected to their *affiliations*. Behaviours they observed from senior managers, peers and other users of GCConnex influenced their use. Wayne Wouter, the former Clerk of the Privy Council, responsible for launching *BluePrint 2020*, strongly supported increased collaboration between departments and expressed optimism that *BluePrint 2020* would lead the way to modernize the public service. He found employees' commitment to finding better ways to work together inspiring (Government of Canada, 2014). As the most senior public servant, the Clerk of the Privy Council occupies a high-profile position of great respect. Words of support from someone in this position significantly influence public servants in reinforcing the organizational norms.

Behaviours in line with the Clerk's position have normative legitimacy. Further, senior managers' active support helps confirm GConnex as a legitimate system (Chin, Evans, Choo, et al., 2015).

There is a possibility that very senior managers could have charismatic authority in addition to their legitimate authority where people follow what they say based on the individual's charisma. Although the former Clerk was highly respected and participants supported his message encouraging increased collaboration, there was no evidence that his charisma influenced employees' *appropriate use*. *Relational legitimacy* did not appear to be a factor in their individual judgment of appropriate use at any level.

Several participants noted that they were introduced to GCTools as part of either a formal or informal onboarding process when they first arrived. The onboarding sessions were a means of communicating the organizational norms directly to new employees. The inclusion of GConnex in these presentations gives its use *normative legitimacy*. In a couple of other cases, employees inherited responsibilities to manage GConnex discussion groups when they started their new jobs and carried on supporting the work in the same manner as their predecessor. This exchange is another example of *normative legitimacy* when one employee explains how the work is done.

Peers reinforce the importance of ESM as a work tool to support collaboration among employees. The observed behaviour of peers demonstrates organizational norms, and peers have a role in giving appropriate ESM use *normative legitimacy*. Employees, talking with peers, will discover if their work unit used ESM or not and how. The interaction of peer users is critical to the increased use of ESM. As more employees use

ESM, the quality and quantity of contributions will increase, making it a more attractive and valuable source of organizational information (Chin, Evans, Choo, et al., 2015).

Although some participants were disappointed that more of their peers did not use GCConnex, they continued to use it, while recognizing that they would not be able to benefit of collaborating with peers if their peers did not use the system. Because this study only spoke to users of GCConnex, it is unclear to what extent the influence of peers or the lack of sufficient user-generated content caused users to stop using GCConnex.

The final aspect of the environment is the existence of a strong values and ethics ethos. A robust organizational value system provides a framework that allows employees to show individual judgment in situations that may be unique to them. It is impossible to describe everyday actions for every situation, so employees must be free to decide independently. Responses from participants indicate that federal public servants are confident in their ability to make sound judgments and are generally not afraid that their use might be inappropriate. Also, they demonstrated a willingness to explore and to learn from others.

Agency theory is most often applied to for-profit organizations to explain the relationships and different motivations between the principals and the agents (Eisenhardt, 1989a). One mechanism to address the conflicting goals is for principals to monitor the agents closely, while another mechanism is to concentrate on the outcomes. In the case of the Canadian federal government, monitoring is not possible, and the government cannot outline expected actions and behaviours in every potential situation. The Values and Ethics Code serves as a contract between the government and the public servants outlining the expected behaviours. Employees are empowered to act as they see fit

within the Values and Ethics Code framework within the public sector context. In exchange, the government (and the Canadian taxpayer) have confidence that the public service will continue to uphold the principles of responsible government.

Participants strongly embrace the Values and Ethics Code for the Public Sector. Results indicate that participants are influenced by the desire for their actions to have *regulative* and *normative* legitimacy. They are very aware of the norms unique to their work teams, and in particular, they pay close attention to any differences when they change positions. The Values and Ethics Code for the Public Sector is the foundational document that outlines the expected behaviours of all public servants in their work environment. Supported by more detailed policies, the codified norms are well understood and embraced. These norms are further supported through the words and actions of senior management, peers and other GCConnex users.

7.4 Local Validation

The second question in this study was *How are actions taken by public servants using ESM validated as appropriate?* The researcher was interested in understanding how federal public servants received validation of their use of GCConnex, and what actions they have taken or would take in response to other employees' use of GCConnex.

Respect for authority structures is solid with federal public servants, as reflected in their observations of how GCConnex use is validated. There is evidence in the results that validation of appropriate use happens through both *endorsement* and *authorization*. This validation can also be both *explicit* and *implicit*. Employees will bring severe incidents of inappropriate use to the attention of their manager or the GCTools team. However, inappropriate use could be *implicitly* endorsed by peers with the expectation

that those in authority would *explicitly* address it, resulting in marginally inappropriate use remaining unchallenged.

According to the participants, *authorization* could come from managers or the GCTools team. Participants often consulted the GCTools team if they were uncertain or needed clarification, and feedback from the GCTools team directly influenced how the participants used GCConnex. A couple of participants noted their managers were happy with their GCConnex use, as evidenced by requests to assist the managers and other employees. These examples of *authorization* were explicit from the participant's perspective, but this validation would not necessarily be visible to other GCConnex users. One participant expressed concern that their manager might not support their time on GCConnex because they were not using it directly to complete their assigned tasks. The lack of any negative comments to the employee resulted in the employee assuming *implicit authorization* of how they occupied their day, including time on GCConnex.

Study participants indicated that they received *explicit endorsement* that their use of GCConnex was appropriate when other GCConnex users 'liked' their posts or left positive or supportive comments. This feedback was an indication that their contribution was valued and appreciated. They also felt that either the GCTools team or a moderator would bring it to their attention if their use were inappropriate or needed adjustment.

In the absence of information to the contrary, participants frequently assumed that their use of GCConnex was *implicitly endorsed* as appropriate if they achieved the desired result. An excellent example of this was the participant who reached out for specialist expertise and was very pleased with the number of people that responded. The response they received was an indication that GCConnex was the right tool, the task was

legitimate, the message resonated with other users, and the request was a reasonable one. In the future, this participant would use GCConnex to access expertise again in the same way.

Validation of *appropriate use* was more evident than validation of *inappropriate use*. Participants did not have many examples of *inappropriate use* but could articulate what inappropriate use would look like and how it should be handled. In the few situations they described involving *inappropriate use*, someone in authority, such as the GCTools team or a manager, resolved the problems. Participants felt that moderators were responsible for ensuring their group's effective running and handling any inappropriate content posted in the groups. However, participants also indicated that for severe situations of inappropriate use (e.g., harassing behaviour), they would bring it to the attention of someone in authority.

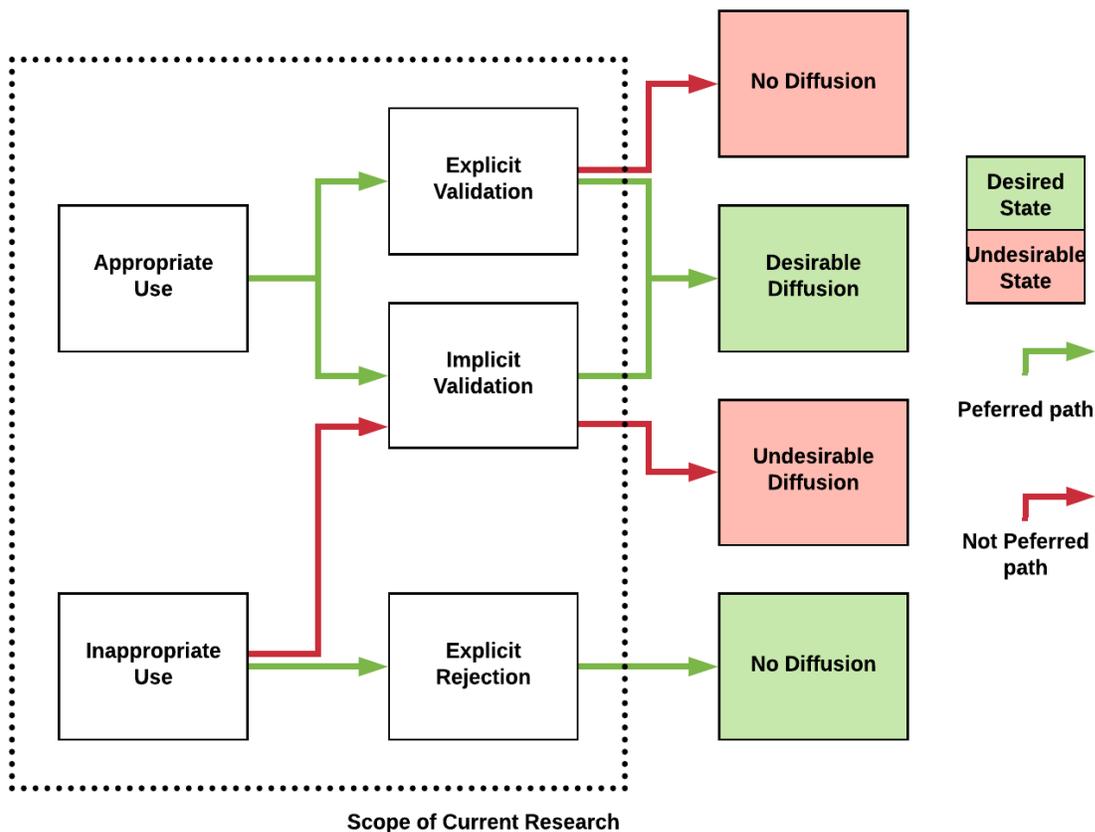
For situations that were not serious, participants were not sure if they would do anything about it. They recognized that appropriate use was subjective and that although it may not be something they would do, they realized that others might view it as appropriate. Participants felt not all inappropriate use would require them to take any action. As a result, some marginal use could be left unchecked. An example is allowing the repeated posting of job resumes on The Wire or in unrelated discussion groups.

A surprising result of this study was the degree to which participants were unlikely to correct the use of other GCConnex users if, in their mind, it could be considered inappropriate. Participants felt that this responsibility should rest on moderators, managers, or the GCTools team. Although the GCTools help files set an expectation that "we are all responsible for monitoring these tools and ensuring a positive

and productive collaborative environment,” there was not widespread acceptance from participants that this was a role they should play. Instead, they felt that this role was more the responsibility of the GCTools team members, moderators or managers – in other words, people with authority.

The IT value literature tells us that appropriate use is required to achieve value (Lucas, 1993a; Soh & Markus, 1995), meaning that appropriate use of GCConnex is desirable while inappropriate use is not. Although inappropriate use may result in the user achieving their original objective, inappropriate use may not be sustainable over time or could have undesirable secondary effects, such as disciplinary action or damage to organizational or individual reputations. Actions that are initially seen as inappropriate may be explicitly rejected (Purtik & Arenas, 2019). There may need to be changes to broader societal or organizational norms that make this behaviour more appropriate where it may ultimately be implicitly validated or even explicitly validated. An example with ESM could involve sharing work information that is initially deemed inappropriate but, over time, could become more acceptable and ultimately lead to increased inter-organizational collaboration.

Figure 30: Potential ESM Use Paths



The IT value literature tells us that appropriate use is required to achieve value (Lucas, 1993a; Soh & Markus, 1995), meaning that appropriate use of GCConnex is desirable while inappropriate use is not. Although inappropriate use may result in the user achieving their original objective, inappropriate use may not be sustainable over time or could have undesirable secondary effects, such as disciplinary action or damage to organizational or individual reputations. Actions that are initially seen as inappropriate may be explicitly rejected (Purtik & Arenas, 2019). There may need to be changes to broader societal or organizational norms that make this behaviour more appropriate where it may ultimately be implicitly validated or even explicitly validated. An example

with ESM could involve sharing work information that is initially deemed inappropriate but, over time, could become more acceptable and ultimately lead to increased inter-organizational collaboration.

Figure 30 presents the multiple paths available from ESM use, beginning with the perspective of *appropriate* and *inappropriate use*. The traditional validation model would indicate that validation can be either through *authorization* (i.e., superiors) or *endorsement* (i.e., peers) and that this validation can be either *explicit* or *implicit* (Dornbusch & Scott, 1975). The model above describes four potential ESM diffusion states, two desirable and two undesirable. Although the four identified states are outside the scope of this research (i.e., the study did not look at how local validation leads to diffusion), the point is that both appropriate use and inappropriate use can lead to diffusion even though the diffusion of inappropriate use is not desirable.

Ideally, inappropriate use is explicitly rejected and, therefore, will not diffuse or see broader use. However, in the absence of explicit rejection, inappropriate use could be implicitly validated by other users. “The basis for implicit validation lies in the presumption of consensus held by the actors in the group” (Berger et al., 1998, p. 395). Therefore, there is a possibility that this inappropriate use could become more common, creating an undesirable state with negative implications.

In the case of GCConnex, this undesirable diffusion is the situation with users posting their resumes in the wrong areas of GCConnex (i.e., not in the Jobs/Career Marketplace). When no one corrects this action, the employee (and other GCConnex users) sees this as *implicitly* validated. Other users mimic this assumed appropriate use and post their resumes. As a result of validation, employees will adjust their

understanding of what is appropriate to be consistent with their actions (Walker et al., 1988). The result is an undesirable situation where resumes detract from The Wire or a discussion group's usefulness. "Many low-quality contributions create a social dilemma wherein these contributions drown out the worthy contributions and exhaust the available attention" (Kiesler et al., 2012, p. 130).

On public social media tools such as Twitter, trolls will often hijack a conversation to get more attention to their cause or create discord among the participants in the discussion. This behaviour is typical with political trolls who are consciously trying to disrupt and distract from the initial conversation (Cerna Aragón, 2017). Employees posting their resumes in wrong groups are not consciously trying to disrupt or alienate other users but simply trying maximize exposure to increase their chances of success. Users attempting this on public social media can be expected to be called out by others or reported to the moderators.

The preferred state would be for inappropriate use to be explicitly rejected. Authorities cannot see everything within ESM systems, and all users must play a role to ensure the system continues to meet the needs of the organization and its employees. If everyone must play a role, what prevents employees from getting involved and correcting other users, and how can organizations encourage them to validate the use norms?

The literature on legitimacy and validation defines *endorsement* as coming from colleagues or subordinates (Dornbusch & Scott, 1975). This definition over-simplifies the interpersonal dynamics that exist within a workplace. Employees are not always peers (Cao et al., 2013). Although they all appear equal as users of GCConnex, they function within a complex hierarchy and set of power relationships that do not go away

just because they are using GCConnex. The Canadian federal public service's status quo has an excessive hierarchy and top-down accountability (Clarke, 2019), and the high visibility of employee GCConnex interactions could make them more reluctant to take action.

The Values and Ethics Code for the Public Sector identifies Respect for People as a core value expected of all public servants (Treasury Board of Canada Secretariat, 2011b), meaning treating all people with respect, dignity, and fairness. Additionally, the Policy on Performance Management puts the onus on managers to make any corrections to employee performance, including any inappropriate use of GCConnex. Federal public servants are unlikely to act in a way that could be interpreted as criticizing another employee's performance.

It is well established within the authority structures and practices in the federal public service that correction of behaviour is the responsibility of managers or other appropriate authorities. Therefore, employees' unwillingness to correct another employee is supported by the norms in place in government, and going against these norms could have negative repercussions on the employee. This reluctance is evident for borderline inappropriate use of GCConnex, where the employee is unsure. They are willing to accept what they see implicitly. For clear violations against the Code of Values and Ethics for the Public Sector, employees appear inclined to bring to the attention of someone in authority.

The literature on whistleblowing is instructive in understanding why employees are reluctant to speak up when they see something wrong. There are five actions an employee can take when they observe a problem in the organization. They can confront

the individual, report to a manager, call a hotline, report it outside the organization or do nothing (Kaptein, 2011).

The whistleblowing literature confirms that employees are more likely to report serious wrongdoing such as mismanagement, sexual misconduct or legal violations. They are less likely to report waste or discrimination (Near, Rehg, Van Scotter, & Micheli, 2004), supporting the observation that employees may choose not to take any action in some cases that they do not view as serious violations. Employees are more likely to confront a wrongdoer or report to management if the situation is obvious wrongdoing and they trust their supervisors. However, if employees believe their leadership (including the moderators or GCTools team) is already aware of the inappropriate use, they are less likely to inform management (Kaptein, 2011).

In most cases, it can be assumed that employees who inappropriately use GCConnex are still committed to the organization, and their use resulted from a lack of awareness of the norms, a misunderstanding or a mistake. Confronting the employee gives them a chance to clarify the action and to correct it. The employee that observed the inappropriate use also gets feedback to help confirm their understanding of the situation.

Although this research provided few examples of inappropriate ESM use, there are plenty of examples of inappropriate use in public social media that manifest as spamming, trolling, bullying or flame wars (McGillicuddy et al., 2016). However, inappropriate use can also result from employees not understanding the rules or not agreeing with the norms and wanting to change them (Kiesler et al., 2012). Employees,

who are insiders, are likely to voluntarily comply if they have concerns about how the rest of the community perceives them (Kiesler et al., 2012).

Some of the techniques proposed by Kiesler et al. (2012) for managing public social media communities can apply equally to the federal public service. People learn behaviour by observing others (DiMaggio & Powell, 1983; Kiesler et al., 2012), so moderators should make appropriate use visible to the rest of the community and encourage other members to leave each other positive and negative comments to reinforce the norms. Moderators should also encourage the community to contribute to the group norms, and then they should make the norms available for all members. Employees may be more willing to help correct inappropriate use if moderators provide them with the right language (e.g. “you may not be aware ...”) or if they could flag inappropriate use to the moderators.

Although horizontal collaboration and the elimination of stovepipes is an overarching goal of GCConnex, putting it into practice is much more difficult. The norms of the hierarchy are entrenched, as evidenced by participants’ desire to get their managers’ support before sharing material that has not yet been approved for release. Failing to explicitly draw attention to the inappropriate use of GCConnex effectively implicitly validates the action, leaving the employee with the belief that the consensus is that their actions are legitimate. Their actions, therefore, are believed to be representative of the social reality. The more these actions are implicitly validated, the more likely they will become the new shared reality. The unwillingness of federal public servants to become more engaged in ‘policing’ GCTools means it will be more difficult to change entrenched practices.

Federal public servants are generally comfortable with their ability to show sound judgment in various situations. Even when using new technology such as GCConnex, constant reinforcement that their use is appropriate is not necessary. However, if their use is inappropriate, it will need to be pointed out to adjust their actions. In the absence of correction, they are likely to assume their use is appropriate.

This section responded to the research question: *How are actions taken by public servants using ESM validated as appropriate?* The results support local validation in the model. However, a surprising result indicates that inappropriate use could also be implicitly validated, leading to problems down the road. Previous research on whistleblowers in organizations and regulating online community behaviour can help provide ideas on how to address inappropriate behaviour. More research is needed to understand which options will work better in which circumstances. However, it is also vital to understand this blind spot in local validation.

7.5 Use of Legitimacy as a Theoretical Lens

There are many similarities between federal public servant use of GCConnex and previous study of legitimacy in political systems, organizational theory and social behaviour. Federal public servants function as part of an extensive political system within a Westminster parliamentary democracy. They believe in the legitimacy of the laws and policies that govern their work and TBS' authority to establish the expected standards of behaviour. They also operate within complex organizational structures with high-level departmental missions to achieve through their work objectives. Employees are recognized and evaluated for their performance and embrace the ethos of public service. The introduction of GCConnex brings in a social dimension that extends their

social interactions beyond their immediate work team to include other employees across government.

Suddaby et al. (2017) note that legitimacy has three configurations: *legitimacy-as-property*, *legitimacy-as-process*, and *legitimacy-as-perception*. Appropriate use of ESM is discussed here from each configuration's perspective.

Researchers who subscribe to the *legitimacy-as-perception* discipline view legitimacy as a socio-cognitive process that occurs primarily at the individual level where individual judgment is influenced by their perception of organizational properties and behaviours (Bitektine & Haack, 2015). "As a collective construction of social reality, legitimacy has both a cognitive dimension that constitutes the object for actors as a valid, objective social feature and a normative, prescriptive dimension that represents the social object as right" (Johnson et al., 2006, p. 57). The individual evaluates these properties and behaviours against social and organizational norms and takes action based on this judgment.

Employees that use ESM systems need to make a judgment on whether or not their use is appropriate. Their judgment is influenced by their perception that the proposed use aligns with the norms outlined by policies and communicated and demonstrated by managers, colleagues and other ESM users. If the proposed use does not align with the world as they understand it, the employee will judge it as inappropriate.

Legitimacy-as-process researchers consider legitimacy as interactions involving multiple stakeholders that are "actively and continually negotiated" (Suddaby et al., 2017, p. 459) that take time to develop. In this model, the legitimation process is of interest, particularly how organizations move from one stage to the next. One view of

legitimation considers the relevance of organizational logics as underlying assumptions and organizing principles. If the proposed behaviour or actions do not fit the underlying assumptions, then the only way to get them accepted is to change this underlying logic. This change is particularly challenging. However, it is easier if the new logics are connected to higher-level social values (Suddaby & Greenwood, 2005). The process of legitimation perspective assumes that legitimacy is continually evolving through a process of social construction.

Governments are well known for their “rigidly siloed and hierarchical organizational structures” (Clarke, 2019, p. 8). The need to break down the barriers to increase interdepartmental collaboration will require a change in the existing logic. The intention is for GCConnex to support this effort. However, employees will evaluate this intended use against “how things should be or typically are done” (Johnson et al., 2006, p. 72). Until the underlying logics evolve, employees will experience conflict between the old and new models of working. These institutional logics are further reinforced if employees use GCConnex to collaborate across departments without receiving the expected validation. This lack of validation will further reinforce the established siloes and outdated processes. The organizational norms related to internal collaboration may not have fully evolved to embrace the concept of open government using ESM systems. However, broader society has already embraced online collaboration. Federal public servants’ concept of appropriate use will continue to be influenced by public-facing social media. With enough time, these external influences will support changes in how ESM can be used inside government.

The final research discipline considers *legitimacy-as-a-property* of an object of interest, based on the degree of fit between the object and the external environment (Suddaby et al., 2017). Much work has been done to understand the different types of legitimacy an object or organization can have. The findings of this study support using legitimacy types to understand the basis of determining if GCConnex use is appropriate or not.

Use is appropriate from a *regulative* perspective if it aligns with the legislative framework applicable in government. The fear of sanctions motivates employees to ensure their use is appropriate. *Normative legitimacy* is grounded in the many policies in place in government, particularly the Values and Ethics Code for the Public Sector. These documents, collectively, articulate the norms against which GCConnex use is evaluated. The two aspects that provide *cognitive legitimacy* to employees' use of GCConnex include their behaviour in the offline world at work and their private social media life. They have framed GCConnex as a tool for public servants to share information with other public servants and this framing provides them with clarity in ambiguous situations. They also believe they understand what appropriate work behaviour is in the real world and take for granted that their online behaviour should be the same. Finally, use of GCConnex to achieve a work objective has *pragmatic legitimacy*. Based on the results of this study, there is no evidence of use that would support *relational* legitimacy.

Legitimacy is ultimately about the construction of a social reality. To be deemed legitimate, a social object must be consistent with cultural beliefs, norms, and values shared by others (Johnson et al., 2006). It is sufficient for these norms to appear to be

shared because it is about the perception that they are shared that is the most important, even if they are not in reality shared. Legitimation is the dynamic process by which the broader community or society creates expectations on what will occur locally.

This study demonstrated that legitimacy is a valid theoretical lens to understand how *appropriate use* of ESM is socially constructed. Organizational policies, workplace norms, and input from peers and supervisors influence employees' determination of the appropriate use of ESM. The primary sources of legitimacy related to the use of ESM, in the context of this study, are regulative and normative.

7.6 Implications

This section discusses the implication of this study to three critical areas: Research, organizational Policy, and Practitioners.

7.6.1 Implications for Research

IT value literature treats use as a dependent, independent, or intervening variable, but researchers have done little to understand its meaning. Although other work has been done to address effective use (Burton-Jones & Grange, 2013), intended use (Lucas & Spitler, 1999), and voluntary use (Elbanna & Linderoth, 2015), this study is unique in exploring the concept of *appropriate use* of ESM. Researchers studying *use* in technology solutions need to better articulate what they mean by use and consider if what they are looking at is, in fact, appropriate use.

Appropriate use is not a binary concept. In addition to appropriate and inappropriate use, there is a grey area where employees may have different opinions or are uncertain if the use is appropriate or not. This study revealed that *appropriate use* also has several dimensions: *Task*, *Feature*, and *Form*. Employees must ensure that their

use has legitimacy of purpose (i.e., the reason or goal they are trying to achieve is suitable for an ESM system) and that they are using the proper feature of the ESM to achieve their objective based on the norms in place. Finally, the form of their ESM use is just as crucial as the purpose. Their language, tone, grammar, spelling and medium must also be appropriate for the message and the audience. Failure to address any of these dimensions could result in other users failing to validate their use as appropriate.

These dimensions, discovered in a study of how *appropriate use* is socially constructed in a Westminster parliamentary democracy, may not be present in other work environments. Canadian federal government employees tend to avoid informal, unstructured communications commonly found in public social media forums. “Yet the rapid, informal, and personalized forms of communication facilitated by digital technologies are entirely at odds with siloed, hierarchical models of government-citizen interaction” (Clarke, 2019, p. 20). It is equally possible that studies of other work environments could reveal different dimensions. Different organizations have distinct organizational cultures, resulting in different dimensions being salient, such as partnering or relationship-building. Therefore, researchers should be cautious about assuming appropriate use is only one-dimensional.

This study also presents the case for considering *appropriate use* as a social construction. Employees’ initial judgment of their appropriate use of ESM is formed within their historical (i.e., time and place) and cultural context (i.e., social, technical and political context) (Berger & Luckmann, 1966). However, this understanding evolves over time and through social interactions with other people. A shared understanding of

the appropriate use of ESM can only be generated through these social interactions – a conversation is required, even if that conversation only happens in the virtual world.

This study proposed a conceptual model to guide the research and validated the first three stages. Results support the use of legitimacy theory to help understand what is happening related to the appropriate use of ESM. However, the context of GCConnex in the Canadian federal government highlighted several unique results. Instead of the affordance of visibility identified by Treem and Leonardi (2012), participants valued the limitation of this visibility. Employees need to trust that others will not share the information they post beyond the defined ESM boundary. Another feature of the influences for individual judgment was how the Values and Ethics Code for the Public Sector influenced the employees' determination of appropriate use. In a social networking system, a greater emphasis on relationship building would be expected, but this was not obvious in the results of this study. The final point discovered that is not entirely represented in the initial model is the potential path where inappropriate actions are implicitly validated due to employees staying quiet.

There was evidence that appropriate use is grounded in *normative* legitimacy, with some indication of *regulative*, *cognitive* and *pragmatic* legitimacy. However, there is no evidence that judgments of appropriate use have any basis in *relational* legitimacy.

Federal public servants carefully partition their use of GCConnex within the context of their work lives. They see GCConnex as clearly a work-related tool, and therefore, appropriate use must be considered within that context. Employee motivation to use ESM is primarily related to achieving specific work objectives or improving their work environment. Researchers should be cautious about extending hypotheses or

theories from research on public social media to studies involving ESM in government. Federal public servants provide an excellent example that users may have two identities in the social world – one for their personal lives and one for their professional lives. They freely share information about their personal lives and engage on topics of personal interest on public social media tools. Their ESM use is more reserved and focused on their professional lives. They are also cautious to ensure work content does not get shared externally, and they keep their personal information out of the workplace.

7.6.2 Implications for Policy

As evidenced by the goals set out in *Destination 2020*, the Canadian government is committed to helping the Canadian federal public service continue to evolve to address changes happening in the world. Wayne Wouter, the former Clerk of the Privy Council, called on public servants “to commit to action and to take individual ownership for change in this next phase of our journey” (Government of Canada, 2014, p. 2). The results of this study indicate that the messages of Wayne Wouter had a significant influence on employees. Federal public servants highly respect the Clerk’s role, and their words of encouragement and clear expectations have weight with employees.

TBS policy instruments provide direction to the departments to ensure consistency, manage risks and implement public service values (Treasury Board of Canada Secretariat, 2017a). This study indicates that the policy instruments issued by TBS are worthwhile to provide the guidance that employees need to use GCConnex appropriately. Nevertheless, the fast-changing world of social media means policy instruments need to be flexible enough to keep pace with other innovations.

The results of this study support the role of the Values and Ethics Code for the Public Sector as a foundation for all policy. It is a critical guide for employees in their job performance. Given appropriate guidance, employees will be confident in their ability to make wise decisions on the appropriate use of ESM and the other tools provided to them for their jobs.

Except for the GCTools help files, there is no official policy or guideline for the using GConnex or the other GCTools. In the absence of this official guidance, employees extract what they need from other policies and guidelines. This approach has generally been sufficient, but employees are still concerned that the tools are not fully utilized. A dedicated policy that explains an ESM's role would help solidify the tools as official tools to support employees and avoid situations where employees were concerned that managers may see them as wasting time. It could also explain clearly the expectation for employees to contribute to validation efforts either by helping each other or gently correcting when required.

One of the principal goals behind *Blueprint 2020* was to put in place the means for the federal public service to evolve as “the world continues to change rapidly, putting significant stress on the existing way of doing things” (Government of Canada, 2013, p. 3). Technology will continue to evolve faster than either policy or government workplace norms can keep up. The federal public service needs to be agile and willing to adapt (Clarke, 2019). Senior managers need to continue to provide the fundamental value structure for the organization and at the same time encourage employees to show innovation within that value structure. Employees are well equipped to make the

necessary judgment calls, so policies should continue to provide the rough framework needed to guide employee decision-making.

7.6.3 Implications for Practitioners

This study explored the appropriate use of ESM in the case of Canadian federal public servants. It, therefore, addressed an actual management situation.

The participants in this study clearly understand the role of GConnex. Some of them benefited from early investments by TBS that supported widespread implementation efforts, including the use of GTools Ambassadors. This broad support does not appear to still be in place, indicating that during the implementation of the GTools, the focus was on creating the system and implementing it. Implementers need to move beyond treating the implementation of ESM as solely a technology project and instead focus on the value that is expected (Grant & Collins, 2016). If the desire is truly to begin transforming the business of government, it needs to start at the top, and senior leaders should communicate through ESM tools instead of passing administrative emails through the chain of command.

One of the critical features of ESM is that it is accessible only to a closed group of employees inside the organization or trusted partners. Opening up the collaboration to those outside may create a situation where the employees no longer trust that their communication is privileged and may fear inadvertent disclosure. As a result, employees may decide that sharing information on the collaboration platform is no longer appropriate for their purposes.

Appropriate use is very context-specific, and employees are willing to learn appropriate use from each other. However, they would benefit from specific use cases on

how they could use GCConnex appropriately. Presenting positive examples of appropriate use will give employees a model they can mimic.

Appropriate use is a continuous, multidimensional concept. In some cases, employees may not be sure if an action is appropriate or not, and their understanding may change over time. Employees need the space and encouragement to support each other in discovering what is appropriate use mutually. They also need explicit support from management if they continue to be uncertain.

Finally, making norms of use explicitly available will remove some of the ambiguity and speed the adoption of appropriate use. Moderators should post the norms of use for Groups for easy access. The particular norms applicable to group use should be available, visible, and updated as necessary by the moderator to avoid unnecessary missteps by users new to the Group.

7.6.4 Summary of Implications

This chapter presented the implications of the study's findings for Research, Policy and Practitioners. The conceptual model that guided this research supports legitimacy theory as a lens for understanding appropriate use. Appropriate use is a continuous, multidimensional construct that is socially constructed. This study discovered three dimensions: Task, Feature, and Form. Employees carefully partition their use of social media, and ESM is a work-related tool.

In the absence of ESM-specific use policies, employees will extract what they need from other policies and guidelines. A Values and Ethics Code provides a solid foundation to guide employees in their decision-making. However, applicable policy suites need to be flexible enough to keep pace with rapidly changing technology.

Employees understand that appropriate use is context-specific. Because it is also socially constructed, employees need a means to mutually support other users in the creating the norms for appropriate use. Positive use cases could guide them in this effort.

Chapter 8: Conclusion

8.1 Summary

This study set out to understand how appropriate use of ESM is socially constructed within a Westminster parliamentary democracy such as the Canadian federal government. Increasingly, organizations are using ESM systems to enhance internal communications and increase knowledge generation and information sharing (Bennett et al., 2010). The Government of Canada is no different, as demonstrated by the transformation effort launched by the former Clerk of the Privy Council in 2013. GCConnex is one of the web applications implemented to enable collaboration among Canadian federal public servants. As of the last user survey conducted by TBS in 2016, there were more than 100,000 users, and 83% of the respondents were aware of GCConnex (Treasury Board of Canada Secretariat, 2016, p. 13).

This exploratory study addressed two research questions: *What influences a public servant's individual judgment that a specific action is appropriate when using enterprise social media?* And *How are actions taken by public servants using ESM validated as appropriate?* The conceptual model that guided this study was developed from literature on IT value, legitimacy, ESM, IS use, and the social construction of reality. Data sources included Canadian government policy documents and legislation, departmental documents, GCConnex Help files and semi-structured interviews with federal public servants.

Technology affordances influence employees' appropriate use of ESM. In the case of GCConnex, although there is evidence of the value of *association*, *visibility*, *persistence* and *editability*, it is the *limitation of visibility* that is most critical to

employees. The limited access to the system reassures them. Employees are also influenced by their background and experience using GCConnex. They see GCConnex as strictly for federal public servants to collaborate and share information. Finally, the Values and Ethics Code for the Public Sector is a foundational policy that articulates the norms of behaviour expected of federal public servants. It is evident in the study's findings that this Code guides their behaviour online as well as offline.

The results of this research indicate that federal public servants carefully partition their personal and work lives to help frame their use of GCConnex. Their perception of appropriate use has *normative* and *regulative* legitimacy. Even if they change departments or jobs, employees are aware that norms may differ in their new organization and their new roles and are willing to make the necessary adjustments.

The findings of the study show that *appropriate use* is socially constructed. Although the employees make individual judgments on appropriate use based on their organizational and social norms articulated in documents and communicated by superiors and peers, this judgment is not static. Appropriate use is highly subjective and subject to influence by context and other uses, and it is socially constructed through users' interactions with each other and their environment. This study discovered that appropriate use is a continuous, dynamic construct that has multiple dimensions. In GCConnex use in the Canadian federal government, three dimensions: Task, Feature, and Form were identified.

This study shows that the appropriate use of ESM is not a simple binary concept. Although some ESM use is appropriate and some use is inappropriate, employees recognize that at any given time, there is some ESM use that requires individual

judgment and can be simultaneously appropriate and inappropriate depending on the individual. Organizational norms are instantiated in official policies for federal public servants, including the Values and Ethics Code for the Public Sector. The bureaucratic authority structures in government influence federal public servants, making them unlikely to comment on ESM use that they believe may not be appropriate.

The federal government's current values and norms have solid legitimacy, including the bureaucratic practices that impact how employees interact and share information. Implementing any technology that aims to challenge these norms and break down barriers will face difficulties in legitimation. In introducing new work practices, practitioners should consider the importance of *propriety* (individual beliefs), *endorsement* (validation by peers) and *authorization* (validation by those in positions of authority). The validation of local actions by peers and managers is critical to help employees see the legitimacy of the new practices. This validation must be explicit as implicit validation serves to strengthen the status quo.

8.2 Theoretical Contributions

This research makes several contributions to theory related to appropriate use. First, this research develops a framework describing how *appropriate use* of ESM is socially constructed. This framework can guide future research on ESM in other organizational contexts such as industry or academia. It will help researchers explore how legitimacy theory is a relevant theoretical lens to understand the social construction of appropriate use of other types of technology.

This study adds to the literature on technology use by examining the unique construct of appropriate use. This research demonstrates that appropriate use is a

continuous and dynamic construct that is highly dependent on context. It also has multiple dimensions. In GCConnex use in the Canadian federal government, three dimensions were identified: Task, Feature and Form. Other dimensions could be relevant in different contexts.

Finally, this research contributes to the literature on validation by demonstrating how appropriate and inappropriate use can have multiple paths to explicit and implicit validation and that these can result in multiple states of diffusion. The model presented in this study can support further research on the diffusion of innovation, particularly in the use of technology.

8.3 Limitations

Like most other research studies, this one also has limitations. By design, this study only looked at the GCConnex tool as one instantiation of an ESM tool. As was noted by participants, a competing tool, CCCollab, was used by some public servants. There are also plans underway to replace the GCTools suite with a new system based on Microsoft Teams. There may also be local departmental ESM tools in use that this study did not consider. The focus of this research was on appropriate use and not the tools. Therefore, this study did not look at other tools or how their use could differ from GCConnex and whether that made a difference in appropriate use.

The scope of this study was limited to a Westminster parliamentary democracy in the Canadian federal government. The context described in this case is specific to the Canadian federal government. The results represent what was learned with this particular case; therefore, researchers cannot assume the employees' experiences in other organizations will be the same as the participants in this study. Organizations with less

formalized norms could have distinctly different results. The contribution of appropriate use as a multi-dimensional, dynamic and continuous construct can be generalized to other organizations. However, other researchers could discover different dimensions of appropriate use in different contexts.

This study followed a nested case study methodology where individual cases were the employees embedded within the more significant Canadian federal government case. Two data sources were organizational documents and semi-structured interviews. Organizational norms can be established and communicated through other means such as internal websites, emails, or newsletters. These additional documents were not easily accessible, and they may have provided more detail on the norms in the local work unit. When the participants were asked about other departmental policy documents, they identified very few. Therefore, if other organizational records exist, they were not likely significant influences.

This study considered appropriate and inappropriate use of ESM. These two terms have positive and negative connotations. Participants may have been reluctant to give examples of their use that may have been inappropriate, not wanting to admit to their own 'mistakes' or overly criticize their peers. After the first couple of interviews, the progression of questions could influence the participants' view of appropriate use; therefore, a question was added to capture their attitudes early in the interview. The results obtained during the semi-structured interviews could have been subject to social desirability bias (Singleton & Straits, 2010).

The invitation to participate in this study was only posted on GCConnex. Therefore, non-users of GCConnex were excluded from the study. The perspectives on

the appropriate use of ESM are limited to those who use GCConnex, even if only periodically. Non-users of GCConnex might have provided a different view of appropriate use, and their perspective might have provided an insight into why they decided not to use GCConnex. Including these employees would not have contributed to how *appropriate use* was socially constructed.

Students and casual employees were explicitly excluded from this study because their employment tends to be short and atypical for the federal public service, comprising approximately 5% of the employee population (Treasury Board of Canada Secretariat). Their use of GCConnex also tended to be atypical.

Participants could not provide an extensive list of inappropriate use examples, and many had not personally experienced situations where GCConnex use was or could be considered inappropriate. In the absence of personal experience, participants provided examples of behaviour that they believed would be inappropriate. As a result, some examples were based on first-hand knowledge, while others were predictive of what they would qualify as inappropriate use. So although the examples could not show how participants responded, there was still great value in understanding their expected behaviours in response to inappropriate use.

This study followed an interpretive approach as the most appropriate approach “to understand the context of the information system and the process whereby the information system influences and is influenced by the context” (Walsham, 1993, pp. 4-5). The participant and the researcher are both critical components of this interpretive approach. Therefore, this research is limited by the lens used by the researcher to interpret the findings, just as the information provided by the participant is influenced by

their background and the social and organizational context. The researcher's lens is framed by their many years of experience as a military officer and federal public servant.

8.4 Areas for Future Research

This study has helped to understand how appropriate use of ESM is socially constructed within the case of the Canadian federal government. However, there is still much left to learn about ESM.

Although Chapter 3 proposed a five-stage process model to show how appropriate use of GCConnex is socially constructed, only the first four stages are considered in this study. The obvious next steps would be to validate the rest of the model (i.e. diffusion and general validation). This additional work would require conducting a study at the group and organizational levels to understand how locally validated actions are taken for granted and widely accepted. Also, a natural next step to this study would be to validate this study's findings empirically.

This study looked at the appropriate use of ESM in the context of a Westminster democracy using the Canadian federal government GCConnex as the case of study. Other researchers could repeat the analysis for other organizations, particularly those organizations that have organizational norms (i.e., high technology firms), to see how the sources of legitimacy are different and how the use of ESM is validated. It would also be interesting to know if the observed dimensions of appropriate use exist in other organizational IT systems.

This study demonstrated that the discussion groups were the main feature attracting users to GCConnex. In some cases, these discussion groups mimicked real-world groups or groups with common interests. Organizations would benefit from a

greater understanding of group dynamics within ESM discussion groups. How are they different from real-world groups concerning goals and operating norms? Can we learn from the content of the information posts about the various roles employees play in these groups and whether these roles differ from the real world, or do they evolve as the group matures? How do people new to a group learn about the group norms (i.e. separate from the organizational norms), and how do they embrace these norms? This work would help us understand what happens in the final two steps in the conceptual framework proposed in this study. Finally, why do people leave or disengage from work-structured discussion groups?

Students who work either summer or co-op terms with the federal government are potential future public servants. Although this study focused on term and indeterminate employees, a subsequent study targeted to students would help understand their expectations around using ESM in the workplace. Future tools could then be developed and implemented with a greater emphasis on the future workforce. Students' understanding of appropriate use of ESM might be more strongly influenced by their personal and school usage. Considering this understanding might result in the expanded use of ESM in government, providing increased value to the organization. This study should consider multiple environments (e.g. government, industry or academia) and look at the situation longitudinally to see how their attitudes change over time. Given this understanding, is it possible to determine when an employee is the best fit for a position based on ESM use expectations in the workplace?

This study revealed that public servants carefully partition their social media lives to identify a work requirement. However, some professional development use of ESM

appears to be appropriate. Given that the government is committed to creating a world-class public service capable of the agility needed to respond to the fast-changing world, how can ESM (i.e., GCConnex, GCCollab, or the planned replacement) be used to mobilize innovation, creativity, agility and resiliency? This question goes beyond the need for knowledge management, information sharing or collaboration. Instead, the goal should be to create strategic change in the workforce.

ESM tools have rich functionality that includes Blogs, Discussion Groups, messaging as examples. The researcher unsuccessfully attempted to categorize social media and ESM users according to two frameworks. However, these frameworks fail to consider that user interactions vary over time and depend on the motivation or specific purpose for using the ESM. Researchers should study ESM user behaviour from a dynamic perspective to see how factors (e.g., tasks or features) influence their usage behaviour over time.

Data for this study was collected before COVID-19. The COVID-19 pandemic has triggered several studies on how work has changed. Due to the pandemic, most government operations have moved to remote work where collaborative technologies are more critical for employees to remain connected with peers and ensure complete awareness of work taking place specifically in their immediate work unit and across government. Now would be an excellent opportunity to understand how ESM use has also evolved and how employees' attitudes related to appropriate use have changed.

Finally, this study revealed a potentially significant difference between employees working in the region and those working in the headquarters. It would be worthwhile

studying how their work objectives or mandates differ and how this influences their expectations on the value of ESM.

Appendices

Appendix A: Letter of invitation to participate (GCConnex posting)



My name is Donna Wood and I am a PhD Candidate at the Sprott School of Business, Carleton University, Ottawa, Canada working under the supervision of Dr. Gerald Grant.

For my thesis research, I am studying how employees determine that their use of Enterprise Social Media is appropriate and I will be using the case of GCConnex within the Government of Canada. By studying how public servants use GCConnex, I hope to better understand how they determine use to be appropriate with the goal of helping departments get better value out of their investment in GCConnex.

I am looking for approximately 20 term or indeterminate employees willing to share with me their experiences using GCConnex through a single 40-50 minute interview. This interview can be conducted in person at a time and location convenient to you or the interview could be done via Webex.

Please feel free to contact me if you have any questions or if you are willing to participate. I can be reached by email at donna.wood@carleton.ca

The ethics protocol for this research has been reviewed and approved by the Carleton University Research Ethics Board (#110708). If you have any ethical concerns with the study, please contact Dr. Bernadette Campbell, Chair, Carleton University Research Ethics Board-A (by phone at 613-520-2600 ext. 2517 or via email at ethics@carleton.ca).

Thank you for your support!

Donna Wood
PhD Candidate
Sprott School of Business, Carleton University

Appendix B: Letter to Participants Who Expressed Interest



Title: *How is Appropriate Use of Enterprise Social Media Determined? The Case of GCConnex within the Canadian Federal Government.*

Date of ethics clearance: Clearance #110708 21 May 2019

Ethics Clearance for the Collection of Data Expires: 31 May 2020

[date]

Dear [insert name],

Thank you for your interest in participating in a study on the appropriate use of Enterprise Social Media. This study aims to better understand how appropriate use of Enterprise Social Media is socially constructed by studying how public servants in federal departments use GCConnex. By understanding how employees determine what use is appropriate, we hope to learn how departments can get better value from GCConnex use.

This study involves one 50 minute interview that will take place either by telephone or in a mutually convenient, safe location. With your consent, interviews will be audio-recorded. Once the recording has been transcribed, the audio-recording will be retained for no more than 10 years and then destroyed. If you do not consent to the audio-recording, you may still participate in the study and I will take notes of your responses.

While there are no anticipated emotional or psychological risks associated with your participation in this interview, the interview questions will require you to reflect on the nature of your work and discuss examples related to your use of GCConnex.

Your participation is completely voluntary and you will have the right to end your participation in the study at any time, for any reason, up until two months after the interview. If you choose to withdraw, all the information you have provided will be destroyed.

All research data, including audio-recordings and any notes will be password-protected. Any hard copies of data (including any handwritten notes or USB keys) will be kept in a locked cabinet. Research data will only be accessible by the researcher and the research supervisor.

If you are able to participate, and would like to participate during your workday, I have enclosed a letter that can be provided to your manager to explain your involvement to

assist you in gaining the necessary approvals. I have also enclosed a Research Consent form that I would request you review and return to me if you agree to participate.

If you are able to participate, please advise me of your availability over the next two weeks. The interview can be conducted by phone either during the work day or after hours dependent on your availability.

The ethics protocol for this project was reviewed by the Carleton University Research Ethics Board, which provided clearance to carry out the research. Should you have questions or concerns related to your involvement in this research, please contact: Dr. Bernadette Campbell, Chair, Carleton University Research Ethics Board-A (by phone at 613-520-2600 ext. 2517 or via email at ethics@carleton.ca).

Sincerely,

Donna Wood
PhD Candidate Carleton University
613-862-5935
Donna.wood@carleton.ca

Appendix C: Letter for Managers



Canada's Capital University

My name is Donna Wood and I am a PhD Candidate at the Sprott School of Business, Carleton University, Ottawa, Canada working under the supervision of Dr. Gerald Grant.

For my thesis research, I am studying how employees determine that their use of Enterprise Social Media is appropriate and I will be using the case of GCConnex within the Government of Canada. By studying how public servants use GCConnex, I hope to better understand how they determine use to be appropriate with the goal of helping departments get better value out of their investment in GCConnex.

Your employee has expressed an interest in participating in this research. His/her participation will involve a single 50 minute interview that can take place by telephone, or in person at your employee's location at a time convenient to the employee. The participation of your employee is completely voluntary and he/she is free to withdraw at any time. Your employee will be required to provide informed consent prior to the interview.

Please feel free to contact me if you have any questions about your employee's participation. I can be reached by email at donna.wood@carleton.ca

The ethics protocol for this research has been reviewed and approved by the Carleton University Research Ethics Board (Clearance #110708). If you have any ethical concerns with the study, please contact Dr. Bernadette Campbell, Chair, Carleton University Research Ethics Board-A (by phone at 613-520-2600 ext. 2517 or via email at ethics@carleton.ca).

Thank you for your support!

Donna Wood
PhD Candidate
Sprott School of Business, Carleton University

Appendix D: Research Consent Form



Canada's Capital University

Name and Contact Information of Researchers:

Primary Researcher: Donna Wood
PhD Candidate
Sprott School of Business
Donna.wood@carleton.ca
613-862-5935

Supervisor: Dr. Gerald Grant
Associate Professor
Sprott School of Business
Carleton University
Gerald.grant@carleton.ca
613-520-2600 ext 8006

This research is being conducted in support of a PhD dissertation from the Sprott School of Business at Carleton University, Ottawa, Canada.

Project Title

How is Appropriate Use of Enterprise Social Media Determined? The Case of GCConnex within the Canadian Federal Government.

Carleton University Project Clearance

Clearance #: 110708

Date of Clearance: 21 May 2019

Invitation

You are invited to take part in a research project because you are currently a Government of Canada employee who uses GCConnex. The information in this form is intended to help you understand what we are asking of you so that you can decide whether you agree to participate in this study. Your participation in this study is voluntary, and a decision not to participate will not be used against you in any way. As you read this form, and decide whether to participate, please ask all the questions you might have, take whatever time you need, and consult with others as you wish.

What is the purpose of the study?

The purpose of this research is to better understand how Appropriate Use of Enterprise Social Media is socially constructed by studying how public servants in federal departments use GCConnex. By understanding how employees determine what use is appropriate, we hope to learn how departments can get better value from GCConnex use.

What will I be asked to do?

If you agree to take part in the study, we will ask you to participate in a single 50 minute interview with the primary researcher. This interview can be done by phone, using webex or in person in the National Capital Region. Unless requested otherwise, the interview will take place during your normal work day. Your responses will be recorded to enable the researcher to transcribe the information. If you do not consent to audio-recording of the interview, you may still participate in the study and the researcher will take notes of your responses.

During this interview, you will be asked questions on the following topics:

- Demographic information such as years of service, education, gender, age, job classification and department
- Public Social media experience
- Work environment related to GCConnex
- Your personal experiences using GCConnex

Risks and Inconveniences

While there are no anticipated emotional or psychological risks associated with your participation in this interview, the interview questions will require you to reflect on the nature of your work and discuss examples related to your use of GCConnex. The potential for any social or economic exposure associated with your answers is taken seriously and is mitigated by ensuring the anonymity of your participation and responses. I would like to make it clear that, if you agree to participate, you will not be obligated to answer any questions with which you are uncomfortable. Furthermore, you are entirely free to drop out of the study at any time, without question.

Possible Benefits

You may not receive any direct benefit from your participation in this study. However, your participation may allow researchers to better understand how government employees view appropriate use of GCConnex.

Compensation/Incentives

You will not be paid or compensated for your participation in this study.

No waiver of your rights

By signing this form, you are not waiving any rights or releasing the researchers from any liability.

Withdrawing from the study

If you withdraw your consent during the course of the study, all information collected from you before your withdrawal will be discarded.

After the study, you may request that your data be removed from the study and deleted by notice given to the Principal Investigator (named above) within two months of your interview.

Confidentiality

We will treat your personal information as confidential, although absolute privacy cannot be guaranteed. No information that discloses your identity will be released or published without your specific consent. Research records may be accessed by the Carleton University Research Ethics Board to ensure continuing ethics compliance.

This study is being conducted under the authority of Carleton University therefore all data is exempt from any request for release under the Access to Information and Privacy Act. All data will be kept confidential, unless release is required by law (e.g., child abuse, harm to self or others).

The results of this study may be published or presented at an academic conference or meeting, but the data will be presented so that it will not be possible to identify any participants unless you give your express consent.

You will be assigned a code so that your identity will not be directly associated with the data you have provided. All data, including coded information, will be kept in a password-protected file on a secure computer.

We will password protect any research data that we store or transfer.

Data Retention

After the study is completed, your de-identified data will be retained for future research use.

New information during the study

In the event that any changes could affect your decision to continue participating in this study, you will be promptly informed.

Ethics review

This project was reviewed and cleared by the Carleton University Research Ethics Board A. If you have any ethical concerns with the study, please contact Dr. Bernadette Campbell, Chair, Carleton University Research Ethics Board (by phone at 613-520-2600 ext. 2517 for CUREB A or by email at ethics@carleton.ca).

Statement of consent – print and sign name

| | | |
|---|------------------------------|-----------------------------|
| I voluntarily agree to participate in this study. | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| I agree to be audio recorded | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

Signature of participant

Date

Research team member who interacted with the subject

I have explained the study to the participant and answered any and all of their questions. The participant appeared to understand and agree. I provided a copy of the consent form to the participant for their reference.

Signature of researcher

Date

Appendix E: Follow-up letter to Ambassadors' Network for the GCTools

My name is Donna Wood and I am a PhD candidate at Sprott School of Business, Carleton University, Ottawa, Canada. I am conducting research on the Appropriate Use of Enterprise Social Media and am conducting a case study on the use of GCConnex with the Government of Canada. By studying how public servants use GCConnex, I hope to better understand how they determine their use to be appropriate with the goal of helping departments get better value out of their investment in GCConnex.

I am asking for your assistance in two ways.

First, I am looking for any departmental policies, guidelines or training that is available to employees in your department and that could guide employees in their determination of how GCConnex can or should be used. This documentation could be in any form including for example text, video, or powerpoint and could be either formal or informal. I am only looking for material that is readily available to employees in your department and that is Unclassified. I have already obtained the federal policies and guidelines. I am an indeterminate government employee so if this information is already available on GCConnex or GCPedia, it is sufficient to send me a link to the location for the materials. If it is only available on internal departmental networks, I would appreciate a copy of the material be sent to me.

Second, I have conducted a number of interviews already, but would still like to speak to more employees. I'm looking to speak with term or indeterminate employees who use GCConnex and would be particularly interested in speaking with employees in the regions. I have uploaded an invitation for employees that I would appreciate if you could share with your GCConnex users or within any groups that you are involved with as you deem appropriate. I have already posted it on The Wire and GCCollab, but I know not everyone uses The Wire.

If you have any questions, please don't hesitate to contact me. Thank you for your help in supporting my research.

Donna Wood
PhD Candidate
Sprott School of Business
Donna.wood@carleton.ca
Donna.wood@forces.gc.ca

Appendix F: Interview Protocol

| | |
|-------------------------------|--|
| Participant ID | |
| Interview Date and Time | |
| Interview Location | |
| Interviewer | |
| File Name for Consent Form | |
| File Name for Webex File | |
| File Name for Audio File | |
| File Name for Transcript | |
| File Name for Interview Notes | |
| Copy of Final Report | |
| Transcription Complete | |

Introductory Script:

I would first like to thank you for agreeing to participate in this interview. My name is Donna Wood and I am a PhD candidate from the Sprott School of Business at Carleton University.

For my PhD thesis, I am looking at how employees determine that use of Enterprise Social Media is appropriate and I will be using federal public servants' use of GCConnex as a case study. For clarification, the term Enterprise Social Media (ESM) is applied to the situation where social media technologies are implemented internal to organizations with use limited to defined boundaries and users. GCConnex and GCPedia are good examples of Enterprise Social Media, but I am limiting my study to GCConnex.

The study involves a single interview about your experiences with social media, your work environment related to GCConnex and your personal experiences using GCConnex. During the interview I will be asking questions to help me understand how you use GCConnex and what things you have considered in your decisions about using GCConnex.

This interview will take approximately 40-50 minutes of your time. Are you available for this time period?

This study has been approved by the Carleton University Board of Ethics (Clearance #110708) and they require an informed consent form to ensure that human subjects participating in a study are informed of the conditions of the research including its risks and the subject's rights and privacy.

I have received your signed consent form. Thank you. I would like to remind you that you may still choose not to take part, or not to answer any of the questions and you are free to drop out of the study at any time without question. Do you have any questions about this study or need any clarification? I'm confirming you have agreed to have the interview audio-recorded (or not).

OR

Consent:

Your participation in this interview is voluntary, and you may choose not to take part, or not to answer any of the questions. Furthermore, you are entirely free to drop out of the study at any time, without question. If you decide to withdraw after the interview, your responses will be removed if you notify the researcher within two months.

While there are no anticipated emotional or psychological risks associated with your participation in this interview, the interview questions will require you to reflect on the nature of your work and discuss examples related to your use of GCConnex.

We will treat your personal information as confidential, although absolute privacy cannot be guaranteed. We will maintain the anonymity of your responses by assigning you an identification number that is linked to your name and contact information in a master list that is only accessible to the principal researcher. This master list will be destroyed once the findings have been fully reported. In addition, your name and personal information will not be divulged in any report of the findings of this study. Results will be reported so that no individual's responses can be linked to the individual and any quotes used will be cited to maintain your anonymity.

With your permission, I would like to digitally record the audio of the interview to accurately capture your ideas. If you do not consent to the audio-recording, you may still participate in the study and I will take notes of your responses. The data generated by your interview will only be used in the current study and any future studies directly related to this topic, but the recording itself will be destroyed once all the reports from the present study are completed.

The Carleton University Research Ethics Board may access research records to ensure continuing ethics compliance. This study is being conducted under the authority of Carleton University therefore all data is exempt from any request for release under the

Access to Information and Privacy Act. All data will be kept confidential unless release is required by law (e.g., child abuse, harm to self or others).

Statement of Consent

Do you have any questions about this study or need any clarification?

Do you voluntarily agree to participate in the study? Yes _____ No _____

Do you agree to be audio-recorded? Yes _____ No _____

Date: _____

Participant's ID: _____

Research team member who interacted with the subject

I have explained the study to the participant and answered any and all of their questions. The participant appeared to understand and agree. I provided a copy of the consent information to the participant for their reference.

Donna Wood

Date

Demographic Information

The first few questions provide me with some background information on you. This will give me context to interpret the data.

| Question | Response |
|---|----------|
| 1. What department do you work for? | |
| 2. How long have you worked for this department? | |
| 3. How many years do you have with the public service? | |
| 4. Would you consider your position as part of the headquarters, or a region? | |
| 5. Are you a term or an indeterminate employee? | |

| | |
|---|---|
| 6. What gender do you identify with? | |
| 7. What is your highest level of education? | |
| 8. Which of the following age ranges do you belong to? | <29 30-34 35-39 40-44 44-49 50-54 >54 |
| 9. What is your job classification? | |
| 10. Tell me a bit about your responsibilities in your current position. | |

Social Media Experience

The next few questions are related to your experience using Social Media tools outside of work.

| Question | Response |
|---|----------|
| 11. Would you consider yourself a beginner, intermediate or advanced social media user? | |
| 12. Which social media tools do you use outside of work? | |
| 13. How do you use social media tools outside of work? | |

GCConnex Experience

The next few questions are related to your experience using GCConnex.

| Question | Response |
|---|----------|
| 14. How long have you been using GCConnex? | |
| 15. How frequently do you use GCConnex? | |
| 16. When you use GCConnex, what are the features you use most frequently? | |
| 17. Why do you use GCConnex instead of other tools? | |

| | |
|---|--|
| <p>18. Can you give me a specific example of how you have recently used GCConnex? What features of GCConnex did you use? What were you trying to accomplish?</p> <p>Did you accomplish what you set out to do?</p> <p>Did you receive any feedback from other users about your use?</p> | |
| <p>19. My research is focusing on the appropriate use of Enterprise Social Media, using GCConnex as a case study. When I say appropriate use of enterprise social media, what does this mean to you?</p> | |

Work Environment

The next few question explore resources available to you to help understand how you can use GCConnex.

| Question | Response |
|---|----------|
| <p>20. To what extent have you consulted the GCConnex help or taken formal training about using GCConnex?</p> | |
| <p>21. Treasury Board of Canada Secretariat has several policies and guidelines. Which ones do you believe should guide public servants in how to use GCConnex?</p> | |
| <p>22. Does your department have any organizational policies or guidelines to help employees understand what is acceptable use of GCConnex?</p> | |
| <p>23. What role does your department's GCTools Ambassador play in helping new users know what they can use GCConnex for?</p> | |

| | |
|--|--|
| 24. Some groups have moderators. How have you seen moderators influencing how employees use GCConnex? | |
|--|--|

Appropriate Use

The next few questions are intended to get more detail on how you know your GCConnex use is appropriate or how others' use is or is not appropriate. For these questions, it may be beneficial for you to use specific examples.

Individual Judgment

| Question | Response |
|---|----------|
| 25. What is your personal philosophy as to how GCConnex should be used? | |
| 26. What do you believe would be the consequences of using GCConnex inappropriately? To individuals? To the organization? | |
| 27. How would you know that your GCConnex use is appropriate? | |
| 28. How would you know if others' use is or is not appropriate? | |

Local Validation

| Question | Response |
|---|----------|
| 29. Can you think of any example of inappropriate use of GCConnex that you observed? How did you respond? How did others respond? | |
| 30. If you were to provide input into a do's and don'ts for GCConnex use, what would you indicate for do's? | |

| | |
|---|--|
| 31. What would you indicate for don'ts? | |
|---|--|

Conclusion

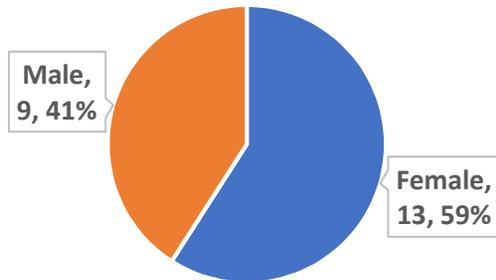
That concludes the interview. I would like to thank you for your time.
Would you be interested in receiving a copy of my final report?
If you have any questions at a later date, please feel free to contact me.

Appendix G: Participant Sample

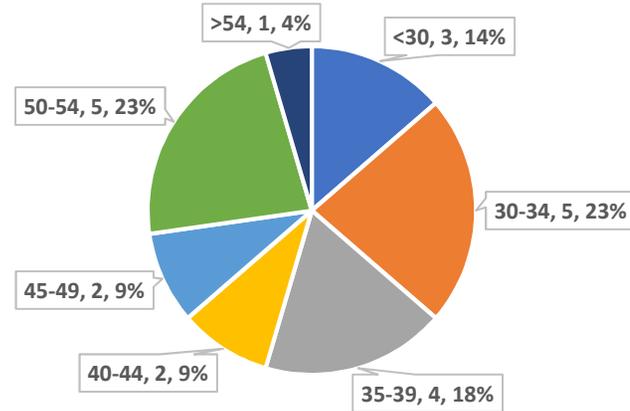
| Participant Code | Department | Age | Years at Dept | Years of Svc | Gender | HQ/Region | Education | Employment Status | Occupation Group | Secondment | Job Resp | SM Experience | GCConnex Frequency | GCConnex Time Using | ESM User Behaviour | ESM User Role |
|------------------|------------|-------|---------------|--------------|--------|-----------|-----------|-------------------|------------------|------------|------------|---------------|--------------------|---------------------|--------------------|---------------|
| Q1 | Q | 50-54 | 5-10 | >20 | F | HQ | Bachelor | indeterminate | PA | yes | GCTools Tm | intermediate | daily | >12 months | periphery | creator |
| P3 | P | 30-34 | 0-5 | 0-5 | F | Region | Bachelor | term | PA | yes | voluntary | beginner | few times/wk | 1-6 months | periphery | joiners |
| P2 | P | 50-54 | 5-10 | 10-15 | M | HQ | Masters | indeterminate | HM | no | GCTools Tm | advanced | daily | >12 months | core | creator |
| P1 | P | 50-54 | 0-5 | 0-5 | F | HQ | College | term | PA | no | voluntary | advanced | few times/wk | >12 months | periphery | spectator |
| N1 | N | >54 | 5-10 | 5-10 | F | HQ | College | indeterminate | other | no | work | intermediate | daily | >12 months | core | creator |
| M1 | M | 50-54 | 5-10 | >20 | M | HQ | Masters | indeterminate | EX | yes | voluntary | intermediate | daily | >12 months | promoter | creator |
| L2 | L | <30 | 0-5 | 0-5 | M | Region | College | indeterminate | other | no | voluntary | intermediate | rarely | 1-6 months | periphery | inactive |
| L1 | L | 30-34 | 5-10 | 5-10 | M | Region | College | indeterminate | other | no | voluntary | beginner | daily | >12 months | core | conersation |
| K2 | K | 30-34 | 0-5 | 5-10 | F | HQ | Bachelor | indeterminate | EC | yes | work | advanced | daily | >12 months | promoter | creator |
| K1 | K | <30 | 0-5 | 0-5 | F | HQ | Masters | indeterminate | EC | no | voluntary | intermediate | few times/month | >12 months | periphery | collector |
| J1 | J | 30-34 | 0-5 | 0-5 | F | HQ | Doctorate | indeterminate | LP | no | voluntary | n/a | rarely | 1-6 months | periphery | spectator |
| H3 | H | 35-39 | 0-5 | 10-15 | M | HQ | Bachelor | indeterminate | EC | no | voluntary | beginner | daily | >12 months | core | creator |
| H2 | H | 44-49 | 0-5 | 15-20 | F | HQ | Bachelor | indeterminate | PA | no | voluntary | advanced | daily | >12 months | promoter | creator |
| H1 | H | 40-44 | 0-5 | 5-10 | F | Region | Masters | indeterminate | PA | no | voluntary | intermediate | daily | >12 months | core | creator |
| G1 | G | 50-54 | 0-5 | 5-10 | F | HQ | Masters | indeterminate | Other | no | GCTools Tm | intermediate | daily | >12 months | super-promoter | creator |
| F2 | F | 35-39 | 0-5 | 10-15 | M | HQ | College | indeterminate | PA | no | voluntary | advanced | few times/month | >12 months | core | critic |
| F1 | F | 35-39 | 0-5 | 0-5 | F | HQ | Masters | indeterminate | PA | no | work | intermediate | daily | >12 months | super-promoter | joiners |
| E1 | E | 30-34 | 0-5 | 10-15 | M | HQ | Bachelor | indeterminate | EC | no | voluntary | intermediate | few times/wk | >12 months | periphery | joiners |
| D1 | D | 40-44 | 0-5 | 15-20 | F | HQ | College | indeterminate | PA | no | voluntary | advanced | daily | >12 months | periphery | spectator |
| C1 | C | <30 | 0-5 | 0-5 | F | HQ | Masters | indeterminate | EC | yes | voluntary | advanced | daily | >12 months | promoter | joiners |
| B1 | B | 35-39 | 10-15 | 10-15 | M | HQ | Masters | indeterminate | RE | no | voluntary | advanced | daily | >12 months | core | creator |
| A1 | A | 44-49 | 0-5 | 15-20 | M | Region | Bachelor | indeterminate | AV | yes | voluntary | advanced | few times/month | >12 months | core | creator |

Total Number of Participants = 22

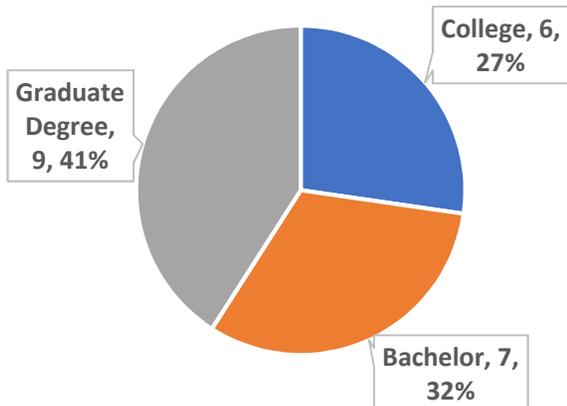
Gender Distribution of Participants



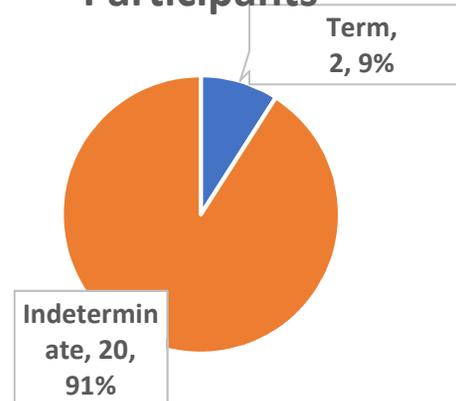
Age Distribution of Participants



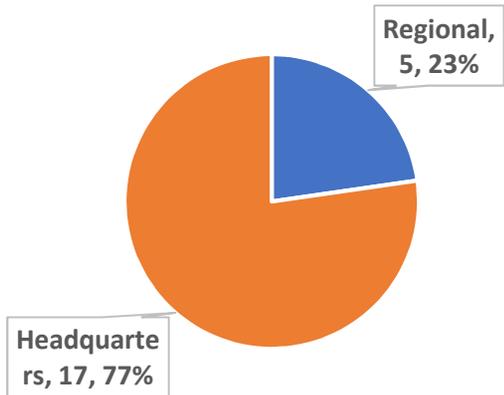
Education Level of Participants



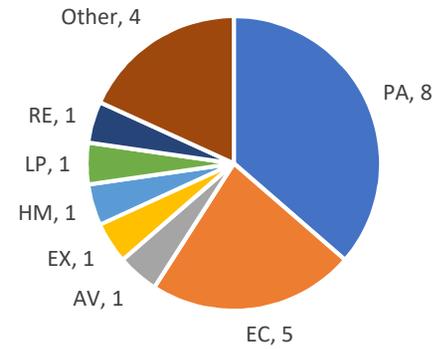
Employment Status of Participants



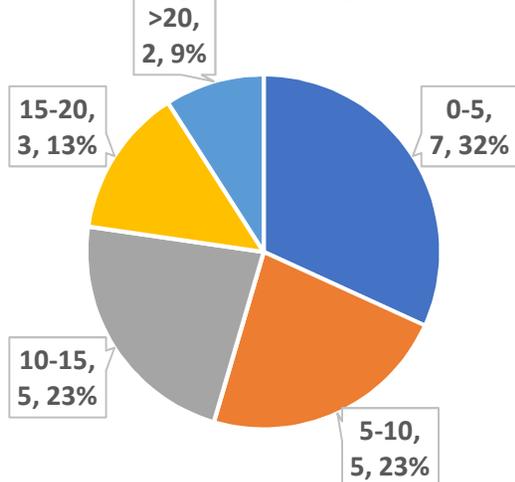
HQ vs Regional Distribution of Participants



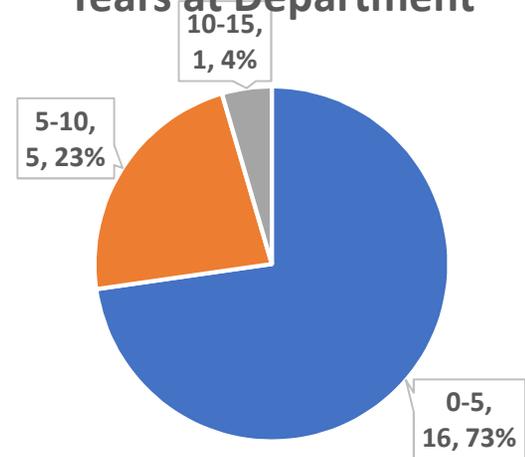
Occupational Group Distribution of Participants



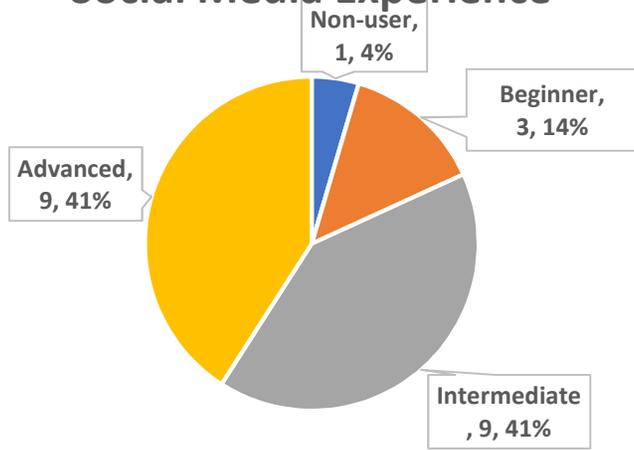
Years of Service



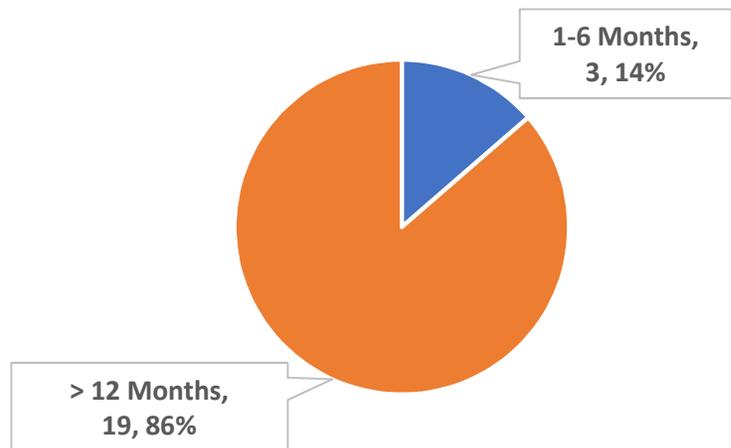
Years at Department



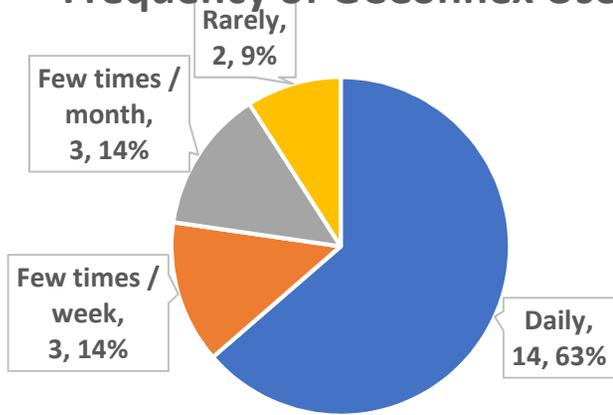
Social Media Experience



Time Using GConnex



Frequency of GConnex Use



Appendix H: List of Federal Departments and Agencies for Participants in Study

| Abbreviation | Department Name | Primary Role |
|--------------|--|--|
| AAFC | Agriculture and Agri-Food Canada | Supports the Canadian agriculture and agri-food sector through initiatives that promote innovation and competitiveness http://www.agr.gc.ca/eng/agriculture-and-agri-food-canada/?id=1395690825741 |
| CIHR | Canadian Institutes of Health Research | Canada's federal funding agency for health research https://cihr-irsc.gc.ca/e/193.html |
| CIRNAC | Crown-Indigenous Relations and Northern Affairs Canada | Continues to renew the nation-to-nation, Inuit-Crown, government-to-government relationship between Canada and First Nations, Inuit and Métis modernize Government of Canada structures to enable Indigenous peoples to build capacity and support their vision of self-determination; and lead the Government of Canada's work in the North. https://www.canada.ca/en/crown-indigenous-relations-northern-affairs.html |
| CLC | Canada Lands Company Ltd | To ensure the commercially oriented, orderly disposition of surplus properties with optimal value to the Canadian taxpayer and the holding of certain properties https://www.clcl.ca/home |
| CRA | Canada Revenue Agency | Administers tax laws for the Government of Canada and for most provinces and territories https://www.canada.ca/en/revenue-agency.html |
| ESDC | Employment and Social Development Canada | Works to improve the standard of living and quality of life for all Canadians by promoting a labour force that is highly skilled and an efficient and inclusive labour market. https://www.canada.ca/en/employment-social-development.html |
| IRCC | Immigration, Refugee, Citizenship Canada | Facilitates the arrival of immigrants, provides protection to refugees, and offers programming to help newcomers settle in Canada https://www.canada.ca/en/immigration-refugees-citizenship.html |
| JUS | Department of Justice Canada | Works to ensure the federal government is supported by high-quality legal services, and the justice system is fair, relevant, accessible, and reflective of Canadian values https://www.canada.ca/en/department-justice.html |

| | | |
|---------|---|---|
| NRC | National Research Council Canada | To have an impact by advancing knowledge, applying leading-edge technologies, and working with other innovators to find creative, relevant and sustainable solutions to Canada's current and future economic, social and environmental challenges. https://nrc.canada.ca/en/corporate/about-nrc |
| NRCan | Natural Resources Canada | Committed to improving the quality of life of Canadians by ensuring the country's abundant natural resources are developed sustainably, competitively and inclusively https://www.nrcan.gc.ca/home |
| PCH | Canadian Heritage | Plays a vital role in the cultural, civic and economic life of Canadians https://www.canada.ca/en/canadian-heritage.html |
| PSC | Public Service Commission of Canada | Responsible for promoting and safeguarding a merit-based, representative and non-partisan public service that serves all Canadians https://www.canada.ca/en/public-service-commission.html |
| PSPC | Public Services and Procurement Canada | Serve federal departments and agencies as their central purchasing agent, real property manager, treasurer, accountant, pay and pension administrator, integrity adviser and linguistic authority. https://www.tpsgc-pwgsc.gc.ca/comm/index-eng.html |
| ServCan | Service Canada | Provides Canadians with a single point of access to a wide range of government services and benefits https://www.canada.ca/en/employment-social-development/corporate/portfolio/service-canada.html |
| StatCan | Statistics Canada | The national statistical office. The agency ensures Canadians have the key information on Canada's economy, society and environment that they require to function effectively as citizens and decision makers. https://www.statcan.gc.ca/eng/start |
| WD | Western Economic Diversification Canada | Working to diversify the western economy while improving the quality of life of western Canadians https://www.wd-deo.gc.ca/eng/home.asp |

Appendix I: List of Federal Documents Reviewed

| Title | Application | Objective/Goal Statement | References Values and Ethics Code | Legislation Referenced |
|---|---|--|--|--|
| Values and Ethics Code for the Public Sector | Every person employed in the public sector | To clarify the roles and expectations of Canadian federal public servants. | | Constitution Act, Public Servants Disclosure Protection Act, Financial Administration Act |
| Policy on Acceptable Network and Device Use | Use of Government of Canada electronic networks for government business and professional and limited personal use | To ensure effective and efficient use of Government of Canada electronic networks and devices to support enhanced communication and collaboration. | Yes | Access to Information Act, Canada Labour Code, Financial Administration Act, Privacy Act, Federal Public Sector Labour Relations Act, Public Servants Disclosure Protection Act, Public Service Employment Act, Security of Information Act |
| Policy Framework for Information and Technology | Contributes to overall management of government | This is a strategic framework to support policies on information management, information technology, privacy, access and security. | | Access to Information Act, Canada Evidence Act, Criminal Records Act, Library and Archives of Canada Act, Official Languages Act, Security of Information Act, Personal Information Protection and Electronic Documents Act, Privacy Act, Statistics Act |
| Policy on Information Management | Information and data, structured and unstructured under control of | Effective and efficient information management to support program and service delivery. | | Access to Information Act, Canada Evidence Act, Criminal Records Act, Library and Archives of Canada Act, Official Languages Act, Security of Information Act, Personal Information |

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| | the Government of Canada | | | Protection and Electronic Documents Act, Privacy Act, Statistics Act, Shared Services Canada Act |
| Policy on Management of Information Technology | Governance and oversight of IT investments and management; | IT services respond to Government of Canada program delivery and business needs. | | Financial Administration Act |
| Policy on Access to Information | Government institutions (less Bank of Canada) | Facilitates compliance with the Access to Information Act. | | Access to Information Act, Canada Evidence Act, Library and Archives of Canada Act, Official Languages Act, Privacy Act, Public Servants Disclosure Protection Act |
| Policy on Privacy Protection | Government institutions (less Bank of Canada) | To facilitate compliance with and application of the Privacy Act. | | Access to Information Act, Canada Evidence Act, Canadian Charter of Rights and Freedoms, Financial Administration Act, Library and Archives of Canada Act, Official Languages Act, Personal Information Protection and Electronic Documents Act, Privacy Act |
| Policy on Learning, Training and Development | To core public administration | To adopt-leading edge management practices to encourage innovation and continuous improvement. | Yes | Canada Labour Code, Canada School of Public Service Act, Employment Equity Act, Official Languages Act, Public Service Employment Act, Public Sector Labour Relations Act, Public Service Modernization Act |
| Policy on the Duty to Accommodate Persons with Disabilities | Applies to the workplace and during staffing processes | To ensure the full participation of persons with disabilities in the federal public service they shall be accommodated up to the point of undue hardship. | | Access to Information Act, Canada Labour Code, Canadian Human Rights Act, Employment Equity Act, Financial Administration Act, Official Languages Act, Privacy Act, Public Service |

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|--|--|--|-----|---|
| | | | | Employment Act, Public Sector Labour Relations Act, |
| Policy on Service | Applies to external and internal enterprise Government of Canada services. | The design and delivery of external and internal enterprise services are client-centric, promote operational efficiencies and a culture of service management. | Yes | Access to Information Act, Canadian Human Rights Act, Financial Administration Act, Official Languages Act, Privacy Act, Personal Information Protection and Electronic Documents Act |
| Policy on Official Languages | Applies to services to the public, language of work and participation of English and French-speaking Canadians | To facilitate compliance with the Official Languages Act. | Yes | The Constitution Act 1867, Canadian Charter of Rights and Freedoms, Financial Administration Act, Official Languages Act, Public Service Employment Act |
| Employment Equity Policy | All departments and portions of the public service | To achieve equality in the federal public service. | | Employment Equity Act, Financial Administration Act, Public Service Employment Act |
| Policy on Harassment Prevention and Resolution | Applies to employee behaviour in the workplace or any location or event related to work. | Sets out expectations to foster a respectful workplace and address situations of harassment. | Yes | Access to Information Act, Canada Labour Code, Canadian Human Rights Act, Financial Administration Act, Official Languages Act, Public Service Employment Act, Public Sector Labour Relations Act, Privacy Act |
| Directive on Information Management Roles and Responsibilities | All departments under the FAA | To identify the roles and responsibilities of all employees in effective management of information. | | Access to Information Act, Canada Evidence Act, Copyright Act, Criminal Records Act, Federal Accountability Act, Financial Administration Act, Library and Archives of Canada Act, Statistics Act, Official Languages Act, Personal Information Protection and Electronic |

| | | | | |
|---|---|--|--|---|
| | | | | Documents Act, Privacy Act, Security of Information Act, Statistics Act |
| Directive on Open Government | Applies to government information of business value | To maximize release of government information and data of business value. | | Access to Information Act, Financial Administration Act, Library and Archives of Canada Act, Privacy Act, Security of Information Act |
| Directive on Management of Information Technology | All departments | To ensure efficient and effective use of IT to support government priorities, program delivery, innovation, productivity. | | Financial Administration Act |
| Standard for Electronic Documents and Records Management (EDRM) Solutions | Only applies when new or upgraded EDRM solutions are proposed | The application of this standard will reduce overall cost to EDRM implementations and support effective and efficient information management. | | Financial Administration Act |
| Standard on Email Management | Applies to email and instant messaging | Ensures email and instant messages are effectively managed through their life cycle, support program and service delivery and are identifiable as Government of Canada correspondence. | | Access to Information Act, Canada Evidence Act, Criminal Records Act, Excise Act, Financial Administration Act, Library and Archives of Canada Act, Official Languages Act, Privacy Act, Shared Services Canada Act |
| Standard on Privacy and Web Analytics | Applies only to external public-facing Governments of Canada websites | Although not applicable to GCConnex, serves a “sound privacy practice” for the GCTools team. | | Access to Information Act, Canadian Charter of Rights and Freedoms, Financial Administration Act, Library and Archives of Canada Act, Official Languages Act, Privacy Act |
| Operational Security Standard: | Federal departments | Defines requirements to ensure security of | | Access to Information Act, Canada Evidence Act, Canada Labour Code, |

| | | | | |
|--|------------------------------------|---|-----|---|
| Management of Information Technology Security Standard | | information and information technology. | | Canadian Security Intelligence Service Act, Charter of Rights and Freedoms, Criminal Code, Criminal Records Act, Defence Production Act, Financial Administration Act, Interpretation Act, National Defence Act, Security of Information Act, Personal Information Protection and Electronic Documents Act, Privacy Act, Public Service Employment Act, Personal Information Protection and Electronic Documents Act, Privacy Act, Statistics A |
| Guideline for Employees of the Government of Canada: Information Management Basics | All Government of Canada employees | Effective management of information resources under our control. | Yes | Lobbying Act |
| Guidelines for Discipline | To core public administration | Provides advice that will foster sound people management practices across the core public administration. | | Financial Administration Act, Public Service Labour Relations Act, |

Referenced Legislation

| Legislation | Description | Offences |
|--|---|--|
| Access to Information Act | An Act to extend the present laws of Canada that provide access to information under the control of the Government of Canada and to provide for the proactive publication of certain information. | On summary conviction to a fine up to \$1k |
| Canada Evidence Act | An Act respecting witnesses and evidence. | |
| Canada Labour Code | An Act to consolidate certain statutes respecting labour. | On summary conviction to a fine not exceeding \$1k |
| Canada School of Public Service Act | An Act respecting the Canada School of Public Service. | |
| Canadian Charter of Rights and Freedoms (Constitution Act) | | |
| Canadian Human Rights Act | An Act to extend the laws in Canada that proscribe discrimination. | On summary conviction to a fine not exceeding \$50k |
| Canadian Security Intelligence Service Act | An Act to establish the Canadian Security Intelligence Service. | |
| Conflict of Interest Act | An Act to establish conflict of interest and post-employment rules for public office holders. | An administrative monetary penalty not exceeding \$500 |
| Copyright Act | An Act respecting copyright. | On conviction on indictment to a fine up to \$1M and/or prison up to 4 years OR on summary conviction on fine up to \$25k and/or imprisonment up to 6 months |
| Criminal Code | An Act respecting the Criminal Law. | Multiple and varied |
| Criminal Records Act | An Act to provide for the suspension of the records of persons who have been convicted of offences and have subsequently rehabilitated themselves. | Punishable on summary conviction |

| | | |
|--|--|---|
| Defence Production Act | An Act respecting defence production. | |
| Employment Equity Act | An Act respecting employment equity. Applies to employers. | Monetary penalty of up to \$10k |
| Excise Act | An Act respecting excise. | Fine of up to \$50 |
| Federal Accountability Act | An Act providing for conflict of interest rules, restrictions on election financing and measures respecting administrative transparency, oversight and accountability. | |
| Federal Public Sector Labour Relations Act | An Act respecting labour relations in the federal public sector. | |
| Financial Administration Act (FAA) | An Act to provide for the financial administration of the Government of Canada, the establishment and maintenance of the accounts of Canada and the control of Crown corporations. | Indictable offence and liable on conviction to a fine up to \$5k and a prison term up to 5 years |
| Interpretation Act | An Act respecting the interpretation of statutes and regulations. | |
| Library and Archives of Canada Act | An Act to establish the Library and Archives of Canada, to amend the Copyright Act and to amend certain Acts in consequence. | On summary conviction to a fine under the Criminal Code |
| Lobbying Act | An Act respecting lobbying. | On summary conviction to a fine up to \$50k or on indictment to a fine up to \$200k and/or 2 years imprisonment |
| National Defence Act | An Act respecting national defence. | Multiple and varied |
| Official Languages Act | An Act respecting the status and use of the official languages of Canada. | The Federal Court may grant any remedy it deems appropriate and just |
| Personal Information Protection and | An Act to support and promote electronic commerce by protecting personal information that is collected, | |

| | | |
|---|--|--|
| Electronic Documents Act | used or disclosed in certain circumstances, by providing for the use of electronic means to communicate or record information or transactions and by amending the Canada Evidence Act, the Statutory Instruments Act and the Statute Revision Act. | |
| Privacy Act | An Act to extend the present laws of Canada that protect the privacy of individuals and that provide individuals with a right of access to personal information about themselves. | Liable on summary conviction to a fine up to \$1k |
| Public Servants Disclosure Protection Act | An Act to establish a procedure for the disclosure of wrongdoings in the public sector, including the protection of persons who disclose the wrongdoings. | An indictable offence with a fine up to \$10k and or 2 years On summary conviction, a fine up to \$5k |
| Public Service Employment Act | An Act respecting employment in the public service. | Punishable on summary conviction |
| Public Service Modernization Act | An Act to modernize employment and labour relations in the public service and to amend the Financial Administration Act and the Canadian Centre for Management Development Act and to make consequential amendments to other Acts. | |
| Security of Information Act | An Act respecting the security of information. | An indictable offence with imprisonment up to 14 yrs. On summary conviction to a fine up to \$2k and/or 12 months |
| Shared Services Canada Act | An Act to establish Shared Services Canada. | |
| Statistics Act | An Act respecting statistics of Canada. | On summary conviction a fine up to \$1k and/or 6 months imprisonment |

Appendix J: List of Departmental Policy Documents Reviewed

| Title | Relevance |
|---|--|
| NRCan Values and Ethics Code | Builds on the Values and Ethics Code for the Public Sector by addressing potential risks and ethical situations likely to be faced by NRCan employees. |
| ESDC – Social Media Guidelines for Employees | Guidelines for ESDC employee use of external social media. |
| ESDC Code of Conduct | Builds on the Values and Ethics Code for the Public Sector and explains how it applies in ESDC. |
| ESDC Infographics – What To Do and What Not To Do | Two-page visual to help employees understand what to and not to do with respect to external social media. |
| ESDC – Web Handbook for Employees | Provides guidance for ESDC employees on using Web 2.0 technologies. Includes frequently asked questions related to personal, institutional, and individual professional use. |
| ESDC – Social Media Self-Assessment Review | Guidelines for employees on use of personal social media. |
| Service Canada – Guidelines for Professional Conduct for Service Canada | Builds on the ESDC Code of Conduct to promote ethical behaviour of Service Canada employees. |

Appendix K: List of GCConnex Help Files Reviewed

| Title | Relevance |
|-------------------------------------|--|
| GCTools Terms and Conditions of Use | Provides a specific reminder to users of their obligations under the Values and Ethics Code for the Public Sector and legislation and policy related to information management, official languages, privacy and access to information, communications and copyright, accessibility and security. |
| GCConnex Privacy Notice | Advises users on how their personal information is handled. |
| Widgets | Provides users with a list of widgets that are accessible in GCConnex. |
| Manage Account Settings | Provides tactical guidance to users on managing their account settings and resetting their password. |
| Group Ownership and Management | Advises users how to create a group and manage members of a group. |
| Getting Started | Provides users with basic orientation on how to navigate and manage their profile. |
| FAQs | Responds to several frequently asked questions. |
| Content Management | Advises users on how to use the filters and how to use The Wire. |
| Collaboration and Networking | Explains how to like posts, manage colleagues and how to send messages. |
| Career Marketplace | Explains the purpose of the career marketplace and how users can conduct a search and respond to opportunities. |
| About the GCTools | Expands on rules related to official languages, content management, and the roles of the GCTools Ambassadors |
| About GCConnex | Describes who can use GCConnex and what users can accomplish with GCConnex. |

Appendix L: Examples of Acceptable Network and Device Use

Reference: Appendix B and C Policy on Acceptable Network and Device Use

Work-related and Professional Development Activities

- Conduct consultations within the federal government via internal wikis and forums to support the development of policies and programs;
- Share knowledge and information intra- or interdepartmentally to support planning and decision-making or facilitate project collaboration;
- Perform research through accessing online reports, presentations, and data-sets;
- Watch online broadcasts of work-related content, such as a parliamentary committee meeting via ParlVU;
- Remain up-to-date with official announcements published on social media platforms by federal departments and agencies, provincial or municipal governments, or international jurisdictions or organizations;
- Document corporate knowledge on Government of Canada wikis to facilitate employee orientation and knowledge transfer;
- Participate in a video or audio conference with colleagues or clients from other organizations or jurisdictions through tools such as Skype or Google Hangouts;
- Develop and share code repositories in collaboration with departments, other jurisdictions and private sector organizations via code sharing tools such as GitHub;
- Leverage expertise from across government by creating or participating in online communities of interest on topics of shared professional interest such as #w2p (Web 2.0 Practitioners community);
- Access or share unclassified information through cloud-based tools such as SlideShare;
- Collaborate on joint initiatives and projects, via open discussions or closed groups as appropriate, with other departments and levels of government through the use of wikis, professional networking applications, internal tools such as GCDocs or external cloud-based tools such as Google Docs;
- Maintain an up-to-date profile on professional networking sites such as LinkedIn;
- Follow thought leaders and government officials on blogs or micro-blogs such as Twitter;
- Tweet, re-tweet or share links to professional activities and events, or interesting and relevant articles;
- Read, contribute to, or edit articles in work-related wikis, online forums or discussion groups;
- Discuss professional issues or participate in professional associations via online forums or social networking sites;
- Participate in online professional training activities (e.g., webcasts, online learning products via CSPA, podcasts);
- Find a colleague or client's contact information or directions to a meeting; Make arrangements for work-related travel, including booking tickets and searching for

- information about accommodations via Government of Canada or third-party travel review services; and
- Complete an online job application or participate in an online interview.

Limited Personal Use

- Search for information online; Keep up-to-date with news and current events;
- Subscribe to Web feeds (such as RSS) ;
- Get directions for a trip or search for addresses and contact information;
- Make personal travel arrangements;
- Post or read ratings/reviews of products or services or make online purchases;
- Check the weather forecast;
- Confirm bus schedule information;
- Pay bills or conduct personal banking online;
- Read or contribute to online forums, blogs, discussion groups, or wikis on topics of personal interest;
- Update a personal blog, micro-blog, social networking page, or Web page that is for noncommercial purposes or does not otherwise constitute Unacceptable Use as per Appendix C; and
- Visit social networking sites to connect with family and friends.

Unacceptable Use

- Is unacceptable or criminal in nature;
- Violates Treasury Board or organizational policies and codes of conduct and other published requirements;
- Impacts negatively the performance of Government of Canada electronic networks and devices;
- Impedes organizational operations or the delivery of services;
- or Breaches the Duty of Loyalty requirement for public servants (i.e., does not refrain from public criticism of the Government of Canada)

Criminal Offences

- Child pornography—Possessing, downloading or distributing any child pornography.
- Copyright infringement—Knowingly distributing infringing copies of a copyrighted work.
- Defamation—Causing a statement to be read by others that is likely to injure the reputation of any person by exposing that person to hatred, contempt or ridicule, or that is designed to insult the person.
- Denying right of access under the Access to Information Act: destroying, mutilating, altering, falsifying or concealing a record, or making a false record with intent to deny a right of access under the Access to Information Act.
- Hacking and other crimes related to computer security.
- Gaining unauthorized access to a computer system—Using someone else's password or encryption keys to engage in fraud or obtaining money, goods or services through false representations made on a computer system.

- Trying to defeat the security features of the electronic networks. Spreading viruses with intent to cause harm.
- Destroying, altering or encrypting data without authorization and with the intent of making the data inaccessible to others who have a lawful need of access. Interfering with others' lawful use of data and computers.
- Harassment—Sending electronic messages that cause people to fear for their safety or the safety of anyone known to them.
- Hate propaganda—Disseminating messages that promote hatred or incite violence against identifiable groups in statements outside of private conversations.
- Interception of private communications or electronic mail (in transit)—Unlawfully intercepting someone's private communications or unlawfully intercepting someone's electronic mail.
- Obscenity—Distributing, publishing or possessing for the purpose of distributing or publicly displaying any obscene material.
- Various other offences—The Criminal Code (and a few other statutes) provide for a range of other offences that can take place in whole or in part using electronic networks. For example, fraud, extortion, blackmail, bribery, illegal gambling, and dealing in illegal drugs can all occur, at least in part, over electronic networks and are criminal acts.

Violations of Federal and Provincial Statutes

- Disclosing sensitive information without authorization.
- Disclosing personal information—Failing to respect the privacy and dignity of every person.
- Disclosing business trade secrets—Revealing business trade secrets without authorization, other than in response to a formal request under the Access to Information Act.
- Disclosing sensitive government information—Revealing sensitive government information without authorization.
- Intellectual property infringement: infringing or otherwise using without authorization another person's intellectual property (copyright, trade-mark or patent).
- Harassment—It is a discriminatory practice to harass an individual on a prohibited ground of discrimination. The prohibited grounds are race, national or ethnic origin, colour, religion, age, sexual orientation, marital status, family status, disability and conviction for which a pardon has been granted.
- Privacy breaches—Include, but is not limited to, any of the following without authorization: reading someone else's electronic mail or other personal information, listening in on someone's private conversations or intercepting electronic mail while it is in transit, for example.

Violation of Organizational Policies

- Causing congestion and disruption of Government of Canada electronic networks and systems through such means as sending chain letters and receiving list server electronic mail unrelated to a work purpose. These are examples of excessive use of resources for non-work related purposes (Policy on Government Security).

- Using the Government of Canada electronic networks for unauthorized activities as laid out in this policy and related guidance (Policy on Conflict of Interest and Post-Employment).
- Using Government of Canada electronic networks to make public comments about government policies, except when acting as the official spokesperson, or to engage in political activity that could impair his or her ability to perform duties in an impartial manner (Public Service Employment Act, Values and Ethics Code for the Public Sector, and Policy on Conflict of Interest and Post-Employment)
- Representing personal opinions as those of the organization, or otherwise failing to comply with organizational procedures concerning public statements about the government's positions (Policy on Conflict of Interest and Post-Employment)
- Providing authorized individuals with access to systems, networks or applications used to process sensitive information before such personnel are properly security screened (Policy on Government Security).
- Failing to revoke system access rights of personnel when they leave the organization due to the end of employment or the termination of a contract, or when they lose their reliability status or security clearance (Policy on Government Security).
- Unauthorized removal or installation of hardware or software on government owned informatics devices or electronic networks (Policy on Government Security).
- Furthermore, unless for valid work-related purposes, authorized individuals cannot use Government of Canada electronic networks or devices to access or download websites or files, or send or receive electronic mail messages or other types of communication, that fall into the following categories: Documents that incite hatred against identifiable groups contained in personal messages (the Criminal Code prohibits incitement of hatred against identifiable groups in public conversations, also listed under criminal offences); Documents whose main focus is pornography, nudity and sexual acts.

Activity that can expose individuals or employer to tort liability

- Disclosing or collecting sensitive data—Revealing or obtaining such information without authorization. In addition to the statutory provisions mentioned above, an unauthorized disclosure or collection of personal information can result, in some circumstances, in a civil action for invasion of privacy, nuisance or trespass under common law, and similar actions under the Civil Code of Québec (articles 3, 15–41), for breach of contract and for breach of trust or breach of confidence (e.g., if confidential commercial information is disclosed).
- Defamation—Spreading false allegations or rumours that would harm a person's reputation. In addition to criminal libel, publishing defamatory statements without a lawful defence can result in a civil action.
- Inaccurate information—Posting inaccurate information, whether negligently or intentionally. This can lead to civil lawsuits for negligent misrepresentation.

Appendix M: Coding For File and Case Classifications

File Classifications:

Policies

Originator

ESDC
NRCan
ServiceCanada
TBS

Type

Policy
Directive
Guideline
Help
Code
Communication
Standard

Year

Interviews

InterviewDate
InteviewLocation
ParticipantID
Interviewer
File_Audio
File_Notes
File_Transcript

Case Classifications

Participants

Age

<30
30-34
35-39
40-44
45-49
50-54
>54

Education

High School
College
Bachelor
Graduate

Employment Status

Term
Indeterminate

ESM User Behaviour
Super-Promoter
Promoter
Core-User
Periphery-User

ESM User Role
Creators
Conversationalists
Critics
Collectors
Joiners
Spectators
Inactives

GCConnex Frequency
Daily
Few times a week
Few times a month
Less than once a month
rarely

GCConnex Time Using
<1 month
1-6 months
6-12 months
>12 months

Gender
Female
Male

HQ/region
HQ
Region

Job Responsibilities
Current or Previous GCTools Team
Job Requires GCConnex Use
Use of GCConnex is voluntary

Occupational Group
AV
CRA-AU
CS
EC
EX
FB
HM
LP
NR
PA
RE

Other
Secondment
 Yes, Currently on secondment
 No, Not currently on secondment
Secondment Department
 AAFC
 CLC
 IIRC
Social Media Experience
 Beginner
 Intermediate
 Advanced
Substantive Department
 CLC
 CIRNAC
 CRA
 CSPS
 DJC
 ESDC
 INAC
 IRCC
 NRC
 NRCan
 PSC
 PSPC
 StatsCan
 TBS
Years at Department
 0-5
 5-10
 10-15
 15-20
 >20
Years of Service
 0-5
 5-10
 10-15
 15-20
 >20

Appendix N: Coding for Nodes

Nodes

Appropriate Use

- Consequences of Inappropriate Use

 - Individual

 - Organizational

- Examples

 - Appropriate use

 - Inappropriate use

- Guide – prescriptive

 - Do's

 - Don'ts

- Meaning of appropriate use

Environment

External Social Media Use

- Needs

 - Social

 - Hedonic

 - Cognitive

- Philosophy

- Tools

 - DreamWhip

 - Facebook

 - Infogram

 - Instagram

 - LinkedIn

 - Periscope

 - Pinterest

 - QORA

 - Reddit

 - Snapchat

 - Tictoc

 - Twitter

 - Whatsapp

GCConnex Use

- Affordances

 - Association

 - Editability

 - Persistence

 - Visibility

- Benefits

- Operational
 - Completing Work
 - Cost-Cutting
 - Overcoming Barriers
- Longterm
 - Harvesting Innovation
 - Locating Expertise
 - Team-building
- Strategic
 - Improved Culture
 - Institutional Practices
 - Speeding Decisions

Expected Value

Features

- Blogs
- Bookmarks
- Chat-Messages
- Communities
- Dashboard
- EventCalendar
- Groups
- Jobs Marketplace
- MessageBoard
- Newsfeed
- Polls
- Search
- The Wire

Overarching Philosophy

Needs

- Social
- Hedonic
- Cognitive

Zone of Use

- Directly contributes to work objectives
- Supports work environment
- Meets personal professional goals
- Meets personal goals

Influences

- GCTools Ambassadors
 - Did not use, but aware
 - Helped by one
 - Unaware
 - Was one

GCTools Team

Help files

Moderators
 GroupMember
 WereModerators
Peers
Policies
 Accessibility
 AccesstoInfo
 Communication
 ConfictofInterest
 Departmental
 Diversity
 InformationMgmt
 Language
 Privacy
 Security
 UseofNetowrkDevices
 UseofSocialMedia
 ValuesandEthics
Supervisors or Senior Management
Training

Juicy stuff
 GCCollab
 Not sure yet
 Quotes

Legitimacy
 Cognitive
 Normative
 Pragmatic
 Regulatory
 Relational

Legitimation process steps
 Individual Judgment
 Innovation
 Local Validation

Validation
 Authorization
 Endorsement
 Explicit
 Implicit

WorkExperiences

Appendix O: Mapping of Value Against Affordances

| | | Association | Editability | Persistence | Visibility |
|-----------------------------------|------------------------------|---|--|---|---|
| Tactical/ Foundational | Completing the Work | “I’m also connecting with the developers of GCConnex in various instances and you know for some features I would use their troubleshooting or their features that they have.” (PARTICIPANT G1) | “I received documents from individuals with information related to the posting. I kept the posting up for a number of days after which I went back and I retired the posting.” (PARTICIPANT G1) | “I used GCConnex to publicize the recording of the event.” (PARTICIPANT P2) | “We used GCConnex to publicize the event and to have the details of the event shared with GCConnex participants.” (PARTICIPANT P2) |
| | Overcoming Barriers | “It’s the only place where federal public servants really, from all organizations, departments, agencies that can go online and actually truly communicate each other. It’s not siloed in any way. It’s available to absolutely everyone... It’s the one-stop shop for finding other public servants or meeting other public servants.” (PARTICIPANT B1) | “We came across some very sensitive information ... So the information had to be removed.” (PARTICIPANT G1) | “There’s so much inertia behind email. People are still used to just emailing everything to everyone. And like I particularly was hoping to break that behaviour and just take advantage of some of the tool’s capacity to just connect people to work and actually do substantive project work.” (PARTICIPANT A1) | “As an ADM, trying to communicate with a big organization, GCConnex was new and so I took it as a complementary channel.” (PARTICIPANT M1) |
| Long-Term Benefits | Harvesting Innovation | “And it was kind of meant to be a sounding board for leaders to talk about impacts that are happening to staff, things like that.” (PARTICIPANT H2) | | “I’ll often do that kind of scanning activities, see what tools already exist so that we can just modify for our use rather than developing from scratch.” (PARTICIPANT D1) | |

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|------------------|--------------------------------|---|--|--|--|
| | Locating Expertise | “Sometimes I, when I find something interesting I’ll look at who’s in charge of that committee or that specific page and I get in contact with that person.” (PARTICIPANT P3) | | “If there was a certain topic or a certain question that people didn’t have a lot of information on, then they could create a section within the call centre group to kind of identify that issue and talk about or give us information on how to fix a problem or fix.” (PARTICIPANT L1) | “There’s just way too much data, that it’s really hard to sometimes sift through to find the right people you’re looking for or even the right information that you’re looking for.” (PARTICIPANT K2) |
| | Team Building | “When you have to work with others for goals, it is a relationship and a relationship needs good communication.” (PARTICIPANT L2) | “I actually want to write messages to people in a way that sounds like how I would say it. There is something that followers find in leaders, you know connect with somebody who’s authentic and you know disconnect with people who are phony.” (PARTICIPANT M1) | “We used the platform to provide a place for people to discuss the ongoing planning for the event.” (PARTICIPANT A1) | |
| Strategic | Improved Culture | “Being able to, I don’t if necessarily messaging on the platform is important, but able to say this person, part of this group, we had a great conversation, now I want to email them or have a coffee with them or something.” (PARTICIPANT F2) | | | “But it’s exceptional I think for people to feed back to somebody who is, you know to their boss’, boss’, boss.” (PARTICIPANT M1) |
| | Institutional Practices | “So I was part of that group and I was working for the Office of Conflict Resolution at the time so really being exposed to the | “There were also times when we would just do a summary of what had been said over, across 10-15 messages in another | “They framed it as being easier to communicate as opposed to email where there is a million emails | “I think that there are times when, particularly as a senior person in the public service, you have to, it’s a |

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|--|----------------------------------|--|---|--|---|
| | | <p>conflict management and conflict resolution world. And because the manager at the time was also a conflict resolution practitioner, he was linked in and he posted it in the ICMS group on GCConnex and that's how I was connected," (PARTICIPANT F1)</p> | <p>language so that if somebody wanted to jump in in French into an English conversation, they would have enough context to be able to answer in their own language of choice." (PARTICIPANT H3)</p> | <p>going back and forth between people." (PARTICIPANT L1)</p> | <p>place in which one can set an example." (PARTICIPANT M1)</p> |
| | <p>Speeding Decisions</p> | | <p>"And my writing style tends to be more like a conversational writing style. I've had, at the Canada School for GCCampus, they have a review function, they have staff who review your stuff, your content." (PARTICIPANT M1)</p> | <p>"We don't tend to be on it all the time, so it's more something, you have a question you can post it out there and people will get back to you in a day or two or whatever." (PARTICIPANT F2)</p> | |

Appendix P: Participant Comments on Influences to GCConnex Use

| Influence | Participant Comments |
|---------------------|--|
| Training | <p>“I’ve delivered three learning events, for workshops, seminars, information sessions at the Canada School of Public Service with a focus on the GCTools.” (PARTICIPANT H1)</p> <p>“I have never taken any formal training, I just got on it and tried to learn the platform on my own.” (PARTICIPANT F2)</p> <p>“I’m pretty sure I’ve never taken any formal training Probably attended like a one hour thing on that at some point, but it was a long time ago.” (PARTICIPANT E1)</p> <p>“I’m sort of a self-taught type of guy. I have an IT background and that has helped me to take the lead on using the platforms for leading in this case two groups.” (PARTICIPANT P2)</p> <p>“We have, usually once or twice a year, learning days. And I remember GCConnex was one of the mini sessions you could take.” (PARTICIPANT L1)</p> |
| Help Files | <p>“I have used the help... there’s some really good tools that were created and placed on the GCPedia page. And I’ve used them.” (PARTICIPANT H1)</p> <p>“The help, I mean I’ve looked at the documentation sitting there on GCPedia explaining things like the profile and how to setup and maintain the group and things like that.” (PARTICIPANT B1)</p> <p>“About the use of help, I have used it very very rarely. Just yesterday, I was looking for a file size limit. I found my answer, using the Search functionality.” (PARTICIPANT P2)</p> <p>“I have used the help function quite a bit. They have a page, you know, kind of a centralized page, where they have frequently asked questions and things like that.” (PARTICIPANT H2)</p> <p>“So actually, I was involved in revamping some of the help materials for GCConnex.” (PARTICIPANT K1)</p> <p>“I haven’t used like GCConnex Help or anything like that. It was just me literally educating myself.” (PARTICIPANT P1)</p> |
| GCTools Team | <p>“I will use the help to troubleshoot so when people are having trouble like with creating their account or something is going on with their account and something is not working quite right.” (PARTICIPANT H1)</p> <p>“I did at one point, have to have access to their help, I guess their help menu, but it was more so the person at Treasury Board that oversees the GCConnex platform.” (PARTICIPANT F1)</p> <p>“I’ve actually made contact with someone at Treasury Board who was able to help me directly with certain things.” (PARTICIPANT H2)</p> <p>“And I’ve certainly consulted the help files or I’ve exchanged messages with the GCConnex support people when I feel as though the platform probably</p> |

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| | <p>would allow me to accomplish something, but I don't know how." (PARTICIPANT A1)</p> <p>"When I signed up for GConnex, I got in contact with someone who was on a GTools team at TBS and so I worked with him for about four months to familiarize myself with the GTools suite." (PARTICIPANT C1)</p> |
| Policies | <p>"Well I think first, the code of values and ethics for the public sector would be the main one because in it you find the expected behaviours of the public service." (PARTICIPANT F1)</p> <p>"It's like the values and ethics framework has to then cascade into this channel." (PARTICIPANT M1)</p> <p>"Anything related to ethics I think is something of value to people, especially if you're online using social media." (PARTICIPANT H2)</p> <p>"I think primarily the values and ethics from the very top, it's a good base to cover off any activity." (PARTICIPANT D1)</p> |
| Moderators | <p>"I was managing a couple of groups and I was very active in making sure the group members have access to the most recent information." (PARTICIPANT G1)</p> <p>"Moderators might intervene or interact with that group in some way, but other than that, it's a social media tool, so it's meant to be used more ubiquitous, undefined space." (PARTICIPANT F2)</p> <p>"In the groups I've been in, I don't think they've had to step in too much." (PARTICIPANT E1)</p> <p>"I consider myself a moderator of the group, a facilitator, a promoter, an engager, a leader all of those." (PARTICIPANT P2)</p> <p>"I haven't seen that myself. I can see it being advantageous if it's a group that's very active and requires some management." (PARTICIPANT H2)</p> <p>"I actually didn't know there were moderators." (PARTICIPANT C1)</p> |
| GTools Ambassador | <p>"So I've used them extensively I'd say and then also because I'm a GTools Ambassador and people know that I do a lot of promotion and outreach here in the region." (PARTICIPANT H1)</p> <p>"I don't know that it's being used at this particular point in time as fully as it could ... They were a real support in the early days." (PARTICIPANT A1)</p> <p>"If we have something like that, I would not be aware." (PARTICIPANT F1)</p> <p>"I think this is a very important role and I think it should be first of all fully recognized by management." (PARTICIPANT G1)</p> <p>"They did a good effort initially with the Ambassadors going out ... but you really did see a drop off. I think that they have an attrition problem with the ambassadors that they don't always get replaced or have the time to actually do that ambassador work." (PARTICIPANT D1)</p> |

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| | <p>"I know that for many, many, many people, particularly in the regions, GCTools Ambassadors were highly helpful, highly valued, because they would be the one doing presentations in team meetings." (PARTICIPANT K1)</p> |
| Peers | <p>"I remember when I first started, when we looked at the map of the country and the usage of the GCTools, back then BC was very low. Like the further away you got from the NCR, the lower the usage rate was." (PARTICIPANT H1)</p> <p>"I make sure that my colleagues know exactly the location where they can find the information." (PARTICIPANT G1)</p> <p>"Since I'm here, at [Org P], nobody really talked about GCConnex at all. Most of my agents don't even have GCConnex account. It is not really used that much through [Org P] from what I can see." (PARTICIPANT P3)</p> <p>"I've gotten tips from other users or from colleagues." (PARTICIPANT B1)</p> <p>"As far as my peer group is concerned, well, I've gotten mixed results and I find that part of it has to do with the confusion over the rules – what I can do and what can't I do." (PARTICIPANT H3)</p> <p>"No formal training and I did not consult the help. I've just informal information from colleagues." (PARTICIPANT J1)</p> <p>"I have an acquaintance who's pretty GCConnex savvy. I could ask him any question I had." (PARTICIPANT J1)</p> <p>"I've heard from three or four colleagues now that they really like GCConnex as a tool to move around internally. But I have heard from multiple other colleagues that they don't like GCConnex or any of the GCTools." (PARTICIPANT C1)</p> <p>"So I use GCConnex just because someone at work, ... had told me about it.... I have a feeling, if I were to ask, to poll my team about how many people use GCConnex, I'd be really surprised if half the people use it." (PARTICIPANT P1)</p> |
| Senior Management | <p>"I have taken my signal ... I remember the former clerk of the Privy Council at the time was Wayne Wouters launching the consultation phase ... of the BluePrint 2020 vision. And he was unequivocal and very strongly encouraging public servants to work across organizational silos to collaborate and to make use of these tools available to us." (PARTICIPANT H1)</p> <p>"So I started with GCConnex because my Director at the time wanted a GCConnex page and he wanted us to invite as many people within [IRCC] to join and to do various postings." (PARTICIPANT F1)</p> <p>"I don't know if you're familiar with Alex Venetti? The CIO of TBS, he has more or less encouraged people to use as much of these tools as we can." (PARTICIPANT N1)</p> <p>"If you have a manager or a director who's really saying you should be using this, who is actually on there and leading by example then that's much more likely to happen, that you'll actually use it and feel comfortable using it." (PARTICIPANT E1)</p> |

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| | <p>“I find that people generally work from example, so having managers and directors and director generals on GCConnex, actually interacting, putting stuff out ... would actually allow people to say, ok this use is proper use and not proper use.” (PARTICIPANT H3)</p> <p>“Unless we get managers to actually see value and use it then encourage their employees to use, it just won’t be used.” (PARTICIPANT H3)</p> <p>“Five years ago when I started using it, ... and management was kind of really pushing us to get on to it so they could use it as a communication tool with us.” (PARTICIPANT L1)</p> <p>“If Treasury Board wants to set the tone for the future, they need to start releasing their stuff only on GCConnex. And Deputy Ministers need to see that if they don’t pay attention to GCConnex, they’re going to miss something important and that’s going to embarrass them.” (PARTICIPANT A1)</p> <p>“I know at [Org H], in the western region, we finally got our ADM to launch a presence on GCConnex and that was really an achievement because it sort of signaled, ok this is a legitimate platform and we can use that at any level of this 5,000 person shop to move work forward.” (PARTICIPANT A1)</p> |
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Appendix Q: Participant Comments on Meaning of Appropriate Use

| Comments from Participants on Appropriate Use | Link to Legitimacy Types |
|---|--------------------------|
| “I’m taking it from what is allowed vs not allowed sort of mindset, or perspective.” (PARTICIPANT F2) | Regulative, Normative |
| “When I hear appropriate, it is more about values and ethics kind of way ... but I guess it would also be the best practices also.” (PARTICIPANT P3) | Normative |
| “Appropriateness, has a dimension ... Around confidentiality, around you that it’s civil, that it’s respectful ... you’re contributing to a conversation ... Other elements of appropriate use for this maybe gets into effective use ... clearly things that are disrespectful, profanity, other forms of just clearly socially unacceptable. It’s like the values and ethics framework has to then cascade into this channel.” (PARTICIPANT M1) | Normative |
| “It’s as if you’re talking in public, really, in a sense, to other departments and other agencies ... is it relative to the business. Is it relative to the question that’s being asked in the first place and is it helpful? And if it is, then I think it’s appropriate. It’s all very vague.” (PARTICIPANT N1) | Pragmatic |
| “I think one of the things is always your immediate management’s expectations ... There’s always that debate of is it exactly your job or are you kind of learning and more in a professional role you play. Hard to draw that line.” (PARTICIPANT E1) | Relational |
| “I was trying to figure out where you were pushing with that? I mean it’s two parts of appropriate I can come to mind. One is policy-appropriate ... And then the other part of appropriate, is it the right tool from a design perspective.” (PARTICIPANT B1) | Regulative, Pragmatic |
| “Appropriate use within the government context is it’s a tool that shouldn’t be abused for personal gain. It should be used for work primarily ... But for what it’s intended use, where we get to connect with other people, create communities of practice, be able to share information, be able to disseminate information, archive as well important policy change and documents, for those kind of things, I see that as the ideal use ... I find just the participation itself and just the communities that already exist on there, tend to set the standard on what’s acceptable and what isn’t.” (PARTICIPANT H3) | Normative |
| “I think for GConnex, it’s difficult to not use it properly ... You know you’re using it for work purposes like it’s a place for employees to connect with each other but at the same time, it’s still a tool that’s provided by the workplace. It belongs to the government.” (PARTICIPANT J1) | Cognitive |

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|---|-----------|
| <p>“Appropriate use – I would say, to me it means using it to accomplish your end goal and using it ... you have to use social media for the right reasons and for the right audiences.” (PARTICIPANT H2)</p> | Pragmatic |
| <p>“I guess it means that you’re using it for the things it was designed for and not falling outside the public service code of ethics.” (PARTICIPANT C1)</p> | Normative |
| <p>“I’m not really sure. I would tend to look at it something like a codes and ethics perspective I guess when I hear appropriate ... well I would wonder if you mean best practices, the best use. Making good use of it as a job aid or tool, but to me, appropriate doesn’t lean that way, it’s more towards responsible use.”(PARTICIPANT D1)</p> | Normative |
| <p>“The use is aligned with the code of conduct; an extension of employment expectations.” (PARTICIPANT L2)</p> | Normative |
| <p>“I would say appropriateness would probably be like how is your content related to your work and if it’s relatable to your work and your work objectives, then it’s appropriate.” (PARTICIPANT K2)</p> | Pragmatic |
| <p>“I guess appropriate use would mean using a tool in the way that it was designed to be used.” (PARTICIPANT K1)</p> | Normative |
| <p>“I would say, using the social media for business purposes and not for personal purposes.” (PARTICIPANT L1)</p> | Normative |
| <p>“To me it means that you’re selecting the right tool for the job. And that you’re using the best feature set to accomplish some work-related goal.” (PARTICIPANT A1)</p> | Pragmatic |
| <p>“Appropriate use means that you are you know using the social media tool within the realms of the work. That you’re not abusing it.” (PARTICIPANT P1)</p> | Normative |

Appendix R: Recommendations for Do's and Don'ts

| Categories | Do's | Don'ts |
|--------------------|--|--|
| Values | <p>Know limitations and existing policies</p> <p>Be respectful, mindful of others' opinions.</p> <p>Be open-minded.</p> <p>Be respectful, collaborative, open.</p> <p>Challenge ideas not people.</p> | <p>What you wouldn't do in the offline world don't do it in the online world.</p> <p>Don't be disrespectful.</p> <p>No racist or other kind of inappropriate thinking.</p> <p>Don't say something you will regret.</p> <p>Don't bully, harass or belittle others.</p> <p>Don't rant or bash.</p> <p>Don't post discriminatory or harassing information.</p> <p>Don't post information that is illegal or could damage the organization's reputation.</p> |
| Constraints | <p>Keep professional.</p> <p>Use it to the max.</p> <p>Share your work after having it vetted by your manager.</p> <p>Have someone check your words before posting.</p> <p>Respect copyright.</p> | <p>Don't blame the tool for non-functionality.</p> <p>Don't lead users to a paywall.</p> <p>Don't turn on your notifications.</p> |
| Purpose | <p>Use for professional development and advancement.</p> <p>Use to connect with or find colleagues.</p> <p>Use to keep abreast of recent developments.</p> <p>Use to satisfy professional interests and needs</p> <p>Use job opportunities to your advantage.</p> <p>Share if you have specific expertise.</p> | <p>Don't use it to 'hook up'.</p> <p>Don't use it in a way that could bring harm to self or others.</p> <p>Don't use it for personal use.</p> <p>Don't use it for anything other than your professional work.</p> <p>Don't recruit for the private sector.</p> <p>Don't message people if you have an agenda that is unprofessional.</p> |
| How | <p>Reach out to people doing similar things before reinventing.</p> <p>Learn best practices of others.</p> <p>Check it out first.</p> <p>Carve out some of your day to scan.</p> <p>Make your stuff findable (take time to tag and structure).</p> <p>Do research before setting anything up.</p> <p>Join groups.</p> <p>Ask questions.</p> <p>Be curious and explore.</p> <p>Respond to your messages if someone messages you directly.</p> | <p>Don't need to try things out to see how they work.</p> <p>Don't just post without thinking.</p> <p>Don't reply to yourself all the time.</p> <p>Don't dominate the conversation.</p> <p>Don't spam multiple groups with similar content.</p> <p>Don't set up a group just because someone else is doing so we need to do it here.</p> |
| Content | <p>Fill out your profile and keep updated.</p> <p>Share reference guides.</p> <p>Share information others may enjoy or that you have found useful.</p> <p>Make an introductory post when you join a new group.</p> <p>Share events.</p> <p>Share things that establish credibility.</p> <p>Share ideas.</p> | <p>Don't circulate proprietary material.</p> <p>Don't use it to post personal pictures of family.</p> <p>Don't post things your department is not ready to share.</p> <p>Don't waste people's time by posting meaningless content.</p> <p>Don't share personal and private information.</p> |

| | | |
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| | <p>Have a point of view and communicate it.</p> <p>Engage in productive discussions.</p> <p>Link your GCConnex account to the GEDS directory.</p> <p>Keep humour to a minimum.</p> | <p>Don't violate copyright.</p> <p>Don't post above approved security level.</p> <p>Don't share information that is partisan or critical comments/personal bias.</p> <p>Don't sit on your hands and not say something if you've actually got something to say.</p> |
| Form | <p>Use spell check, watch language.</p> <p>Set up a new thread when you change topic.</p> <p>Tone is important.</p> <p>Think about what is being said and have something meaningful to say.</p> <p>Do official languages.</p> <p>Be mindful of the language used.</p> | <p>Don't use it as an Internet or document repository.</p> |
| System-level | <p>How to actually promote people's work.</p> <p>What content is appropriate to share in GCConnex.</p> <p>How to leverage groups.</p> <p>How to connect with people more collaboratively across departments.</p> | <p>Don't have big conceptual discussions about the power of collaboration, actually do it.</p> |

References

- Aboelmaged, M. G. (2018). Knowledge sharing through enterprise social network (ESN) systems: motivational drivers and their impact on employees' productivity. *22*(2), 362-383. doi:10.1108/JKM-05-2017-0188
- Adams, D. A., Nelson, R. R., & Todd, P. A. (1992). Perceived Usefulness, Ease of Use, and Usage of Information Technology: A Replication. *MIS Quarterly*, *16*(2), 227-247.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, *50*(2), 179-211. doi:10.1016/0749-5978(91)90020-T
- Alavi, M., & Leidner, D. E. (2001). Review: Knowledge Management and Knowledge Management Systems: Conceptual Foundations and Research Issues. *MIS Quarterly*, *25*(1), 107-136.
- Aldrich, H. E., & Fiol, C. M. (1994). Fools Rush In? The Institutional Context Of Industry Creation. *Academy of Management Review*, *19*(4), 645-670. doi:10.5465/amr.1994.9412190214
- Alexander, D. E. (2014). Social Media in Disaster Risk Reduction and Crisis Management. *Science and Engineering Ethics*, *20*(3), 717-733. doi:10.1007/s11948-013-9502-z
- Ali-Hassan, H., Nevo, D., & Wade, M. (2015). Linking dimensions of social media use to job performance: The role of social capital. *Journal of Strategic Information Systems*, *24*(2), 65-89. doi:10.1016/j.jsis.2015.03.001
- Allison, C. (2016). Complexity, Wicked Problems and Relevance: Understanding Digital Collaboration in the Government of Canada. In: Data Processing Institute.
- Anderson, V. (2017). Criteria for Evaluating Qualitative Research. *Human Resource Development Quarterly*, *28*(2), 125-133. doi:10.1002/hrdq.21282
- Aoun, C., & Vatanasakdakul, S. (2012). *Social Media in the Workplace: Key Drivers for Inclusive Innovation*. Paper presented at the AMCIS 2012, Seattle, Washington, USA.
- Aral, S., Dellarocas, C., & Godes, D. (2013). Introduction to the Special Issue Social Media and Business Transformation: A Framework for Research. *Information Systems Research*, *24*(1), 3-13. doi:10.1287/isre.1120.0470
- Archer-Brown, C. (2012). *Using Enterprise Social Media for Collaboration Case Study Review*. Retrieved from <http://www.nemode.ac.uk/wp-content/uploads/2014/04/Archer-Brown-Using-Enterprise-Social-Media-for-Collaboration-Final.pdf>
- Archer-Brown, C., & Kietzmann, J. (2018). Strategic Knowledge Management and Enterprise Social Media. *Journal of Knowledge Management*, *22*(6), 1288-1309. doi:10.1108/JKM-08-2017-0359
- Banker, R. D., & Kauffman, R. J. (1988). *A Scientific Approach to the Measurement of IT Business Value - Part I: A Manager's Guide to 'Business Value Linkage' Impact Analysis*. Working Paper Series #194. Stern School of Business, New York University. Retrieved from <https://ssrn.com/abstract=1289680>
- Bansal, P., Smith, W. K., & Vaara, E. (2018). New Ways of Seeing through Qualitative Research. *Academy of Management Journal*, *61*(4), 1189-1195. doi:10.5465/amj.2018.4004

- Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17(1), 99-120.
- Barua, A., Brooks, L., Gillon, K., Hodgkinson, R., Kohli, R., Worthington, S., & Zukis, B. (2010). Creating, Capturing and Measuring Value From IT Investments: Could We Do Better? *Communications of the Association for Information Systems*, 27, 13-26.
- Baxter, P., & Jack, S. (2008). Qualitative Case Study Methodology: Study Design and Implementation for Novice Researchers. *Qualitative Report*, 13(4), 544-559.
- Beetham, D. (1991). Max Weber and the Legitimacy of the Modern State. *Analyse und Kritik*, 13(1), 34-45.
- Beetham, D. (2013). *The Legitimation of Power* (2nd ed.). New York: Palgrave MacMillan.
- Behrendt, S., Klier, J., Klier, M., Richter, A., & Wiesneth, K. (2015). *The Impact of Formal Hierarchies on Enterprise Social Networking Behavior*. Paper presented at the Thirty Sixth International Conference on Information Systems, Fort Worth, United States of America.
- Behrendt, S., Richter, A., & Trier, M. (2014). Mixed Methods Analysis Of Enterprise Social Networks. *Computer Networks*, 75, Part B, 560-577.
doi:<http://dx.doi.org/10.1016/j.comnet.2014.08.025>
- Benbasat, I., Goldstein, D. K., & Mead, M. (1987). The Case Research Strategy in Studies of Information Systems. *MIS Quarterly*, 11(3), 369-386.
- Bennett, J., Owers, M., Pitt, M., & Tucker, M. (2010). Workplace impact of social networking. *Property Management*, 28(3), 138-148.
doi:10.1108/02637471011051282
- Berg, B. L. (2001). *Qualitative Research Methods for the Social Sciences* (4th ed.). Boston: Allyn and Bacon.
- Berger, J., Fisek, M. H., Ridgeway, C. L., & Norman, R. Z. (1998). The Legitimation And Delegitimation Of Power And Prestige Orders. *American Sociological Review*, 63(3), 379-405.
- Berger, J., & Zelditch, M. (1998). *Status, Power, and Legitimacy: Strategies & Theories*. New Brunswick, NJ: Transaction.
- Berger, P. L., & Luckmann, T. (1966). *The Social Construction Of Reality*: Doubleday & Company, Inc.
- Bertot, J. C., Jaeger, P. T., & Grimes, J. M. (2010). Using ICTs to create a culture of transparency: E-government and social media as openness and anti-corruption tools for societies. *Government Information Quarterly*, 27(3), 264-271.
doi:10.1016/j.giq.2010.03.001
- Bharadwaj, A. S. (2000). A Resource-Based Perspective On Information Technology Capability And Firm Performance: An Empirical Investigation. *MIS Quarterly*, 24(1), 169-196.
- Bitektine, A., & Haack, P. (2015). The "Macro" And The "Micro" Of Legitimacy: Toward A Multilevel Theory Of The Legitimacy Process. *Academy of Management Review*, 40(1), 49-75. doi:10.5465/amr.2013.0318
- Boland, R. J. (2002). Information System Use as a Hermeneutic Process. In *Qualitative Research in Information Systems*. London: SAGE Publications, Ltd. Retrieved

- from <https://methods.sagepub.com/book/qualitative-research-in-information-systems>. doi:10.4135/9781849209687
- Boland, R. J., & Day, W. F. (1989). The experience of system design: A hermeneutic of organizational action. *Scandinavian journal of management*, 5(2), 87-104. doi:10.1016/0956-5221(89)90017-1
- Bostrom, R. P., Gupta, S., & Thomas, D. (2009). A Meta-Theory for Understanding Information Systems Within Sociotechnical Systems. *Journal of Management Information Systems*, 26(1), 17-47. doi:10.2753/mis0742-1222260102
- Bowen, G. A. (2009). Document Analysis as a Qualitative Research Method. *Qualitative Research Journal*, 9(2), 27-40. doi:10.3316/QRJ0902027
- Boyd, d. m., & Ellison, N. B. (2007). Social Network Sites: Definition, History, and Scholarship. *Journal of Computer-Mediated Communication*, 13(1), 210-230.
- Bozeman, B., & Kingsley, G. (1998). Risk Culture in Public and Private Organizations. *Public Administration Review*, 58(2), 109-118. doi:10.2307/976358
- Brandel, M. (2008). Social Networking Goes Corporate. *ComputerWorld*, 42(32).
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. doi:10.1191/1478088706qp063oa
- Brinkmann, S., & Kvale, S. (2015). *Interviews: Learning the Craft of Qualitative Research Interviewing* (3rd ed.). Los Angeles: Sage.
- Brooks, J., McCluskey, S., Turley, E., & King, N. (2015). The Utility of Template Analysis in Qualitative Psychology Research. *Qualitative Research in Psychology*, 12(2), 202-222. doi:10.1080/14780887.2014.955224
- Brooks, S. (2015). Does personal social media usage affect efficiency and well-being? *Computers in Human Behavior*, 46, 26-37. doi:10.1016/j.chb.2014.12.053
- Brown, D. C. G. (2013). Accountability in a collectivized environment: From Glassco to digital public administration. *Canadian Public Administration*, 56(1), 47-69. doi:10.1111/capa.12003
- Brynjolfsson, E. (1993). The productivity paradox of information technology. *Communications of the ACM*, 36(12), 66-77. doi:10.1145/163298.163309
- Burr, V. (1995). *An Introduction to Social Constructionism*. London: Routledge.
- Burton-Jones, A., & Gallivan, M. J. (2007). Toward a Deeper Understanding of System Usage in Organizations: A Multilevel Perspective. *MIS Quarterly*, 31(4), 657-679. doi:10.2307/25148815
- Burton-Jones, A., & Grange, C. (2013). From Use to Effective Use: A Representation Theory Perspective. *Information Systems Research*, 24(3), 632-658.
- Burton-Jones, A., & Straub, D. W., Jr. (2006). Reconceptualizing System Usage: An Approach and Empirical Test. *Information Systems Research*, 17(3), 228-246.
- Burton-Jones, A., & Volkoff, O. (2017). How Can We Develop Contextualized Theories of Effective Use? A Demonstration in the Context of Community-Care Electronic Health Records. *Information Systems Research*, 28(3), 468-489. doi:10.1287/isre.2017.0702
- Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, & Social Sciences and Humanities Research Council. (2018). *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans*.

- Canadian Internet Registration Authority. (2019). Canada's Internet Factbook. Retrieved from <https://cira.ca/resources/corporate/factbook/canadas-internet-factbook-2019#section-3>
- Cao, J., Gao, H., Li, L. E., & Friedman, B. (2013). Enterprise Social Network Analysis and Modeling: A Tale of Two Graphs. *IEEE Infocom*, 2382-2390. doi:10.1109/INFCOM.2013.6567043
- Castillo-de Mesa, J., & Gómez-Jacinto, L. (2020). Connectedness, Engagement, and Learning through Social Work Communities on LinkedIn. *Psychosocial Intervention*, 29(2), 103-112. doi:10.5093/pi2020a4
- Castillo-Montoya, M. (2016). Preparing for Interview Research: The Interview Protocol Refinement Framework. *The Qualitative Report*, 21(5), 811-831.
- Cerna Aragón, D. (2017). Who is the Troll?: The Construction of Political Identities on Social Media in the Peruvian Context. *Contratexto*(28), 71-92. doi:10.26439/contratexto2017.n028.1551
- Chen, X., & Wei, S. (2019). Enterprise social media use and overload: A curvilinear relationship. *Journal of Information Technology*, 34(1), 22-38. doi:10.1177/0268396218802728
- Chin, C. P.-Y., Evans, N., & Choo, K.-K. R. (2015a). *Enterprise Social Networks: A Successful Implementation within a Telecommunication Company*. Paper presented at the Twenty-first Americas Conference on Information Systems, Puerto Rico.
- Chin, C. P.-Y., Evans, N., & Choo, K.-K. R. (2015b). Exploring Factors Influencing the Use of Enterprise Social Networks in Multinational Professional Service Firms. *Journal of organizational computing and electronic commerce*, 25(3), 289-315. doi:10.1080/10919392.2015.1058118
- Chin, C. P.-Y., Evans, N., Choo, K.-K. R., & Felix B, T. (2015). *What Influences Employees to Use Enterprise Social Networks? A Socio-Technical Perspectives*. Paper presented at the Pacific Asia Conference on Information Systems (PACIS).
- Chin, W. W., Gopal, A., & Salisbury, W. D. (1997). Advancing the Theory of Adaptive Structuration: The Development of a Scale to Measure Faithfulness of Appropriation. *Information Systems Research*, 8(4), 342-367. doi:10.1287/isre.8.4.342
- Choudrie, J., & Zamani, E. D. (2016). Understanding individual user resistance and workarounds of enterprise social networks: the case of Service Ltd. *Journal of Information Technology*, 31(2), 130-151. doi:10.1057/jit.2016.9
- Clark, I. (2005). *Legitimacy in international society*. New York; Oxford: Oxford University Press.
- Clarke, A. (2019). *Opening the Government of Canada: The Federal Bureaucracy in the Digital Age*. Toronto: UBC Press.
- Coffey, A. (2014). Analysing Documents. In U. Flick (Ed.), *The SAGE Handbook of Qualitative Data Analysis*. Los Angeles: SAGE.
- Cohen, D. J. P., & Crabtree, B. F. P. (2008). Evaluative Criteria for Qualitative Research in Health Care: Controversies and Recommendations. *Annals of Family Medicine*, 6(4), 331-339. doi:10.1370/afm.818

- Colyvas, J. A., & Jonsson, S. (2011). Ubiquity and Legitimacy: Disentangling Diffusion and Institutionalization. *Sociological Theory*, 29(1), 27-53. doi:10.1111/j.1467-9558.2010.01386.x
- Comer, J. C., & Wikle, T. A. (2008). Worldwide Diffusion of the Cellular Telephone, 1995-2005. *The Professional geographer*, 60(2), 252-269. doi:10.1080/00330120701836303
- Constant, D., Kiesler, S., & Sproull, L. (1994). What's Mine Is Ours, or Is It? A Study of Attitudes about Information Sharing. *Information Systems Research*, 5(4), 400-421. doi:10.1287/isre.5.4.400
- Cordella, A., & Tempini, N. (2015). E-government and organizational change: Reappraising the role of ICT and bureaucracy in public service delivery. *Government Information Quarterly*, 32(3), 279-286. doi:<https://doi.org/10.1016/j.giq.2015.03.005>
- Cramton, C. D. (2001). The Mutual Knowledge Problem and Its Consequences for Dispersed Collaboration. *Organization Science*, 12(3), 346-371. doi:10.1287/orsc.12.3.346.10098
- Creswell, J. W. (2013). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches* (3rd ed.). Los Angeles: SAGE Publications.
- Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches* (4th ed.). Los Angeles: Sage.
- Creswell, J. W., & Miller, D. L. (2000). Determining Validity in Qualitative Inquiry. *Theory Into Practice*, 39(3), 124-130. doi:10.1207/s15430421tip3903_2
- Culnan, M. J., McHugh, P. J., & Zubillaga, J. I. (2010). How Large U.S. Companies Can Use Twitter And Other Social Media To Gain Business Value. *MIS Quarterly Executive*, 9(4), 243-259.
- Cummings, K. M., & Proctor, R. N. (2014). The Changing Public Image of Smoking in the United States: 1964-2014. *Cancer Epidemiology, Biomarkers & Prevention*, 23(1), 32-36. doi:10.1158/1055-9965.EPI-13-0798
- Dabbagh, N., & Kitsantas, A. (2012). Personal Learning Environments, social media, and self-regulated learning: A natural formula for connecting formal and informal learning. *The Internet and Higher Education*, 15(1), 3-8. doi:<https://doi.org/10.1016/j.iheduc.2011.06.002>
- Davies, T. R., & Mintz, M. D. (2009). *Design Features for the Social Web: The Architecture of Deme*. Paper presented at the 8th International Workshop on Web-Oriented Software Technologies.
- Davis, F. D. (1985). *A Technology Acceptance Model for Empirically Testing New End-User Information Systems: Theory and Results*. (PhD), Massachusetts Institute of Technology, Cambridge, MA.
- Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User Acceptance Of Computer Technology: A Comparison Of Two Theoretical Models. *Management Science*, 35(8), 982-1003.
- Davison, R. M., Ou, C. X. J., Martinsons, M. G., Zhao, A. Y., & Du, R. (2014). The Communicative Ecology of Web 2.0 at Work: Social Networking in the Workspace. *Journal of the Association for Information Science and Technology*, 65(10), 2035-2047. doi:doi:10.1002/asi.23112

- Dawes, S. S., Cresswell, A. M., & Pardo, T. A. (2009). From “Need to Know” to “Need to Share”: Tangled Problems, Information Boundaries, and the Building of Public Sector Knowledge Networks. *Public Administration Review*, 69, 392-402. doi:10.1111/j.1540-6210.2009.01987_2.x
- Dedeoglu, B. B. (2019). Are information quality and source credibility really important for shared content on social media?: The moderating role of gender. *International journal of contemporary hospitality management*, 31(1), 513-534. doi:10.1108/IJCHM-10-2017-0691
- DeLone, W. H., & McLean, E. R. (1992). Information Systems Success: The Quest for the Dependent Variable. *Information Systems Research*, 3(1), 60-95.
- DeLone, W. H., & McLean, E. R. (2003). The DeLone and McLean Model of Information Systems Success: A Ten-Year Update. *Journal of Management Information Systems*, 19(4), 9-30.
- Department of National Defence. (2017). *Strong, Secure, Engaged - Canada's Defence Policy*. Ottawa
- DeSanctis, G., & Poole, M. S. (1994). Capturing the Complexity in Advanced Technology Use: Adaptive Structuration Theory. *Organization Science*, 5(2), 121-147.
- Devaraj, S., & Kohli, R. (2003). Performance Impacts of Information Technology: Is Actual Usage the Missing Link? *Management Science*, 49(3), 273-289.
- DiMaggio, P. J., & Powell, W. W. (1983). The Iron Cage Revisited: Institutional Isomorphism And Collective Rationality In Organizational Fields. *American Sociological Review*, 48(2), 147-160.
- DiMicco, J., Millen, D. R., Geyer, W., Dugan, C., Brownholtz, B., & Muller, M. (2008). *Motivations for Social Networking at Work*. Paper presented at the Proceedings of the 2008 ACM Conference on Computer Supported Cooperative Work, San Diego, CA, USA.
- Doll, W. J., & Torkzadeh, G. (1998). Developing a multidimensional measure of system-use in an organizational context. *Information & Management*, 33(4), 171.
- Dornbusch, S. M., & Scott, W. R. (1975). *Evaluation and the exercise of authority*. San Francisco: Jossey-Bass Publishers.
- Easton, D. (1965). *A systems analysis of political life*. New York: Wiley.
- Edwards, P., Fritz, A., & Kehoe, J. (2015). *Blueprint 2020: Building Tomorrow's Public Service Together*. Paper presented at the 4th Annual Canadian Association of Programs in Public Administration (CAPPA) Conference in Public Management: Public Management in Theory and Practice.
- Eisenhardt, K., & Graebner, M. E. (2007). Theory Building from Cases: Opportunities and Challenges. *Academy of Management*, 50(1), 25-32.
- Eisenhardt, K. M. (1989a). Agency Theory: An Assessment and Review. *The Academy of Management Review*, 14(1), 57-74. doi:10.2307/258191
- Eisenhardt, K. M. (1989b). Building Theories from Case Study Research. *The Academy of Management Review*, 14(4), 532-550. doi:10.2307/258557
- El Ouiridi, M., El Ouiridi, A., Segers, J., & Henderickx, E. (2014). Social Media Conceptualization and Taxonomy: A Lasswellian Framework. *Journal of Creative Communications*, 9(2), 107-126. doi:10.1177/0973258614528608

- Elbanna, A., & Linderoth, H. C. J. (2015). The formation of technology mental models: the case of voluntary use of technology in organizational setting. *Information Systems Frontiers*, 17(1), 95-108. doi:10.1007/s10796-014-9513-6
- Ellison, N. B., Gibbs, J. L., & Weber, M. S. (2015). The Use of Enterprise Social Network Sites for Knowledge Sharing in Distributed Organizations: The Role of Organizational Affordances. *The American Behavioral Scientist*, 59(1), 103-123. doi:10.1177/0002764214540510
- Employment and Social Development Canada. (2016). *ESDC Code of Conduct*. (SP-1111-07-16E).
- Employment and Social Development Canada. (2019). ESDC Web Handbook for Employees. Retrieved from http://esdc.prv/en/stay_connected/handbook.shtml
- Enli, G. S., & Skogerbø, E. (2013). Personalized Campaigns In Party-Centred Politics. *Information, Communication & Society*, 16(5), 757-774. doi:10.1080/1369118X.2013.782330
- Evans, S. K., Pearce, K. E., Vitak, J., & Treem, J. W. (2017). Explicating Affordances: A Conceptual Framework for Understanding Affordances in Communication Research. *Journal of Computer-Mediated Communication*, 22(1), 35-52.
- Fabre, M. (2015). Use of Social Media for Internal Communication: A Case Study in a Government Organization. In S. Nepal, C. Paris, & D. Georgakopoulos (Eds.), *Social Media for Government Services*: Springer.
- Financial Administration Act, Revised Statutes of Canada, (1985 c.F-11).
- Fishbein, M., & Ajzen, I. (1975). *Belief, Attitude, Intention, And Behavior: An Introduction To Theory And Research*. Reading, Mass: Addison-Wesley Pub. Co.
- Friedman, B. D., Burns, M. J., & Cao, J. (2014). Enterprise Social Networking Data Analytics Within Alcatel-Lucent. *Bell Labs Technical Journal*, 18(4), 89-109. doi:10.1002/bltj.21648
- Fulk, J. (1993). Social Construction Of Communication Technology. *Academy of Management Journal*, 36(5), 921-950. doi:10.2307/256641
- Fulk, J., & Boyd, B. (1991). Emerging Theories of Communication in Organizations. *Journal of Management*, 17(2), 407-446.
- Fulk, J., Schmitz, J. A., & Steinfield, C. (1990). A social influence model of technology use. In J. Fulk & C. Steinfield (Eds.), *Organizations and communication technology* (pp. 117-142). Newbury Park, CA: Sage.
- Fusi, F., & Feeney, M. K. (2016). Social Media in the Workplace: Information Exchange, Productivity, or Waste? *The American Review of Public Administration*, 48(5), 395-412. doi:10.1177/0275074016675722
- Fyfe, T., & Crookall, P. (2010). *Social Media and Public Sector Policy Dilemmas* (1-55061-100-3). Retrieved from <http://www.mikekujawski.ca/ftp/SocialMediaPublicSectorPolicyDilemmas.pdf>
- Geddes, C. (2011). Achieving critical mass in social networks. *Journal of database marketing & customer strategy management*, 18(2), 123-128. doi:10.1057/dbm.2011.14
- Gibbert, M., Ruigrok, W., & Wicki, B. (2008). What Passes as a Rigorous Case Study? *Strategic Management Journal*, 29(13), 1465-1474.
- Gibbs, G. (2007). *Analyzing Qualitative Data*. London: SAGE.

- Gibbs, J. L., Eisenberg, J., Rozaidi, N. A., & Gryaznova, A. (2015). The “Megapozitiv” Role of Enterprise Social Media in Enabling Cross-Boundary Communication in a Distributed Russian Organization. *The American Behavioral Scientist*, 59(1), 75-102. doi:10.1177/0002764214540511
- Gibbs, J. L., Rozaidi, N. A., & Eisenberg, J. (2013). Overcoming the “Ideology of Openness”: Probing the Affordances of Social Media for Organizational Knowledge Sharing. *Journal of Computer-Mediated Communication*, 19(1), 102-120.
- Gibson, J. (1977). The Theory of Affordances. In J. Bransford & R. Shaw (Eds.), *Perceiving, Acting, and Knowing: Toward an Ecological Psychology*. Hillsdale, N.J: Erlbaum.
- Giermindl, L., Strich, F., & Fiedler, M. (2017). *Why do you NOT use the Enterprise Social Network? Analyzing Non-Users’ reasons through the lens of Affordances*. Paper presented at the ICIS 2017.
- Giermindl, L., Strich, F., & Fiedler, M. (2018). *Do Enterprise Social Networks really enhance our Performance? Exploring the Relationship between Usage Practices and Individual Task Performance*. Paper presented at the Thirty Ninth International Conference on Information Systems, San Francisco.
- Gilley, B. (2009). *The Right to Rule - How States Win and Lose Legitimacy*. New York: Columbia University Press.
- Gladwell, M. (2002). *The tipping point: how little things can make a big difference*. Boston: Little, Brown.
- Goodhue, D. L., & Thompson, R. L. (1995). Task-Technology Fit and Individual Performance. *MIS Quarterly*, 19(2), 213-236. doi:10.2307/249689
- Government of Canada. (2021 July 23). Departments and agencies. Retrieved from <https://www.canada.ca/en/government/dept.html>
- Government of Canada. (2005). *Public Servants Disclosure Protection Act*.
- Government of Canada. (2013). *Blueprint 2020*. Privy Council Office Retrieved from <http://www.clerk.gc.ca/eng/feature.asp?pageId=349#i>
- Government of Canada. (2014). *Destination 2020*. Privy Council Office Retrieved from <http://www.clerk.gc.ca/eng/feature.asp?pageId=378>
- Government of Canada. (2016). Management Accountability Framework. Retrieved from <https://www.canada.ca/en/treasury-board-secretariat/services/management-accountability-framework.html>
- Grant, G., & Collins, R. (2016). *The Value Imperative - Harvesting Value from your IT Initiatives*. New York: Palgrave Macmillan.
- Grant, R. M. (1991). The Resource-Based Theory of Competitive Advantage: Implications for Strategy Formulation. *California Management Review*, 33(3), 114-135.
- Greeven, C. S., & Williams, S. P. (2017). Enterprise Collaboration Systems: Addressing Adoption Challenges and the Shaping of Sociotechnical Systems. *International Journal of Information Systems and Project Management*, 5(1), 5-23. doi:10.12821/ijispm050101
- Gurzick, D., & White, K. F. (2013). Online Personal Networks of Knowledge Workers in Computer-Supported Collaborative Learning. In (pp. 225-239). Boston, MA: Springer US.

- Haefliger, S., Monteiro, E., Foray, D., & von Krogh, G. (2011). Social software and strategy. *Long Range Planning*, 44(5-6), 297-316. doi:10.1016/j.lrp.2011.08.001
- Harden, G. (2012). Knowledge sharing in the workplace: A social networking site assessment. *45th Annual Hawaii International Conference on System Sciences*, 3888-3897. doi:10.1109/HICSS.2012.408
- Harfoush, R. (2009). *Yes we did an inside look at how social media built the Obama brand* (1st edition ed.). Berkeley, Calif: New Riders.
- Harvey, L. J., & Myers, M. D. (1995). Scholarship and practice: the contribution of ethnographic research methods to bridging the gap. *Information Technology & People*, 8(3), 13-27. doi:10.1108/09593849510098244
- Hill, C. A., Dean, E., & Murphy, J. (2014). *Social Media, Sociality, and Survey Research* (Vol. 1). Hoboken, N.J: J. Wiley & Sons.
- Hillier, E. (2014). Form, Fit, and Function – A Framework for your Bill of Material. Retrieved from <https://www.engineering.com/story/form-fit-and-function-a-framework-for-your-bill-of-material>
- Hinchcliffe, D. (2009). Determining the ROI of Enterprise 2.0. Retrieved from <http://www.zdnet.com/article/determining-the-roi-of-enterprise-2-0/>
- Hinchcliffe, D. (2015). How much can technology actually improve collaboration? Retrieved from <http://www.zdnet.com/article/how-much-can-technology-actually-improve-collaboration/>
- Holtzblatt, L., Drury, J. L., Weiss, D., Damianos, L. E., & Cuomo, D. (2013). Evaluating the Uses and Benefits of an Enterprise Social Media Platform. *Journal of Social Media for Organizations*, 1(1), 1-21.
- Hutchby, I. (2001). Technologies, Texts and Affordances. *Sociology*, 35(2), 441-456.
- IBM. Beehive (SocialBlue). Retrieved from https://researcher.watson.ibm.com/researcher/view_group.php?id=1231
- Igbaria, M., & Tan, M. (1997). The consequences of information technology acceptance on subsequent individual performance. *Information & Management*, 32(3), 113-121. doi:[http://dx.doi.org/10.1016/S0378-7206\(97\)00006-2](http://dx.doi.org/10.1016/S0378-7206(97)00006-2)
- Iivari, J. (1985). *A Planning Theory Perspective on Information System Implementation*. Paper presented at the International Conference on Information Systems 1985.
- Johnson, C. (2004). Introduction: Legitimacy Processes In Organizations. *Research in the Sociology of Organizations*, 22, 1-24. doi:10.1016/S0733-558X(04)22010-9
- Johnson, C., Dowd, T. J., Ridgeway, C. L., Cook, K. S., & Massey, D. S. (2006). Legitimacy As A Social Process. *Annual Review of Sociology*, 32, 53-78.
- Junco, R., Heiberger, G., & Loken, E. (2010). The effect of Twitter on college student engagement and grades. *Journal of Computer Assisted Learning*, 27(2), 119-132. doi:10.1111/j.1365-2729.2010.00387.x
- Kane, G. C., Alavi, M., Labianca, G., & Borgatti, S. P. (2014). What's Different About Social Media Networks?: A Framework And Research Agenda. *MIS Quarterly*, 38(1), 275-304.
- Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. *Business Horizons*, 53(1), 59-68. doi:10.1016/j.bushor.2009.09.003

- Kaplan, S., & Tripsas, M. (2008). Thinking about technology: Applying a cognitive lens to technical change. *Research Policy*, 37(5), 790-805. doi:10.1016/j.respol.2008.02.002
- Kapoor, K. K., Tamilmani, K., Rana, N. P., Patil, P., Dwivedi, Y. K., & Nerur, S. (2018). Advances in Social Media Research: Past, Present and Future. *Information Systems Frontiers*, 20(3), 531-558. doi:10.1007/s10796-017-9810-y
- Kaptein, M. (2011). From Inaction to External Whistleblowing: The Influence of the Ethical Culture of Organizations on Employee Responses to Observed Wrongdoing. *Journal of Business Ethics*, 98(3), 513-530.
- Karahanna, E., & Straub, D. W. (1999). The psychological origins of perceived usefulness and ease-of-use. *Information & Management*, 35(4), 237-250. doi:10.1016/S0378-7206(98)00096-2
- Katz, E., Haas, H., & Gurevitch, M. (1973). On the Use of the Mass Media for Important Things. *American Sociological Review*, 38(2), 164-181. doi:10.2307/2094393
- Kelton, K., Fleischmann, K. R., & Wallace, W. A. (2008). Trust in Digital Information. *Journal of the American Society for Information Science & Technology*, 59(3), 363-374.
- Kiesler, S., Kraut, R. E., Resnick, P., & Kittur, A. (2012). Regulating Behavior in Online Communities. In *Building Successful Online Communities* (pp. 125): The MIT Press.
- Kim, A. J., & Ko, E. (2012). Do social media marketing activities enhance customer equity? An empirical study of luxury fashion brand. *Journal of business research*, 65(10), 1480-1486. doi:<https://doi.org/10.1016/j.jbusres.2011.10.014>
- Klein, G. A. (1999). *Sources of Power: How People Make Decisions*: MIT Press.
- Klein, H. K., & Myers, M. D. (1999). A Set of Principles for Conducting and Evaluating Interpretive Field Studies in Information Systems. *MIS Quarterly*, 23(1), 67-93.
- Klein, K. J., Dansereau, F., & Hall, R. J. (1994). Levels Issues in Theory Development, Data Collection, and Analysis. *The Academy of Management Review*, 19(2), 195-229. doi:10.2307/258703
- Kozlowski, S., & Klein, K. (2010). A multilevel approach to theory and research in organizations: Contextual, temporal, and emergent processes. In *Multilevel Theory, Research, and Methods in Organizations*. San Francisco: Jossey-Bass.
- Kraut, R., Patterson, M., Lundmark, V., Kiesler, S., Mukophadhyay, T., & Scherlis, W. (1998). Internet paradox: A social technology that reduces social involvement and psychological well-being? *American Psychologist*, 53(9), 1017-1031. doi:<http://dx.doi.org/10.1037/0003-066X.53.9.1017>
- Kraut, R. E., Rice, R. E., Cool, C., & Fish, R. S. (1998). Varieties of Social Influence: The Role of Utility and Norms in the Success of a New Communication Medium. *Organization Science*, 9(4), 437-453.
- Kügler, M., Dittes, S., Smolnik, S., & Richter, A. (2015). Connect Me! Antecedents and Impact of Social Connectedness in Enterprise Social Software. *Business & Information Systems Engineering*, 57(3), 181-196. doi:10.1007/s12599-015-0379-z
- Kvale, S. (2007). *Doing interviews*. London: SAGE Publications.
- Kwahk, K.-Y., & Park, D.-H. (2016). The effects of network sharing on knowledge-sharing activities and job performance in enterprise social media environments.

- Computers in Human Behavior*, 55, 826-839.
doi:<http://dx.doi.org/10.1016/j.chb.2015.09.044>
- Lacity, M. C., & Janson, M. A. (1994). Understanding Qualitative Data: A Framework of Text Analysis Methods. *Journal of Management Information Systems*, 11(2), 137-155. doi:10.1080/07421222.1994.11518043
- Laïfi, A., & Josserand, E. (2016). Legitimation in practice: A new digital publishing business model. *Journal of business research*, 69(7), 2343-2352.
doi:10.1016/j.jbusres.2015.10.003
- Lamb, R., & Kling, R. (2003). Reconceptualizing Users As Social Actors in Information Systems Research. *MIS Quarterly*, 27(2), 197-235.
- Lange, A., Mitchell, S., Stewart-Weeks, M., & Vila, J. (2008). *The Connected Republic and the Power of Social Networks*. Retrieved from
<http://www.openforum.com.au/files/The%20Connected%20Republic%20and%20the%20Power%20of%20Social%20Networking%20July%202008.pdf>
- Larsson, A. O., & Moe, H. (2011). Studying political microblogging: Twitter users in the 2010 Swedish election campaign. *New Media & Society*, 14(5), 729-747.
doi:10.1177/1461444811422894
- Lee, C. S. (2001). Modeling the business value of information technology. *Information and Management*, 39(3), 191-210. doi:10.1016/S0378-7206(01)00090-8
- Lee, S. K., Kramer, M. W., & Guo, Y. J. (2019). Social media affordances in entry-level employees' socialization: employee agency in the management of their professional impressions and vulnerability during early stages of socialization. *New Technology Work and Employment*, 34(3), 244-261. doi:10.1111/ntwe.12147
- Leftheriotis, I., & Giannakos, M. N. (2014). Using social media for work: Losing your time or improving your work? *Computers in Human Behavior*, 31(Complete), 134-142.
- Leidner, D. E., Gonzalez, E., & Koch, H. (2018). An affordance perspective of enterprise social media and organizational socialization. *Journal of Strategic Information Systems*, 27(2), 117-138. doi:10.1016/j.jsis.2018.03.003
- Leonardi, P., & Neeley, T. (2017). What Managers Need To Know About Social Tools: Avoid The Common Pitfalls So That Your Organization Can Collaborate, Learn, And Innovate. *Harvard Business Review*, 95(6), 118-126.
- Leonardi, P. M. (2011a). Innovation Blindness: Culture, Frames, and Cross-Boundary Problem Construction in the Development of New Technology Concepts. *Organization Science*, 22(2), 347-369. doi:10.1287/orsc.1100.0529
- Leonardi, P. M. (2011b). When Flexible Routines Meet Flexible Technologies: Affordance, Constraint, and the Imbrication Of Human and Material Agencies. *MIS Quarterly*, 35(1), 147-168.
- Leonardi, P. M. (2013). When Does Technology Use Enable Network Change in Organizations? A Comparative Study of Feature Use and Shared Affordances. *MIS Quarterly*, 37(3), 749-775.
- Leonardi, P. M. (2014). Social Media, Knowledge Sharing, and Innovation: Toward a Theory of Communication Visibility. *Information Systems Research*, 25(4), 796-816.

- Leonardi, P. M., Huysman, M., & Steinfield, C. (2013). Enterprise Social Media: Definition, History, and Prospects for the Study of Social Technologies in Organizations. *Journal of Computer-Mediated Communication*, 19(1), 1-19.
- Leonardi, P. M., & Vaast, E. (2017). Social Media and Their Affordances for Organizing: A Review and Agenda for Research. *Academy of Management Annals*, 11(1), 150-188. doi:10.5465/annals.2015.0144
- Li, C., & Bernoff, J. (2011). *Groundswell: winning in a world transformed by social technologies* (Vol. Expand and rev.). Boston, Mass: Harvard Business Review Press.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic Inquiry*. Beverly Hills, Calif: Sage Publications.
- Liu, S. M., & Yuan, Q. (2015). The Evolution of Information and Communication Technology in Public Administration. *Public Administration and Development*, 35(2), 140-151. doi:doi:10.1002/pad.1717
- Lochri, S., Curran, R., & O'Gorman, K. (2015). Qualitative Data Gathering Techniques. In K. D. O'Gorman & R. MacIntosh (Eds.), *Research methods for business & management: a guide to writing your dissertation* (Vol. Second). Oxford: Goodfellow Publishers Limited.
- Lomborg, S. (2016). A state of flux: Histories of social media research. *European Journal of Communication*, 32(1), 6-15. doi:10.1177/0267323116682807
- Longo, J. (2017). The evolution of citizen and stakeholder engagement in Canada, from Spicer to #Hashtags: EVOLUTION OF CITIZEN AND STAKEHOLDER ENGAGEMENT. *Canadian Public Administration*, 60(4), 517-537. doi:10.1111/capa.12229
- Lu, Y., Deng, S., & Pan, T. (2019). Does usage of enterprise social media affect employee turnover? Empirical evidence from Chinese companies. *Internet Research*, 29(4), 970-992. doi:10.1108/INTR-03-2018-0140
- Lucas, H. C. (1975). The Use of an Accounting Information System, Action and Organizational Performance. *The Accounting review*, 50(4), 735-746.
- Lucas, H. C. (1978). Empirical Evidence for a Descriptive Model of Implementation. *MIS Quarterly*, 2(2), 27-42. doi:10.2307/248939
- Lucas, H. C. (1981). *Implementation: The Key To Successful Information Systems*. New York: Columbia University Press.
- Lucas, H. C. (1993a). The Business Value of Information Technology: A Historical Perspective and Thoughts for Future Research. In R. D. Banker, R. J. Kauffman, & M. A. Mahmood (Eds.), *Strategic information technology management: Perspectives on organizational growth and competitive advantage*: IGI Global.
- Lucas, H. C., & Spitler, V. K. (1999). Technology Use and Performance: A Field Study of Broker Workstations*. *Decision Sciences*, 30(2), 291-311. doi:10.1111/j.1540-5915.1999.tb01611.x
- Lucas, H. C. J. (1973). A Descriptive Model of Information Systems in the Context of the Organization. *SIGMIS Database*, 5, 27-39. doi:10.1145/2579442.2579445
- Lucas, H. C. J. (1993b). The business value of information technology: a historical perspective and thoughts for future research. In D. B. Rajiv, J. K. Robert, & M. Mo Adam (Eds.), *Strategic information technology management* (pp. 359-374): IGI Global.

- Lundberg, C. C. (2004). Is there really nothing so practical as a good theory? *Business Horizons*, 47(5), 7-14.
- Majchrzak, A., Faraj, S., Kane, G. C., & Azad, B. (2013). The Contradictory Influence of Social Media Affordances on Online Communal Knowledge Sharing. *Journal of Computer-Mediated Communication*, 19(1), 38-55.
- Mandviwalla, M., & Watson, R. (2014). Generating Capital from Social Media. *MIS Quarterly Executive*, 13(2), 97-113.
- Mangold, W. G., & Faulds, D. J. (2009). Social media: The new hybrid element of the promotion mix. *Business Horizons*, 52(4), 357-365.
doi:<https://doi.org/10.1016/j.bushor.2009.03.002>
- Markus, L. M. (1983). Power, Politics, and MIS Implementation. *Communications of the ACM*, 26(6), 430-444. doi:10.1145/358141.358148
- Markus, M. L. (1987). Toward a "Critical Mass" Theory of Interactive Media: Universal Access, Interdependence and Diffusion. *Communication Research*, 14(5), 491-511. doi:10.1177/009365087014005003
- Markus, M. L., & Robey, D. (1988). Information Technology and Organizational Change: Causal Structure in Theory and Research. *Management Science*, 34(5), 583-598. doi:10.1287/mnsc.34.5.583
- Marshall, B., Cardon, P., Poddar, A., & Fontenot, R. (2013). Does Sample Size Matter in Qualitative Research?: A Review of Qualitative Interviews in IS Research. *Journal of Computer Information Systems*, 54(1), 11-22.
doi:10.1080/08874417.2013.11645667
- Maxwell, J. A. (2005). *Qualitative Research Design: An Interactive Approach* (2nd ed. Vol. 41). Thousand Oaks, Calif: SAGE Publications.
- McCracken, G. (1988). *The Long Interview*. Newbury Park: SAGE Publications.
- McGillicuddy, A., Bernard, J.-G., & Cranefield, J. (2016). *Controlling Bad Behavior in Online Communities: An Examination of Moderation Work*. Paper presented at the Thirty Seventh International Conference on Information Systems, Dublin, Ireland.
- McKinnon, M. (2016). 2016 Canadian Social Media Use and Online Brand Interaction (Statistics). Retrieved from <http://canadiansinternet.com/2016-canadian-social-media-use-online-brand-interaction-statistics/>
- McNutt, K. (2014). Public engagement in the Web 2.0 era: social collaborative technologies in a public sector context. *Canadian Public Administration*, 57, 49-70.
- Meister, D., & Compeau, D. (2002). *Infusion of Innovation Adoption: An Individual Perspective*. Paper presented at the ASAC 2002, Winnipeg, Manitoba, Canada.
- Mergel, I. (2012). The social media innovation challenge in the public sector. *Information Polity*, 17(3-4), 281-292.
- Mergel, I. (2013a). A framework for interpreting social media interactions in the public sector. *Government Information Quarterly*, 30(4), 327-334.
doi:10.1016/j.giq.2013.05.015
- Mergel, I. (2013b). *Social media in the public sector: a guide to participation, collaboration, and transparency in the networked world*. San Francisco: Jossey-Bass.

- Mergel, I. (2016). *The Social Intranet : Insights on Managing and Sharing Knowledge Internally*.
- Mergel, I., & Bretschneider, S. I. (2013). A Three-Stage Adoption Process for Social Media Use in Government. *Public Administration Review*, 73(3), 390-400.
- Mergel, I., Mugar, G., & Jarrahi, M. H. (2012). *Forming and norming social media adoption in the corporate sector*. Paper presented at the 2012 iConference, Toronto, Ontario, Canada.
- Mettler, T., & Winter, R. (2015). Are business users social? A design experiment exploring information sharing in enterprise social systems. *Journal of Information Technology*, 31(2), 101-114. doi:10.1057/jit.2015.28
- Meyer, J. W., & Scott, W. R. (1983). Centralization and Legitimacy Problems in Local Government. In J. W. Meyer & W. R. Scott (Eds.), *Organizational environments: ritual and rationality*. Beverly Hills: Sage.
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative Data Analysis: An Expanded Sourcebook* (Second ed.). Thousand Oaks: Sage Publications.
- Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative Data Analysis: A Methods Sourcebook* (Third ed.). Thousand Oaks, California: SAGE Publications, Inc.
- Miller, G. (1997). Contextualizing Texts: Studying Organizational Texts. In R. Dingwall & G. Miller (Eds.), *Context and Method in Qualitative Research*. Thousand Oaks, Calif;London;: Sage Publications.
- Miller, H. (1996). The Multiple Dimensions of Information Quality. *Information Systems Management*, 13(2), 79.
- Mirani, R., & Lederer, A. L. (1998). An Instrument for Assessing the Organizational Benefits of IS Projects. *Decision Sciences*, 29(4), 803-838. doi:10.1111/j.1540-5915.1998.tb00878.x
- Mooney, J. G., Gurbaxani, V., & Kraemer, K. L. (1995). *A Process Oriented Framework For Assessing The Business Value Of Information Technology*. Paper presented at the International Conference on Information Systems 1995, New York, USA.
- Moore, G. C., & Benbasat, I. (1991). Development of an Instrument to Measure the Perceptions of Adopting an Information Technology Innovation. *Information Systems Research*, 2(3), 192-222. doi:10.1287/isre.2.3.192
- Morgeson, F. P., & Hofmann, D. A. (1999). The Structure and Function of Collective Constructs: Implications for Multilevel Research and Theory Development. *The Academy of Management Review*, 24(2), 249-265. doi:10.2307/259081
- Myers, M. D. (1994). A Disaster for Everyone to See: An Interpretive Analysis of a Failed IS Project. *Accounting, Management and Information Technologies*, 4(4), 185-201. doi:10.1016/0959-8022(94)90022-1
- Myers, M. D. (1997). Qualitative Research in Information Systems. *MIS Quarterly*, 12(2), 241-242. <http://www.qual.auckland.ac.nz/>
- Myers, M. D. (2004). Hermeneutics in Information Systems Research. In L. Willcocks & J. Mingers (Eds.), *Social Theory And Philosophy For Information Systems*. Chichester, West Sussex;Hoboken, N.J;: Wiley.
- Myers, M. D. (2009). *Qualitative Research In Business And Management*. Los Angeles: SAGE.

- Myers, M. D., & Newman, M. (2007). The Qualitative Interview In IS Research: Examining The Craft. *Information and Organization*, 17(1), 2-26. doi:10.1016/j.infoandorg.2006.11.001
- Nan, N. (2011). Capturing Bottom-Up Information Technology Use Processes: A Complex Adaptive Systems Model. *MIS Quarterly*, 35(2), 505-532.
- Nance, W. D. (1992). *Task/technology fit and knowledge worker use of information technology: A study of auditors*. (Dissertation/Thesis)
- Natural Resources Canada. (2012). *NRCan Values and Ethics Code*. Retrieved from
- Near, J. P., Rehg, M. T., Van Scotter, J. R., & Micheli, M. P. (2004). Does Type of Wrongdoing Affect the Whistle-Blowing Process? *Business Ethics Quarterly*, 14(2), 219-242. doi:10.5840/beq200414210
- Nel, P. (2016). The MIT Way to Spot Unicorns with Mad Cow Disease. Retrieved from <https://www.linkedin.com/pulse/mit-way-spot-unicorns-mad-cow-disease-pieter-nel>
- Norman, D. A. (1988). *The psychology of everyday things*. New York: Basic Books.
- O'Gorman, K., & MacIntosh, R. (2015). Mapping Research Methods. In *Research Methods for Business and Management* (Second ed.): Goodfellow Publishers Ltd.
- O'Gorman, K. D., Lochri, S., & Watson, A. (2015). Research Philosophy and Case Studies. In K. O'Gorman & R. MacIntosh (Eds.), *Research methods for business & management: a guide to writing your dissertation* (Second ed.). Oxford: Goodfellow Publishers Limited.
- O'Keefe, G. S., Clarke-Pearson, K., Council on, C., & Media. (2011). The impact of social media on children, adolescents, and families. *Pediatrics*, 127(4), 800-804. doi:10.1542/peds.2011-0054
- O'Reilly, T. (2007). What is Web 2.0: Design Patterns and Business Models for the Next Generation of Software. *Communications & Strategies*, 65, 17-37.
- Olfat, M., Shokouhyar, S., Ahmadi, S., Tabarsa, G. A., & Sedaghat, A. (2020). Organizational commitment and work-related implementation of enterprise social networks (ESNs): the mediating roles of employees' organizational concern and prosocial values. *Online information review*, 44(6), 1223-1243. doi:10.1108/OIR-04-2019-0124
- Olmstead, K., Lampe, C., & Ellison, N. (2015). *Social Media and the Workplace*. Retrieved from http://assets.pewresearch.org/wp-content/uploads/sites/14/2016/06/PI_2016.06.22_Social-Media-and-Work_FINAL.pdf
- Olsen, J. P. (2006). Maybe It Is Time to Rediscover Bureaucracy. *Journal Of Public Administration Research And Theory*, 16(1), 1-24. doi:10.1093/jopart/mui027
- Olsen, J. P. (2008). The Ups and Downs of Bureaucratic Organization. *11*(1), 13-37. doi:10.1146/annurev.polisci.11.060106.101806
- Omar, K., Scheepers, H., & Stockdale, R. (2014). Social Media Use in Local Government: An Australian Perspective. *International Journal of Public Administration*, 37(10), 666.
- Oostervink, N., Agterberg, M., & Huysman, M. (2016). Knowledge Sharing on Enterprise Social Media: Practices to Cope with Institutional Complexity. *Journal of Computer-Mediated Communication*, 21(2), 156-176. doi:10.1111/jcc4.12153

- Orlikowski, W. J. (1991). Integrated information environment or matrix of control? The contradictory implications of information technology. *Accounting, Management and Information Technologies*, 1(1), 9-42. doi:10.1016/0959-8022(91)90011-3
- Orlikowski, W. J. (1992). The Duality of Technology: Rethinking the Concept of Technology in Organizations. *Organization Science*, 3(3), 398-427. doi:doi:10.1287/orsc.3.3.398
- Orlikowski, W. J. (2000). Using Technology and Constituting Structures: A Practice Lens for Studying Technology in Organizations. *Organization Science*, 11(4), 404-428.
- Orlikowski, W. J., & Baroudi, J. J. (1991). Studying Information Technology in Organizations: Research Approaches and Assumptions. *Information Systems Research*, 2(1), 1-28.
- Orlikowski, W. J., & Gash, D. C. (1994). Technological frames: making sense of information technology in organizations. *ACM Transactions on Information Systems*, 12(2), 174-207. doi:10.1145/196734.196745
- Ouyang, Y., & Waterman, R. W. (2020). *Trump, Twitter, and the American Democracy Political Communication in the Digital Age* (1st ed. 2020. ed.). Cham: Springer International Publishing.
- Pammett, J. H., & Dornan, C. (2020). *The Canadian Federal Election Of 2019*. Montreal: McGill-Queen's University Press.
- Parsons, T. (1960). *Structure and process in modern societies*. Glencoe, Ill: Free Press.
- Parton, N. (2008). The Social Construction of Reality: A Treatise in the Sociology of Knowledge. *The British Journal of Social Work*, 38(4), 823-824. doi:<https://doi.org/10.1093/bjsw/bcn068>
- Patton, M. Q. (1980). *Qualitative evaluation methods*. Beverly Hills: Sage Publications.
- Pel, B. (2014). Intersections in system innovation: a nested-case methodology to study co-evolving innovation journeys. *Technology Analysis & Strategic Management*, 26(3), 307-320. doi:10.1080/09537325.2013.850656
- Petter, S., DeLone, W., & McLean, E. R. (2013). Information Systems Success: The Quest for the Independent Variables. *Journal of Management Information Systems*, 29(4), 7-62. doi:10.2753/MIS0742-1222290401
- Pew Research Center. (2019). Social Media Fact Sheet. Retrieved from <http://www.pewinternet.org/fact-sheet/social-media/>
- Pfeffer, J., & Salancik, G. R. (1978). *The External Control of Organizations: A Resource Dependence Perspective*. New York: Harper & Row.
- Privy Council Office. (23 April 2021). Public Service Renewal: Beyond2020. Retrieved from <https://www.canada.ca/en/privy-council/services/blueprint-2020/beyond-2020.html>
- Purtik, H., & Arenas, D. (2019). Embedding Social Innovation: Shaping Societal Norms and Behaviors Throughout the Innovation Process. *Business & society*, 58(5), 963-1002. doi:10.1177/0007650317726523
- Qi, C., & Chau, P. Y. K. (2018). Will enterprise social networking systems promote knowledge management and organizational learning? An empirical study. *Journal of organizational computing and electronic commerce*, 28(1), 31-57. doi:10.1080/10919392.2018.1407081

- Razmerita, L., Kirchner, K., & Nabeth, T. (2014). Social media in organizations: leveraging personal and collective knowledge processes. *Journal of organizational computing and electronic commerce*, 24(1), 74-93. doi:10.1080/10919392.2014.866504
- Rhodes, R. A. W., Wanna, J., & Weller, P. (2008). Reinventing Westminster: how public executives reframe their world. *Policy & Politics*, 36(4), 461-479. doi:10.1332/030557308X313705
- Richter, A., Hetmank, C., Klier, J., Klier, M., & Müller, M. (2016). *Enterprise Social Networks from a Manager's Perspective*. Paper presented at the 49th Hawaii International Conference on System Sciences (HICSS).
- Richter, A., & Riemer, K. (2013). Malleable End-User Software. *Business & Information Systems Engineering*, 5(3), 195-197. doi:10.1007/s12599-013-0260-x
- Ridgeway, C. L., & Berger, J. (1986). Expectations, Legitimation, and Dominance Behavior in Task Groups. *American Sociological Review*, 51(5), 603-617.
- Rocco, T. S. (2010). Criteria for evaluating qualitative studies. *Human Resource Development International*, 13(4), 375-378. doi:10.1080/13678868.2010.501959
- Rogers, E. M. (1983). *Diffusion of Innovations* (Third ed.). New York: The Free Press.
- Ross, J. W., Beath, C. M., & Goodhue, D. L. (1996). Develop Long-Term Competitiveness through IT Assets. *Sloan Management Review*, 38(1), 31-42.
- Saga, V. L., & Zmud, R. W. (1993). The Nature and Determinants of IT Acceptance, Routinization, and Infusion. *IFIP Transactions A: Computer Science and Technology* 8, 67-86.
- Saldaña, J. (2016). *The coding manual for qualitative researchers* (3rd ed.). London: SAGE.
- Sarkar, A. (2016). Learning Design: Is Form, Fit, Function (FFF) Applicable in the eLearning Industry? Retrieved from <https://elearningindustry.com/learning-design-form-fit-function-fff-applicable-elearning-industry>
- Schiller, C., & Meiren, T. (2018). *Enterprise Social Networks for Internal Communication and Collaboration*. Paper presented at the IEEE International Conference on Engineering, Technology and Innovation.
- Schram, T. H. (2003). *Conceptualizing Qualitative Inquiry: Mindwork for Fieldwork in Education and the Social Sciences*. Upple Saddle River, New Jersey: Merrill Prentice Hall.
- Schurgin O'Keeffe, G., & Clarke-Pearson, K. (2011). Clinical Report-The Impact of Social Media on Children, Adolescents, and Families. *Pediatrics (Evanston)*, 127(4), 800-804.
- Scott, W. R. (2001). *Institutions and Organizations* (2nd Ed.). Thousand Oaks, Calif: Sage Publications.
- Seddon, P. B. (1997). A Respecification and Extension of the DeLone and McLean Model of IS Success. *Information Systems Research*, 8(3), 240.
- Shahsavarani, N. (2014). *Social Media for Government Use*. (Doctor of Philosophy in Management), Carleton University, Ottawa.
- Shaw, T., & Jarvenpaa, S. (1997). Process Models in Information Systems. In A. S. Lee, J. Liebenau, & J. I. DeGross (Eds.), *Information Systems and Qualitative Research* (pp. 70-100). Boston, MA: Springer US.

- Singleton, R. A., & Straits, B. C. (2010). *Approaches to Social Research* (5th ed.). Oxford, UK: Oxford University Press.
- Skeels, M. M., & Grudin, J. (2009). *When Social Networks Cross Boundaries: A Case Study of Workplace Use of Facebook and LinkedIn*. Paper presented at the GROUP '09, Sanibel Island, Florida, USA.
- Small, T. A. (2011). WHAT THE HASHTAG?: A content analysis of Canadian politics on Twitter. *Information, Communication & Society, 14*(6), 872-895. doi:10.1080/1369118X.2011.554572
- Smith, E. R., & Semin, G. R. (2007). Situated Social Cognition. *Current Directions in Psychological Science, 16*(3), 132-135. doi:10.2307/20183180
- Soh, C., & Markus, M. L. (1995). *How IT Creates Business Value: A Process Theory Synthesis*. Paper presented at the Sixteenth International Conference on Information System, Amsterdam, The Netherlands.
- Statistics Canada. (2017 Nov 23). Education Highlight Tables, 2016 Census. Retrieved from <https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/hltfst/edu-sco/Table.cfm?Lang=E&T=11&Geo=00&View=2&Age=2>
- Suchman, M. C. (1995). Managing Legitimacy: Strategic and Institutional Approaches. *The Academy of Management Review, 20*(3), 571-610.
- Suddaby, R., Bitektine, A., & Haack, P. (2017). Legitimacy. *Academy of Management Annals, 11*(1), 451-478. doi:10.5465/annals.2015.0101
- Suddaby, R., & Greenwood, R. (2005). Rhetorical Strategies of Legitimacy. *Administrative Science Quarterly, 50*(1), 35-67.
- Sun, Y., Zhou, X., Jeyaraj, A., Shang, R.-A., & Hu, F. (2019). The impact of enterprise social media platforms on knowledge sharing. *Journal of Enterprise Information Management, 32*(2), 233-250. doi:10.1108/JEIM-10-2018-0232
- Tosi, H. L., Klein, K., & Kozlowski, S. W. (2002). Multilevel Theory, Research, and Methods in Organizations: Foundations, Extensions, and New Directions. *Administrative Science Quarterly, 47*(2), 368. doi:10.2307/3094811
- Tost, L. P. (2011). An Integrative Model Of Legitimacy Judgments. *Academy of Management Review, 36*(4), 686-710. doi:10.5465/AMR.2011.65554690
- Tracy, S. J. (2010). Qualitative Quality: Eight “Big-Tent” Criteria for Excellent Qualitative Research. *Qualitative Inquiry, 16*(10), 837-851. doi:10.1177/1077800410383121
- Treasury Board of Canada Secretariat. (2020 Aug 12). Demographic Snapshot of Canada’s Federal Public Service, 2019. Retrieved from <https://www.canada.ca/en/treasury-board-secretariat/services/innovation/human-resources-statistics/demographic-snapshot-federal-public-service-2019.html>
- Treasury Board of Canada Secretariat. GConnex - About GConnex. 2.1.0.0. Retrieved from <https://gconnex.gc.ca/help/knowledgebase#2100028949-en>
- Treasury Board of Canada Secretariat. GConnex - About the GCTools. 2.1.0.0. Retrieved from <https://gconnex.gc.ca/help/knowledgebase#2100029511-en>
- Treasury Board of Canada Secretariat. GConnex - Content Management. 2.1.1.0. Retrieved from <https://gconnex.gc.ca/help/knowledgebase#2100029483-en>
- Treasury Board of Canada Secretariat. GConnex - FAQs. 2.1.0.0. Retrieved from <https://gconnex.gc.ca/help/knowledgebase#2100029398-en>
- Treasury Board of Canada Secretariat. GCTools - Your Knowledge at Work. In.

- Treasury Board of Canada Secretariat. (27 Jun 2018). GCTools Terms and Conditions of Use. 2.1.0.0. Retrieved from <https://gcconnex.gc.ca/terms>
- Treasury Board of Canada Secretariat. (2007a). *Policy on Information Management*. Retrieved from <https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=12742§ion=html>
- Treasury Board of Canada Secretariat. (2007b). *Policy on Management of Information Technology*. Retrieved from <https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=12755§ion=html>
- Treasury Board of Canada Secretariat. (2009). *Directive on Management of Information Technology*. Retrieved from <https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=15249§ion=html>
- Treasury Board of Canada Secretariat. (2011a). *Guidelines for Discipline*. Retrieved from <https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=22370>
- Treasury Board of Canada Secretariat. (2011b). *Values and Ethics Code for the Public Sector*. Retrieved from <https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=25049>
- Treasury Board of Canada Secretariat. (2011c). *Values and Ethics Code for the Public Sector*. Retrieved from <https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=25049>
- Treasury Board of Canada Secretariat. (2012). *Policy on Harassment Prevention and Resolution*. Retrieved from <https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=26041§ion=html>
- Treasury Board of Canada Secretariat. (2013). *Policy on Acceptable Network and Device Use*. Retrieved from <https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=27122§ion=html>
- Treasury Board of Canada Secretariat. (2014). *Standard on Email Management*. Retrieved from <https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=27600§ion=html>
- Treasury Board of Canada Secretariat. (2016). *GCTools User Study*.
- Treasury Board of Canada Secretariat. (2017a). *Foundation Framework for Treasury Board Policies*. Retrieved from <https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=13616>
- Treasury Board of Canada Secretariat. (2017b). *Guideline for Employees of the Government of Canada: Information Management (IM) Basics*. Retrieved from <https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=16557§ion=html>
- Treasury Board of Canada Secretariat. (2019a). *About the TB Policy Suite*. 1.0.0.3. Retrieved from <https://www.tbs-sct.gc.ca/pol/info-eng.aspx>
- Treasury Board of Canada Secretariat. (2019b). *Browse policy instruments hierarchically*. 1.0.0.3. Retrieved from <https://www.tbs-sct.gc.ca/pol/hierarch-eng.aspx>
- Treasury Board of Canada Secretariat. (2020, 2020-10-16). *get ready! gcxchange is coming!* Retrieved from <https://intranet.canada.ca/psc-fsc/gwi-ipg/gcxchange-gcechange-eng.asp>
- Treasury Board of Canada Secretariat. (2021, 21 January 2021). *Welcome to the GCTools Ambassadors Network*. *GCTools Ambassadors Network*.
- Treem, J. W., & Leonardi, P. M. (2012). *Social Media Use in Organizations: Exploring the Affordances of Visibility, Editability, Persistence, and Association*. *Communication Yearbook*, 36, 143-189.

- Trice, A. W., & Treacy, M. E. (1988). Utilization as a dependent variable in MIS research. *SIGMIS Database*, 19(3-4), 33-41. doi:10.1145/65766.65771
- Trimi, S., & Galanxhi, H. (2014). The impact of Enterprise 2.0 in organizations. *Service Business*, 8(3), 405-424. doi:10.1007/s11628-014-0246-x
- Trochim, W. M. K., & Donnelly, J. P. (2008). *Research Methods Knowledge Base* (Vol. 3rd). Mason, Ohio: Atomic Dog/Cengage Learning.
- Tsai, H., Compeau, D., & Meister, D. (2017). Voluntary use of information technology: an analysis and synthesis of the literature. *Journal of Information Technology*, 32(2), 147-162. doi:10.1057/jit.2016.6
- Turban, E., Bolloju, N., & Liang, T.-P. (2011). Enterprise Social Networking: Opportunities, Adoption, and Risk Mitigation. *Journal of organizational computing and electronic commerce*, 21(3), 202-220.
- Turner, D., W. III. (2010). Qualitative Interview Design: A Practical Guide for Novice Investigators. *The Qualitative Report*, 15(3), 754.
- Ulmer, G., & Pallud, J. (2014). *Understanding Usages and Affordances of Enterprise Social Networks: A Sociomaterial Perspective*. Paper presented at the Twentieth Americas Conference on Information Systems, Savannah, USA.
- Vaast, E., & Kaganer, E. (2013). Social Media Affordances and Governance in the Workplace: An Examination of Organizational Policies. *Journal of Computer-Mediated Communication*, 19(1), 78-101.
- Van de Ven, A. H., & Poole, M. S. (2005). Alternative Approaches for Studying Organizational Change. *Organization Studies*, 26(9), 1377-1404. doi:10.1177/0170840605056907
- Van Osch, W., Bulgurcu, B., & Kane, G. C. (2016). *Classifying Enterprise Social Media Users: A Mixed-Method Study of Organizational Social Media Use*. Paper presented at the Thirty Seventh International Conference on Information Systems, Dublin, Ireland.
- Van Osch, W., & Mendelson, O. (2011). *A Typology of Affordances: Untangling Sociomaterial Interactions Through Video Analysis*. Paper presented at the Thirty Second International Conference on Information Systems, Shanghai, China.
- Venkatesh, V., & Davis, F. D. (2000). A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies. *Management Science*, 46(2), 186-204. doi:10.1287/mnsc.46.2.186.11926
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User Acceptance of Information Technology: Toward a Unified View. *MIS Quarterly*, 27(3), 425-478.
- Walker, H. A., Rogers, L., & Zelditch, M., Jr. (1988). Legitimacy and Collective Action: A Research Note. *Social forces*, 67(1), 216.
- Walker, H. A., Thomas, G. M., & Zelditch, M. (1986). Legitimation, Endorsement, and Stability. *Social forces*, 64(3), 620-643. doi:10.1093/sf/64.3.620
- Walsham, G. (1993). *Interpreting Information Systems In Organizations*. New York;Chichester, West Sussex, England;: Wiley.
- Walsham, G. (1995). Interpretive Case-Studies In IS Research - Nature And Method. *European Journal of Information Systems*, 4(2), 74-81. doi:10.1057/ejis.1995.9
- Walsham, G., & Waema, T. (1994). Information systems strategy and implementation: a case study of a building society. *ACM Trans. Inf. Syst.*, 12(2), 150-173. doi:10.1145/196734.196744

- Wang, Y., Deng, Q., & Ji, S. (2015). *A Review of Social Media Use in Enterprises*. Paper presented at the International Conference on Information Resources Management
- Weber, M. (1947). *The theory of social and economic organization* (A. M. Henderson & T. Parsons, Trans. T. Parsons Ed.). New York: Oxford University Press.
- Weick, K. E. (2007). The Generative Properties of Richness. *Academy of Management Journal*, 50(1), 14-19.
- Weick, K. E., & Bougon, M. G. (1986). Organizations as cognitive maps: Charting ways to success and failure. In H. P. Sims & D. A. Gioia (Eds.), *The thinking organization* (pp. 102-135). San Francisco: Jossey-Bass.
- Weill, P., & Olson, M. H. (1989). Managing Investment in Information Technology: Mini Case Examples and Implications. *MIS Quarterly*, 13(1), 3-17.
- Welch, C., & Piekkari, R. (2017). How should we (not) judge the ‘quality’ of qualitative research? A re-assessment of current evaluative criteria in International Business. *Journal of World Business*, 52(5), 714-725. doi:10.1016/j.jwb.2017.05.007
- West, E., Barron, D. N., Dowsett, J., & Newton, J. N. (1999). Hierarchies and cliques in the social networks of health care professionals: implications for the design of dissemination strategies. *Social Science & Medicine*, 48(5), 633-646. doi:10.1016/S0277-9536(98)00361-X
- Wodzicki, K., Schwämmlein, E., & Moskaliuk, J. (2012). “Actually, I Wanted to Learn”: Study-related knowledge exchange on social networking sites. *The Internet and Higher Education*, 15(1), 9-14. doi:<https://doi.org/10.1016/j.iheduc.2011.05.008>
- Yates, D., & Paquette, S. (2011). Emergency knowledge management and social media technologies: A case study of the 2010 Haitian earthquake. *International Journal of Information Management*, 31(1), 6-13. doi:10.1016/j.ijinfomgt.2010.10.001
- Yee, R. W. Y., Miquel-Romero, M.-J., & Cruz-Ros, S. (2021). Why and how to use enterprise social media platforms: The employee’s perspective. *Journal of business research*, 137, 517-526. doi:10.1016/j.jbusres.2021.08.057
- Yin, R. K. (2009). *Case Study Research: Design and Methods* (Fourth ed. Vol. 5): SAGE Publications Inc.
- Yoo, K., Bae, K., Park, E., & Yang, T. (2020). Understanding the diffusion and adoption of Bitcoin transaction services: The integrated approach. *Telematics and Informatics*, 53, 101302. doi:10.1016/j.tele.2019.101302
- Young, K. (2010). Policies and procedures to manage employee Internet abuse. *Computers in Human Behavior*, 26(6), 1467-1471. doi:<https://doi.org/10.1016/j.chb.2010.04.025>
- Zelditch, M. (2001). Processes of Legitimation: Recent developments and new directions. *Social Psychology Quarterly*, 64(1), 4-17.
- Zhu, K., & Kraemer, K. L. (2005). Post-adoption variations in usage and value of e-business by organizations: cross-country evidence from the retail industry. *Information Systems Research*, 16(1), 61-84.
- Zucker, L. G. (1989). Combining Institutional Theory and Population Ecology: No Legitimacy, No History. *American Sociological Review*, 54(4), 542-545.