

Looking to the Future: Indigenous Data Sovereignty and Policy in Canada

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Abstract

This article explores the concept of Indigenous Data Sovereignty (IDS) in Canada, examining its barriers, resources, implementation, and policy implications. While not an exhaustive list of all IDS-related policies, the article focuses on key definitions, successful implementations, support programs and resources, and outdated policies that hinder IDS and Indigenous governance practices. Through a First Nations lens, the paper highlights the importance of Indigenous People's control over data and knowledge about their communities and lands. It discusses the challenges of implementing IDS within non-Indigenous organizations and communities, including financial constraints and the influence of colonial policies. The article also addresses the impact of IDS on Indigenous self-determination, emphasizing the need for government and educational institutions to support IDS practices. Additionally, it explores the First Nations' principles of Ownership, Control, Access, and Possession (OCAP) as an example of successful IDS implementations. The paper acknowledges the role of data sovereignty in reconciliation frameworks and highlights resources such as the International Work Group for Indigenous Affairs (IWGIA) and the Global Indigenous Data Alliance (GIDA) that advocate for IDS and Indigenous self-governance. The conclusion emphasizes the ongoing need for support, collaboration, and the mobilization of UNDRIP and TRC frameworks to ensure the success of IDS and the amendment of colonial policies.

Keywords: Indigenous Data Sovereignty, Indigenous Peoples, policy, barriers, implementation, self-determination, reconciliation, information resources, UNDRIP, TRC

This paper examines Canadian Indigenous Data Sovereignty (IDS) barriers, resources, implementation, and various policies that impact IDS processes.

This article is not an exhaustive list of every IDS-related policy that exists in Canada, as that would encompass numerous institutions that are private, academic, government, corporate, etc. However, it does address various ways to improve the ever-growing field of IDS through analysis of current research and the development of

IDS procedures, including a focus on the following topics: key IDS definitions; where and how IDS has been implemented successfully; programs and resources that exist to support IDS; and policies that are outdated and colonially-influenced, which become barriers to IDS and other Indigenous governance practices. This paper has been written through a First Nations lens as these are my own people and this is an IDS context I am capable of appropriately examining. The terms "Indigenous People" and "Indigenous Peoples" will be used throughout this paper. I use these terms to denote different perspectives of Indigenous rights and ownerships in a Canadian context: I use "Indigenous People" to refer to a common Indigenous experience, irrespective of specific culture or geography, and "Indigenous Peoples" when the distinct needs, histories, and protocols of distinct Nations or communities is relevant to the issue at hand. The capitalization of the term "People" or "Peoples" is significant when addressing Indigenous identities, rights, and cultural information: this practice is supported and used in this paper, and drawn from the work of other Indigenous scholars, such as Gregory Younging's (2018) "Elements of Indigenous Style: A Guide for Writing by and About Indigenous Peoples."

What is Indigenous Data Sovereignty and Why is it Important?

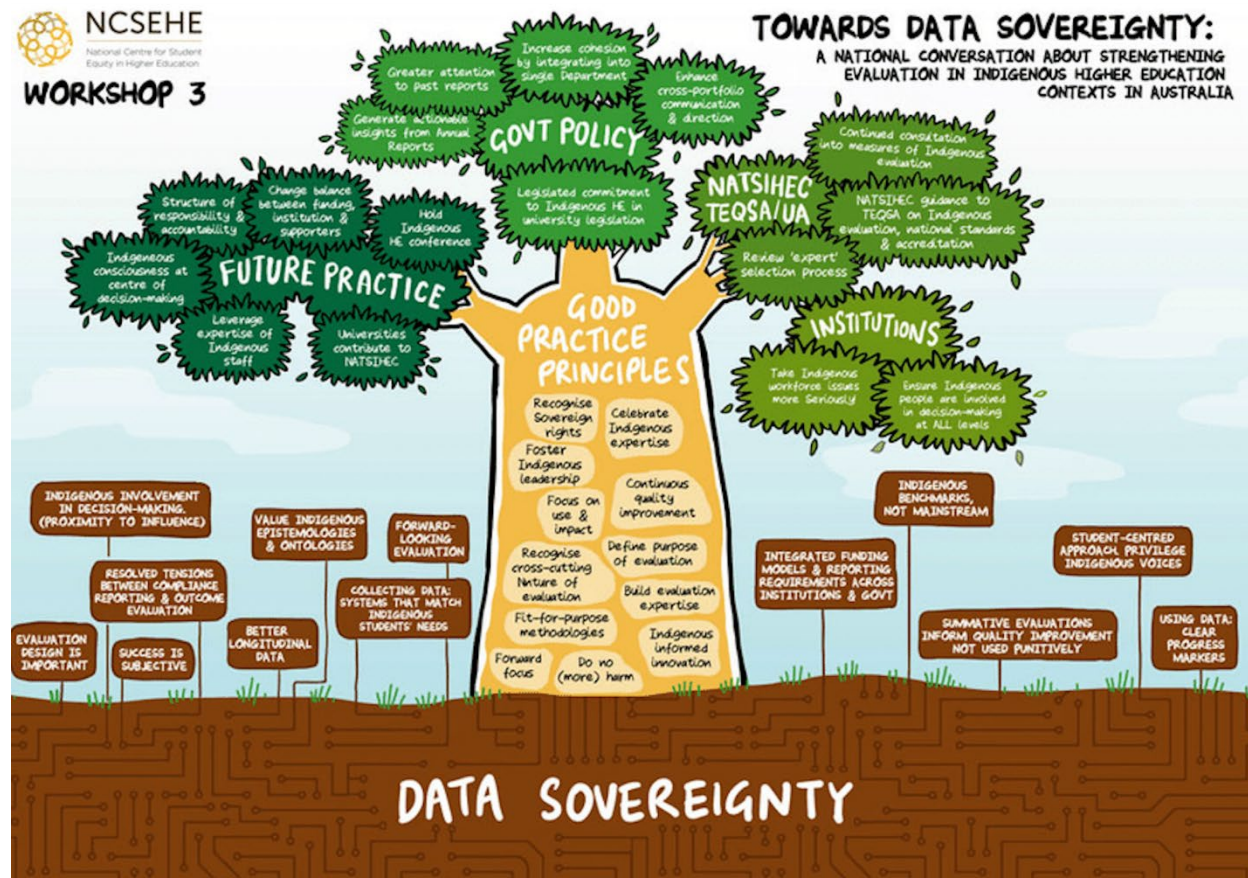
When speaking on the topic of IDS, it is essential to define how I use and visualize the term: the definition of IDS that I use and reflect on is from Rainie et al. (2019), who state that "IDS is the right of Indigenous Peoples to control data from and about their communities and lands, articulating both individual and collective rights to data access and privacy." Rainie et al.'s (2019) definition is evident in its intent: Indigenous People should have control over and rights to the information that pertains to them. The concept of Indigenous Peoples retaining the ability to manage all of the knowledge and information they generate, as well as that which is generated about them, is a new practice. The first use of the term IDS did not occur before 2016, meaning that Indigenous information has historically not been accessible to Indigenous People (Kukutai & Taylor, 2016).

IDS seems straightforward by definition *only*. Enacting IDS procedures in non-Indigenous organizations or communities is faced with many barriers and challenges

due to the fact most currently established data and knowledge management systems are created from a Westernized lens that is often incompatible with Indigenous methodologies (FNIGC, 2019). Within Indigenous communities themselves, there are major challenges to adopting IDS. One of the major barriers to implementing IDS policies include the lack of financial resources to undergo knowledge management processes, which involve purchasing expensive software and securing adequate compensation for professionals capable of maintaining IDS standards. Furthermore, remote areas may have additional difficulties with limited online access, which is a requirement for IDS work, and, as a result, may face structural issues related to technological literacy among some Indigenous Peoples (Stevens, 2008). The issues listed prior are not the sole reasons why IDS can be challenging to implement: the continuing influence of *The Indian Act*, which was initially created to assimilate Indigenous Peoples and erase their cultures, can be seen in the homogenization of information resources for Indigenous People, which were created with the assumption that all Indigenous People operate in the same way and use the same information and organizational methods. These harmful assumptions dismiss the vastness of Indigenous Peoples' cultures, identities, and uniqueness (Walter et al., 2021; Kaniki & Mphahlele, 2002).

Figure 1

Toward data sovereignty: a national conversation about strengthening evaluation in Indigenous higher contexts in Australia.



Note. Created by the National Centre for Student Equity in Higher Education, available under CC-BY 4.0.

Referring to Figure 1, a visualization of IDS practices within the government sector from the National Centre for Student Equity in Higher Education (NSCEHE, 2018), recommendations for policy development in this area are shown to be essential for a few key reasons. Firstly, Indigenous Peoples have an inherent right to self-determination and governance over their People and lands, as declared in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). Secondly, in attempts at reconciliation, having IDS policies as a guiding principle can help address the power imbalance between Indigenous and non-Indigenous researchers. Using IDS

methods can ensure Indigenous People are actively participating in and leading the conversations around Indigenous knowledge and information management (IWGIA, 2021). In order to develop and improve upon IDS practices more broadly within Canada, we must cultivate it not only within government, but within education and research institutions as well. This multilayered approach is the only way to improve current conditions for IDS policy.

Where is IDS Utilized in Canada and How Does it Impact Indigenous Peoples' Self-Determination?

In Canada, Indigenous Services Canada (ISC) is the largest department within the Government of Canada that is responsible for policies and resources for Indigenous People; accordingly, their mandate is to collaborate with Indigenous People to address socio-economic issues within Indigenous communities (Government of Canada, 2018). Despite the ISC's mandate and good intentions, being hosted at the federal level dictates that they, too, are guilty of generalizing the Indigenous population, using data that are not reflective of Indigenous People in Canada as a whole and misrepresenting many communities and geographical areas (Walter et al. 2021). A noticeable and anticipated divide is created between large governing bodies like the ISC and local Indigenous communities: this dynamic is seen in the slow transition towards self-determination in Indigenous People. ISC, should they complete their mandate to help Indigenous People achieve self-determination and governance, and establish relationships to federal government, is meant to dissolve as a unit once achieved. Services and programs from ISC, and their role as an intermediary between Indigenous Nations and government, would no longer be needed when self-determination is achieved; however, this goal of having Indigenous self-governance with federal government support has been around since 1755 when the British Crown established the Indian Department. Attempts to support Indigenous governance from a federal or provincial level, whether it be via knowledge and data governance, environmental management, or educational programming for Indigenous students, needs to be relinquished to IDS professionals and their communities to implement effective governance and self-determination (Bowie, 2013). The idea of a true equal-effort partnership is not what IDS seeks; instead, it seeks support in moving to fully

autonomous governance for each Indigenous community. This principle also extends past data and information governance as building blocks for social and political autonomy (Bowie, 2013).

First Nations Ownership, Control, Access, and Possession

A popular example of IDS implementation outside the government is in the development of the First Nations principles of Ownership, Control, Access, and Possession (OCAP). OCAP is a tool for strong data governance, made available via training sessions to anyone who works with First Nations data (FNIGC, 2022). OCAP was initially created to protect the rights of Indigenous information and data, and to ensure the right of Indigenous People to partake in knowledge management in whatever way is best for their communities (FNIGC, 2022). Many institutions and researchers are engaging with OCAP training before handling First Nations data: this practice is an act of genuine reconciliation and respect. OCAP training is a form of IDS in that it teaches many non-Indigenous researchers (private researchers, university researchers, government researchers, etc.) how to properly gain permission to initiate a study with Indigenous People and how to inform these communities of ongoing research about them (Schnarch, 2004).

However, there are many challenges to OCAP training that remain, especially those related to an unfamiliarity with how to implement its principles, leading to research projects without clear goals. For example, OCAP initiatives often face suggestions to be more flexible with how principles are applied; comments about needing more "diverse" expertise for OCAP research; and many requests to change policies within OCAP for more straightforward implementation. All of these critiques wrongly suggest that OCAP teachers and Indigenous researchers require outside support and that Indigenous People do not fully understand what research processes are required to be successful (Schnarch, 2004).

When different ways of learning and researching are considered too different and complex to follow, despite resources available to learn and adapt, this becomes an inflexible model. Non-Indigenous colonial perspectives are innately in opposition to Indigenous ways of being and are expressed through opposition to initiatives like

OCAP. I would argue that this colonial perspective of prescribing universal research practices is where improvements are evidently needed since many methodologies demand assimilation to function. Ultimately, understanding and utilizing OCAP is highly advisable when handling or engaging with First Nations information or data. This work is usually done by the lead researchers, who have undertaken OCAP training, on projects that use First Nations information, to inform and guide themselves and their teams throughout the project (Mashford-Pringle & Pavagadhi, 2020). OCAP training is critical in positioning First Nations at the core of research that involves them; however, this training is only appropriate to use with First Nations information, as it does not adhere to the research needs of other Indigenous Peoples.

Data Sovereignty and Reconciliation Frameworks

Data is regularly seen and defined as an economic and cultural resource. Laws and policies in Canada typically protect access to data. The data most governments collect, in turn, inform their policies. This is true for not only settlers but Indigenous People as well (IWGIA, 2021). The data that exists about Indigenous Peoples, as alluded to previously, tends to create an unfair assessment of Indigenous needs and an unclear picture of where policies should be focusing their efforts for improvement. In reality, due to the generalized approach for creating policies that apply to all Indigenous Peoples, government bodies create more barriers to navigate and end up working against their organizational mandates (Walter et al., 2021; IWGIA, 2021).

In Canada, we see the effects of the Truth and Reconciliation Commission (TRC) reports on Indigenous governance (including IDS) in the *Call-to-Action* number 43. This Call-to-Action advises that the federal and provincial governments change their policies regarding Indigenous self-governance to allow for the implementation of the UNDRIP reconciliation framework (Walter et al., 2021). While taking action to adhere to TRC and UNDRIP, such as revising policies and advocating for Indigenous governance, would be steps toward reconciliation, we have not seen either of these frameworks mobilized yet (Walter et al., 2021). Historically, Canadian policies have always worked against Indigenous Peoples. Residential schools largely existed due to the policies stated in the Gradual Civilization Act (1857) and the Indian Act (1985), which sought to assimilate and undermine Indigenous Peoples, causing ethnocide that carries through to today

and separates Indigenous People from their cultural knowledge in favour of colonial information systems and behaviours (Hanson, Gamez, & Manuel, 2020). While not all policies enacted upon Indigenous People residing in Canada are strictly about IDS, many of them operate to effectively remove Indigenous People from their culture. As long as policies of this kind still exist and continue to dictate Indigenous roles in larger society, adopting and implementing current reconciliation frameworks is the minimum that could be done for Indigenous Peoples.

Resources to Support Indigenous Data Sovereignty

While much more work and further governance is needed to improve policies for IDS, some positive programs, reports, principles, and groups have been created that advocate for IDS and Indigenous self-determination.

- *The International Work Group for Indigenous Affairs (IWGIA)*: this organization "works to empower Indigenous Peoples through documentation, capacity development and advocacy on local, regional and international level" (IWGIA, 2021). The IWGIA is a resource that is not only concerned with Indigenous knowledge management, but it has resources for climate change rights. It provides overviews as to what types of governance exist and how to participate in governing. In addition, it provides current updates from studies and reports, and highlights a report called *The Indigenous World*. *The Indigenous World* is a collaborative document created by Indigenous Peoples of all backgrounds and areas to report on situations in different communities where Indigenous rights are threatened, and it serves as an area to document information and injustices to have shared across the globe.
- *The Global Indigenous Data Alliance (GIDA)*: this organization serves to promote Indigenous control, ownership, and governance over Indigenous data. According to their website, GIDA was formed during UNDRIP meetings and workshops, and seeks to network with Indigenous information management professionals, researchers, and policymakers to advocate for IDS.
- *CARE Principles for Indigenous Data Governance*: one of GIDA's most notable achievements is the creation of CARE. The CARE Principles are as follows:

Collective Benefit, Authority to Control, Responsibility, and Ethics. With the world being in a phase of moving towards open access, it is essential to begin thinking of policies and procedures for how to maintain data integrity and primary ownership. Therefore, CARE was created (CARE Principles, 2021).

- *FAIR Principles*: the FAIR principles were not created by GIDA but complement the CARE principles superbly. The FAIR principles were first conceptualized in 2016 and are meant to help address barriers to data discovery and reusability in research. FAIR stands for Findable, Accessible, Interoperable, and Reusable (Wilkinson, Dumontier, Aalbersberg, et al., 2016). FAIR is also meant to be used in the open-access realm of information management and organization. While not explicitly founded for IDS purposes like CARE, both exist to enhance the online sharing space, which will hopefully, in turn, allow for IDS practices to continuously improve as well as enhance its accessibility.
- *Jordan's Principle*: this principle and support grew first out of a recent traumatic loss to Indigenous communities. Jordan's Principle is a child-focused principle that ensures First Nations children get the services they need when they need them. From the website Jordans Principle | First Nations Caring Society (2016):

Jordan River Anderson, a First Nations child from Norway House Cree Nation in Manitoba. He was born with complex medical needs, Jordan spent more than two years unnecessarily in hospital, waiting to leave, while the Province of Manitoba and the federal government argued over who should pay for his at home care—care that would have been paid for immediately had Jordan not been First Nations. Jordan died in the hospital at the age of five years old, never having spent a day in a family home.

This principle brings light to, first, how policies work against Indigenous People, as before Jordan had passed, this was the reality for many others in similar positions, and second, with IDS consideration, to the fact that Indigenous health information, practices, and methods are often discredited in institutions like hospitals (Macdonald & Attaran, 2007). This principle forces the federal and provincial governments to operate with First Nations and develop information and

health plans for these events. Ultimately, it represents one way in which self-determination for First Nations is beginning to form collaboratively (Government of Canada, 2020).

These initiatives are a small sample of some of the amendments and acts of reconciliation that have mobilized and supported Indigenous People and IDS efforts. Following through with the rest of UNDRIP and TRC is the next logical move in improving Indigenous relations and self-governance. However, utilizing resources like the CARE and FAIR principles in open-access instances is a simple step most researchers, practitioners, and institutions can participate in. Together, these resources provide a network of peers to improve any institution's Indigenous knowledge management and organizational and ethical guidelines, without that institution needing to be Indigenous-run and governed. These frameworks are for everyone who is reconciling.

Future Directions

Current areas of ongoing research in IDS in Canada involve Canada's Open Government Plan, which concerns the implementation of UNDRIP and TRC at a national level and improving upon accessible training like OCAP. Canada's Open Government Plan aims to further develop the nation-to-nation relationships among Indigenous Peoples. Improving these relationships will also lead to an easier implementation of IDS and defining the parameters of sharing across nations (Rainie et al., 2019). Utilizing the CARE and FAIR principles, as well as advocating for UNDRIP's framework, GIDA has been advancing Indigenous COVID-19 data and information and informing all health research in this area (IWGIA, 2021). IWGIA (2021) has also found that one of the most significant issues in IDS is in the private sector: government and universities seem more accepting of IDS implementation and are in the early stages of enacting it, whereas private sector institutions may have policies to follow IDS and TRC recommendations but are failing to adopt and address them. Continuing to advocate for the implementation of IDS and the amendment of colonial policies in government institutions is currently the most considerable concern for the future of IDS and where individuals, such as myself, should focus our efforts. Research and guidelines on how to

adopt IDS have been in progress for some time. Directing further study into specific Indigenous communities, assessing their IDS plans and information management practices, is a task that future Indigenous researchers should take on. Settlers should offer support to Indigenous People where it is requested and work to collaborate with the community rather than perpetuating the countless studies that have occurred to them and without them (FNIGC, 2019).

While there may be a limit to the extent settlers can contribute to the growing field of IDS, there are many ways to contribute without conducting major research projects, many of which are open to settlers and Indigenous researchers alike: volunteer in IDS spaces or your local Friendship Centre; donate money to non-profit organizations like IWGIA; and provide the expertise you have to Indigenous organizations when requested.

There are also opportunities to participate in OCAP training if you are researching First Nations groups or using First Nations data, even if collected in the past. It is important to be mindful of how you handle and use Indigenous data, making efforts to involve Indigenous People when able. Researchers should use FAIR and CARE principles in open-access work they may engage in. Additionally, if you or someone you are close to are in a leadership position at a research or cultural institution, note that many Review Ethics Board (REB) committees do not have Indigenous expertise or protocols, even when reviewing applications for Indigenous work. Therefore, forming relationships with local Indigenous communities, and gaining an Indigenous research representative for REB committees should be paramount to conduct fair and equitable research at your institution. Local government officials or policymakers could also consider advocating for improved IDS and Indigenous governance conditions. Alternatively, everyday citizens can write to their local council representatives directly to advocate for these changes. These options are only some of what exists in supporting Indigenous data rights but are a comprehensive starting place for those new to reconciliation work.

Conclusion

IDS is a complex field. While relatively new, it has historical ties to colonial practices that have affected Indigenous Peoples since the settlers arrived. IDS is a way for Indigenous People to enact their rights to self-governance, to own their data and information, and to set boundaries and create guidelines for accessibility on their terms. However, despite being a powerful concept that reinforces Indigenous Peoples' right to autonomy, IDS in practice requires ongoing support and collaboration to be implemented nationally, largely due to outdated policies that are colonially-based or policies that do not address the unique needs of distinct Indigenous groups (Bowie, 2013; Stevens, 2008). If implemented with the proper care and commitment, there is potential for IDS procedures to allow all Nations to address their unique information and data needs and avoid having their cultures and information perceived as homogenized. That said, ultimately, for IDS to be successful and for policies to be amended in a supportive fashion, the UNDRIP and TRC frameworks, which advocate for Indigenous governance, must be mobilized and adopted at the federal government level.

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