



Office of the Commissioner of

**INDIGENOUS
LANGUAGES**

The Value of Indigenous Language Vitality

An Annotated Bibliography

Table of Contents

The Value of Indigenous Language Vitality	3
General Structure	4
Sampling Methods	7
Language and Health	8
Language and Resource Management	19
Language and the Economy	24
Language and Education	27
Language and Society	31
Language and Healing	33
Language and Lawmaking	36
Language and Biodiversity	40

The Value of Indigenous Language Vitality

An Annotated Bibliography

The Value of Indigenous Language Vitality

The purpose of this annotated bibliography is to offer quantifiable ways of thinking about language vitality that extend beyond the number of language speakers and learners. Direct measures of a language's vitality such as an Indigenous language learned in the home and Indigenous mother tongue (e.g., Statistics Canada, 2023) are important for understanding how many people can speak or are learning Indigenous languages. However, these measures do not describe the effects language vitality can have on speakers, their communities and Canada at-large. For the purposes of this bibliography, the term communities will be used to refer to specific Indigenous population centers (e.g., Wikwemikong). Communities will also be used in a broader sense, to collectively include those who self-identify and affiliate themselves with an Inuit, Métis, and/or First Nations cultural and linguistic heritage, whether they are speakers or not, and whether they are on- or off-reserve.

The following annotated bibliography identifies pertinent existing research that demonstrates the tangible positive impacts that Indigenous language vitality has on Indigenous speakers, communities, and Canadian society more broadly. While the intangible benefits of a vibrantly-used Indigenous language—humanity's “collective heritage”, for example—can intuitively be grasped by many who do not have a direct stake in the language's survival, accounts of the more tangible benefits exist but are either not overly accessible to non-academic audiences or not particularly situated within a broad storyline of language loss and revitalization. The public consciousness has—by and large—begun shifting towards viewing the plight of Indigenous languages more favourably. However, there are many, especially in larger organizations, the government, and the private sector, for whom additional evidence of a language's value may be deemed necessary.

An Annotated Bibliography

The purpose of this bibliography is to serve as a tool which can be drawn upon when needed in research, reports, funding proposals or knowledge mobilization. This bibliography forms part of ongoing research into the quantifiable value of Indigenous languages, and as such, is intended to expand into future editions to accommodate new research and benefit areas. Specifically, this bibliography only contains open access sources, meaning those which are publicly available and do not require a subscription in order to be accessed.



General Structure

This annotated bibliography lists references in the APA-7 citation style followed by accompanying descriptions that summarize the resource. In addition to the APA-7 style however, resource titles will be presented in boldface to enhance readability.

This bibliography is divided into several broad 'benefit areas', listed as embedded links below:

a. Language and Health

This benefit area explores the intersections between the vitality of Indigenous languages in an Indigenous community and personal health. This review considers *personal health* from a holistic and Indigenous perspective described by Reading and Wien (2009), and understands the term *health* to encompass interrelated physical, spiritual, emotional, and mental dimensions during different times in one's life journey, including as a child, youth, and adult.

Several personal health conditions are identified in this benefit area, which correspond to the most common chronic health conditions identified by the 2018 First Nations Regional Health Survey. These include allergies, arthritis, high blood pressure, and diabetes (type 2), as well as the experience of aging when faced with obstacles in accessing culturally relevant healthcare. Similarly, this bibliography includes resources describing the outward effects and consequences of health conditions, such as on the healthcare system, economy, and society generally.

b. Language and Resource Management

This benefit area focuses on the ways language vitality can impact Indigenous communities' agency over resource extraction processes and their ability to manage the associated risks and benefits, including in mining, forestry, and water usage. The link between linguistic diversity and biodiversity is also discussed in these resources. The vitality effects are observed through the appropriate use of Indigenous terms that draws upon linguistic knowledge which is embedded within their wisdom about local environments. Positive effects are notably seen in the management of ecosystems, such as wildfire control and the protection of biodiversity.



c. Language and the Economy

This benefit area explores the ways in which increased language vitality can enhance Indigenous communities' economic outputs in viable ways, viable meaning they respect the communities' and people's needs and desires. This includes the ways that increased Indigenous language usage creates new jobs and sectors, supports speakers in new roles in existing sectors, or leads speakers to other economically viable positions. Such positions could include cultural tourism, the teaching of Indigenous languages, and the development of local businesses alongside general increases in potentially lucrative Indigenous entrepreneurship (Ochwo-Oburu, 2020 & Evans, 2021). Moreover, the link between language vitality, decreased crime rates, and better health outcomes can significantly decrease state burdens in addition to increasing the economic potential of Indigenous people.

d. Language and Education

The relationship between Indigenous language vitality and educational outcomes is increasingly recognized as pivotal in shaping students' academic success. A mounting body of evidence suggests that when students have a strong foundation in their community language, it can significantly enhance their academic performance and overall educational outcomes (McCarty, 2003; Morcom & Roy, 2017). This strong backing not only boosts proficiency in national languages like English but also fosters a deeper connection to cultural identity and heritage, which is essential to educational engagement and success (Institute of Education Sciences, 2023).

Additionally, Indigenous languages that are supported and integrated into educational frameworks can positively affect students' attitudes toward learning and their achievements in school. By valuing and maintaining their heritage languages, Indigenous students have been demonstrated to experience increased confidence and motivation, leading to more positive educational experiences and improved academic results.

e. Language and Society

This benefit area focuses on the relationship between Indigenous language vitality and societal factors, such as community safety, strength, and cohesion. This includes resources that describe the effects of language loss on community stability as well as the importance of cultural continuity—of which language is a major component—on fostering a sense of community strength and resilience (e.g., Auger, 2016). Links are drawn between language vitality and issues such as crime and recidivism (Howell, 2008).

f. Language and Healing

The benefit area of healing is explored in a holistic sense, covering spiritual, emotional, mental, and cultural healing of the self, the family, the community, and the language. While *healing* can take on many meanings, it is referred to here as it is by the Aboriginal Healing Foundation (Waldram, 2008), who describes it as an active journey to wellness that continues to unfold across one's lifetime and takes place on both a personal and societal level. For many, healing is an essential part of restabilizing and regaining control over Indigenous ways of being and knowing in the face of an ongoing and intergenerational and legacy of forced relocation, residential schools, and cultural and linguistic genocide. Healing can take on many different forms, depending on the contexts and histories of those undergoing their journey. This benefit area explores works that focus specifically on how supporting language vitality can contribute to these journeys of healing to benefit both speakers and language communities.

g. Language and Lawmaking

This benefit area focuses on the importance of Indigenous language vitality in communities' abilities to implement traditional laws and build constitutions that are recognized more broadly. As an example of this, Borrows (2022) discusses the relationship between Indigenous laws and nature, while noting that the community language is the key to understanding this relationship. Similarly, Metallic (2023) indicates that Indigenous laws ought to be implemented in the corresponding Indigenous language to be properly interpreted and exercised. It should be stressed that the right for Indigenous Peoples to exercise legal autonomy is essential to autonomy in other domains, such as cultural continuity and resource management (Gunn, 2007).

h. Language and Biodiversity

This benefit area explores the intimate relationships between Indigenous peoples and the lands they occupy, and how these relationships impact biodiversity. Generally, the sources in this section support a positive relationship between Indigenous language vitality and biodiversity, suggesting that communities where language and cultural transmission are strong have retained an intimate knowledge of the natural environment useful in conservation efforts (e.g., Frainer et al., 2020; Zimmer, 2024) and are better-equipped to engage in sustainable land-stewardship (e.g., Stoffle et al., 2023) and ecological observation (e.g., Alexander et al., 2011).

Sampling Methods

a. Keyword Search

Relevant terms are input into search engines such as Google Scholar. Examples are detailed below:

- Indigenous Language Health
- Indigenous Language Healing
- Indigenous Language Diabetes
- Diabetes Healthcare Cost Canada
- Indigenous Language HIV
- HIV Healthcare Cost Canada
- Indigenous healthcare perspectives
- Inuit healthcare access language
- Indigenous language education success
- Indigenous language education experience
- Indigenous Fire Management
- Indigenous Constitution Building
- Indigenous Entrepreneurship
- Language vitality and biodiversity

b. Browsing resources' References sections

c. Search of existing bibliographies

Several bibliographies already identify research linking Indigenous language vitality to some of our identified benefit areas. These include bibliographies compiled by Dr. Heather Bliss and publicly available works such as an annotated bibliography compiled by van Beek (2016) for the First Peoples' Cultural Council (FPCC).



Language and Health

A

Anja, B., & Laura, R. (2017). **The cost of diabetes in Canada over 10 years: applying attributable health care costs to a diabetes incidence prediction model.** *Health Promotion and Chronic Disease Prevention in Canada: Research, Policy and Practice*, 37(2), 49–53.

This article provides an analysis of the economic burden of diabetes on the Canadian healthcare system and introduces the Diabetes Population Risk Tool to forecast future costs over a decade. The authors apply this tool to predict how diabetes incidence could impact healthcare expenditures, providing insights for long-term health planning. The study's findings are intended to assist health planners and policymakers in developing strategies to manage and mitigate the financial impact of diabetes. Furthermore, they underscore the importance of proactive planning and resource allocation in chronic disease management.

Auger, M. D. (2016). **Cultural continuity as a determinant of Indigenous Peoples' health: A metasynthesis of qualitative research in Canada and the United States.** *International Indigenous Policy Journal*, 7(4), 1–24.

In this article, Auger explores the concept of cultural continuity and its impact on the health outcomes of Indigenous Peoples. The meta-analysis argues that maintaining and revitalizing cultural practices, traditions, and community connections plays a crucial role in improving health and well-being among Indigenous populations, including better mental health, reduced substance abuse, and increased life satisfaction. By examining various case studies and empirical data, the article highlights the importance of integrating cultural factors into health policy and intervention strategies. This work contributes to the understanding of how cultural engagement and strengthening can promote health, offering insights for policymakers, health practitioners, and Indigenous communities.

B

Bourke, S., Wright, A., Guthrie, J., Russell, L., Dunbar, T., & Lovett, R. (2018). **Evidence review of Indigenous culture for health and wellbeing.** *The International Journal of Health, Wellness and Society*, 8(4), 11–27.

A comprehensive review of literature examining the impact of Indigenous culture on health and wellbeing, highlighting both positive effects and gaps in current research. It assesses the quality of evidence across various studies, identifies recurring limitations, and discusses the representation of Indigenous perspectives within the literature. The review is valuable for understanding the strengths and weaknesses of existing research and emphasizes the need for incorporating Indigenous viewpoints to improve the effectiveness of healthcare interventions.

C

Cheran, K., Murthy, C., Bornemann, E. A., Kamma, H. K., Alabbas, M., Elashahab, M., ... & Venugopal, S. (2023). **The growing epidemic of diabetes among the Indigenous population of Canada: A systematic review.** *Cureus, 15*(3), e36713.

This meta-analysis synthesizes findings from 13 studies on the incidence of diabetes in Indigenous communities across Canada, highlighting key sociocultural factors influencing both diabetes prevalence and management. The review also examines diabetes complications, the challenges faced in disease management, and the associated costs to the Canadian healthcare system. Notably, the authors, who are ostensibly not Indigenous and did not conduct the research within Canada, bring an external perspective that might impact the contextual relevance of their findings. This study is valuable for understanding the broader epidemiological trends and challenges but should be considered alongside research conducted by Indigenous communities.

Crowshoe, L., Dannenbaum, D., Green, M., Henderson, R., Hayward, M. N., Toth, E., & Diabetes Canada Clinical Practice Guidelines Expert Committee. (2018). **Type 2 diabetes and Indigenous peoples.** *Canadian Journal of Diabetes, 42*, S296–S306.

A set of guidelines and considerations for healthcare professionals working with Indigenous communities, focusing on the nuances of Type 2 diabetes management within these populations. It addresses social and colonial barriers to treatment and access, emphasizing how colonization and language loss significantly impact health outcomes (p.S297). The guidelines aim to enhance culturally sensitive care and improve engagement with Indigenous peoples by highlighting systemic challenges and proposing actionable strategies for overcoming them. This resource may be useful for healthcare workers seeking to provide equitable and effective diabetes care in Indigenous contexts.

Crowshoe, L. L., Henderson, R., Jacklin, K., Calam, B., Walker, L., & Green, M. E. (2019). **Educating for Equity Care Framework: Addressing social barriers of Indigenous patients with type 2 diabetes.** *Canadian Family Physician, 65*(1), 25–33.

This article presents, with case studies, the E4E Care Framework for addressing social factors for Indigenous patients with Type 2 Diabetes. Culture is recognized as a facilitator in diabetes management and is noted too often be ignored in the clinical process. Additionally, instruction is given to care providers on identifying resource limitations that influence diabetes management and educating patients on culturally compatible care. This includes recognizing elements of socioeconomic resource disparities, knowledge barriers, personal/collective loss, and the ongoing intergenerational effects of residential schools. In addition to discussing framework elements, the researchers also provide insights into their process of framework development.

“Not only do our languages tie us to our history, spirituality, culture and the land, they also are a source of knowledge about our health and well-being” (FPCC, 2018).

F

First Nations Health Authority (2018). **First Nations Regional Health Survey: Phase 3 (2015-17)**. First Nations Health Authority. https://fnigc.ca/wp-content/uploads/2020/09/53b9881f96fc02e9352f7cc8b0914d7a_FNIGC_RHS-Phase-3-Volume-Two_EN_FINAL_Screen.pdf

This report comprises phase 3 of a longitudinal survey that provides detailed qualitative and quantitative information about the health status, health behaviors, and social determinants of First Nations communities in Canada. Phase 3 involved a community-based approach, gathering data through face-to-face interviews with First Nations people, as well as community consultations. Key findings highlight significant health disparities, including higher rates of chronic diseases, mental health challenges, and substance use among First Nations people compared to the general Canadian population. The results are intended to inform policymaking and health interventions, offering a foundation for addressing health challenges and reducing disparities within First Nations communities.

Flood, D., & Rohloff, P. (2018). **Indigenous languages and global health**. *The Lancet Global Health*, 6(2), e134–e135.

This mini article presents Indigenous languages as both a vital component of effective health models and a potential barrier to accessing healthcare. The authors discuss how incorporating Indigenous languages into health services can improve communication and health outcomes for Indigenous patients, while also noting the challenges that language barriers pose in healthcare delivery.

FPCC. (2018). **First Nations language and health** [Brochure]. First Peoples' Cultural Council Fact Sheet Series, 10. <https://fpcc.ca/wp-content/uploads/2020/05/Fact Sheet 10 Language Health.pdf>

Fact sheet containing a plain-English overview of the connection between language and health, discussion of why this connection is important, and a note about what readers can do to strengthen these connections. This fact sheet is generated by the First Peoples' Cultural Council, which is a known and respected Indigenous organization and research agency.

H

Hamel, D., Hamel, G., Gagnon, S. (2020). **Methodological Report**. Nunavik Inuit Health Survey 2017 Qanuilirpitaa? How are we now? Quebec: Nunavik Regional Board of Health and Social Services (NRBHSS) & Institut national de santé publique du Québec (INSPQ). https://nrbhss.ca/sites/default/files/health_surveys/A11991_RESI_Rapport_methodologique_EP4.pdf

An in-depth analysis of the research methods used in the 2017 Nunavik Inuit Health Survey. The report outlines the survey's design, including sampling techniques, data collection procedures, and the tools employed to assess the health and well-being of the Nunavik Inuit population. The methodological rigor demonstrated in this report ensures the reliability and validity of the data collected, making it an essential resource for researchers and policymakers interested in Inuit health and public health interventions in Northern Quebec. Additionally, the report contains approximately 5 questions related to the use of the Inuttitut language.

J

Jenni, B., Anisman, A., McIvor, O., & Jacobs, P. (2017). **An exploration of the effects of mentor-apprentice programs on mentors' and apprentices' wellbeing.** *International Journal of Indigenous Health, 12*(2), 25–42.

This study, based on two years of interviews and focus groups, examines how Mentor-Apprentice Programs (MAPs) affect the wellbeing of both mentors and apprentices. It identifies six key themes: 1) Cultural and spiritual health and healing, 2) Health outcomes, 3) The impact of language loss on Indigenous wellbeing, 4) The link between MAP commitment and participant wellbeing, 5) Preparing apprentices as future community leaders, and 6) Elders' healing through their role as language mentors.

K

King, M., Smith, A., & Gracey, M. (2009). **Indigenous health part 2: The underlying causes of the health gap.** *The Lancet, 374*(9683), 76–85.

This review examines the root causes of health disparities between Indigenous and non-Indigenous populations, highlighting systemic and social factors contributing to the health gap. The authors emphasize the importance of language as a key element of identity and health, noting its critical role in maintaining cultural connection and overall wellbeing (p.78). Additionally, this review provides a comprehensive analysis of the broader determinants of health disparities and underscores the need for culturally informed approaches to address these gaps.

L

Loppie, C. (2021). **Health promotion among older Indigenous people.** In I. Rootman, P. Edwards, M. Levasseur, & F. Grunberg (Eds.), *Promoting the Health of Older Adults: The Canadian Experience* (pp. 235–251). Canadian Scholars Press.

This chapter discusses the experiences and contexts of Indigenous peoples, and especially the aging population with relation to the healthcare system. This includes some summary statistics from the 2012 Aboriginal Peoples' Survey, and the identification of significant health issues many individuals face. Determinants are cited, including Toxic vs. Nurturing Stem Environments (e.g., low-income vs. family supports), Toxic vs. Nurturing Core Environments (e.g., poor infrastructure vs. value of being an Elder), and Toxic vs. Nurturing Root Environments (e.g., Residential Schools vs. a sense of interconnection with past and future generations. Overall, this account provides an important overview of Indigenous perspectives and challenges in health.

M

McIvor, O. (2013). **Protective effects of language learning, use and culture on the health and well-being of Indigenous people in Canada.** *Proceedings of the 17th FEL Conference*. FEL XVII: Endangered Languages Beyond Boundaries: Community Connections, Collaborative Approaches and Cross-Disciplinary Research, Ottawa, ON (pp. 123–131). Carleton University.

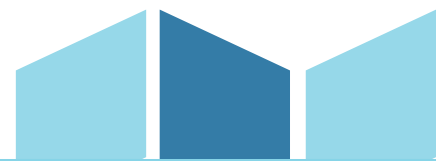
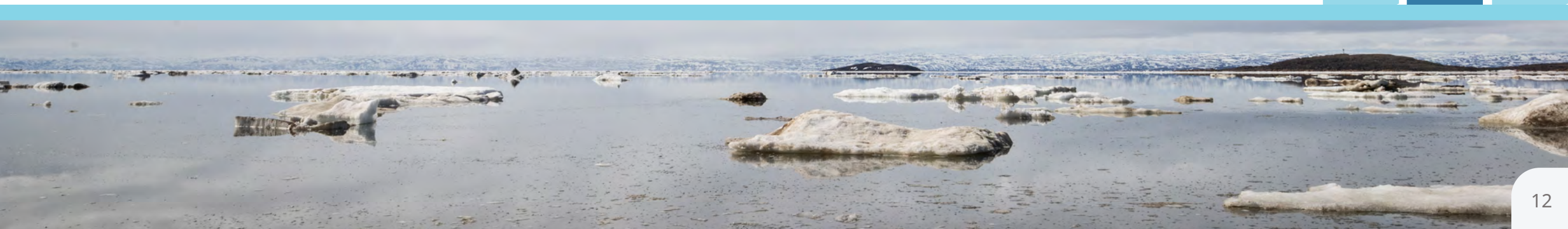
Exploration of the literature discussing the protective effects of traditional language and culture on health outcomes for Indigenous people. This includes fostering connection to the land which in turn positively impacts health, promoting traditional medicine, strengthening spirituality as preventative medicine, and forming an important part of traditional foods and activities.

McIvor, O., Chew, K. A., & Stacey, K. N. I. (2020). **Indigenous language learning impacts, challenges and opportunities in COVID-19 times.** *AlterNative: An International Journal of Indigenous Peoples*, 16(4), 409–412.

Situation Report discussing challenges to Indigenous language learning due to the COVID-19 pandemic, with examples from Kanyen'ke:hà, Chickasaw, and Swampy Cree. The authors, each from Indigenous communities working to revitalize and strengthen their languages, note that many programs' funding and implementation have been deprioritized at the risk of remaining a low priority. However, the authors also note opportunities in language education that have arisen due to the increasingly online nature of education generally, which can be beneficial in linking those living away from community with educators and other learners.

McIvor, O., Napoleon, A., & Dickie, K. M. (2009). **Language and culture as protective factors for at-risk communities.** *International Journal of Indigenous Health*, 5(1), 6–25.

A literature review/analysis focusing on the role of Indigenous language in improving health outcomes and reducing risk factors for health problems. This research identifies six linked themes as protective factors against health issues, of which language is repeatedly cited. While this research is based on a university setting, it is carried out by Indigenous scholars working from both community and post-secondary perspectives.



N

Miller, J. (2024, February). **Language barriers in the clinic could harm children's health.** *Harvard Medicine*. <https://magazine.hms.harvard.edu/articles/language-barriers-clinic-could-harm-childrens-health>

In this magazine article, Miller examines the critical issue of language barriers in clinical settings and their potential impact on children's health. The piece highlights how communication challenges between healthcare providers and patients who speak minority and Indigenous languages can lead to misunderstandings, inadequate treatment, and negative health outcomes for children. Strategies for addressing these challenges are proposed, such as employing medical interpreters and improving language access services. The article underscores the need for systemic changes to ensure that all patients, regardless of their language background, receive equitable and effective medical care.

Newell, S. L., Dion, M. L., & Doubleday, N. C. (2020). **Cultural continuity and Inuit health in Arctic Canada.** *Journal of Epidemiological Community Health*, 74(1), 64–70.

This article explores the relationship between cultural continuity and health outcomes among Inuit populations in Arctic Canada and analyzes how the revitalization of Inuit cultural practices, including traditional knowledge and community traditions, impact health and well-being. The study uses a mix of quantitative and qualitative methods to assess the influence of cultural factors on health indicators, such as mental health, chronic disease prevalence, and overall quality of life. The findings suggest that stronger cultural continuity is associated with better health outcomes, emphasizing the importance of integrating cultural practices into public health strategies.

O

O'Brien, J. A., Patrick, A. R., & Caro, J. J. (2003). **Cost of managing complications resulting from type 2 diabetes mellitus in Canada.** *BMC Health Services Research*, 3, 1–11.

An analysis of the costs associated with managing complications from type 2 diabetes mellitus in Canada. The authors break down the financial impact of various diabetes-related complications, including strokes, diabetic foot ulcers, amputations, and heart attacks, on both personal and public healthcare expenses. The study highlights the substantial economic burden of these complications and emphasizes the need for effective management strategies to mitigate costs. Although the data are specific to the year 2000 and may not reflect current economic conditions, the findings still offer insights into the historical costs and help inform current discussions on the financial implications of diabetes management.

P

Oster, R. T., Grier, A., Lightning, R., Mayan, M. J., & Toth, E. L. (2014). **Cultural continuity, traditional Indigenous language, and diabetes in Alberta First Nations: A mixed methods study.** *International Journal for Equity in Health, 13*, 1–11.

This mixed-methods study investigates the relationship between cultural continuity, including the use of local Indigenous languages, and the prevalence of Type 2 diabetes among Alberta First Nations communities. The research finds that communities with stronger cultural preservation and language use may experience lower rates of Type 2 diabetes, when socio-economic factors are accounted for. The study combines qualitative interviews with Indigenous leaders and a quantitative cross-sectional analysis using provincial administrative and publicly available data. These findings suggest that cultural and linguistic continuity can play a protective role against diabetes, highlighting the importance of Indigenous languages in supporting favourable health outcomes.

Parker, A., & Gessner, S. (2017, March). ***Our language is our health: Connecting language revitalization to health outcomes for Indigenous communities*** [Presentation]. Talk given at the 5th International Conference on Language Documentation (ICLDC), University of Hawai'i at Mānoa.

This talk focuses on language as a wellness indicator, cites improvement in the management of diabetes symptoms, lower suicide rates, and resiliency to HIV. Also mentions improved high-school graduation rates as well as success at post-secondary institutions.

Pearce, M. E., Jongbloed, K. A., Richardson, C. G., Henderson, E. W., Pooyak, S. D., Oviedo-Joekes, E., ... & Cedar Project Partnership (2015). **The Cedar Project: resilience in the face of HIV vulnerability within a cohort study involving young Indigenous people who use drugs in three Canadian cities.** *BMC Public Health, 15*, 1–12.

This academic article reports on The Cedar Project, an ongoing community-driven and Indigenous-governed research study examining factors that contribute to resilience against HIV and hepatitis C among young Indigenous people who use drugs in Vancouver and Prince George. The research identifies cultural connectedness, including a history of Indigenous language use, as a significant factor associated with higher resilience scores by acting as a buffer against the impacts of historical and lifetime trauma. As such, this research offers valuable insights into the role of cultural engagement in promoting health and resilience in vulnerable populations.

R

Reading, C. L., & Wien, F. (2009). ***Health inequalities and the social determinants of Aboriginal peoples' health*** (pp. 1–47). National Collaborating Centre for Aboriginal Health.

An overview of health inequalities experienced by Indigenous people in Canada, that is based around social determinants of health across the lifespan. This overview illustrates disparities in health and healthcare among Indigenous Peoples and focuses on social determinants. This paper forms an important background to many systemic issues Indigenous Peoples face in the healthcare system, from an Indigenous perspective.

Reo, N. J., Topkok, S. M., Kanayurak, N., Stanford, J. N., Peterson, D. A., & Whaley, L. J. (2019). **Environmental change and sustainability of Indigenous languages in Northern Alaska.** *Arctic*, 72(3), 215–228.

This article describes how climate change is impacting the ways in which Inupiat and Yup'ik are being used. It does so by explaining the deep connection between the terms used for subsistence living, a vital means of survival where groceries costs are high in the North, and the environment. Indigenous knowledge, which is vital for resource management, also draws upon these connections between environment, language, and traditional cultural practices.

Romain, S. J. (2013). **Pharmaceutical health care and Inuit language communications in Nunavut, Canada.** *International Journal of Circumpolar Health*, 72(1), 21409.

This article investigates the challenges and barriers related to pharmaceutical health care in Nunavut, with a particular focus on communication issues arising from language differences. The lack of Inuit language services in the pharmaceutical sector is noted to affect medication management, patient understanding, and overall health outcomes. An analysis of case studies and interviews with healthcare professionals and Inuit patients identifies gaps in language support and suggests practical solutions to improve communication. The article advocates for enhanced language services and cultural competency training to bridge communication gaps and ensure more equitable access to pharmaceutical care.

Rowe, D. J. (2023, April 7). **First-ever Inuktitut eye chart reaches Indigenous communities in their language.** *CTV News Montreal*. <https://montreal.ctvnews.ca/first-ever-inuktitut-eye-chart-reaches-indigenous-communities-in-their-language-1.6347015?cache=wcoseppn%2F7.656243>

This online CTV news article reports on the use of the first-ever eye chart in Inuktitut, designed to cater specifically to Indigenous communities in Canada that make use of syllabics. The eye chart, which was developed to improve accessibility and inclusivity in eye care, represents a significant step forward in providing healthcare resources in Indigenous languages. The article highlights the broader impact of language-specific medical tools in enhancing patient engagement and ensuring that Indigenous communities receive culturally relevant care.

Rosella, L. C., Lebenbaum, M., Fitzpatrick, T., O'reilly, D., Wang, J., Booth, G. L., ... & Wodchis, W. P. (2016). **Impact of diabetes on healthcare costs in a population-based cohort: a cost analysis.** *Diabetic Medicine*, 33(3), 395–403.

This study conducts a high-resolution analysis of healthcare costs attributable to diabetes using a sample of 699,042 cases in Ontario. The researchers compare per-person healthcare costs for adults with diabetes to those of controls, finding that diabetes is associated with up to \$10,000 CAD in attributable costs per person over an 8-year period. This research is pivotal for understanding the economic impact of diabetes and can guide healthcare policy and resource allocation aimed at managing and mitigating these costs.

Walsh, M. (2018). **“Language is Like Food...”: Links Between Language Revitalization and Health and Well-being.** In L. Hinton, L. Huss, & G. Roche (Eds.), *The Routledge Handbook of Language Revitalization* (pp. 5–12). Routledge.

This book chapter provides an account of observed links between language revitalization and health and well-being, emphasizing its significance in Indigenous contexts. Walsh discusses how revitalizing Indigenous languages can positively affect mental and emotional health, cultural identity, and overall well-being, drawing parallels between language and food as essential components of cultural and personal sustenance. Although the focus is on Australian Indigenous contexts, the chapter also references studies from other countries, making its insights more applicable to global contexts.

“Largely because of the costs incurred through complications, diabetes is one of the most costly health conditions to manage.” (Rosella et al., 2015).

Webster, P. (2018). **Language barriers restricting access to health care for Indigenous populations.** *CMAJ: Canadian Medical Association Journal*, 190(24), e754.

This academic news article highlights how linguistic challenges contribute to disparities in health outcomes and hinder effective communication between Indigenous patients and healthcare providers. The article underscores the need for systemic changes, including the integration of language services and cultural competency training for healthcare professionals, to improve health equity. This resource is important for understanding how language barriers contribute to health disparities and for informing strategies to enhance accessibility and quality of care for Indigenous communities. It is important to note that this article is written from a non-Indigenous medical perspective, exemplified by the misspelled “Inuktituk” (Inuktitut) throughout.

“Indigenous languages carry values that are health-promoting, including traditional foods practices and consumption, activities (exercise) to participate in, community relationship, and spiritual practices; these all relate to positive health outcomes.” (Whalen et al., 2022)

Whalen, D. H., Lewis, M. E., Gillson, S., McBeath, B., Alexander, B., & Nyhan, K. (2022). **Health effects of Indigenous language use and revitalization: A realist review.** *International Journal of Equity Health*, 21, 1–14.

This article provides a review of existing studies that documents the far reaching mental and physical health benefits of language vitality in Indigenous communities. Specifically, language instruction and vitality are noted as protective factors that are cost-effective, especially when compared to the costs associated with healthcare factors such as diabetes, obesity, and substance use. Studies that state these claims are listed and categorized according to whether they are qualitative or quantitative, and whether they find language revitalization measures impact health issues positively, negatively, or neutrally.

Whalen, D. H., Moss, M., & Baldwin, D. (2016). **Healing through language: Positive physical health effects of Indigenous language use.** F1000Research. <https://f1000research.com/articles/5-852/v1>

This article, still awaiting formal publication, investigates the positive physical health effects associated with the use of Indigenous languages. The authors present evidence showing that engaging with Indigenous languages can contribute to improved health outcomes, highlighting how language use is linked to enhanced mental and physical well-being. They discuss various studies and data that support the notion that language revitalization and cultural engagement have tangible health benefits, including reduced stress and better overall health. Additionally, the article emphasizes the role of language in fostering a sense of identity and community, which in turn supports health and healing.

Wilson, C., Oliver, V., Flicker, S., Prentice, T., Jackson, R., Larkin, J., ... & Mitchel, C. (2016). **'Culture' as HIV prevention: Indigenous youth speak up!** *Gateways: International Journal of Community Research and Engagement*, 9(1), 74–88.

This article explores how Indigenous youth involved in an HIV intervention project use cultural practices as a means of self-definition and resistance. Through an art-based approach, the research examines how these youth reclaim their cultures to address HIV prevention and health promotion. The study focuses on customized arts-based weekend workshops led by Indigenous youth coordinators, which facilitated discussions on the links between structural inequality and HIV. The findings highlight the effectiveness of incorporating cultural elements into health interventions and demonstrate how culture can serve as a powerful tool for resistance and health promotion within Indigenous communities.



Language and Resource Management

A

Andre, A., Kritsch, I., Benson, K., & Snowshoe, S. (2023). *An Indigenous place names handbook: Sharing the Gwich'in experience in Canada*. Gwich'in Tribal Council and Natural Resources Canada. <https://natural-resources.canada.ca/sites/nrcan/files/pdf/SharingGwichinExperience-en.pdf>

This handbook, produced by the Gwich'in Tribal Council in collaboration with Natural Resources Canada, provides a comprehensive guide for Indigenous communities on repatriating their place names. It draws on over two decades of research conducted in the Gwich'in Settlement Region, directed by Gwich'in Elders and traditional land users. The handbook includes information such as GIS database management practices, engagement protocols, and verification of the incoming data. The handbook is intended for community-led place names research, verification of spellings, and replacing colonial names on official maps.

B

Banerjee, S. (2020, November 30). *Protecting Indigenous languages is protecting biodiversity* [Article]. Common Dreams. <https://www.commondreams.org/views/2020/11/30/protecting-indigenous-languages-protecting-biodiversity>

This article highlights how Indigenous languages embody unique knowledge systems that reflect deep relationships with the environment. Banerjee emphasizes that the loss of these languages threatens not only cultural heritage but also valuable ecological wisdom essential for sustainable practices. Through various examples, Banerjee illustrates how Indigenous communities utilize their languages to navigate and manage natural resources effectively.

C

Chiblow, S., & Meighan, P. J. (2022). *Language is land, land is language: The importance of Indigenous languages*. *Human Geography*, 15(2), 206–210.

This article explores the intrinsic connection between Indigenous languages and their corresponding landscapes. The authors argue that Indigenous languages are deeply intertwined with cultural and environmental knowledge, reflecting the relationship between people and their land. By examining how Indigenous languages convey ecological wisdom and cultural identity, the paper emphasizes the significance of these languages in sustaining traditional knowledge systems and promoting environmental stewardship. The authors highlight case studies demonstrating the role of language in land management and cultural practices.

E

Environmental Assessment Office. (2020, April). ***Guide to Indigenous knowledge in environmental assessments*** [Report]. (Version 1). Government of British Columbia. https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/environmental-assessments/guidance-documents/2018-act/guide_to_indigenous_knowledge_in_eas_v1_-_april_2020.pdf

This report, authored by the Environmental Assessment Office in British Columbia, provides a comprehensive guide on incorporating Indigenous knowledge into environmental assessments. It emphasizes the importance of recognizing and integrating traditional ecological knowledge to enhance the assessment process. Additionally, this guide outlines best practices, methodologies, and case studies to support meaningful engagement with Indigenous communities.

F

Ferguson, J., & Sidorova, E. (2023, April). ***The usage of Indigenous languages as a tool for meaningful engagement with northern Indigenous governments and communities*** (Vol. 15:46). Canadian Northern Corridor Special Series, School of Public Policy Research Papers, University of Calgary. <https://www.policyschool.ca/wp-content/uploads/2023/04/NC46-UsageIndigenousLang.Ferguson.Sidorova.pdf>

This Research Paper examines the critical role of Indigenous languages in fostering effective communication and collaboration between policymakers and Indigenous communities in Canada's northern regions, especially in relation to funding and financing, as well as resource management. The authors argue that using Indigenous languages not only enhances trust and respect but also allows for a more nuanced understanding of community needs and perspectives. They discuss various case studies where language usage has facilitated better governance and community involvement, highlighting the importance of linguistic inclusion in policy development. The paper advocates for integrating Indigenous languages into public policy practices to promote equitable partnerships and support the cultural sovereignty of Indigenous peoples.

G

Garde, M., Nadjamerrek, B. L., Kolkkwarra, M., Kalarriya, J., Djandjomerr, J., Birriyabirriya, B., ... & Biless, P. (2009). ***The language of fire: seasonally, resources and landscape burning on the Arnhem Land Plateau***. In J. R. Smith et al. (Eds.), *Culture, ecology and economy of fire management in north Australian savannas: Rekindling the Wurrk tradition*. CSIRO Publishing.

This chapter presents an in-depth case study demonstrating the critical role of Indigenous languages in Integrated Fire Management (IFM) practices on the Arnhem Land Plateau. It highlights how Indigenous knowledge, expressed through language, is vital for implementing effective fire management strategies that protect biodiversity and manage economic resources in fire-prone regions. The authors explore seasonal burning practices and their ecological and cultural significance, offering insights into how these practices contribute to landscape management and resource conservation.

H

Hunter, W. M. (2011). **Geographies of cultural resource management.** In T. King (Ed.), *A Companion to Cultural Resource Management* (pp. 95–113). Wiley-Blackwell.

Hunter's chapter examines the spatial dimensions of cultural resource management (CRM) and how geographical contexts influence revitalization efforts. This work emphasizes the role of language as a cultural resource in enhancing CRM strategies and improving consultations between government and Indigenous peoples. By integrating geographical and linguistic perspectives, Hunter provides valuable insights into more effective and respectful resource management practices (p. 203).

L

Lertzman, D. A., & Vredenburg, H. (2005). **Indigenous peoples, resource extraction and sustainable development: An ethical approach.** *Journal of Business Ethics*, 56, 239–254.

The authors argue why it is unethical and unsustainable to sacrifice the viability of Indigenous cultures for industrial resource extraction; it is ethical to engage with Indigenous peoples in a manner consistent with their wishes and needs as they perceive them. Discusses how language vitality can bolster the sustainable practices of resource developers who are positively engaging with TEK (Traditional Ecological Knowledge) and pursuing their development with the goals and wishes of Indigenous communities in mind, which often includes Indigenous Language Revitalization.

N

Nicolle, S. (2004). [Review of the book **On biocultural diversity: Linking language, knowledge, and the environment**, by L. Maffi (Ed.)]. *Smithsonian Institution Press*, https://www.sil.org/system/files/reapdata/10/87/34/108734828518823365457562969695287058993/SILEBR_2004_007.pdf

This review summarizes how linguistic diversity is correlated to biological diversity. It explains in detail how the natural environment is encoded into languages, giving local languages a more robust way of describing the environments in which they are found. This can be used to demonstrate the importance of Indigenous languages in protecting biodiversity and achieving sustainable resource management. Both of which have economic impacts.

“The promotion and maintenance of traditional Indigenous ecological knowledge is of relevance to the current discourse on the links between linguistic and biological diversity (Harmon 1996)...The correlating linguistic diversity [to the biological diversity] of the region expresses a great range of such adaptational ideas and, with the loss of such diversity and cultural heritage, our ability to understand the complexity of human interactions with this particular environment is certainly impoverished” (Garde et al., 2010)

Nikolakis, W. D., & Roberts, E. (2020). **Indigenous fire management: A conceptual model from literature.** *Ecology & Society*, 25(4), 11.

A conceptual framework analysis on Indigenous fire management (IFM). It presents five main concepts of IFM, a practice which is increasingly being relied upon to mitigate the disastrous impact of wildfires and protect ecosystems. The article demonstrates how culture influences how fire is perceived and managed in societies. This means that language vitality contributes greatly to the continued effectiveness of this increasingly important practice, as Indigenous languages code the ways in which they perceive and will manage fires effectively.

Nikolakis, W., Roberts, E., Hotte, N., & Ross, R. M. (2020). **Goal setting and Indigenous fire management: A holistic perspective.** *International Journal of Wildland Fire*, 29(11), 974–982.

This article analyzes what goals are sought after in carrying out Indigenous Fire Management (IFM) using a case study in British Columbia. These goals are (1) strengthen cultural connection and well-being, (2) restore health of the land, and (3) respect traditional laws. All three of these are greatly bolstered through language vitality, as it has been documented how Indigenous languages are much more specific and descriptive of geological features in their lands due to the language's development in that area. Moreover, the values and worldviews encoded in Indigenous languages promote, preserve and protect the practices which constitute IFM. Research has also documented that IFM mitigates carbon emissions, improves livelihoods and enhances well-being among participants.

Schreyer, C. (2009). **Reserves and resources: Local rhetoric on land, language, and identity amongst the Taku River Tlingit and Loon River Cree First Nations** [Doctoral Dissertation, University of Alberta]. University of Alberta Library. <https://era.library.ualberta.ca/items/962bbeac-eed5-442b-a858-b048dfefc106/download/156607b7-7651-41a1-992f-f91cb30a2547>

This dissertation looks at the difference in approaches between grassroots language revitalization and that of the National Aboriginal Languages Task Force (2005). It reveals that while both approaches focus on the relationship between land and language planning, the grassroots efforts use the concept of nationhood in conjunction with assertions of sovereignty over land, and, therefore, situate their language planning within land planning. Chapters 2-4 extensively cover the relationship between resource management, consultations with government, land stewardship, and language revitalization.

“a small investment in language can substantially decrease expenditure in social services” (Walsh, 2018).

W

Steffensen, S. V., & Fill, A. (2014). **Ecolinguistics: The state of the art and future horizons.** *Language Sciences, 41*, 6–25.

The author discusses the connection between Indigenous languages and ecology. An exploration of these connections acts as an important tool to help bolster arguments about how language vitality impacts ecological knowledge, as well as Indigenous knowledge critical for sustainable resource extraction, fire management, and other Sustainable Development Goals.

“Access to the ecological knowledge of Indigenous people is mostly available in the fullest details to members of the speech community in question. It is here that collaboration among linguists, Indigenous people and natural scientists can assist in the documentation and maintenance of threatened traditional ecological knowledge” (Garde et al., 2010)

Walsh, F. J., Dobson, P. V., & Douglas, J. C. (2013). **Anpernirrentye: A framework for enhanced application of Indigenous ecological knowledge in natural resource management.** *Ecology and Society, 18*(3).

This article presents the “Anpernirrentye” framework, developed to improve the integration of Indigenous ecological knowledge (IEK) into natural resource management practices and bridge the gap between Western scientific approaches and traditional Indigenous perspectives. The authors outline how Anpernirrentye can be applied to enhance decision-making processes, ensuring that Indigenous knowledge is valued and effectively incorporated into resource management strategies. The paper discusses the framework’s theoretical underpinnings and provides practical examples of its application, highlighting the benefits of incorporating diverse knowledge systems to achieve more sustainable and culturally respectful management outcomes.



Language and the Economy

B

Bliss, H., Gessner, S., Herbert, T., & Parker, A. (2020). **Framing the discussion: A proposal for a national strategy for the implementation of Bill C-91.** First Peoples' Cultural Council. https://fpcc.ca/wp-content/uploads/2020/08/FPCC_national_strategy_discussion_paper_June_11_2020.pdf

This report is a call-to-action targeted at the government, supported with ideas from other countries' successful language revitalization efforts. It alludes to the need for more research to be done on the relationship of Indigenous language revitalization and the economy, but also provides insight as to how other countries are revitalizing language in various economic markets. The creation of new jobs/resource markets and the positive impact on innovation are two keyways ILR impacts the economy. Additionally, the move to a "green economy" will require a knowledge base only made possible through the nuances expressed in Indigenous languages.

D

Dana, L. P. (2007). **Toward a multidisciplinary definition of Indigenous entrepreneurship.** In L. P. Dana & R. B. Anderson (Eds.), *International Handbook of Research on Indigenous Entrepreneurship* (pp. 3–7). Edward Elgar Publishing Limited.

This book seeks to unveil the cultural attitudes toward entrepreneurship, economic activity, risk and opportunity amongst the world's Indigenous peoples and re-conceptualizes entrepreneurship through the lens of these attitudes. The book includes case studies from each continent, drawing upon research from scholars of entrepreneurship.

E

Evans, P. (2021, October 27). **CBC Indigenous report: Indigenous communities face 'crisis of trust' with banks, says report.** *CBC News*. <https://www.cbc.ca/news/business/rbc-indigenous-report-1.6100857>

This article illustrates the economic potential of Indigenous people that is not being tapped into due to gaps in technology. It provides key facts about their economic potential and contribution, such as the fact that Indigenous people contribute approximately \$33 billion (as of 2021) to Canada's economy, but this amount could be as high as \$70 billion were it proportionate to the population. Additionally, Indigenous entrepreneurs are the fastest growing group of entrepreneurs in Canada, and they create new businesses at nine times the Canadian average. This bolsters other research which found the ethnolinguistic diversity is key to innovativeness.

The connection between language and well-being, as well as closing other gaps, can motivate Indigenous people to be more productive in the economy. Finally, it is important to understand Indigenous entrepreneurship in a way that suits their needs and goals for economic development, this re-conceptualization is discussed in other works in this bibliography.

M

Meades, S., & Pine, D. (2016). **Investigating the regional labour market for Indigenous language teachers, administrators and service providers.** Shingwauk Education Trust and the Government of Ontario. https://www.academia.edu/25940597/Investigating_the_Regional_Labour_Market_for_Indigenous_Language_Teachers_Administrators_and_Service_Providers

This report summarizes how graduates of Algoma's Bachelor of Arts in Anishinaabemowin fared in the job market, and how they are filling needed skill gaps in the economy. It illustrates how Indigenous language revitalization creates new industries and closes service gaps which reduces risks and costs of service provision in industries such as health care, justice, education and the arts.

Meades, S., Pine, D., & Broad, G. (2019). **The emerging indigenous language economy: Labour market demand for Indigenous language skills in the Upper Great Lakes.** *Journal of Aboriginal Economic Development*, 11(2), 26–37.

This article seeks to close the gap in the literature on the relationship between Indigenous language revitalization and economic spheres. Drawing on interviews with Anishinaabe communities this article showcases needs for Indigenous language skills in oft-overlooked labor markets.

Mrabure, R. O. H. (2018). **Indigenous Entrepreneurial Orientation: Exploring Entrepreneurial Orientation with Māori Entrepreneurs** [Doctoral dissertation, University of Otago]. https://ourarchive.otago.ac.nz/view/pdfCoverPage?instCode=64OTAGO_INST&filePid=13397331880001891&download=true

This thesis examines the five dimensions of entrepreneurial orientation (EO) and what factors cause them to be present in individuals. These dimensions are innovativeness, risk taking, proactiveness, autonomy and competitive aggressiveness. It defines Indigenous entrepreneurship distinctively and relies on qualitative evidence from Māori business owners. The findings indicate that a strong connection to culture and language provides the drive/support upon which entrepreneurial orientations are grounded.

“This would form part of a much broader economic perspective, in which the traditional view that the economy influences languages is supplemented by the notion that language exercises a strong influence on the economy. There are several domains in which languages play an important role and thus contribute to their economic success – such as tourism (with its emphasis on diversity), the arts, and local manufacturing industries.”
Crystal (2000)

O

Olko, J. (2021). **Marketing and commercializing language revitalization.** In J. Olko & J. Sallabank (Eds.), *Revitalizing Endangered Languages: A Practical Guide* (pp. 140–155). Cambridge University Press.

This chapter highlights several case studies in Europe and Mexico to identify and address core issues in promoting language revitalization: 1) ensuring economic benefits to language learning speakers and 2) the fact that language learning often takes place within impoverished minority communities. This discussion highlights heritage language usage in traditional knowledge for subsistence and environmental strategies, cultural and educational tourism, and the marketing and promotion of language revitalization. All of these are contextualized with case studies describing strategies that promoted and incentivized the creation of new speakers. The chapter's general aim is to present arguments useful in securing state funding by demonstrating their important economic impact. Additionally, it discusses the kinds of incentives needed inside minority language communities to promote new learners.

P

Peredo, A. M., & McLean, M. (2013). **Indigenous development and the cultural captivity of entrepreneurship.** *Business & Society*, 52(4), 592–620.

This article has a critical focus on mainstream definitions of entrepreneurship that have been used to spur economic development in Indigenous communities. Mainstream conceptions are often ill-fit to the realities of Indigenous communities, specifically regarding their cultural desires. They argue that other forms of entrepreneurship, those that consider Indigenous people's goals for development which often center on cultural preservation and reclamation, would be a better fit, yet these have gone unexplored due to the sole focus on the mainstream conception.

“Our argument is that we need to enlarge our understanding of entrepreneurship in ways that allow for different cultural embodiments. Our research should be re-directed to take account of the variety of ways Indigenous cultures increase what they value in the process of exchange, without assuming their process of exchange are adequately modelled by standard market assumptions about prices, supply and demand, or that the fundamental motivation in exchange is or should be an increase in individual monetary profit” (Peredo & McLean, 2013).

S

Smith, D. H. (1994). **The issue of compatibility between cultural integrity and economic development among Native American tribes.** *American Indian Culture and Research Journal*, 18(2).

This article argues that economic development in Indigenous communities only makes sense where it preserves their cultural continuity. Otherwise, it forces the nation to choose between their identity and economic development. The article discusses how development planning rooted in preserving cultural continuity spurs more interest in revitalizing Indigenous languages.

Language and Education

A

Angelo, D., Disbray, S., Singer, R., O'Shannessy, C., Simpson, J., Smith, H., Meek, B., & Wigglesworth, G. (2022). **Learning (in) Indigenous languages: Common ground, diverse pathways.** *OECD Education Working Papers, (278)*, 1–106.

This working paper explores the significance of Indigenous languages in education across Aotearoa New Zealand, Australia, and Canada. It highlights the common aspirations of Indigenous peoples for their languages and cultures, supported by international conventions, treaties, and policies. Specific discussion is offered to noting the benefits of education in the local Indigenous language to community members, including well-being and resilience, and improved education outcomes including increased retention and achievement rates (p.18).

B

Arim, R. G., Tam, B., Bougie, E., & Kohen, D. E. (2016). **School outcomes among elementary school-aged Inuit children in Inuit Nunangat.** *Aboriginal Policy Studies, 5(2)*, 32–59.

This study examines the educational outcomes of elementary school-aged Inuit children living in Inuit Nunangat, the Inuit homeland in Canada. The authors use data from the 2011 National Household Survey and other sources to explore various factors impacting academic performance and educational attainment among these children. The research highlights disparities in school outcomes compared to non-Indigenous peers and discusses the influence of socio-economic conditions, cultural factors, and community support. This article is valuable for understanding the specific challenges faced by Inuit students and the broader implications for policy and educational practice aimed at improving Indigenous education. The findings underscore the need for culturally responsive educational strategies and support systems to enhance academic success in Indigenous communities.

C

Castagno, A. E., & Brayboy, B. M. J. (2008). **Culturally responsive schooling for Indigenous youth: A review of the literature.** *Review of Educational Research, 78(4)*, 941–993.

An analysis of the previous failures of Culturally Responsive Schooling (CRS) for Indigenous youth while remaining accountable to general standards. The authors focus on creating lasting changes to schools with an explicit focus on curriculum sovereignty and self-determination, racism, and Indigenous epistemologies to produce the most positive educational impact. Revitalizing Indigenous languages in these domains is shown to be an essential part of effective CRS.

I

Chew, K. A. B., & Tennell, C. (2022). **Sustaining and revitalizing Indigenous languages in Oklahoma public schools: educational sovereignty in language policy and planning.** *Current Issues in Language Planning*, 24(1), 60–80.

This article reviews how 39 Indigenous Nations in Oklahoma assert educational sovereignty to sustain and revitalize their languages within public schools, while examining the challenges posed by state language-in-education policies. Chew and Tennell analyze how these Nations navigate and influence language policy and planning to align with their cultural and educational goals. The study uncovers key links between language planning, educational outcomes, and the development of culturally sustaining and revitalizing education models. By providing insights into effective strategies and ongoing obstacles, the article contributes to understanding how Indigenous communities can advocate for, and implement, educational practices that support their linguistic and cultural heritage.

“All of the recent reviews agree with the conclusion that ‘congruency between the school environment and the language and culture of the community is critical to the success of formal learning.’ (Castagno & Brayboy, 2008).

Institute of Education Sciences. (2023). ***Walking in both worlds*** [Video]. Regional Educational Laboratory Southwest, Institute of Education Sciences. <https://ies.ed.gov/ncee/edlabs/regions/southwest/videos/walking-in-both-worlds.aspx>

This documentary produced by the Institute of Education Sciences, a federal agency in the United States responsible for conducting and supporting research on education, highlights the experiences of Indigenous students and educators navigating both traditional cultural practices and the formal education system. It focuses on the integration of Indigenous cultural knowledge and practices within the educational framework to enhance student engagement and academic success. The film features interviews with educators and community members, showcasing strategies and programs designed to support Indigenous students in balancing their cultural identity with academic demands.

J

Jones, B., & Sandoval, N. (2022, August 23). ***On the importance of Indigenous language education: Reflecting on past and current U.S. policy.*** Center for Standards, Assessment, & Accountability. <https://csaa.wested.org/on-the-importance-of-indigenous-language-education-reflecting-on-past-and-current-u-s-policy/>

This article examines U.S. policies regarding Indigenous language education, and highlights the damaging impact of past policies on the intergenerational transmission of these languages. The authors discuss the current federal and Tribal mandates that support culturally sustaining and revitalizing education for Indigenous students, emphasizing the importance of integrating Indigenous languages into school curricula. Importantly, this article identifies a number of benefits of learning an Indigenous language, including promoting constructive classroom behaviour and comparably higher academic achievement.

M

McCarty, T. L. (2003). **Revitalizing Indigenous languages in homogenizing times.** *Comparative Education*, 39(2), 147–163.

Discusses successes of full immersion education for Indigenous students in the U.S. and situates their findings within the broader goal of preventing language shift. It looks at three case studies, two in Arizona and one in Hawai'i, and identifies the factors which contributed to their success: (1) the presence of a stable core of bilingual educators with shared values and aspirations; (2) teachers receiving long-term support from building principals and connections made at knowledge-sharing conventions; and (3) the presence of consistent funding over several years. The research found that students who are educated primarily in their heritage language perform much better academically than their all-English educated Indigenous peers. Ultimately, language-use solely in educational domains will not prevent language shift, and the use of the language at home and in businesses will become part of the wider struggle against language shift.

McCarty, T. L. (2021). **The holistic benefits of education for Indigenous language revitalization and reclamation (ELR2).** *Journal of Multilingual and Multicultural Development*, 42(10), 927–940.

This article examines how education can support Indigenous language maintenance by integrating cultural values and practices, thereby enhancing community cohesion and identity. McCarty discusses various case studies and programs that illustrate successful strategies for language revitalization within educational settings. The research highlights the importance of culturally relevant pedagogies and community involvement in the educational process. This article is particularly useful for educators, policymakers, and researchers interested in Indigenous language education, providing insights into effective approaches for fostering linguistic and cultural resilience through holistic educational practices.

“At Nawahi (a Hawaiian school that centers the Hawaiin language), students have achieved the ‘topmost rating’ on state-mandated Hawaiian-medium assessments, and the school has consistently shown high levels of attendance, a 100% high-school graduation rate, and an 80% college-going rate” (T.L. McCarty, 2021).

Morcom, L. A., & Roy, S. (2017). **Learning through language: Academic success in an Indigenous language immersion kindergarten.** *Journal of American Indian Education*, 56(2), 57–80.

This study explores the impact of Indigenous language immersion on academic success in kindergarten settings. The authors present a case study of a language immersion program and its effects on students' academic performance and language proficiency, finding that immersion in an Indigenous language contributes positively to children's academic achievements and cognitive development. The authors argue that such programs not only enhance linguistic skills but also foster a deeper connection to cultural identity. This article is significant for its empirical evidence supporting the benefits of language immersion in early education and provides valuable insights into how Indigenous language programs can promote both educational and cultural outcomes.

T

Task Force on Aboriginal Languages and Culture. (2005). **Towards a new beginning: A foundational report for a strategy to revitalize First Nation, Inuit and Métis languages and cultures.** *Task Force on Aboriginal Languages and Culture.* https://publications.gc.ca/collections/collection_2018/pch/CH4-96-2005-eng.pdf

This groundbreaking report emphasizes the urgent need for coordinated efforts to support language preservation and cultural renewal through community-led initiatives, educational programs, and governmental support. The report provides actionable recommendations and a framework for fostering cultural resilience and linguistic diversity among Indigenous communities. In Section VII: Protecting and Promoting our Languages, the report notes that while fewer than 50% of Indigenous Canadians graduated high school at the time, students in Indigenous language immersion programs—such as the Mohawk language immersion program—experienced retention rates of at least 90%, while 85% passed provincial English literacy tests or courses (p.87).



Language and Society

C

Chandler, M. J., & Lalonde, C. (1998). **Cultural continuity as a hedge against suicide in Canada's First Nations.** *Transcultural Psychiatry*, 35(2), 191–219.

This article explores how cultural continuity impacts suicide rates among Canada's First Nations communities, finding that greater cultural engagement is linked to lower suicide rates. Chandler and Lalonde consider colonial contexts and histories in their analysis, highlighting how these factors affect cultural continuity and mental health. While language is not explicitly discussed, it is implied as part of the broader concept of cultural continuity. The study emphasizes the role of preserving cultural heritage in reducing suicide risk and promoting community resilience.

“Suicide rates were six times higher in Indigenous communities in which fewer than half of the members could converse in their ancestral language” (Hallet et al., 2007).

G

Gonzalez, M. B., Aronson, B. D., Kellar, S., Walls, M. L., & Greenfield, B. L. (2017). **Language as a facilitator of cultural connection.** *ab-Original: Journal of Indigenous Studies and First Nations and First Peoples' Cultures*, 1(2), 176–194.

This article explores the role of language in fostering cultural connections among and within Indigenous communities. The authors argue that language is not only a means of communication but also a crucial element in maintaining cultural identity and heritage. Through qualitative analysis, the research highlights how language revitalization efforts contribute to community cohesion and the preservation of traditional knowledge. The findings underscore the importance of supporting language programs to strengthen cultural ties and promote social well-being within Indigenous communities.

H

Hallett, D., Chandler, M. J., & Lalonde, C. E. (2007). **Aboriginal language knowledge and youth suicide.** *Cognitive Development*, 22(3), 392–399.

Preliminary investigation into how community-level variability in knowledge of Indigenous languages relate to measures of youth suicide in British Columbia, Canada. This simple language-use indicator was found to have predictive power over and above that of six other cultural continuity factors identified in previous research; youth suicide rates effectively dropped to zero in those few communities in which at least half the band members reported a conversational knowledge of their own language.

H

Howell, T. (2008). *The point of no return: Aboriginal offenders' journey towards a crime free life* [Doctoral dissertation, University of British Columbia]. UBC Open Library. <https://open.library.ubc.ca/media/download/pdf/24/1.0054158/1>

This dissertation investigates the pathways through which Indigenous offenders transition towards a crime-free life, focusing on the challenges and strategies involved in this process. The research delves into the experiences of Indigenous individuals who have successfully navigated the criminal justice system and reintegrated into their communities. Howell employs interviews and case studies to uncover the personal, social, and cultural factors that contribute to successful rehabilitation, including the use of Indigenous languages in offenders' lives.

K

Khawaja, M. (2021). **Consequences and remedies of Indigenous language loss in Canada.** *Societies*, 11(3), 1–12.

This article reviews contemporary literature on the impact of Indigenous language loss in Canada, focusing on how colonialism affects language, culture, and self-identity. Consequences such as isolation, racism, and barriers to generational knowledge transfer are discussed, with an exploration of potential remedies like educational programs and community initiatives.

M

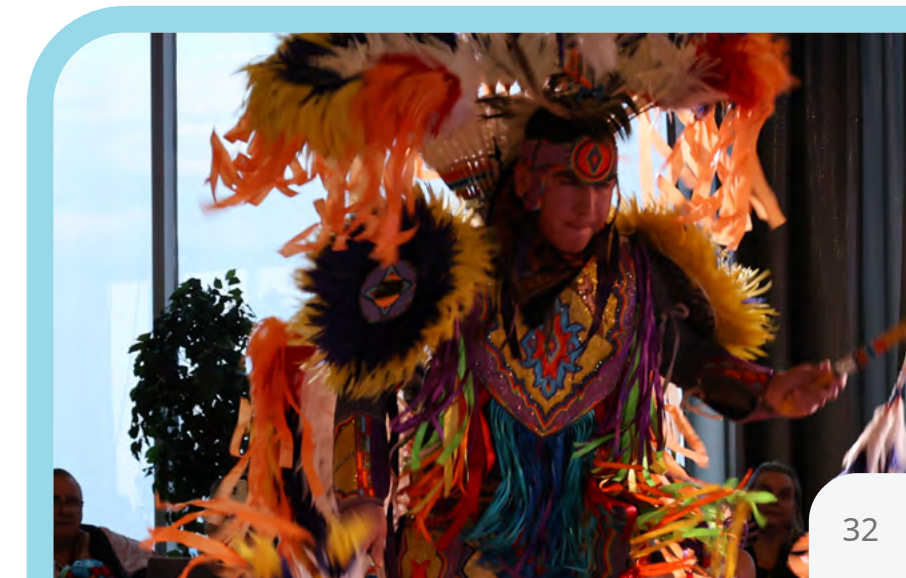
Meades, S., Pine, D., & Broad, G. (2019). The emerging Indigenous language economy: Labour market demand for indigenous language skills in the Upper Great Lakes. *Journal of Aboriginal Economic Development*, 11(2), 26–37.

This report uses information gained from interviews and focus groups from a selection of Anishinaabe communities in Northern Ontario, Canada to identify the often-overlooked needs of Anishinaabe language speakers in the regional labor market. In doing so, it showcases a methodology that can be used to reveal Indigenous language labor-needs in regional labor markets.

W

Wicherkiewicz, T. (2021). **Dealing with institutions and policy makers.** In J. Olko & J. Sallabank (Eds.), *Revitalizing Endangered Languages: A Practical Guide* (pp. 165–177). Cambridge University Press.

This chapter analyzes how top-down and bottom-up language policies affect minority and dominant languages differently, offering practical guidance for engaging with institutions and policymakers. Wicherkiewicz provides strategies for effectively communicating with governmental and non-governmental organizations to support language revitalization. The chapter explores best practices for advocating language preservation and securing institutional support, making it a valuable resource for analyzing and implementing effective language policies.



Language and Healing

B

Bell, L., & Marlow, P. E. (2009). **Visibility, healing and resistance: Voices from the 2005 Dena'ina Language Institute.** *Journal of American Indian Education*, 48(1), 1–18.

This article forms a critical reflection on outcomes from a 2005 language learning and revitalization program in Dena'ina language. Interviews with language learners revealed common goals of fluency, literacy, cultural knowledge, and community building. These goals illustrated major themes of language as visibility, healing, and resistance to colonial legacy and linguicide.

“Local languages are seen to be valuable because they promote community cohesion and vitality, foster pride in a culture, and give a community (and thus a workforce) self-confidence. In just the same way as so much of language shift has been shown to result from economic factors, so these same factors can be used to foster language maintenance.” Crystal (2000)

Burner, F. (2020). **Healing through language: Revitalization and renewal in the Wendat Confederacy** [Honours' Thesis, University of California, Berkeley]. American Cultures Center. https://americancultures.berkeley.edu/sites/default/files/fallon_thesis_6-9-2020_final.pdf

This article describes the story and timeline of language revitalization within the Wendat Confederacy, bringing forward general insights about language revitalization in the process. The importance of language revitalization to heal the harms of colonialism are unveiled through his qualitative assessment on the impact it has had on Wendat experiences of historical trauma, settler colonialism and history keeping.

H

Elijah, K. A. (2020). **Saiakwatsirón:ni – We are reigniting the fire: Regeneration of Kanien'kéha silent speakers** [Master's Thesis, University of Victoria]. <https://dspace.library.uvic.ca/server/api/core/bitstreams/2991a8e2-91ed-4c26-9eba-f4e5822c2318/content>

In this master's thesis, Elijah investigates the regeneration of Kanien'kéha (Mohawk) language among silent speakers. The study focuses on strategies and community efforts to re-engage individuals in language learning and use. Elijah provides an in-depth analysis of the challenges and successes of these initiatives, contributing valuable insights into language revitalization practices. This thesis is essential for understanding the dynamics of language recovery efforts and offers practical examples for similar Indigenous language regeneration projects.

E

Erasmus, M. T. (2019). *Goyatì K'aàt'ìì Ats' edee, K'aàt'ìì Adets' edee: Ho! Healing our languages, Healing ourselves: Now is the time!* [Master's Thesis, University of Victoria]. <https://dspace.library.uvic.ca/server/api/core/bitstreams/9d2515ca-1519-48c4-9c0d-210ea9acfe17/content>

Erasmus's thesis investigates key components for effective Indigenous adult language learning and the resulting health and wellness benefits. Using a Dene research paradigm combined with Grounded Theory applications, the study explores how engaging with traditional languages can facilitate personal and communal healing. The research highlights various community-led initiatives and their positive impacts on individuals' emotional and cultural well-being. This work provides valuable insights into how language revitalization contributes to both language recovery and broader healing processes.

M

McKenzie, J. (2022). **Addressing historical trauma and healing in Indigenous language cultivation and revitalization.** *Annual Review of Applied Linguistics*, 42, 71–77.

This article, with a focus on Diné (Navajo) communities, examines how teaching, learning, and developing Indigenous languages can positively impact the effects of trauma, healing, and overall well-being. McKenzie discusses the ways in which addressing historical injustices through language revitalization can facilitate cultural and psychological healing. Additionally, the paper explores trauma-informed approaches to language programs and highlights how language cultivation efforts can support resilience and improve well-being in Indigenous communities. This work provides insights into integrating healing practices with language preservation to enhance community health and cultural continuity.

S

Shea, H., Mosley-Howard, G. S., Baldwin, D., Ironstrack, G., Rousmaniere, K., & Schroer, J. E. (2019). **Cultural revitalization as a restorative process to combat racial and cultural trauma and promote living well.** *Cultural Diversity and Ethnic Minority Psychology*, 25(4), 553–565.

This article investigates the role of cultural revitalization in healing the impacts of racial and cultural trauma. Shea et al. argue that restoring and revitalizing cultural practices, such as language, is essential for fostering resilience and well-being within marginalized communities. The article outlines strategies for cultural revitalization, and emphasizes their potential to promote mental health, strengthen community ties, and enhance individual and collective identity. A review of existing literature and case studies highlights the importance of culturally informed interventions in psychological healing practices.

“For communities planning to maintain and revitalize their languages, one of the key steps for success is to conduct research to identify the areas in need of support. With the assessment of multiple scales of vitality, communities can develop and initiate effective language programs and strategies best suited to their goals and objectives.” (Gomashie & Terborg, 2021)



W

Sivak, L., Westhead, S., Richards, E., Atkinson, S., Richards, J., Dare, H., ... & Brown, A. (2019). **“Language breathes life”—Barnarla community perspectives on the wellbeing impacts of reclaiming a dormant Australian Aboriginal language.** *International Journal of Environmental Research and Public Health*, 16(20), 3918.

Applies Indigenous research methods to outline the psychological benefits of language revitalization in an Australian Aboriginal community. The article builds on consistent findings which link loss of language to declines in mental health, and uses stories told by community members to demonstrate the potential for healing this damage through the revitalization and reclamation of their language. Key themes from the interviews include connection to spirituality, kinship, cultural pride, and impacts on identity.

Waldram, J. M. (2008). **Introduction.** In J. M. Waldram (Ed.), *Aboriginal Healing in Canada: Studies in Therapeutic Meaning and Practice* (pp. 1–8). National Network of Aboriginal Mental Health Research in partnership with Aboriginal Healing Foundation. <https://ahf.ca/files/aboriginal-healing-in-canada.pdf>

The Introductory section of the report “Aboriginal Healing in Canada: Studies in Therapeutic Meaning and Practice” sets the stage for an exploration of the diverse approaches to healing within Indigenous [referred to in this work as Aboriginal] communities in Canada. This section outlines a basic definition as well as the historical and cultural contexts of Indigenous healing practices, emphasizing their significance in addressing both individual and collective trauma experienced by Indigenous peoples. It highlights the influence of colonialism and the legacy of residential schools on mental health and well-being, while also acknowledging the resilience and strength of Aboriginal healing traditions.

Whalen, D. H., Lewis, M. E., Gillson, S., McBeath, B., Alexander, B., & Nyhan, K. (2022). **Health effects of Indigenous language use and revitalization: A realist review.** *International Journal for Equity in Health*, 21(1), 169–132.

This systematic review investigates the health effects of Indigenous language use and revitalization, focusing on how these practices serve as protective factors against poor health outcomes. The authors analyze various studies to demonstrate that engaging with Indigenous languages contributes to improved mental and physical health, enhanced community cohesion, and stronger cultural identity. This article is useful in understanding the protective health benefits of language revitalization and its role in promoting well-being among Indigenous populations.

“Indigenous languages carry values that are health-promoting, including traditional foods practices and consumption, activities (exercise) to participate in, community relationship, and spiritual practices; these all relate to positive health outcomes.” (Whalen et al., 2022)

Language and Lawmaking

B

Borrows, L. K. (2022). *The land is our casebook: Revitalizing Indigenous law in relation with the living world* [Master's Thesis, University of Alberta]. <https://era.library.ualberta.ca/items/94182d6c-8869-4f13-b42c-e954b835c9d3/download/551f1460-7e70-4374-a250-5ea6bdd5dab8>

This thesis discusses how we can learn about law from nature, and how Indigenous languages are essential to the understanding of our relationship to the natural world. These languages unveil responsibilities and conceptualizations that provide insight into legal questions about the rights of natural environments.

Borrows, L. K. (2018). *Otter's journey through Indigenous language and law*. UBC Press.

This book intertwines Indigenous legal traditions with the revitalization of Indigenous languages. Using the character of Otter as a guide, the book explores how language shapes legal understanding and community identity within Indigenous cultures. Borrows argues that language is not merely a communication tool but a vessel for conveying laws, values, and cultural practices. This work emphasizes the importance of integrating Indigenous languages into legal frameworks and education to enhance the recognition and application of Indigenous rights. This book serves as a resource for scholars, practitioners, and students interested in the intersections of language, law, and Indigenous identity.

Borrows, J. (2016). *Heroes, tricksters, monsters, and caretakers: Indigenous law and legal education*. *McGill Law Journal*, 61(4), 795–846.

This article examines how traditional narratives and figures from Indigenous cultures—heroes, tricksters, and caretakers—can inform and enrich legal understanding and practice. Borrows argues for a more inclusive legal curriculum that recognizes the significance of Indigenous laws and perspectives, challenging conventional Western legal paradigms. By emphasizing storytelling and cultural context, the article advocates for a transformative approach to legal education that respects and incorporates Indigenous knowledge systems. This work contributes to discussions on the role of Indigenous law in Indigenous and non-Indigenous society.



C

Charlie, C. (2024, July 10). **Revitalizing Indigenous languages through legal drafting.** Woodward & Company Lawyers LLP. <https://www.woodwardandcompany.com/news/revitalizing-indigenous-languages-through-legal-drafting/>

This news article, on the website of a legal company founded to fight exclusively for Indigenous groups and governments, discusses the innovative approach of using legal drafting to support the revitalization of Indigenous languages. Charlie emphasizes the importance of incorporating Indigenous languages into legal documents and frameworks as a means to preserve and promote linguistic heritage. The piece highlights various case studies where legal drafting has successfully integrated Indigenous languages, thereby strengthening cultural identity and legal recognition. The author advocates for continued efforts and collaboration between legal professionals and Indigenous communities to ensure the sustainability of these languages through formal legal mechanisms.

Cornell, C., & Jorgensen, J. (2023). **Indigenous culture in contemporary Indigenous government: Some examples from Native Nations in the United States** (Report No. 6). <https://carleton.ca/rfng/wp-content/uploads/Cornell-Jorgensen-2023-Final-6-2348-1.pdf>

This paper focuses on the how of governing, rather than the right to govern. The article analyzes constitutions, citizenship, dispute resolution and the provision of justice, law-making, the selection of leaders, and child welfare to uncover how Indigenous nations are drawing on their own culture to create effective governing institutions. Throughout the paper, language is consistently stressed as a key source of knowledge to inform Indigenous principles which guide all six of the governing tools discussed.

“The knowledge and awareness which comes from the process of education can generate a confidence which stands the children in good stead, as they find themselves coping with the difficulties of language maintenance. Knowing something about a language’s history, folklore, and literature can be a great source of reassurance”
Crystal (2000)

Craft, A., & King, L. (2021). **Building the treaty# 3 Nibi declaration using an Anishinaabe methodology of ceremony, language and engagement.** *Water*, 13(4), 532–545.

This article emphasizes how language plays an important role in conceptualizing responsibility and proper, lawful behavior through an Indigenous lens, which is crucial for First Nations who are making new constitutions. It utilizes the case study of treaty #3’s Nibi Declaration, which describes the Nation’s relationship to water. The declaration, functionally a legal implementation device, was developed through the essential use of Anishinaabe language to articulate the legal principles.

F

Friedland, H. L. (2016). ***Reclaiming the language of law: The contemporary articulation and application of Cree legal principles in Canada*** [Doctoral Dissertation, University of Alberta]. University of Alberta Library. <https://era.library.ualberta.ca/items/48bb0f25-2b18-4596-a73a-4b5915211ee1/download/52a9f179-1cf9-4180-88ff-a5197decdd43>

This dissertation reviews how Indigenous languages are being used to implement Indigenous law in Canada. It overviews how the meta-principles and special relationships conceptualized in the language are used to deliberate and produce Indigenous laws. It also discusses challenges, such as judges not being able to interpret or pass decisions effectively without a firm understanding of the language, highlighting Indigenous Language Revitalization as the key to resolving these issues.

G

Gunn, B. L. (2007). **Protecting Indigenous peoples' lands: Making room for the application of Indigenous peoples' laws within the Canadian legal system.** *Indigenous Law Journal*, 6(1), 32–69.

This article addresses the issue of integrating Indigenous laws into the Canadian legal system to better protect Indigenous Peoples' lands and rights. Gunn argues for an inclusive approach that respects and incorporates Indigenous legal traditions, highlighting the legal and policy gaps that undermine Indigenous land protection. By analyzing case studies and legal precedents, the article provides a detailed exploration of how Indigenous laws can be effectively integrated into existing legal structures. This work contributes to the ongoing discourse on legal pluralism and the need for systemic reforms to ensure that Indigenous rights and land claims are adequately addressed and protected within Canadian jurisprudence.

L

Legislative Assembly of Ontario. (2024). ***Standing Order 24(a) Amendment.*** 43rd Parliament, 1st Session Votes and Proceedings (No.138). https://www.ola.org/sites/default/files/node-files/house/document/pdf/2024/2024-03/43_1_138_March_26_2024_Votes.pdf

This record of Votes and Proceedings from the Legislative Assembly of Ontario's parliamentary session on March 26, 2024, marks an amendment to the Ontario legislature that enables members of the provincial parliament to rise and address the Speaker in an Indigenous language spoken in Canada without first asking for permission. The amendment also states that members of parliament wishing to do so need to notify the Clerk of the House of their intentions so that appropriate translation and interpretation services can be provided. This benchmark legal decision increases Indigenous language representation in government.

M

Metallic, N. W. (2023). **Five Linguistic Methods for Revitalizing Indigenous Laws.** *McGill Law Journal*, 68(1), 47–87.

This article expands on our understanding of how Indigenous languages can be used to recover Indigenous laws. Noting that there is not one linguistic method, but five, including: 1) “meta-principle” method; 2) “grammar as revealing worldview method”; 3) “word-part” method; 4) “word-clusters” method; and 5) “place names” method. Metallic notes also that one does not have to be fluent in their language to make use of these methods to improve the understanding and implementation of Indigenous laws.

“All legal orders are generally composed of values, principles, rules, acotrs, and processes relating to the regulation of a group and the resolution of conflicts within that group and with other groups. The differences between and relationships amongst values, principles, and rules is especially illuminating to the work of finding law in sources like language, stories and ceremonies.” (Metallic, 2024).

Metallic, N. W. (2022). **Six examples applying the meta-principle linguistic method: Lessons for Indigenous Law Implementation.** *University of New Brunswick Law Journal*, 73, 133–168.

This article explains how the ‘meta-principle’ method can be used to support Indigenous laws. It contextualizes its use by judges, public governments, and Indigenous governments. These groups use different methods to identify and employ meta-principles, which reveal four categories of the method. 1) inherent knowledge of decision-maker; 2) in-court evidence; 3) official ratification; 4) advisory bodies. The article explains the benefits and challenges of each approach and demonstrates how it can give communities the power to revive and, more importantly, implement Indigenous law.



Language and Biodiversity

A

Alexander, C., Bynum, N., Johnson, E., King, U., Mustonen, T., Neofotis, P., ... & Weeks, B. (2011). **Linking indigenous and scientific knowledge of climate change.** *BioScience*, 61(6), 477–484.

This paper explores the integration of indigenous knowledge with scientific research in understanding of climate change. The authors discuss the complementary strengths of these knowledge systems and advocate for collaborative approaches to climate research. By presenting case studies and examples from various indigenous communities, the article demonstrates how Traditional Ecological Knowledge can provide valuable insights into climate patterns, impacts, and adaptation strategies.

B

Blake, J. (2013). **Safeguarding endangered and Indigenous languages—How Human Rights can contribute to preserving biodiversity.** *Environmental Sciences*, 10(1), 131–144.

In an article that investigates the intersection of human rights and environmental conservation, Blake focuses on the support of endangered and Indigenous languages as a way of protecting biodiversity. Through a series of case studies and theoretical analyses, the author highlights the importance of integrating cultural and linguistic preservation into biodiversity conservation strategies. Importantly, Blake argues that linguistic diversity is closely linked to ecological knowledge and practices, which are vital for maintaining biodiversity. Finally, the paper discusses how human rights frameworks can support the protection of Indigenous languages, thereby contributing to broader environmental sustainability efforts.

E

Estrada, L. Y. (2023, May 22). **Biodiversity and indigenous languages: One heritage to protect.** *AIDA: Interamerican Association for Environmental Defense (AIDA)*. <https://aida-americas.org/en/blog/biodiversity-and-indigenous-languages-one-heritage-to-protect>

This blog explores the intrinsic link between biodiversity and Indigenous languages, emphasizing the need to protect both as interconnected aspects of cultural and ecological heritage. Estrada argues that Indigenous languages are repositories of traditional ecological knowledge, which is crucial for biodiversity conservation. The piece highlights various initiatives and efforts to preserve Indigenous languages and, by extension, the biodiversity they help sustain. It calls for greater recognition and support for indigenous communities in global conservation strategies, stressing that protecting linguistic diversity is essential for ecological balance and resilience.

F

Fish, R. D., Austen, G. E., Bentley, J. W., Dallimer, M., Fisher, J. C., Irvine, K. N., ... & Davies, Z. G. (2024). **Language matters for biodiversity.** *BioScience*, 74(5), 333–339.

This article explores the critical role of language in biodiversity conservation. The authors argue that linguistic diversity is closely linked to ecological knowledge and practices, which are essential for effective biodiversity management. By examining various case studies and theoretical perspectives, the paper highlights how language shapes our understanding of the natural world and influences conservation strategies. The findings emphasize the need to preserve linguistic diversity as a means to protect and enhance biodiversity, advocating for policies that integrate linguistic and ecological considerations.

Frainer, A., Mustonen, T., Hugu, S., Andreeva, T., ... & Pecl, G. (2020). **Cultural and linguistic diversities are underappreciated pillars of biodiversity.** *Proceedings of the National Academy of Sciences*, 117(43), 26539–26543.

Using case studies of Mangagoulack, Inari Sámi, Evenki, and Tao communities, the article explores the integral role of cultural and linguistic diversity in maintaining and enhancing biodiversity. The authors, from 8 countries with sizeable Indigenous populations, argue that these forms of diversity are often overlooked in conservation efforts, yet they are crucial for the resilience and adaptability of ecosystems. By providing a comprehensive analysis of these case studies, the paper highlights the interconnectedness of human cultural practices and natural biodiversity, and suggest that incorporating cultural and linguistic considerations into biodiversity conservation strategies can lead to more effective and sustainable outcomes.

“To grasp the magnitude and variety of biological and cultural wealth around us is to gain a better perspective on our relationship to the rest of life” (Harmon, 1996).

G

G20 (2024, April 1). **Linguistic biodiversity, the climate crisis and the preservation of ancestral knowledge.** *G20 Brasil 2024 News*. <https://www.g20.org/en/news/linguistic-biodiversity-the-climate-crisis-and-the-preservation-of-ancestral-knowledge>

This news article discusses the critical role of linguistic biodiversity in addressing the climate crisis and preserving ancestral knowledge. It highlights the G20's recognition of the importance of protecting endangered languages as a means to safeguard cultural heritage and ecological wisdom. The article emphasizes that linguistic diversity is not only a cultural asset but also a vital component of global biodiversity, contributing to more resilient and adaptive environmental practices. The piece calls for international cooperation and policy measures to support linguistic and cultural diversity as part of broader climate action strategies.



H

Harmon, D. (1996). ***Losing species, losing languages: Connections between biological and linguistic diversity.*** *Southwest Journal of Linguistics*, 15(1-2), 89–108.

In this academic article, Harmon explores the connection between linguistic diversity and biological diversity by demonstrating how the conditions which cause differentiation in species are analogous to those that create different languages. Understanding the relationship between endemic species and languages provides a robust understanding of the environment they both and concurrently evolved within, as well as the resources within that environment. This article does not focus on Indigenous languages and their uses for resource management, although it does reference those studies, and it does discuss the relationship between local environments and languages, which has meaningful implications for resource management. As such, this article acts as an important supplement to existing case studies of traditional ecological knowledge.

L

Loh, J., & Harmon, D. (2014). ***Biocultural diversity: Threatened species, endangered languages.*** WWF Netherlands, Zeist, The Netherlands.

This report, commissioned by the World Wildlife Fund (Netherlands), examines the intricate relationship between biological and cultural diversity, emphasizing how both are threatened by similar forces. The authors argue that the decline in species and the loss of languages are interconnected phenomena, driven by factors such as globalization, habitat destruction, and cultural assimilation. By using species and languages as proxies for biodiversity and cultural diversity, respectively, the report highlights the parallels in their decline and the importance of preserving both to maintain the planet's ecological and cultural richness. The authors advocate for integrated conservation strategies that address both biological and cultural aspects to effectively combat these dual crises.

M

Maffi, L. (2002). ***Endangered languages, endangered knowledge.*** *International Social Science Journal*, 54(173), 385–393.

In this article, Luisa Maffi explores the critical link between endangered languages and the loss of traditional knowledge. Maffi argues that the loss of languages leads to the erosion of cultural and intellectual diversity, as languages are key vehicles for transmitting knowledge, beliefs, and practices. The article highlights the urgent need for preserving linguistic diversity to maintain the world's cultural heritage and biodiversity. Maffi also discusses the role of communities and linguists in language revitalization efforts, emphasizing the importance of collaborative approaches to safeguard endangered languages and the knowledge they embody.

P

M'sit No'kmaq, Marshall, A., Beazley, K. F., Hum, J., Joudry, S., ... & Zurba, M. (2021). **“Awakening the sleeping giant”: re-Indigenization principles for transforming biodiversity conservation in Canada and beyond.** *FACETS*, 6(1), 839–869.

This paper presents a framework for re-Indigenizing biodiversity conservation, emphasizing the integration of Indigenous knowledge, languages, and practices into environmental management. The authors argue that traditional ecological knowledge and cultural values, conveyed through Indigenous languages, are essential for effective conservation efforts. By highlighting the role of Indigenous languages in preserving ecological knowledge, the article outlines strategies for incorporating these perspectives into conservation policies and practices in Canada and globally.

Parks, L., & Tsioumani, E. (2023). **Transforming biodiversity governance? Indigenous peoples' contributions to the Convention on Biological Diversity.** *Biological Conservation*, 280, 109933.

This article examines the significant contributions of Indigenous peoples to the governance of biodiversity through their involvement in the Convention on Biological Diversity (CBD). The authors highlight how Indigenous knowledge, practices, and perspectives have influenced international biodiversity policies and frameworks through the analysis of case studies and policy developments. The findings demonstrate how that incorporating Indigenous contributions can lead to more equitable, effective, and sustainable biodiversity conservation strategies. While Indigenous languages are only briefly referenced, the case studies here serve as an important example of integration in governance with related forms knowledge.

Powless, B. (2023, January 16). **How Indigenous Peoples are leading the way on global biodiversity protection.** *Canadian Geographic Online*. <https://canadiangeographic.ca/articles/how-indigenous-peoples-are-leading-the-way-on-global-biodiversity-protection/>

This article highlights the pivotal role Indigenous Peoples play in global biodiversity protection. Powless discusses various initiatives and success stories where Indigenous communities have led conservation efforts, leveraging their traditional ecological knowledge and sustainable practices. The online article underscores the importance of recognizing and supporting Indigenous leadership in biodiversity governance, advocating for policies that integrate Indigenous perspectives and rights. It also emphasizes the need for collaborative approaches to conservation that respect and incorporate Indigenous knowledge systems.

“A diversification among human communities is essential for the provision of the incentive and material for the Odyssey of the human spirit. Other nations of different habits are not enemies: they are godsend” (Harmon, 1999).



S

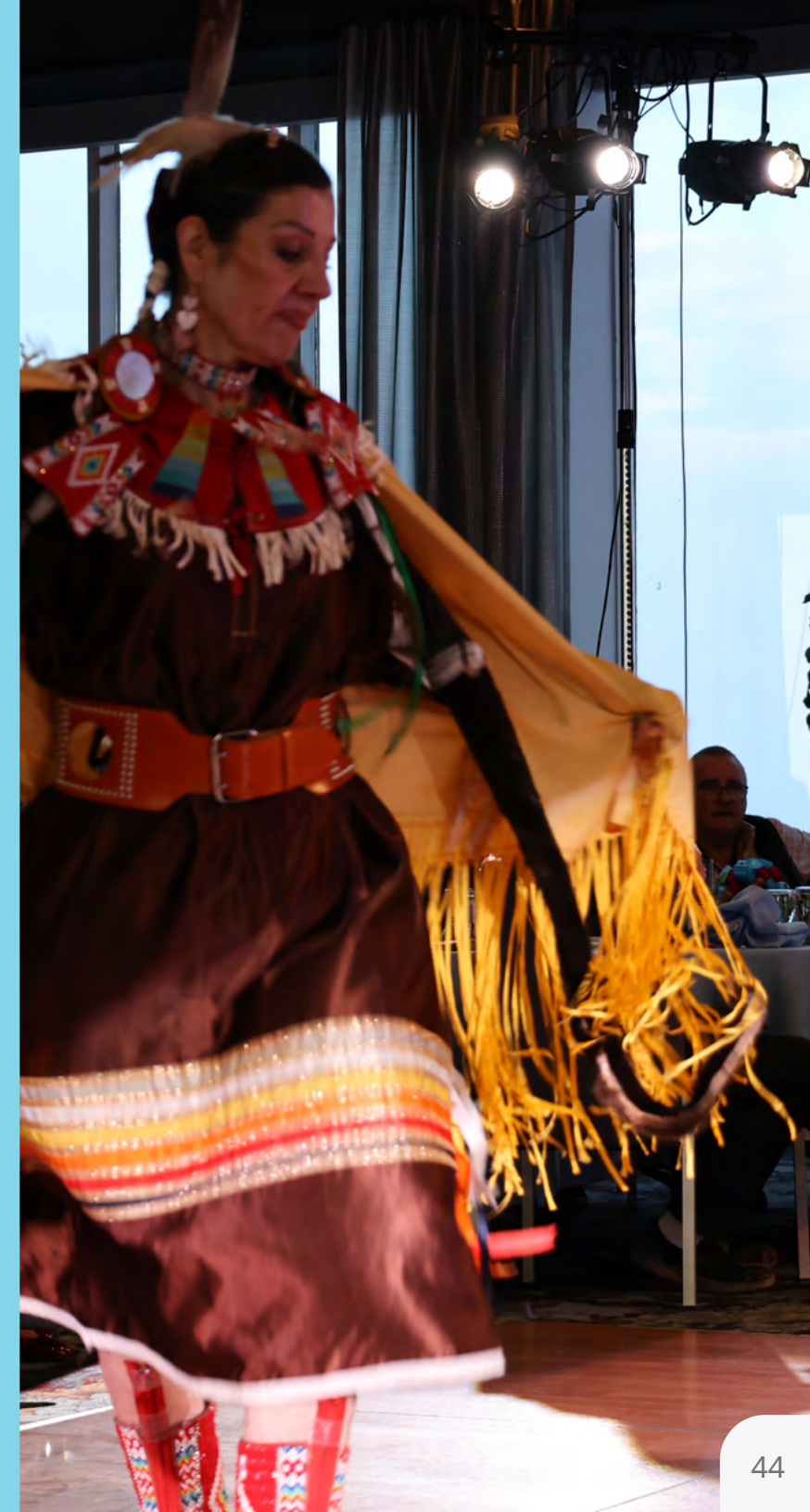
Stoffle, R. W., Evans, M. J., Sittler, C., Berry, D. L., & Van Vlack, K. A. (2023). **Native knowledge of great lakes ecology: Climate changes to Odawa lands.** *Frontiers in Climate*, 5, 1–15.

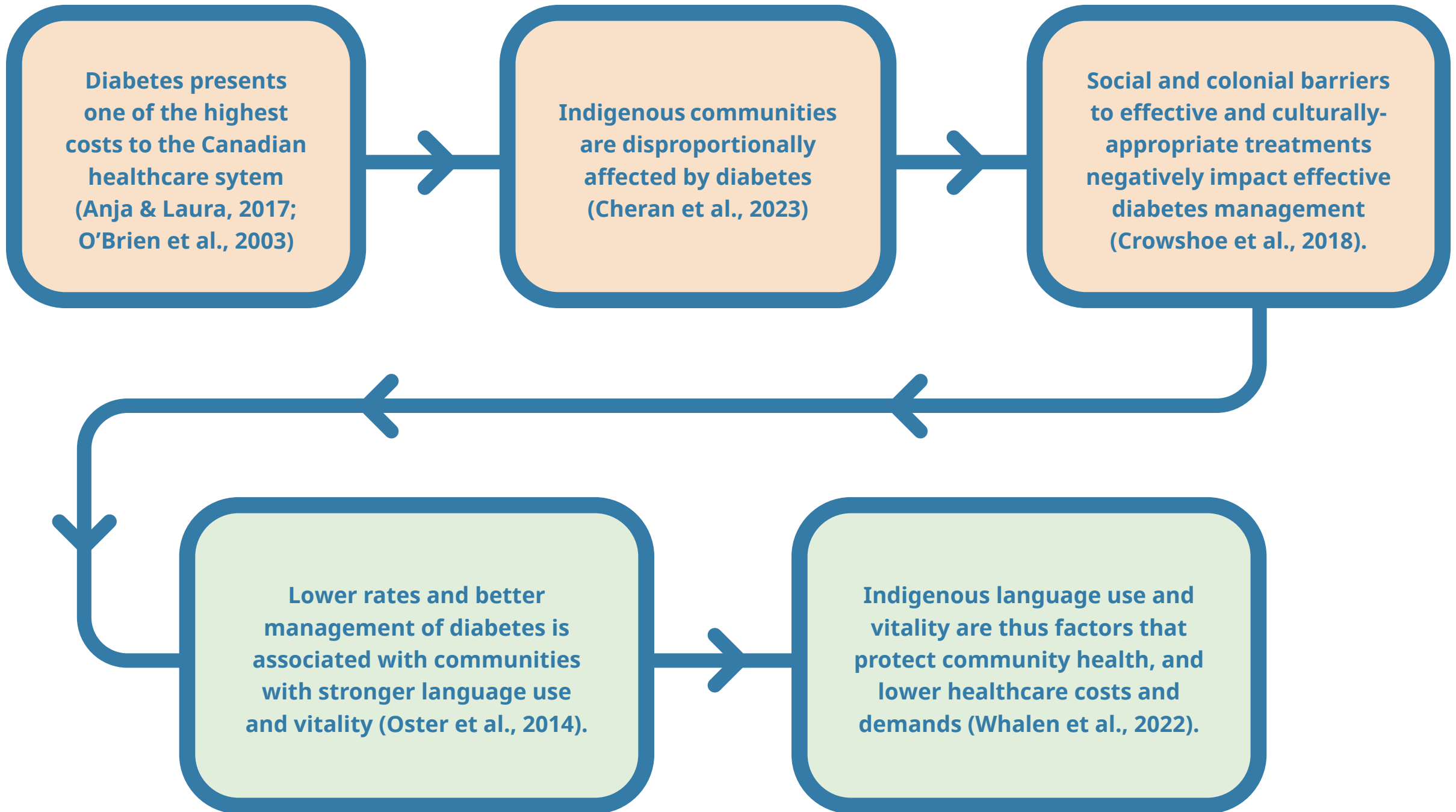
This article examines the impact of climate change on the lands of the Odawa people, utilizing indigenous knowledge to provide insights into ecological changes in the Great Lakes region. The authors—expert elders and anthropologists—highlight the importance of integrating Indigenous ecological knowledge with scientific research to better understand and address the environmental challenges faced by indigenous communities. Through detailed case studies and collaborative research, the paper underscores the value of traditional ecological knowledge in enhancing climate resilience and informing sustainable environmental practices.

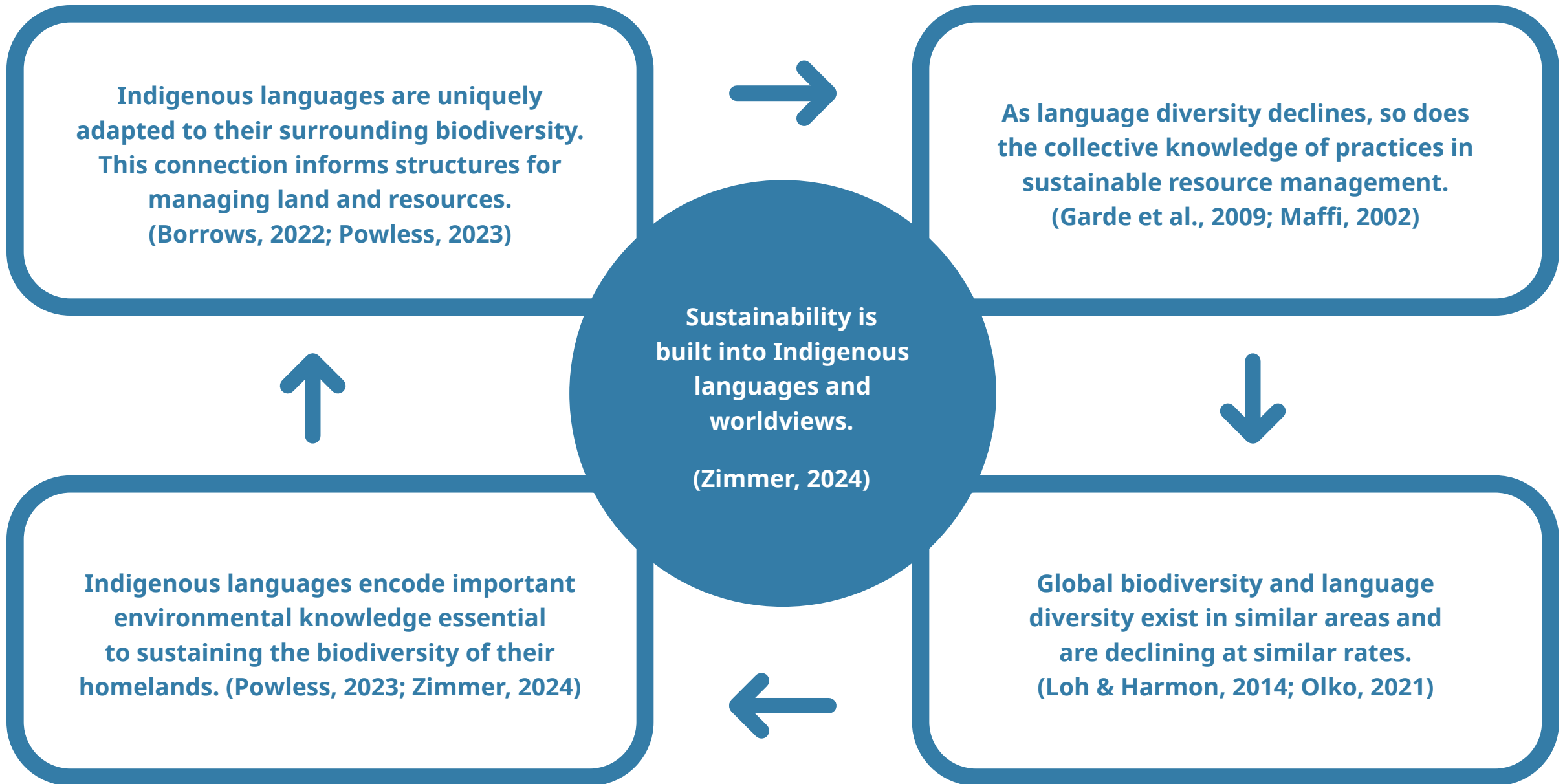
Z

Zimmer, K. (2024, January 25). **Indigenous languages are founts of environmental knowledge.** *Knowable Magazine*. <https://knowablemagazine.org/content/article/society/2024/indigenous-languages-environmental-knowledge-save-ecosystems>

In this online article, Katarina Zimmer explores how Indigenous languages encapsulate extensive environmental knowledge, which is crucial for biodiversity conservation. The piece highlights the work of environmental linguist David Harrison, who has studied various Indigenous languages and found that they often contain detailed observations of local ecosystems. This knowledge, embedded in Indigenous languages, can offer valuable insights for realistic and sustainable conservation efforts. The article underscores the urgency of strengthening and supporting these languages, and emphasizes the potential benefits of integrating Indigenous ecological knowledge into global environmental strategies.







The demand for Indigenous language speakers and experts generally exceeds the labour supply across a variety of industries. (Meades & Pine, 2016)



Indigenous students who are offered opportunities to engage with their language in school have improved outcomes, and increased rates of achievement. (Angelo et al., 2022)



As Indigenous languages are revitalized, new economic opportunities are developed, and these gaps in the labour market are filled. (Olko, 2021)



Economic opportunities for Indigenous communities and individuals become more accessible when education in Indigenous languages is prioritized. (Angelo et al., 2022; Mrabure et al., 2018)