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Creating Online Indigenous Language Courses as Decolonizing Praxis

Kari A. B. Chew

University of Victoria

Sara Child

Hase' Language Revitalization Society

North Island College

Jackie Dormer

University of Victoria

Alexa Little

Independent researcher

Olivia Sammons

First Nations University of Canada

Heather Souter

Prairies to Woodlands Indigenous Language Revitalization Circle

University of Winnipeg

Abstract

This article shares a participatory action research project about the use of technology, specifically online Indigenous language courses, to learn and teach Indigenous languages. The research collaborators are the NEȾOLN̲EW̱ "one mind, one people" Partnership, 7000 Languages, and two Indigenous Partners who have created courses with 7000 Languages: the Hase' Language Revitalization Society and the Prairies to Woodlands Indigenous Language Revitalization Circle (P2WILRC). Together we consider (a) how Indigenous Nations and organizations create and implement online courses for their languages and (b) what community-led interventions could make these efforts more effective. We position our work together as decolonizing and transformative praxis toward the continuance of Kwak̓wala, Michif, and other Indigenous languages.

Key words: computer assisted language learning, decolonization, decolonizing praxis, Indigenous language revitalization, online language courses

Indigenous language revitalization and reclamation (ILR) movements, in Canada and beyond, are what Michi Saagiig Nishnaabeg scholar Leanne Betasamosake Simpson (2017) calls radical resistance and resurgence. Indigenous Peoples resist settler colonialism – the ongoing, violent dispossession of Indigenous languages, lives, and lands (Tuck & Yang, 2012) – and reclaim the cultural context and sense of value of their languages through the resurgence of Indigenous languages across generations (Leonard, 2011). This work takes place within Indigenous Nations, communities, and organizations, as well as in "constellations of coresistance" (Simpson, 2017, p. 211), which connect and coordinate "like-minded people working...together" (p. 217) to advance these movements. This article highlights an example of constellated efforts to create computer assisted language learning (CALL) courses that support the learning and teaching of Indigenous languages. The authors come together through a participatory action research involving the NEȾOLṈEW̱ "one mind, one people" Indigenous Language Research Partnership at the University of Victoria; 7000 Languages, a US-based non-profit that develops free language-learning software; and two Indigenous Partners – the Hase' Language Revitalization Society and the Prairies to Woodlands Indigenous Language Revitalization Circle (P2WILRC).

These Partners worked with 7000 Languages to develop online courses for Kwak̓wala and Michif, respectively. Our research aims to understand (a) how Indigenous Nations and organizations create and implement online courses for their languages and (b) what community-led interventions could make these efforts more effective. We refer to Indigenous Nations and organizations because, in some cases, Indigenous Nations create these courses (i.e., the development of Rosetta Stone Chickasaw by Chickasaw Nation and Rosetta Stone) and, in other cases, Indigenous-led non-profit organizations focused on ILR create these courses (i.e., the

P2WILRC and Hase' partnerships with 7000 Languages). In both our research and our respective work of creating Indigenous language CALL courses, we engage in decolonizing and transformative praxis that moves to beyond what Māori scholar Graham Hingangaroa Smith (2005, p. 41) describes as "mere description of problems and issues" toward "making sure that change does in fact occur." We hope that what we learned together about Indigenous CALL courses will be useful to other Indigenous Nations and organizations using technology to support ILR.

Online courses to support language revitalization

Because settler colonization has displaced and disconnected Indigenous Peoples from their Nations and communities, technology, including Indigenous language CALL courses, has played a crucial role in connecting constellated efforts to support ILR. To create an Indigenous language CALL course, Indigenous Nations and organizations typically partner with a CALL technology provider. There are over 100 Indigenous language CALL courses across popular platforms, including 7000 Languages, Cudoo, Drops, Duolingo, Mango Languages, Memrise, and Rosetta Stone (Chew, Calls Him, et al., 2022). Except for 7000 Languages, an independent non-profit focused on supporting language revitalization (Little, 2017), the platforms named above are run by for-profit companies that specialize in teaching dominant languages (e.g., English, Spanish, and French).

A small number of CALL platforms have been designed specifically for ILR contexts, with the unique needs of Indigenous Peoples and languages in mind. Examples include Bloom for ᏣᎳᎩ ᎦᏬᏂᎯᏍᏗ (Cherokee language) (Alexander, 2018); Nyikina nganka Yimardoowarra for Nyikina (Westwood, 2017); and Oahpa! for North Saami (Antonsen et al., 2009). While some of these platforms are no longer in use, others have expanded to support other minority and

Indigenous languages. Oahpa! has been adapted for dozens of other languages, including as the nêhiyawêtân ("Let's Speak Cree") course for nêhiyawêwin (Plains Cree language) university classes (Bontogon et al., 2018). While platforms designed for language revitalization may offer unique features, like Indigenous characters or activities tailored to teaching polysynthetic languages, they can require a great deal of work and resources to build and sustain over time. Of the platforms listed above, for example, Oahpa! is currently the only one that still has an active website where courses can be accessed. This is one reason Indigenous Nations and organizations may choose to work with an established technology provider, even if it does not focus on Indigenous languages.

There is currently limited research focused on Indigenous-led efforts to create Indigenous language courses on existing platforms. For Indigenous Nations and organizations, the use of technologies developed for dominant languages can be what Kanaka Hawaiʻi (Hawaiian) scholar Candace Kaleimamoowahinekapu Galla (2016, p. 1139) calls a "double-edged sword" with potential both to support ILR and to further contribute to colonization. Technology is "the extension of the knowledge and belief system which has led to its creation" (Meighan, 2021, p. 2), so these CALL technologies may reinforce Western knowledge systems, making it difficult for Indigenous language course creators to enact Indigenous epistemologies. Chew, Hinson, and Morgan (2022), for example, describe tensions in their work to center Chickasaw relational epistemologies in a Rosetta Stone course for the Chickasaw language. A review of Indigenous language CALL courses found that, while mainstream CALL technologies may not be built specifically to support ILR, Indigenous language course creators have still found ways to centre relational ways of knowing and being in common features of CALL courses, such as through immersive videos in the language, custom photographs of the community, audio recordings of

Elders' teachings, and more (Chew, Calls Him, et al., 2022). This research suggests that the features of a CALL platform are just one factor in the choice to create an Indigenous language course on a particular platform.

Importantly, CALL platforms exist in a broader context of digital colonization, making data sovereignty another major concern. Western institutions, including technology companies, often claim that Indigenous knowledge systems fall within the public domain (Okediji, 2018) and do not consider Indigenous knowledges to be protected by intellectual property (IP) and copyright laws (Anderson, 2005). When "ownership" of knowledge is considered, authorship may be assigned to the first person to physically record the knowledge of oral societies, often by writing it down (Anderson & Christen, 2019). This allows institutions to exploit Indigenous knowledges: Researchers can claim copyright to recordings and refuse to share them (Anderson, 2004), scholarly attribution can grant ownership rights to the researcher and institution instead of to the originating community (Anderson & Christen, 2019), and data by and about Indigenous people can be used without the consent of the Indigenous Nation (First Nations Information Governance Centre, 2014). Because of this, Indigenous Nations are increasingly emphasizing data sovereignty and data governance, in which the Nation has the "broad right to control" all "facts, knowledge, or information about the [N]ation and about its citizens, lands, resources, programs, and communities" (Rainie et al., 2017, p. 1). The notion of data sovereignty is affirmed by Article 11 of the United Nations Declaration on the Rights of Indigenous Peoples, which states that Indigenous Peoples have a right to control their cultural property – such as language – and have a right to redress if their cultural property is taken in violation of their traditions (UN General Assembly, 2007, p. 5).

The concept of data sovereignty and data governance frequently runs into conflict with the technology sector's understanding of data ownership (Kukutai & Taylor, 2016), which typically takes one of two primary stances:

(1) the *trade* model, in which a technology provider trades money and/or technological resources in exchange for ownership or control of Indigenous language data;

(2) the *open access* model, in which technologists work together to make freely available technology resources but stipulate that any data or learning products created using those resources are made fully available to the public.

Both models are problematic when it comes to Indigenous knowledges. The trade model fails because language is not a commodity (Dobrin et al., 2009) and therefore cannot be traded; that is, ownership cannot be transferred from a person or community to a technology company. The open access model fails because it leaves languages open to inappropriate commodification and does not recognize Indigenous protocols for sharing or limiting access to certain knowledge, such as ceremonies and prayers that are not meant to be shared with outsiders (Anderson, 2004). Even non-sacred language data can be exploited if made openly available. For example, the ʻōlelo Hawaiʻi (Hawaiian language) phrase "Aloha Poke" was copyrighted by a non-Hawaiian company in Chicago, which then sent cease and desist letters to restaurants run by Native Hawaiians (Awopetu, 2020). These actions reflected an attempt to commercialize and control not only Hawaiian language but aloha as a core cultural concept.

While there is no singular path toward decolonizing the digital landscape, Kanyen'kehá:ka (Mohawk) scholar Nathan Thanyehténhas Brinklow (2021, p. 240) points to the need for Indigenous leadership in "all aspects of technology development, from identifying the problems, finding solutions, and exercising control, to deploying the tools back to their

communities.” Indigenous leadership claims space and opportunity for decolonizing praxis, which centres the needs, values, and aspirations of Indigenous Peoples. Online Indigenous language courses created by Indigenous leaders may be different from other language courses. Given that the separation of Indigenous Peoples from their lands, languages, and communities has long been an agenda of colonization, goals of connecting people to the land, each other, and the language via technology may exist alongside and even take precedence over goals related to advancing learners’ language proficiency (Alexander, 2018; Galla, 2016; Hermes et al., 2012). As ᏣᎳᎩ ᎦᏬᏂᎯᏍᏗ (Cherokee) CALL course creator Bri Alexander (2018, p. 98) asserts, “having access to language...is less about learning vocabulary and more about being in control of one’s history, present, and future in a holistic way” that allows Indigenous language learners to “reclaim power over their lives” (p. 98). It is this assertion of sovereignty and reclamation of language that is at the heart of decolonizing and transformative praxis in ILR.

Partners involved in this research

NEȾOLṈEW̱ “one mind, one people” Indigenous Language Research Partnership

The NEȾOLṈEW̱ “one mind, one people” Indigenous Language Research Partnership (www.netolnew.ca), housed at the University of Victoria, was established by Drs. Onowa McIvor (maskēkow-ininiw, Swampy Cree) and T'naxwtn (Peter Jacobs) (Squamish Nation). The partnership includes nine Indigenous Nations and organizations in Canada that are pursuing research projects to advance ILR efforts, with a focus on “supporting Indigenous adults to learn their Indigenous language, or to enhance their proficiency in their language” (McIvor & Ball, 2019, p. 19). NEȾOLṈEW̱ research efforts are conceptualized as a house formed and supported by five themes related to adult Indigenous language learning (see Figure 1; for more information,

visit https://netolnew.ca/project/). Kari A.B. Chew, a citizen of the Chickasaw Nation, was a postdoctoral fellow with the partnership from 2018–2020 and later became a collaborator. Her interest in Indigenous language CALL courses emerged from her own experiences working with her community to create Rosetta Stone Chickasaw, a partnership between the Chickasaw Nation and Rosetta Stone (Chew, Hinson, & Morgan, 2022). She worked with Alexa Little, then the executive director of 7000 Languages, to propose research about the development of online Indigenous language courses. This research contributes to the theme of *sites of learning and teaching*, as online language courses are a unique virtual space to learn and teach Indigenous languages. NEȾOLṈEW̱ Partners offered support for this research in January 2020, and the research began in February 2020. Chew and Little served as co-leads of this NEȾOLṈEW̱ sub-project.

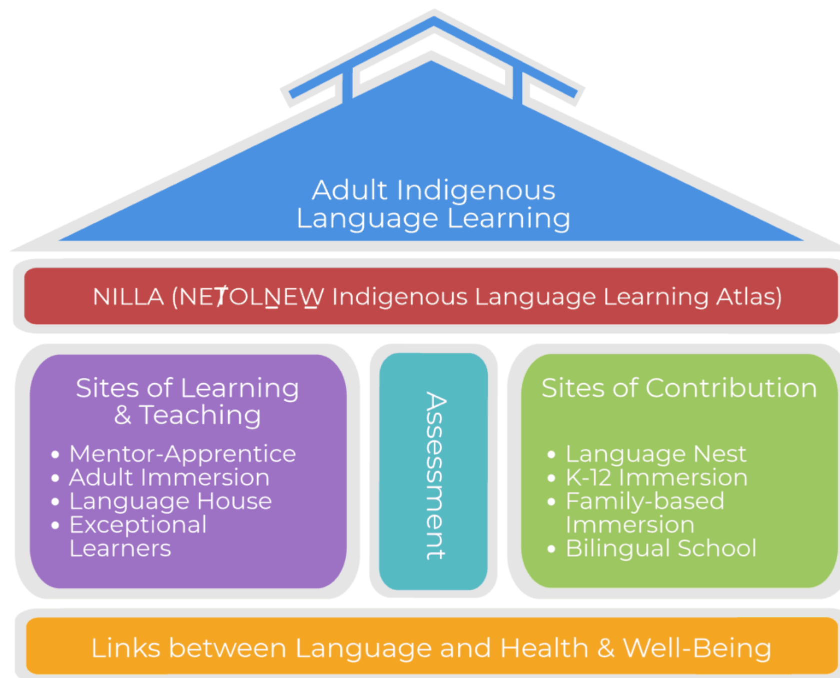

Figure 1: NEȾOLṈEW̱ Project House (McIvor & Jacobs, 2018)

7000 Languages

7000 Languages is a non-profit that provides free services to Indigenous communities around the world to teach, learn, and sustain their languages through the creation of language-learning software. It began as a volunteer project at Transparent Language, a language-learning software company. In 2008, Grassroots Indigenous Multimedia contacted Transparent Language about creating a course for Ojibwe. Inspired by the community's efforts to reclaim their language, the company agreed to donate the software. As the project grew, more and more communities became interested in creating free courses. This led to the launch of 7000 Languages as an independent non-profit in 2016. Little was the executive director from 2016–2021, a position that is now held by Stephanie Witkowski. To date, 7000 Languages has published 55 courses in 29 languages and worked with dozens of communities. While the Transparent Language platform was not initially designed with the specific goal of supporting Indigenous languages, the company values feedback from Indigenous partners and, when possible, incorporates it in platform updates (Witkowski & Jeanette, 2022). As of May 2022, collaborations with Indigenous communities and organizations in North America included the following published courses:

- Coushatta Tribe of Louisiana (Koasati)
- Doyon Foundation (Benhti Kenaga', Deg Xinag, Denaakk'e, Dinak'i, Gwich'in, Hän, Holikachuk, Tanacross)
- Grassroots Indigenous Multimedia (Ojibwe)
- Hase' Language Revitalization Society (Kwak̓wala)
- Langscape (Kaqchikel)

- Manitoba First Nations Education Resource Centre (Central Ojibwe, Cree, Dakota, Denesuline, Northwestern Ojibwe, Oji-Cree)
- The Naskapi Development Corporation (a subdivision of the government of the Naskapi Nation of Kawawachikamach) (Naskapi)
- Prairies to Woodlands Indigenous Language Revitalization Circle (Southern Michif)
- Project GWY (Cherokee)
- Sisseton Wahpeton Oyate Dakotah Language Institute (Sisseton Dakotah)
- Tlahtoltapazolli (Nahuatl)
- Yupiit School District (Yup'ik)

7000 Languages was also working with the Comanche Nation Language Department (Comanche), Douglas Indian Association (Tlingit), and Kansas Kickapoo Tribe (Kickapoo) to create new courses.

Hase’ Language Revitalization Society

The Hase’ Language Revitalization Society is a family-based non-profit founded by Sara Child and supported by a small group of parents, grandparents, and extended family dedicated to language learning. The Hase’ group believes that Kwak̓wala is the hase’ (breath of our ancestors) and that family and intergenerational learning is key to the revitalization of the Kwak̓wala language. The society’s mandate, therefore, is to bring Kwak̓wala back to life in Kwakwaka̱’wakw homes, communities, and the land and sea from where community members come. Hase’ works directly with Elders, children, and families from several communities surrounding Gwa’dzi (Port Hardy, British Columbia) (see Figure 2). Families live in Kwakwaka̱’wakw communities including the Kwagu’ł, Gusgimukw, Gwa’sala-‘Nakwaxda’xw,

and Na̲mgis. Hase' also aspires to support greater collaboration across the Nation because the society members know there is not one single community among them that can bring the language back to life without working together. Hase' hopes to serve a large community of learners who live across Vancouver Island and the lower mainland of British Columbia.

Figure 2: Kwak̓wala language map

When the society was formed, the hope was to accomplish its mission through the provision of intergenerational, land-based, and culturally infused learning opportunities. This mandate has proven to be difficult, with many challenges. First, there was a lack of opportunities for adults and parents interested in learning Kwak̓wala, with many parents struggling to come to terms with learning the language from their children who were learning it in schools. Second,

they had little time to dedicate to the important and enormous task of learning a second language as an adult. Third, most language programming for children was confined to educational places and Western pedagogical spaces from kindergarten to Grade Seven, with virtually no immersion-based, intergenerational language-learning opportunities among Kwakwaka̱ʼwakw for the very young, for youth, or for adults. Finally, the most fluent speakers were very advanced in age, with very few being under 70, and participating in land-based outdoor learning environments was out of the question. Our small group of language advocates reflected on these challenges and saw opportunities to address them, including by creating an online course for the language.

Prairies to Woodlands Indigenous Language Revitalization Circle

Prairies to Woodlands Indigenous Language Revitalization Circle (P2WILRC) was founded in 2019 by Michif speakers Verna DeMontigny, Gail Welburn, and Heather Souter, with trusted non-Indigenous allies Olivia Sammons and Laura Grant. It is a non-profit grassroots community organization focused on the revitalization of Southern Michif and other Indigenous languages spoken by their kin. With roots in the Red River settlements of Manitoba, the Métis homeland reaches from across the prairie provinces in Western Canada (Manitoba, Saskatchewan, Alberta) to North Dakota and Montana in the United States (see Figure 3) and includes small parts of Ontario and British Columbia. Today, the Métis can be found in both urban and rural settings, with some concentration in urban centres (e.g., Winnipeg).

Figure 3: Approximate area of the Red River Métis homelands

The term Michif refers to a group of linguistic varieties developed and traditionally spoken by the Métis, who emerged as a distinct nation of mixed Indigenous and European ancestry in the early nineteenth century (Bakker, 1997; Rosen & Souter, 2009). The Métis have traditionally been multilingual, often acting as guides and interpreters between First Nations people and European explorers or traders. Traditionally, it would not have been uncommon for a Métis person to speak three or more languages (Bakker, 1997; Rosen & Souter, 2009; Sammons, 2019). Michif is a contact language comprising elements of two major source languages – nêhiyawêwin (Plains Cree; Algonquian) and Métis French (Indo-European; Romance) – with additional influences from Anihšināpēmowin (Saulteaux; Algonquian) and, recently, English. It is typically classified as a mixed language, with most verbs originating from nêhiyawêwin, most nouns originating from French, and grammatical elements incorporated from both major source

languages and Anihšināpēmowin. Michif can be broadly grouped into three main varieties: Northern Michif, Southern Michif, and Métis French. Dialectal differences exist within these varieties as well (see Sammons, 2019).

P2WILRC consults on language planning and policy formation, documentation, and new speaker and language instructor development. It is difficult to estimate speaker numbers because the label "Michif" is ambiguous and the Canadian census does not differentiate between Michif varieties. Some Southern Michif speakers estimate that there are fewer than 100 speakers of the language, all aged 60+. Additionally, a small group of motivated second language learners are active in learning and revitalizing the language. They tend to be in geographically disparate areas, with little to no previous exposure to the language, and few opportunities to learn (Souter, 2018). To support these language speakers and learners, some of P2WILRC's projects include Master-Apprentice Programs, language documentation and research, and the development of digital language learning resources, including an online and app-based dictionary (https://michif.org/dictionary/) and verb-conjugator (https://michif.org/verb-maker/). The needs of language speakers and learners, combined with the diasporic nature of the Métis community, motivated the creation of an online language course through 7000 Languages. Through this work, P2WILRC aims to re-establish speech communities for Métis languages using a decolonial framework with a trauma-informed social-justice lens, envisioning a world in which Métis languages, culture, ways of living, and communities are strong, vibrant, and celebrated.

An overview of the courses

7000 Languages develops courses using a language-learning software platform created by Transparent Language. The Kwak̓wala course by Hase' (7000.org/kwakwala) and the Michif

course by P2WILRC (7000.org/michif) are both on this platform and are freely accessible. Funding from the National Research Council of Canada's Canadian Indigenous languages technology project supported the development of both courses. The Transparent Language platform includes more than 40 activity types, which are supplied with language data in different structured formats. The different activity types allow Partners to emphasize what is most important for their Nation or organization, from oral comprehension and pronunciation to understanding the morphology of their languages. While the courses may share some similar features, they are highly customized to meet the needs and goals of Indigenous Partners. Creating a course requires, at a minimum, designing a core curriculum, choosing a set of learner-facing activities, collecting language data, and organizing those data into a format compatible with the software. The 7000 Languages team works with communities to find ways to maximize the potential of the software for teaching each language.

The Kwak̓wala course is composed of 11 units, each with four lessons. These lessons are designed to support parents to communicate with their children during daily activities in the home and community and prepare learners to visit with fluent speakers and Elders in their homes. The focus of this course is asking and responding to questions and engaging in short dialogues. Each lesson contains a series of activities, including the introduction of vocabulary with text and audio, matching and multiple-choice review questions, and writing and speaking practice (see Figures 4 and 5). The course also features a welcome statement that shares Elders' teachings about honoring dialectical differences among community members (see Figure 6).

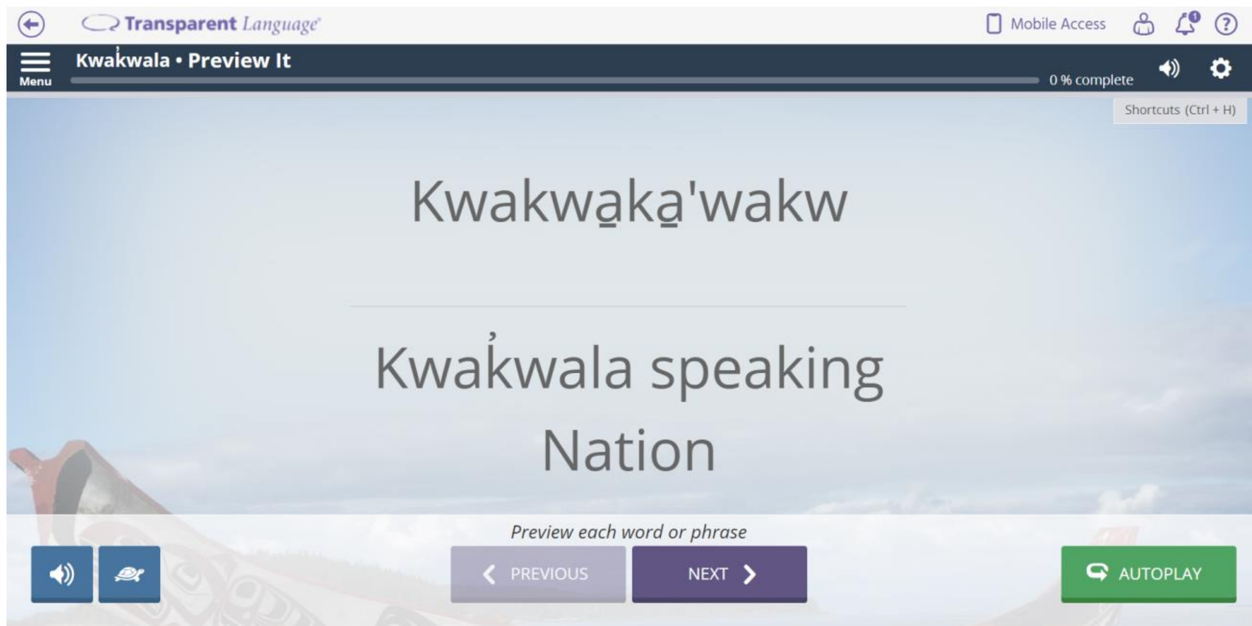

Figure 4: Kwak̓wala vocabulary lesson

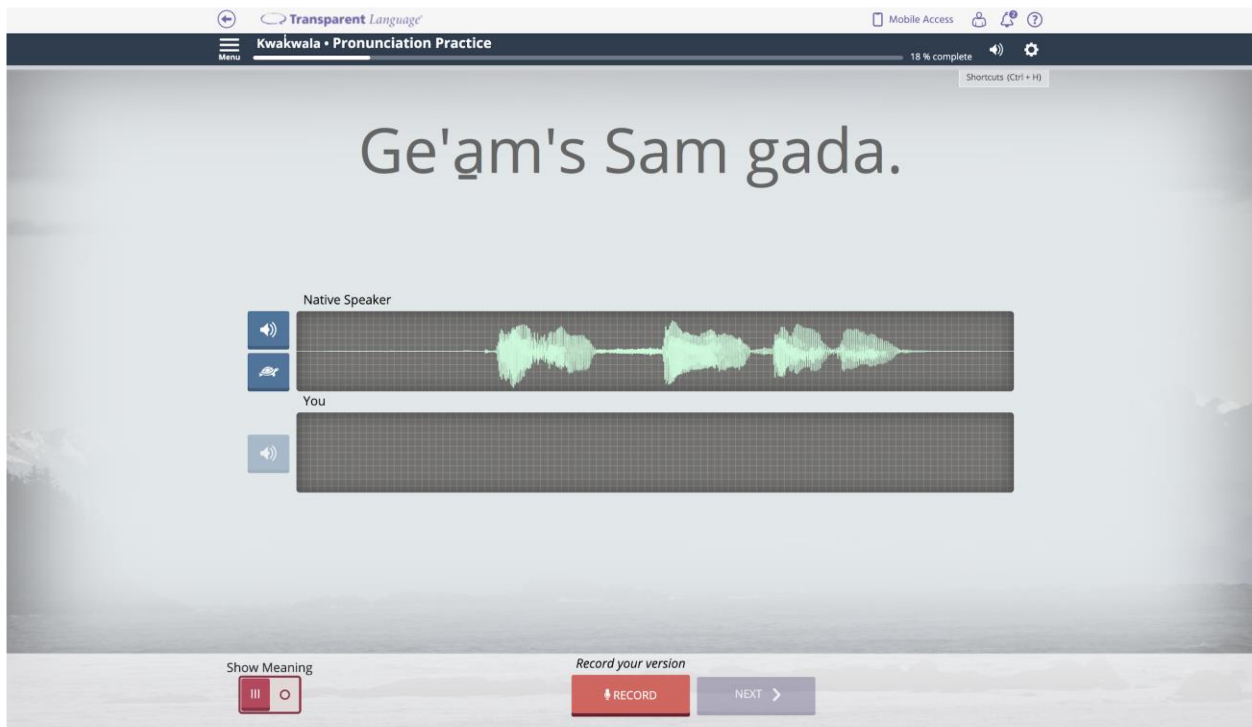

Figure 5: Kwak̓wala speech analysis

*G̱ilakas’la ni’noḵsola
*G̱ilakas’la la’aḵus a’ekaḵila gax̱ano’x̱w.
Wiga xa̱n’s g̱a̱lg̱apoła, a’axsilaṗa, i’ax̱alaṗa, mayȧxa̱laṗa

Our elders would like to remind us that we are multi-dialect. We speak, understand and communicate in multiple dialects of our beloved language.

*Thank you wise ones.
*Thank you for taking care of us on the journey that brought us here.
*Come lets support one another, take care of one another, work together and respect one another

Figure 6: Kwak̕wala welcome

The Southern Michif for Beginners course has 20 units (see Figure 7). The number of lessons within each unit varies from one to eight. Though the activities in each lesson are not identical to those in the Kwak̕wala course, activities similarly include text and audio vocabulary lessons along with listening, speaking, and writing practice. These lessons support the implicit learning of Michif so that learners can speak from the heart. The course emphasizes conversational exchanges and vocabulary building. The course also teaches what P2WILRC calls “learner language” or Michif words and phrases that help learners to maintain a language immersion environment and not switch to English (or another language they know well). In addition to the beginner course, there are two additional courses focused specifically on verbs and vocabulary (see Figure 8). Part of the motivation for the creation of these supplemental courses was to expose learners to more vocabulary than could reasonably fit within a single

course, as well as to provide additional opportunities for learners to practice conjugating verbs, which are morphologically complex and a key component of successfully acquiring Michif.

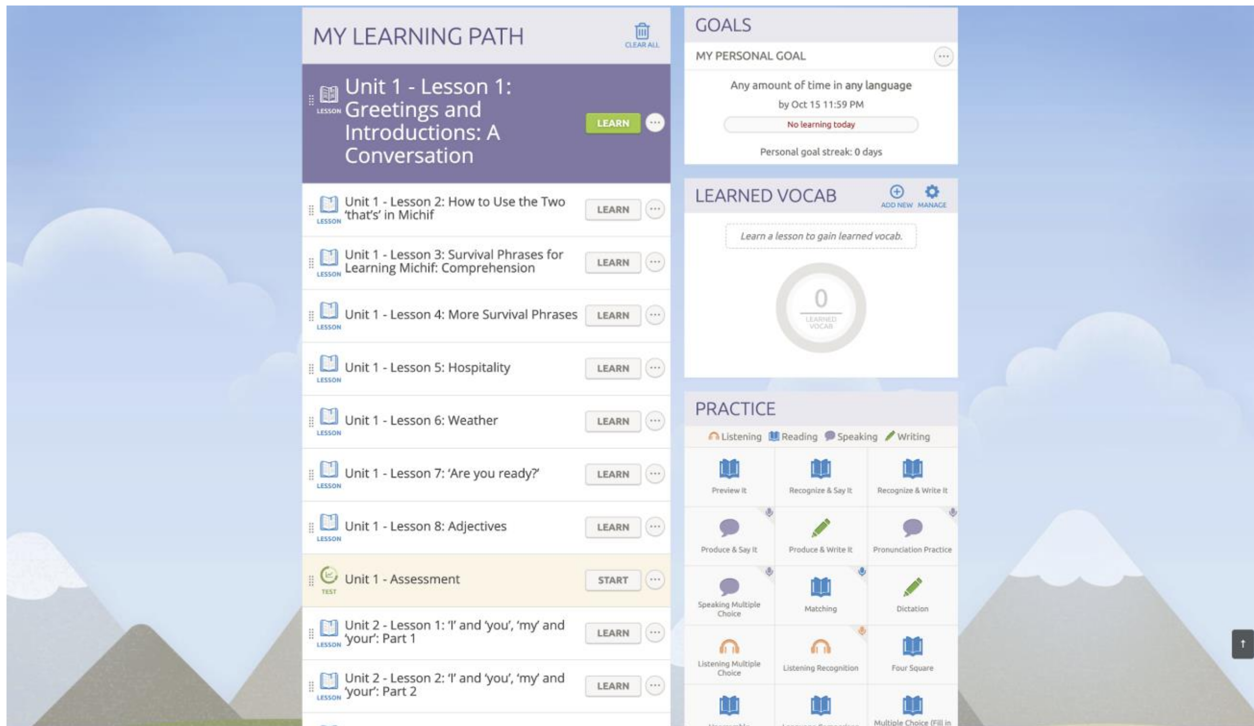

Figure 7: Michif learning path

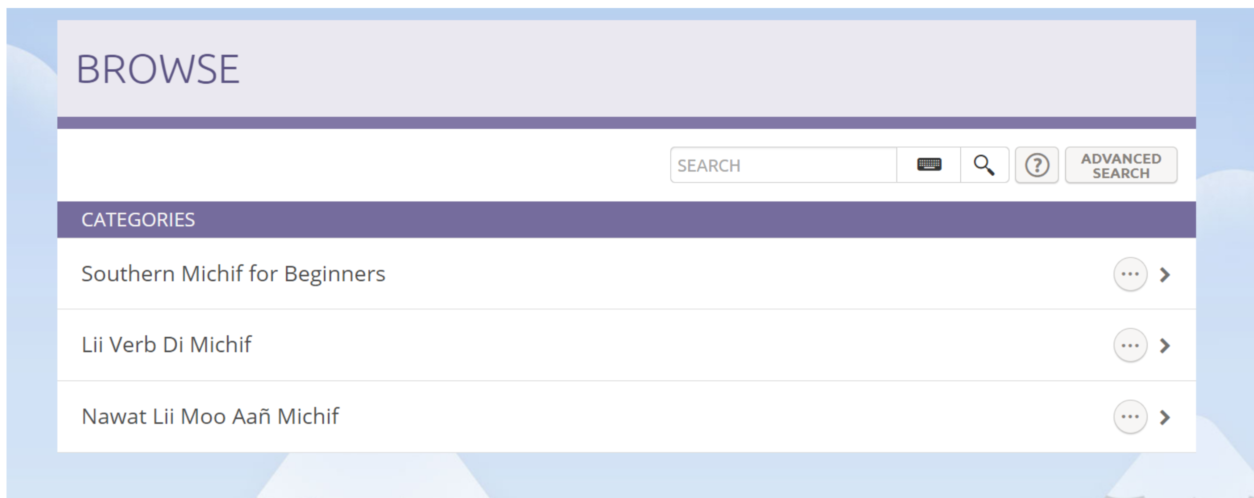

Figure 8: Michif menu

Indigenous-led participatory action research

We consider not only the creation of the online Indigenous language courses themselves as decolonizing praxis, but also our Indigenous-led participatory action research (PAR) methodology. As Unangax̂ scholar Eve Tuck (2009, p. 49) asserts, PAR methodologies are "hinged upon theory/ies of change" rooted in the "epistemologies of sovereignty, contention, balance, and relationship." Likewise, Cree scholar Cora Weber-Pillwax (2009, p. 48) affirms that PAR methodologies that advance such theories of change to involve and engage "spirit, intellect, emotions, and physicality of human beings" are "a means of support for the intellectual and spiritual revolution of Indigenous peoples." Our project began when Chew and Little, who both have experience working on CALL courses to support ILR, came together around a shared commitment to supporting Indigenous communities that are developing online courses for their languages. We invited both Hase' and P2WILRC to partner with us, as both organizations were nearing the completion of their online courses and had important insights about the course creation process and how they were envisioning sharing the courses with their communities. Our motivation to use a PAR methodology was twofold. We wanted (a) to ensure the autonomy of Indigenous Partners in the research process and (b) to take meaningful action toward supporting the work of Indigenous Partners.

Through our PAR methodology, we worked to disrupt problematic power relations – which position Indigenous communities as objects of research (L. Smith, 2012) – by establishing all of us as co-researchers who worked together while also maintaining autonomy in the research process. This was important because, as Souter explained, when Chew and Little first invited the P2WILRC to partner in the work, she had a "visceral reaction" to the word *research*. Māori scholar Linda Tuhiwai Smith (2012) explains that *research* "is probably one of the dirtiest words

in the [I]ndigenous world's vocabulary" (p. 22), in part because Western approaches to research often colonize Indigenous knowledges, viewing knowledge as "there to be discovered, extracted, appropriated and distributed" (pp. 117–118). In contrast, our PAR methodology was rooted in an understanding that we come to knowledge through relationship (Wilson, 2008) and that "our doing [together] is intricately related with our knowing [together]" (Kovach, 2010, p. 40). We also respected one another's autonomy in the research process, creating space for co-researchers to "inform and teach each other about the different worlds of knowledge that each inhabits and/or holds within capacity and competence" (Weber-Pillwax, 2009, p. 50) and ensuring that Indigenous Partners had control over how knowledge shared was used and represented.

When summarizing a PAR project and methodology on paper, the work can appear "deceivingly coherent and orderly, belying all of the simultaneous and disjointed aspects of doing participatory research" (Tuck, 2009, p. 52). Initially, we envisioned our research taking place in what Cherokee Nation scholar Tiffanie Hardbarger (2019, p. 17) calls a "cycle of decolonizing praxis," in our case of *understanding*, *intervention*, and *action*. We envisioned that we would gather to identify pressing challenges faced by our Partners, envision possible strategies to address these challenges, and pilot these strategies. Because PAR is iterative and action-oriented (Weber-Pillwax, 2009), researchers "do not know in advance what will happen" (Junker, 2018, p. 168). To give ourselves time and space to learn from our research process and make meaningful change, we planned to repeat this cycle three times. Unfortunately, the onset of the COVID-19 pandemic converged with the launch of the project in early 2020. Due to public health concerns and restrictions, we were unable to travel and be together in person, and our research plan required adaptations to the circumstances. In addition to shifting our project online, we, as Indigenous language advocates, found ourselves responding to a crisis that was

"potentially detrimental" to ILR movements (Chew, 2021, p. 239). As we worked to support each other through this time of uncertainty, we had to revise our research plan to respond to new circumstances.

Adapting our research plan during the COVID-19 pandemic

Though our research team was especially tech-savvy, given our prior experiences creating online language courses, the shift online during the pandemic posed challenges. A significant portion of our original research budget was dedicated to travel so that we could all spend time together in community to build and strengthen relationships. As Partners worked to complete their courses and begin this project, the first question we faced as a research team was, how do we continue language work and this research while keeping Elders/Old Ones safe and helping them participate in virtual spaces? We worked to understand each Partner's needs, decide how we could use our funding to support these needs, and then act. We spent the funds designated for our first trip to the communities on laptops, iPads, headsets, and other technology so that Partners could connect with Elders/Old Ones.

Next, Chew and Little met with each Partner for a focus group about their experiences creating their online course. Each Partner also identified a community member who would serve as a research assistant focused on aspects of the research taking place in their community. Chew and Little worked with each Partner and the research assistants to design discussion questions and identify who would participate in the focus group. Both Partners co-developed a set of community-specific questions covering three key topics: (a) initial involvement and role in course development, (b) the experience of creating the course, and (c) reflection on these experiences. The P2WILRC focus group included Souter, Sammons, Little, Chew, research

coordinator Jackie Dormer, and Elder Michif speaker Verna DeMontigny. The Hase' focus group included Sara Child, research assistant Colette Child, Little, and Chew. While we initially planned to do additional focus groups with community members who contributed to or would use the course, this was not feasible for various reasons related to the pandemic. Instead of occurring in cycles, our understanding phase was ongoing throughout the project. Members of the research team corresponded and met virtually to continually check in and share with each other. We also came together as a large group to share our project at the 27th annual Stabilizing Indigenous Languages Symposium (see Chew et al., 2021). This provided an important opportunity for us to think collectively about our experiences and the knowledge we were co-creating.

Prior to the onset of the pandemic, both Partners were considering how they would celebrate the completion of the courses with their communities. Both Partners envisioned in-person events to launch and promote the courses. When these original plans were no longer possible, a priority for our research became how best to share the courses with communities. Online events were an option, but Child made the important point that scheduling additional online events may contribute to the "Zoom fatigue" that so many people were feeling. P2WILRC worked on planning a website to host the course and provide additional opportunities to connect communities, such as through message boards, social media, or creating a radio advertisement for their course to play on a local station. Hase' created a beautiful hardcopy booklet featuring artwork by Frances Dick and showcasing the course. A way to promote the course, especially to those who may not be active online, the booklets were delivered to community members along with t-shirts, mugs, and stickers promoting the course and the Kwak̓wala language. Through this work, we continued to reflect together on our work and experiences and their significance.

Analysis

The following sections discuss what we have learned together through our shared work and our focus groups. We focus on initial involvement in their online course projects, the creation process, and reflections on experience.

Involvement

For Indigenous language advocates, the choice whether to embark on a technology project is complex. At first, the Hase' team debated and reflected on whether they wanted to pursue an online course. They were initially concerned that creating a course like this contradicted the society's mandate. They asked, can an online course provide the means to support our adult learners and support their mission to forge pathways for intergenerational, land-based, and culturally infused learning? After many hours of contemplation and reflection, they decided that the creation of the course could support their mission if Hase' moved forward with clear intentions, guided by the 'Ni'nog̱ad (wise ones) and the underlying mission. Choosing to embark on a technology project requires multiple generations of language advocates to come together and discuss how to balance the opportunity for vibrant, intergenerational community learning with the risk of potential data misuse by outside entities, including technology partners, funders, and non-community learners.

P2WILRC similarly experienced hesitation before committing to creating their course. Before beginning the project with 7000 Languages, Souter had a series of extended conversations with Little to discuss how the language data would be collected and used, and whether genuine efforts would be made to ensure the Métis community's ongoing control of the data. Making the language accessible online can greatly assist language reclamation efforts by

providing a way for younger generations and people living outside traditional homelands to learn the language. Digitizing the language makes it more widely accessible to community members, but it also makes the language vulnerable to exploitation and misuse by outsiders, who may try to take ownership of the language data or use it in ways that are culturally inappropriate. While there is risk of language data being misused or commodified, Indigenous Partners were still highly motivated to embark on technology partnerships.

Both Partners acknowledged the desire for language reclamation and the desire to provide community members with greater access to authentic language resources as primary motivators in creating language-learning tech. Due to colonization, forced relocation, and the legacy of residential schools, there are "missing generations" of adults who do not speak their ancestral language(s) (Hinton, 2011). This prevents transmission of these languages as mother tongues to subsequent generations of children. In both Partner communities, most speakers are 70+ and there are few highly proficient adult speakers. As one of the youngest speakers of Michif, DeMontigny expressed the responsibility she feels for maintaining the language: "I'm going to be 70 my next birthday, and I'm the youngest of a group that went to a language gathering, so you see why it's so important for me to keep it." Sara Child emphasized the importance of supporting younger people who want to learn the language "because there are virtually no adult fluent speakers aside from our Elders, who are well into their late 70s and 80s." A CALL course is one way for a few Elder speakers to share their knowledge with younger generations.

Another key motivator in creating an online course is to provide community members living outside the ancestral homeland (the diaspora) with access to their languages and culture. Many members of Indigenous Nations do not live in the traditional community or ancestral homeland of their Indigenous Nation. For example, there are no Métis/Michif reserves in

Canada, and the only protected Métis land base is in Alberta. This motivates language advocates to digitize the language to provide these community members with opportunities to learn the language regardless of geographic location. Colette Child explained that the technology served to "hold onto those Elders' voices in a virtual way" and make their wisdom available to "community members that don't live here in Fort Rupert and don't have access to an Elder." Similarly, Souter expressed that "giving people access to language" online was "really one of the biggest keys...because we don't have a place of our own where we all live together, and we can create a physical community" for language reclamation.

Making an online course requires the active participation of several generations of Indigenous people: the Elders and other proficient speakers who hold the language, younger generations who could utilize technology to capture information, and a mix of generations interested in learning the language online. DeMontigny, who had been working to promote the Michif language in the community for decades, appreciated Souter's help in bringing the language online: "I don't know technology, I don't know how to put it in the computer." Young people's desire to learn the language through technology was "one of the main reasons, actually" that DeMontigny became involved in the project. Ultimately, this multigenerational participation is a key feature of Indigenous efforts for language advocacy. Because Indigenous knowledge is not held by an individual but rather by the community of practice, consenting to share knowledge is a collective decision. Making this decision requires language revitalization practitioners to grapple with the challenging issues of data sovereignty, cultural access protocols, and locus of authority. Based on Partner experiences, we recommend that any Indigenous Nation or organization seek a strong, community-centered license agreement when embarking on a technology project. Furthermore, because no license agreement can perfectly protect Indigenous

knowledges, it is also important for Indigenous language Partners and technology providers to have strong relationships.

Creation

When developing an online Indigenous language course, Indigenous Nations and organizations are faced with a series of decisions that must be made at the outset. Key examples include which orthography to use and which variety or varieties of dialect to represent in the course materials. Though seemingly simple, these choices require careful consideration. Both the Michif and Kwak̓wala communities are historically multilingual, so care was taken in both cases to consider the implications of any dialectic and orthographic choices and address them in the best way for the specific community. As previously mentioned, the Hase' course includes a slide acknowledging that different varieties of the language are represented in the course and that this variation is something to embrace. A similar approach is taken with the Michif course, which focuses specifically on the Southern variety. This is indicated in the title of the course, as well as an introductory slide providing a brief overview of the varieties, as shown in Figure 9.

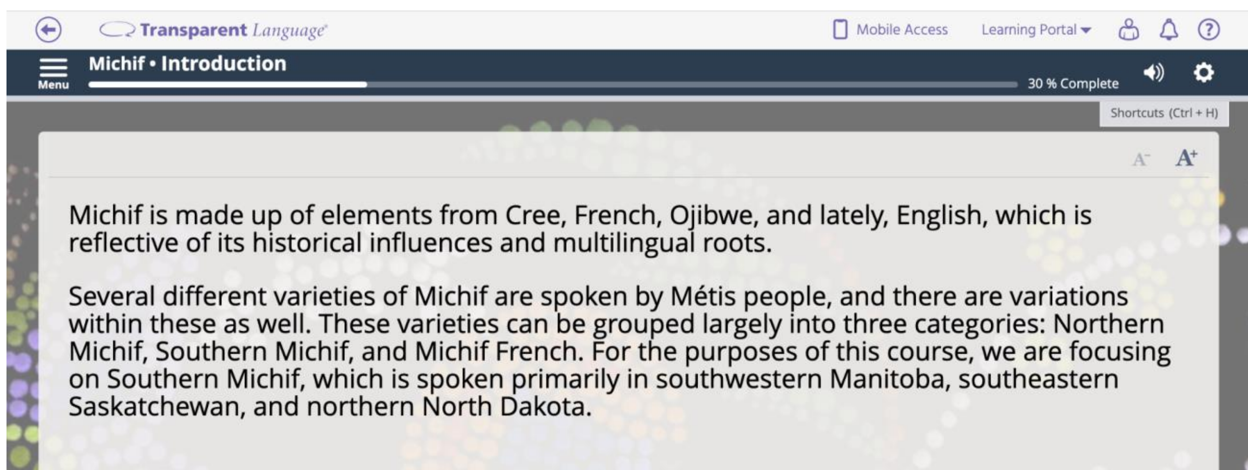

Figure 9: Michif Introduction

These decisions are significant and can have consequences in shaping not only the general direction of the course but also how the course is perceived by the community. While choices should be approached with care, reflection, and consultation, it is possible to become locked in a holding pattern weighing different options. At some point, a decision needs to be made so that other aspects of the course creation can move forward. Both Partners wanted to be as respectful and inclusive as possible in this area, so one way in which they addressed this was to include a statement in the introductory course materials explaining some of these choices that were made. An example of this is shown above for the Kwak̓wala course (see Figure 6), and a similar statement was made for the Southern Michif course as well (see Figure 10).

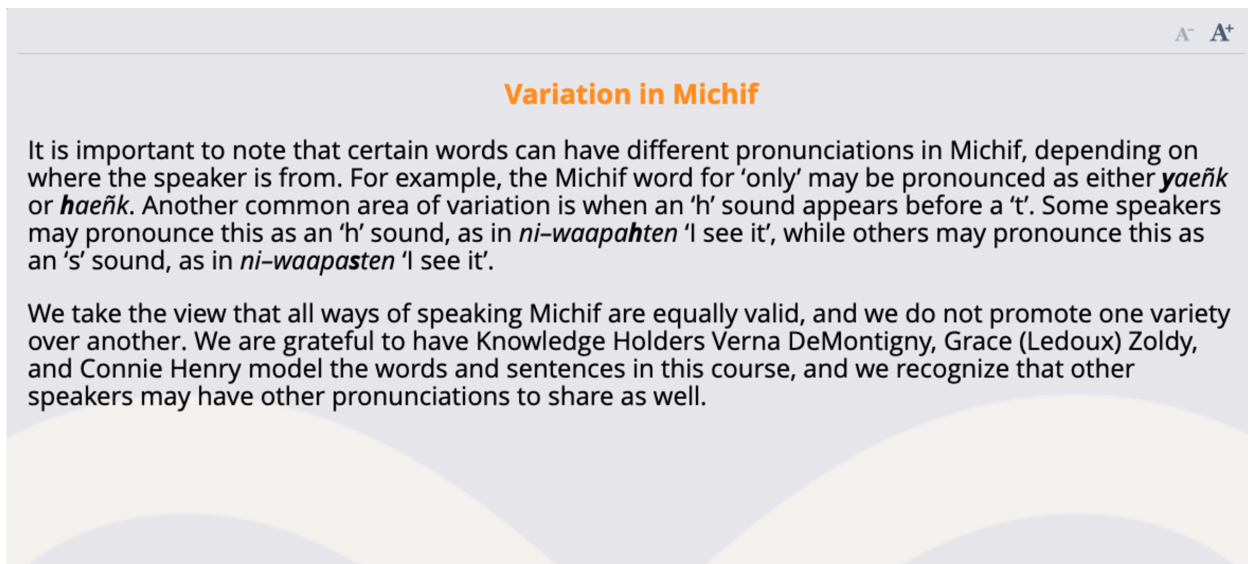

Figure 10: Variation in Michif

The Kwak̓wala course had an additional note at the beginning of the course to acknowledge that they "don't do perfectionism in their culture." Providing statements like these up front can be

helpful in alleviating some of the apprehension and decision fatigue experienced by course creators, especially given the potential high visibility of online language tools.

Partners also recognized the added challenge of having a lack of resources from which to draw in creating course content. This is especially true of Indigenous languages when compared to the documentation and resources available for so-called major world languages. The course creators reported instances in which they encountered the need to both document and analyze forms of the language not available in other sources before they could be incorporated into the course. This adds multiple steps to the course creation process that would not typically be required for languages with different levels of language vitality and documentation. There were several issues to consider on the pedagogical side as well, especially in terms of how to best organize and present the material to learners. For this reason, Sammons emphasized the importance of "having tangible goals" for your course. The asynchronous nature of online courses presents limitations as well as unique advantages. While learners, for example, do not get direct feedback on pronunciation from speakers, they can listen to audio and practice by recording their voice using Transparent Language's EveryVoice™ speech analysis technology (see Figure 5). This allows learners to go at their own pace and may reduce anxiety associated with practicing the language with other people.

Partners reflected on how their languages differ from non-Indigenous world languages, not only in terms of their sound inventories but also in their overall grammatical structure. There were challenges in determining how to effectively teach polysynthetic Indigenous languages in a CALL course and how to emphasize orality and conversational proficiency, often central goals of language revitalization. In the case of the Michif course, some of these concerns were addressed by adopting a "Minimal Course" approach to the course design. This approach

emerged through collaborations between several Algonquian language collaborations; it centres language instruction around Algonquian epistemologies. Key components include (a) listening to community needs and observing what learners are most comfortable with, (b) questioning settler-classroom norms related to language learning and teaching, and (c) maintaining a connection between heart and mind. The method adopts a relational approach to language learning and instruction design, focuses on practical everyday usage, and provides a scaffolded way of exposing learners to patterns in the language using small, learnable chunks called *lessonlets* (Barnes et al., 2021). In addition to this general framework, an effort was made to use Michif-internal ways of referencing grammatical phenomena rather than technical linguistic terminology that the learner may be unfamiliar with. For example, what would typically be referred to as "animate" and "inanimate" nouns in Algonquian linguistics were instead referred to, in the language, as "ana" and "anima" nouns throughout the course (see Figure 11).

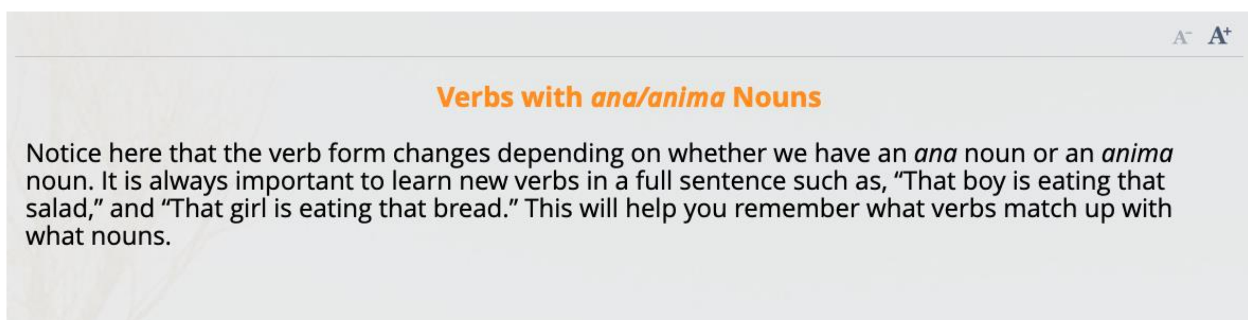

Figure 11: Michif verbs

Reflection

Each Partner reflected on their experiences creating their respective courses and hoped that their experiential knowledge could benefit other Indigenous Nations and communities working to create Indigenous language courses. Firstly, both Partners agreed that it was difficult

to anticipate the time commitment and resources required to see the course creation process through from beginning to end. It is important to set and manage expectations, in terms of both timeline and product, throughout the course creation process. Creating a course with multiple units and levels can require months and even years of work. In addition to developing course content, Partners and their course development teams had to take on many tasks, such as recording audio with speakers, seeking input from community members, and troubleshooting issues with the technology provider. For this reason, Sara Child emphasized that “your team is vital” when developing a language course.

Both Partners agreed that it is paramount to have a caring team who will design the content respectfully. Further, the development team should not work in isolation but continually seek help and input. Métis Elder Verna DeMontigny encouraged language advocates creating online courses to “find anyone that’s remotely willing to do something with your language, hang on to them, and really give them ideas of what you really want to do.” DeMontigny’s contributions to the Michif course, including making hours of recordings, were invaluable. The Kwak̓wala course development team similarly sought input from individuals of diverse ages, backgrounds, and language proficiency. It involved community members who struggled with the language, Elders who knew the language, and speakers who had a deep understanding of the culture. Also critical to the success of the courses was the support of the technology provider, in this case 7000 Languages. Child explained that “maintaining that connection with Alexa [Little, in her role at 7000 Languages] was a huge support.... Alexa has some really good insights.” Cultivating an ongoing relationship with the technology provider enabled the Indigenous Partners to focus on the curriculum and content, rather than the technology itself. Because of

their supportive teams and strong networks, both Partners were able to produce a course that was culturally appropriate and effective for their community.

It is important to consider how online courses *feed* others and get language back into the community. While online courses may not be a complete solution to language loss, they are a tool that can be utilized within the larger scope of language reclamation efforts. Whether the purpose of the course is to help community members gain a deep understanding of grammatical concepts or more conversational fluency to connect with Elders, having a goal provides direction throughout the process. Sara Child believes "the outcome of the course had a lot to do with our team who were having that conversation around what our end goal was." Because the Hase' team shared a similar vision of having a course based around communication and culture, they were able to use that goal to guide their course-building process. It is helpful to connect with others working on Indigenous language courses for ongoing support and reflection. As the creation of Indigenous language courses presents many unique challenges, it is encouraging to know that others have gone through this process. Due to having few fluent speakers and a lack of existing language resources, both P2WILRC and Hase' experienced challenges because creating their courses required additional language documentation and curriculum design work. For this reason, connecting and sharing what resources are available across Indigenous Nations and organizations is important. The opportunity for the Partners to share, reflect, and learn from each other has been a significant part of this project.

Implications and looking forward

Our PAR project illuminated three key findings with implications for other Indigenous Nations and organizations considering or currently developing online courses for their languages.

First, the course must have a purpose within a long-term language plan. Both Partners were clear that their focus was not simply on creating a course but rather on designing a course that would support their existing and future ILR efforts focused on restoring intergenerational language sharing and bringing language back into home and community. Souter explained that it is the community "that 'saves' a language. It's not the course, it's the community, it's the people coming together and using the language." Both courses have only recently been released; in the future, additional research about how community members themselves utilize and benefit from the courses would be helpful toward ensuring that long-term goals for ILR are achieved.

Second, building, strengthening, and sustaining relationships is critical. Completing a course requires collaboration between the Indigenous Nation and/or organization, language learners, speakers, community members, allies, and the technology provider. Relationality is a foundational principle when planning and assessing language work (Chew, Hinson, & Morgan, 2022; Leonard, 2021). This idea of relationship not only affected how the course was completed on a logistical level but was also central to the course design itself. The courses were made to help learners function within the context of their communities, so they naturally had a focus on practical communication and relationships. Souter explained, "the best thing we could do was model some conversation and... exchanges that were based on relationship. Everything is really based on relationship." Sara Child emphasized being in good relationship requires language learners to take active rather than passive roles in ILR: "We wanted to create a course that was going to help people get to the doing part." Partners had a strong desire to use the courses to build a sense of community around language for learners, as well as to inspire future learners to become involved in language revitalization themselves, as expressed by Souter: "That was something really different, to think how this course can contribute to learners becoming language

revitalizationists.” These examples highlight not only some of the unique challenges faced by Indigenous language communities when creating an online language course but also a common focus on relationships and incorporating Indigenous perspectives/ways of doing throughout the course creation process.

Third, the *process* of creating a course is as important as, if not more important than, the course itself. Decolonizing praxis emphasizes process over product. We collectively agreed that there was great value in Indigenous Nations and organizations coming together to do a language project. Building an online course prompts continual conversations among community language advocates about how to overcome challenges, create meaningful pedagogical materials, and bring the community around toward common goals. We also benefited greatly from coming together to do this research. We formed our own community of practice – of language advocates involved in the creation of online Indigenous language courses – to share ideas and offer support to each other. This was a space that none of us had had prior to beginning this research.

Pursuing this research during the COVID-19 pandemic posed unanticipated challenges. The courses provided learners with opportunities to continue language learning during a time of social distancing and isolation, but also limited the Partners’ ability to bring people together in person to celebrate the courses. Souter offered a hopeful vision for the Michif course and future opportunities to gather safely: “Let’s say ma taañt Verna went to Batoche [in Saskatchewan, a culturally important site where an annual festival is held to bring together Métis people from across communities]. There would be young people or all sorts of people coming to Batoche from all over. Ma taañt Verna would be greeted in her language by people she didn’t know. And, young people..., they would be able to say things and talk together.” The Michif and Kwak̓wala courses are part of a dream in which Indigenous languages flourish and people are connected.

Author Biographies

Kari A. B. Chew is a Chickasaw citizen and Chikashshanompa' (Chickasaw language) advocate. She researches technology to support Indigenous languages, pedagogies for Indigenous language learning and teaching, and Indigenous language-in-education policy. She works closely with the Chickasaw Nation on language education projects, including Chickasaw Rosetta Stone and curricula. She has a doctorate in Indigenous language education and linguistics from the University of Arizona and was a postdoctoral fellow and collaborator with NEȾOLṈEW̱ "one mind, one people" at the University of Victoria.

Sara Child is of Kwakiutl, Nuchanulth, Scottish, and English ancestry. She received her bachelor's degree in education from Simon Fraser University in 1991 and her MEd in Indigenous language revitalization from the University of Victoria in 2017. Her work focuses on holistic language revitalization, Indigenization, and decolonization. She views collaboration as key to supporting Indigenous languages across the globe. She is passionate about Indigenous language revitalization and unearthing the integral connection between Kwak̓wala her Indigenous language and the restoration of holistic wellness, through immersive learning that ties us once again to land, culture, and community through a Kwakwaka'wakw lens.

Jackie Dormer is of Métis, German, Irish, and Polish ancestry and grew up in Treaty 1 Territory and the homeland of the Métis Nation (Winnipeg). She received her bachelor's degree in linguistics from the University of Manitoba in 2020 and is now working toward a degree in Native studies. She has contributed to this research as a research assistant and research

coordinator. She hopes to continue supporting language revitalization projects, especially those involving the Michif language.

Alexa Little is an independent researcher who focuses on the use of digital technologies for Indigenous language reclamation. She received her bachelor's degree in linguistics from Yale University in 2016. From 2016 to spring 2021, she served as the executive director of 7000 Languages, a non-profit that connects Indigenous communities with language-learning software. She intends to continue working, both as a researcher and as a volunteer, on projects that help Indigenous nations reclaim their languages through technology.

Olivia Sammons is an assistant professor in Indigenous languages and linguistics at the First Nations University of Canada. Her work focuses on Indigenous language documentation, description, and revitalization, with a particular focus on Michif and Algonquian languages. She also has interests in language contact, lexicography, and second language acquisition.

Heather Souter is a citizen of the Red River Métis Nation and a member of the Manitoba Métis Federation. She holds an MEd in Indigenous language revitalization from the University of Victoria and is an assistant professor at the University of Winnipeg teaching language revitalization, linguistics, and Michif. Heather also co-leads Prairies to Woodlands Indigenous Language Revitalization Circle (P2WILRC) with Elder Verna DeMontigny and Elvis DeMontigny and runs Wiichihitotaak Indigenous Language Revitalization. Some of P2WILRC's projects include varieties of Master/Mentor Apprentice programs, language documentation, and the development of print and digital language learning resources.

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