

## **Resources for and about Indigenous Languages: Examining Online Collections**

Leora Bar-el, Megan Stark, Samantha Prins

There are numerous online resources for and about Indigenous languages of North America. A cursory look through a variety of resources reveals two major issues: first, information is found in several different places, and second, there are inconsistencies and gaps in the information available. These inconsistencies, gaps, and the spread of information across resources is likely one of the contributing factors that has led individuals and groups working with Indigenous languages to develop new websites to fill gaps and/or address needs. If we narrow our focus to resources for and about Indigenous languages of Montana, we are faced with the same results: resources are inconsistent, spread across websites, or missing altogether. To address these issues, we aim to develop a centralized resource collection for and about Indigenous languages of Montana.

When developing new collections, the question at the forefront is: What should these online resource collections look like? In order to navigate and understand online resource collections, this project involves a collaboration between researchers in the field of linguistics and the field of library and information sciences. In this paper we examine a variety of websites that focus on or include resources for and about Indigenous languages of North America. We use the characteristics of collections, as defined by Library and Information Sciences, as a framework to compare these websites in order to better understand the nature of these types of collections: their similarities, their uniqueness, and the choices that their curators made in their development. We undertake this examination with two long-term goals in mind: (i) the design of a resource collection for and about Indigenous languages of Montana, and (ii) the establishment of a set of guidelines for the development of resource collections for and about Indigenous languages that incorporate the expertise of linguists, communities, language activists, and librarians.

This paper is organized as follows: In the first section, we motivate our collaboration. In the second section we provide an overview of collections from a Library and Information Sciences perspective. We then turn in the third section to a survey of several websites that are focused on or include resources for and about Indigenous languages of North America. In this section we examine these websites through the lens of Library and Information Sciences in order to explore what these collections have in common with each other, how they differ, and what questions arise. Finally, we sketch out some next steps and consider the implications of examining resources for and about Indigenous languages as collections.

### **Motivating Our Collaboration**

Linguists are likely to design a resource collection from a linguistic perspective. As we might expect with any discipline or community, researchers are most familiar with their own needs and thus a resource collection could easily serve the needs of a linguist, but not necessarily the needs of individuals or groups that do not have a linguistic background. For example, while categories such as “stems,” “transitivity,” or “syllable structure” are second nature to linguists, not all potential users think about language in the same way. In part motivated by the shift to the empowerment research model (Cameron et al. 1992), in many cases, linguists working with Indigenous languages, not only in North

## *Sustaining Indigenous Languages*

America but around the globe, collaborate with (members of) communities (see for example, discussions in Bischoff and Jany 2018, Sapién 2018, and references therein). In these types of collaborations, a resource collection would be designed to also reflect the community's needs and/or perspectives. However, even in these cases of collaboration, the nature of the collaboration will impact the extent to which varied perspectives might be incorporated. For example, if the community members consulted in the development of the collaboration are interested in compiling teaching materials, while other members of the community might be interested in resources on language planning, it may not be the case that both types of resources are represented in the collection. Depending on how the scope of the collection is defined, this is not a problem per se, but simply a by-product of the collaboration.

Interdisciplinarity is familiar to linguists (see Holton 2018). There is precedent in the field of linguistics to approach work from a variety of perspectives. Linguists collaborate with and seek input from speech communities (as aforementioned), but also other disciplines such as anthropology, sociology, geography, ethnomusicology, ethnobotany, computer science, etc. Within the fields of language documentation and language revitalization, we also find collaborations between linguists and archivists. For example, the National Breath of Life Archival Institute for Indigenous Languages (National BoL) works with communities whose languages are endangered to train members on gaining access to and navigating archives in order to contribute to community-led language revitalization programs (Baldwin et al. 2018). The institute aims to address the fact that language archives can contain a tremendous amount of information about languages, though not always accessible to non-linguists. Based in Washington, DC, the National BoL involves collaboration between linguists, curators, archivists and librarians. The institute is based on the Breath of Life Language Restoration Workshop for California Indians model which was first developed in 1995 by the Advocates for Indigenous California Language Survival and the University of California at Berkeley. *Indigitization: Toolkit for the Digitization of First Nations Knowledge* (Indigitization 2019) is an example of a collaboration between communities and archivists. Based in British Columbia, the project aims to provide resources on digitization, conservation, and management of Indigenous knowledge to community-led projects through funding and training. Language archives are one type of location where resources for and about Indigenous languages may be uncovered.

To help navigate, understand, and assess the characteristics of resource collections, in this project we turn to another discipline which has as its focus the curation and design of collections: Library and Information Sciences. It is useful to turn to the discipline of Library and Information Sciences in order to incorporate core principles in that discipline that may help inform the work of linguists and others. Libraries utilize many collection development standards and guidelines depending on the type of institution (i.e., academic or public library), the nature of the material (i.e., primary or secondary materials) (American Library Association 2019) and other factors. Further, librarians view a collection from the perspective of multiple users, and also ask questions similar to those that linguists ask, including seeking to understand the community around a set of resources and the ways in which a community might engage with a collection (Farnel 2017). Librarians are trained to bring specific collection development standards to the design and curation of collections that, when applied to language resources, may provide new and potentially useful approaches to collections that include Indigenous language materials (Farnel et al. 2017).

### **Characteristics of Collections**

Library and Information Sciences is a discipline that already considers many of the questions that face linguists, language activists, or anyone seeking to develop a language resource collection. The “competencies for special collections professionals” and the “code of ethics for special collections librarians” developed by the Association of College and Research Libraries (2017; 2013) are particularly relevant to this discussion, as are recent publications by library professionals (Brown 2017; Lee 2008; 2011; Littletree and Metoyer 2015) emphasizing the importance of examining and updating the ways in which materials are arranged and described to better reflect the values of Indigenous communities. Some questions that are helpful might include the following:

- Scope: What is the scope of the collection? How is the scope determined?
- Users: Who are the anticipated users of the collection? How might users differ from stakeholders? How are these groups identified?
- Collection structure: What categories are used in the collection? Is the collection structure familiar to users? For non-familiar structures, is guidance and appropriate access provided?
- Dissemination/sustainability: Where is the collection housed? Who is responsible for updating and maintaining the collection over time?
- Materials: Which materials are most useful? Which materials are missing or inaccessible, and why? How are the materials selected? Who is considered an authority?
- Access: Who wants or needs access to which resources? Are there resources that should have limited access?
- Effectiveness: How should the collection be assessed?

It may be further instructive to note in this discussion that resource collections developed at or in collaboration with academic institutions, including academic libraries, may carry different expectations and perceptions. Academic audiences may perceive that information in academia differs from information in the “real world” (Stark 2016) in specific ways. Collections that strive to blur the boundary may encounter unique opportunities to draw on characteristics of each. For example, the ways in which the managers of a collection perceive information may differ from the ways in which users of a collection perceive information. Many linguists, and particularly those working with Indigenous languages and communities, are sensitive to this variation. A few decades ago, a shift in the field of linguistics started taking place as linguists began to adopt better designed collaborations with communities (see for example Sapién 2018, references therein, and numerous other works on community collaboration in language documentation). A consequence of a shift to the empowerment research model (Cameron et al. 1992), as well as the increase in community-led research projects, is a blurring of the line between academic and real world knowledge, particularly as it relates to endangered languages. However, there remain older resources that were not developed within this research model. Moreover, there are researchers who still develop resources that are not necessarily designed for multiple audiences. Furthermore, while linguists are indeed sensitive to the different ways that information can be accessed, librarians understand communities and users in much more varied ways.

In the following section we survey several websites that are focused on or include resources for and about North American Indigenous languages. Using these collection characteristics, we compare these websites in order to better

## *Sustaining Indigenous Languages*

understand the features of these collections and to determine how the curators of these collections might have answered these questions when designing their websites.

### **Resource Collections for/about Indigenous Languages: A Brief Survey**

Resources for and about Indigenous languages of North America are abundant. There are a variety of online resource collections that compile different types of language-related resources, and these collections can be categorized in a variety of ways. For example, we find resource collections which focus on the world's languages, such as *Ethnologue: Languages of the World* (Eberhard et al. 2020), collections that focus on the world's endangered languages, such as *UNESCO's Atlas of the World's Languages in Danger* (Moseley 2010), collections focused on languages in a particular region, such as the *Survey of California and Other Indian Languages* (The Regents of the University of California 2019), and collections focused on individual languages, such as the *Salish Language Institute* (Salish Language Institute 2020). Some language resource collections concentrate on pedagogical materials, such as the *Crow Language Consortium* (Crow Language Consortium 2018), linguistic materials, such as *The Wakashan Linguistics Page* (The Wakashan Linguistics Page 2010), or a combination of types, such as the *Coeur d'Alene Online Language Resource Center* (COLRC) (Coeur d'Alene Online Language Resource Center 2009). We also find collections that compile and link to other resource collections, such as *Spoken First: Your Resource for all Language-Related News in Indian Country* (Falmouth Institute 2020), a blog that includes links to a variety of organizations engaged in language preservation and revitalization. Some resource collections are not focused on language as their primary service, but users who visit their site for independent reasons are pointed to this collection for additional materials, such as the *Administration for Native Americans* (Administration for Native Americans 2019), which includes links to grant applications and language immersion resources. Some collections contain resources that span several of these categories, such as Jon Reyhner's collection *Teaching Indigenous Languages* (Northern Arizona University 2020), which includes books, articles, and columns, as well as links to numerous other websites, organizations, published materials, etc. Among these and other North American Indigenous languages resource collections, we find collections managed by universities, communities, nonprofits and private organizations.

The aforementioned list of online resource collections is by no means exhaustive. Rather, this summary presents a sample of the different types of collections. The question remains: in what way are these collections the same/different and what choices do their curators make when designing these collections? In this section, we examine three collections in more detail:

- (i) Endangered Languages Project (Endangered Languages Project 2020)
- (ii) First Peoples' Cultural Council (First People's Cultural Council 2020) and their website dedicated to the FirstVoices Initiative (FirstVoices 2020)
- (iii) Blackfoot Language Resources (Blackfoot Language Resources 2017)

These three collections are chosen as samples for this survey due to their variation with respect to the language(s) in focus (i.e., a single language, languages of a particular region, and the world's languages). Websites such as these are not usually referred to as "collections" in the sense the term is used by Library and Information Sciences. Here we use the seven characteristics of collections outlined in the above section in order to explore what we can uncover when we look at these websites through a different lens. In comparing these collections

that are not usually compared to each other, and using a set of criteria to do so, we can better understand what these collections have in common, how they differ, and what choices underpin their development.

### **Scope**

The scope of a collection can be determined in various ways. For example, a collection's scope may be defined by a relatively simple trait like a shared characteristic of its content creators (i.e. Montana authors) or by a more complex trait like its subject matter (i.e. Indigenous languages of the Flathead Indian Reservation). Often, a number of features combine to define the scope of a collection, and care is required in maintaining the collection's focused and intentional development.

Defined here as the scope of languages included in the resource collection, scope is perhaps the most obvious distinction across the three resource collections surveyed here. At one end of the spectrum is *The Endangered Languages Project* (henceforth, ELP) which focuses on endangered languages across the world. At the time of writing, the collection contains information on 3432 languages. According to the website, the collection provides "an online resource for samples and research on endangered languages as well as a forum for advice and best practices for those working to strengthen linguistic diversity."

The First People's Cultural Council (henceforth, FPCC) website is narrower in scope, focusing on languages of a particular region, namely the Indigenous languages of British Columbia, Canada. According to their website, the organization's mandate is "to assist B.C. First Nations in their efforts to revitalize their languages, arts and cultures." Their mission is to be a "key source of current and accurate information on the state of First Nations Languages in British Columbia" and to "provide program coordination and funding for First Nations language and culture preservation and enhancement." The *FirstVoices* (henceforth, FV) initiative is described as a "free online environment that connects the knowledge carried in our languages to modern digital technology." The FV archive, which includes information about 53 languages, focuses on Indigenous languages of British Columbia, Canada, but includes languages from other parts of Canada as well as resources for languages across the world.

The scope of the *Blackfoot Language Resources* (henceforth, BLR) website is the narrowest of the three collections discussed here. This website focuses on dialects of the Blackfoot language (Algonquian language family) spoken in Canada and the US.

The variation in scope observed across different collections can reflect the diverse nature of the materials, the intended use of the collection, and other important elements that contribute to defining what scope is most meaningful for the collection and its users.

### **Users**

A collection with a well-defined user will help the curator design the collection to ensure it is meeting the needs of all its users. However, a well-defined user can also identify who might be excluded from the collection, or which users might face challenges when accessing the collection.

It may not always be obvious from the collection itself who are the intended users. For the three collections surveyed here, the intended users are overtly identified within the collections. ELP casts the widest net for users as it is described as being designed for researchers, fieldworkers, speakers and communities. Heaton and Simpson (2018) extend this list to include "language teachers, students, funding agencies, policy makers...and lay people who are generally interested in learning more about languages, language pedagogy, or

## *Sustaining Indigenous Languages*

language endangerment.”

The FV website states that the site is designed “to record and promote Indigenous oral culture and revitalize the linguistic history of their people” and to “help Indigenous languages succeed with state-of-the-art hardware, software and technical support for their communities (not matter how small).” The site houses a mix of publicly accessible and password protected archives. FV promotes that the site is “community-led” and “supports collaboration with Elders.” The FV overview on the FPCC website suggests that “[I]anguage teams can upload dictionaries, alphabets, songs, stories, words and phrases as well as audio and video to their [FV] community sites.” The FPCC website hosts an extensive resource library consisting of guidebooks, toolkits and other language related materials beyond those available on the FV website (see further discussion below). These pages of the FPCC website identify additional users. For example, the FPCC “Language Immersion Handbook” states that it is “intended to be a practical tool for elders, community members, teachers and anyone else involved in language and culture immersion camps.” In many cases users might be the same for both the FPCC and FV websites, though the two websites might also target different users.

Finally, the BLR website is promoted as “[r]esources for teachers, learners and speakers of the Blackfoot language.” This set of targeted users is reinforced by Genee and Junker (2018).

As with determining the scope, many factors contribute to identifying the intended users, and their preferred access, usage and method. Carefully considering users can help prevent potential mismatch in aligning materials and use. Given that developers of these collections have either not yet undertaken formal assessment of their collections or their assessment techniques/results are not transparent from the collections (see below for further discussion), it is unclear from these collections whether the intended users of these collections are the actual users.

### **Collection Structure**

Perhaps the most variation across these sample resource collections is observed in the structure of the collections themselves. In libraries, structure is heavily governed by subject classifications derived from controlled vocabularies. Typically, the hierarchy of the structure is based upon agreed-upon standard taxonomies (as in the Library of Congress Subject Headings). There are examples of other classification systems that govern structures that rely on other factors as the dominant organizing principle. For example, the Superintendent of Documents system which governs U.S. federal documents is organized primarily by the agency that created the material. A collection of Indigenous language materials might benefit from the consideration of all structures in order to discover the classification structure that works best and appeals to all the intended users.

The set of resources on the ELP website are catalogued according to the following categories:

- Language research and linguistics
- Language revitalization,
- Language materials
- Language education
- Language advocacy and awareness,
- Language, culture and art
- Language and technology
- Media

## *Resources for and about Indigenous Languages*

The number of resources within each category varies. For example, the language revitalization category includes 655 resources while the language materials category includes 3718 resources. The ELP website also includes a map which locates the languages represented in the collection and indicates their vitality status. The site includes a blog, a materials submission page, and a page where users can download a database listing the languages represented in the collection, along with some information about them. It is not clear how resources are classified within each category, but it does appear that resources can be classified in more than one category.

The FPCC website, which has undergone recent extensive revisions, includes a variety of resources built around language, arts and culture. Language related resources are available throughout the website. The Language Program section of the website focuses on “funding, training, resources and support for language revitalization.” It includes the following categories:

- Youth Empowered Speakers Program
- Language Revitalization Planning Program
- Language Technology Program
- Pathways to Language Vitality Program
- Mentor-Apprentice
- B.C. Language Initiative
- Language Gathering & Sharing Grants
- Digitization Grant Initiative
- Reclaiming My Language
- Language Nest
- FirstVoices
- Indigenous Languages Grant

The FPCC Initiatives section of the website includes the following categories:

- First People’s Map
- FirstVoices
- Endangered Languages Project
- Decade of Indigenous Languages
- HELISET TŦE SKÁL CONFERENCE
- Indigefest
- Our Living Languages Exhibition

The Resource Library section of the website contains a database searchable by the following categories:

- Area (Arts, Language, Heritage, FPCC General)
- Resource Type (e.g. Fact Sheet, Guide, Handbook, Language Status Report, Legislation, Newsletter, Policy Paper, Poster, Program Toolkit, Report, Technology)
- Programs and Grants (including several of the programs listed in the Language Programs section, as well as e.g. Indigenous Heritage Micro-Grants, Oral Histories Program)
- Year (2009-2020)

The FV collection is described as a “suite of web-based tools and services designed to support Indigenous people engaged in language archiving, language teaching and culture revitalization.” The resource sections of the website consists of the following categories:

## *Sustaining Indigenous Languages*

- Explore Languages (community sites with text, sound, images, and videos)
- FirstVoices for Kids (interactive online games)
- Resources (guides and external links)
- FirstVoices Apps (“keyboard software for over 100 languages and includes every First Nations language in Canada, Australia and New Zealand, plus many languages in the USA”)

The BLR collection structure consists of resources contained within the website and also those linked to other (related) websites. The resource categories include:

- A Blackfoot language dictionary (linked to a separate website),
- A description of the grammar of the Blackfoot language (in progress—some sections not yet complete at the time of writing)
- A compilation of Blackfoot stories (linked to a separate website)
- A blog
- A list of publications (at the time of writing, links to two publications about the project are available)
- A list of contributors

The BLR also includes a sub-collection of resources, categorized as follows: Blackfoot linguistics, Blackfoot grammar and dictionaries, websites, language learning resources, apps, and other resources. These sub-collections include lists of bibliographic information, links to other sites, and descriptions.

Librarians consider collection structure critical to providing access. A complex structure may unintentionally obscure material and can frustrate or confuse users; such a structure may inadvertently bar rather than facilitate access. Ensuring consistency and clarity, while minimizing unnecessary complexity, are all considerations that should guide structure design. Without documenting and assessing the user experience, it may not be clear how users are engaging with these structures and whether users find these structures meaningful.

### **Dissemination/Sustainability**

Questions concerning dissemination and sustainability of the collection include: where is the collection housed? Who is responsible for updating and maintaining the collection over time? Of the three sample resource collections surveyed here, none overtly discuss the choices considered for housing the collection. Only one of the collections outlines plans for long-term maintenance and access. However, we may glean some information about dissemination and sustainability from the locations of the collections, the project funders and other project advisors.

The ELP website has a complex list of funders, founders, content providers, governance council members and advisory committee members. The project is affiliated with two universities (University of Hawai‘i at Mānoa and Eastern Michigan University), as well as other governmental organizations and funding bodies (First People’s Cultural Council and the National Science Foundation). Oversight for the project is managed by members of the Alliance for Linguistic Diversity, as well as a Governance Council and Advisory Committee. The project is housed on its own website and boasts “the most up to date and comprehensive information on endangered languages.” Affiliation with two universities suggests potential longevity of the project, and the project’s Facebook page suggest that the project is being updated. The FAQ section of the website outlines a long-term plan for the collection:

New information will be sought and existing information corrected to complete the fields of information on each language. Documentation and revitalization projects, organizations, and individuals in positions to know or be able to find out will be contacted for current information. Grammars, lexicons, and other sources on the languages will be consulted and evaluated, and on this basis the index of the documentation for the language will be calculated. At the end of its funded period, ELCat will still be maintained and updated by language researchers on a volunteer basis.

Unfortunately, at the time of writing, the link to the Catalogue of Endangered Languages project (ELCat), the source of information contained in the ELP website, is broken. Furthermore, it is unclear how reliance on volunteers is sustainable in the long-term.

The FPCC is a First-Nations run British Columbia Crown Corporation. It is supported by provincial legislation and is overseen by a Board of Directors and an Advisory Committee. The FV project is housed on its own website, has a coordinator and reflects “input from over 50 community partners from across B.C.” FV grants are funded by the First People’s Cultural Foundation (FPCF) and the Ministry of Indigenous Relations and Reconciliation, and are now offered through the FPCC Language Technology Program. The relationship between these three arms (FPCC, FPCF and FV) and the British Columbia government point to anticipated longevity. The recent extensive upgrades to the website demonstrate that the project is ongoing and continuing to develop. Furthermore, for several languages represented on the website, local community contact information is available.

The BLR collection is based at the University of Lethbridge in Lethbridge, Alberta, Canada. The project was developed with funding from the Social Science and Humanities Research Council of Canada. There are approximately 30 contributors to the website, which includes two digital dictionary teams. The project is affiliated with the *Algonquian Linguistic Atlas* (Algonquian Linguistic Atlas 2019), based at Carleton University. The BLR project likely has longevity due to its affiliation with a university, however the website is listed as “a work in progress.” Users with comments and questions are directed to a single faculty member at the university. The website was last modified in June 2017 and does not spell out how the developers plan to fill in gaps on several blank pages throughout the site, or to develop the project further. The BLR, like many similar collections, are often developed through short-term limited grant funding. In some cases, a project such as this can be completed within the span of a grant. However, most projects like this are ambitious and stretch beyond the lifespan of a grant. These projects are also developed as a way to lay the foundation for a larger project. In some cases, the larger project continues. However, it can sometimes be the case that the development of the project ends with the funding. In these cases, the collection may remain online and accessible indefinitely, but it can be the case that the collection itself is endangered as the longevity of the project is undefined. A recent blog post on the website advertises two graduate student positions that are part of the Blackfoot Language Resources project.

When considering the addition of items to any collection, the ability to provide long-term access is a primary consideration for librarians. Evaluating many factors may play a role in determining whether the resource is a good fit in terms of sustainable access over time. Accepting that some resources may be more fleeting, or designing a strategy for facilitating perpetual access are both options and both carry further deliberation. It may be the case that the developers of these surveyed collections have considered issues relating to long-term storage. The

## *Sustaining Indigenous Languages*

fact that their websites do not identify these plans is not problematic per se, but simply raises the question as to whether a plan is in place. For many librarians, the questions of dissemination and sustainability result in succession planning processes in order to ensure long-term access. The extent of digital content has complicated these questions because of the understanding that technology will become obsolete and will render inaccessible multiple formats, platforms, etc. Approaching the materials with an understanding of how, and when, materials were created, and a plan for ongoing distribution are both crucial to the long-term success of the collection.

### **Materials, Access and Effectiveness**

While information about scope, users, collection structure, dissemination and sustainability can often be gleaned from these websites, either directly or indirectly, information about materials (e.g. Which materials are most useful? Which materials are missing or inaccessible, and why? Who is considered an authority?), access (e.g. Who wants or needs access to which resources? Are there resources that should have limited access?), and effectiveness (e.g. How should the collection be assessed?) is not as straightforwardly garnered from these collections. We would expect that usage can be tracked on any website, but that type of information provides only part of the story.

In their book that serves as a companion to the website, Campbell and Belew (2018) acknowledge that the ELP website is “limited in its ability to present supplementary material explaining the rationale, processes and complications involved in curating language information on a large scale.” Materials are uploaded to the ELP website by users according to the project’s posted content guidelines. To upload materials, an account must be created. The resources are not necessarily reviewed for content by the project team, though users can flag copyright violations or inappropriate materials. The FAQ section of the ELP website does outline how languages are chosen for inclusion in ELCat. The ELP website does not identify missing or inaccessible materials, but in response to the question “[s]ome languages have less information; will more be added?” in their FAQ section, the website states:

[it] is an unfortunate fact that for many of the world’s endangered languages, very little information is available to researchers outside the speaker community. The Catalogue of Endangered Languages team has undertaken an intensive four-year search for the best information on each language; however, in some cases, further information simply does not exist.

Of note is an area of the website devoted to outlining ways that users can “[h]elp improve the site.” Suggestions include adding new content or correcting existing content related to specific languages, as well as sharing resources related to any of the identified categories, but that are not language specific. Hauk and Heaton (2018) acknowledge that some language information is limited in the catalogue and discuss prioritizing language documentation when that is the case. The ELP website does not discuss how the collection is assessed for effectiveness. The website allows for resources within categories to be sorted by “most viewed”, though whether that information can be relied on for an assessment of the effectiveness of the resources is not clear. In their exploration of the “real-world applications” of the collection, Heaton and Simpson (2018) provide an overview of the features of the ELP website that are designed to address the needs of communities. They also discuss some anecdotal examples of cases where the project has contributed to communities. It is important to point out here that Heaton

and Simpson suggest that given how recent the completion of the project was reached, “benefits to communities up to this point are less visible than those we anticipate from this point forward.”

The FV website states that “[m]ember groups represent over 50 Indigenous nations, bands and other non-profit organizations.” Choices about content rests with communities: “members retain ownership of content created by them for use on their community site.” Communities interested in archiving materials about their languages or using the FV tools to teach their languages are encouraged to contact the FV team. Thus, the FV website is unique in that updates to the sub-collections are made by communities, while updates to the entire collection are made by the FV team. An earlier version of the FV website offered an optional free membership which “allow[ed] [FV] to present you with content that is personalized to you, however most content is available to the public without registration, at the discretion of communities.” The website relaunch no longer offers this type of membership but rather refers to members as the community language administrators who control the content of the “community sites” within the FV collection.

The homepage of the BLR website has several videos introducing the collection, providing tips on navigation, and explaining the connection of the BLR website to the larger Algonquian Linguistic Atlas project. The BLR website also has the benefit of a companion paper which provides detailed history, development, and impacts of the BLR project (Genee and Junker 2018). Genee and Junker address effectiveness of the website and the difficulty in measuring it. They state that the BLR project “will be successful insofar as it has a positive impact on the Blackfoot language and its speakers and learners” (300). However, they also acknowledge that it is “too early to be able to assess such impact. . . and it will always be difficult to measure” (300). Genee and Junker point to lack of informative usage statistics. They present anecdotal information about the use of the BLR recordings and dictionary at language camps, secondary and post-secondary schools and community language classes. Genee and Junker suggest that effectiveness can also be measured by the experiences of the project participants. However, given the goals of the project, assessing effectiveness requires a more spelled out set of assessment tools and plans.

This brief survey suggests that assessing resources and their uses is complex and can be difficult to undertake. These challenges can serve as a call to collection curators to share their practices so that others can learn from them. If we can identify the challenges facing us, we can look to expertise from other disciplines, such of the field of Library and Information Sciences, for innovative ways to assess effectiveness, which in turn can inform our collections. Together these collaborations can help to develop a set of guidelines to implement assessment and effectiveness in current and future projects. While the collections we discuss here are discrete and diverse, that their designers are faced with similar challenges suggests that language resource collections such as these can link arms and learn together.

### **Final Thoughts, Next Steps and Implications**

This paper has presented an overview of some of the ways in which we can navigate and understand websites that focus on or include resources for and about Indigenous languages of North America. Using a set of collection criteria adopted from the field of Library and Information Sciences, and applying those criteria to these online resource websites, the similarities of these collections, their differences, and the choices that motivated their design emerge. An examination such as this also leads to larger questions. The uniqueness of individual

## *Sustaining Indigenous Languages*

collections is highlighted when collections are compared to one another. Their value becomes noticed and notable. However, a collection will not be unique in all ways, thus a comparison to similar collections reveals what might be at the core of every collection. Furthermore, this type of examination highlights where we might need more resources moving forward.

Examining collections in this way can reveal much about not only the collection and the users, but also the collectors themselves. This application can serve as an opportunity for creators to reflect on their collections and ask whether the collection is serving the intended goals and whether the collection has met the initial expectations. Such an analysis can also continue to help focus the goals of a collection. The framework can serve as an ongoing assessment of the collection and ask questions about what the collection should be.

When we consider these collections through a different lens, we observe that there is not necessarily a shared, or unified, underlying organizing principle. Using collection development criteria to move toward a common, but flexible, framework for creating new collections may provide the opportunity to compare collections for similar features, to highlight uniqueness, and to identify areas that need more development.

This project is a first step in building a collaborative approach to collection development utilizing the expertise of different disciplines. This project represents a preliminary approach, and we anticipate that as the collaboration grows, the project may include new implications for library collection development standards, and increased awareness of the issues involved in curating and presenting Indigenous language materials.

### **Next Steps**

The seeds for this project developed from an observation that resources for and about Indigenous languages of Montana are inconsistent, spread across websites, or missing altogether. Our initial discussions about the ways to address these issues quickly led us to a potential solution: the need for a resource collection for and about Indigenous languages of Montana. However, once we began exploring existing online resource collections, we had more questions than answers. Reaching out to the field of Library and Information Sciences was our next step to help us navigate and understand online resource collections. The survey presented in this paper is the first step in the path to reach a long-term goal to develop a resource collection for and about Indigenous languages of Montana. Our next steps are to continue with materials analysis, assess the resources on and about Indigenous languages of Montana that are available, identify and survey potential users in order to understand what they might need or want from such a resource collection, identify gaps in available resources that might require content creation, and approach other potential collaborators (e.g. tribal college librarians).

### **Implications**

This project highlights the value of an interdisciplinary perspective. Through this project we are asking the question: What would an online resource collection look like if it was informed not just by linguists, communities, and other stakeholders, but also by librarians? While collaboration is familiar to linguists and communities, collaboration with Library and Information Sciences is an underexplored partnership (see discussion in the second section, above). Librarians ask many of the same questions that linguists do (e.g. How is a community defined? Who is considered an authority and how is authority established? Who owns the materials?). Consequently, linguists and librarians have much to learn from such a collaboration. A single view drives a collection in only one way. However, differences and multiple perspectives provide an opportunity for discovery.

This project directs us towards the development of a set of guidelines for resource collections for and about Indigenous languages that taps into an already-existing expertise of librarians, and enriches that knowledge with the already-existing expertise of linguists, communities and language activists. Issues of funding, time and personnel are often acknowledged as a significant limitation to language documentation and revitalization projects. Developing a set of guidelines could help maximize financial, temporal and personnel resources and direct those resources to where they are needed most. This set of guidelines will not ignore the uniqueness of communities and the needs of users more broadly; that uniqueness is built into the collection. Instead, a set of guidelines can help collection curators consider which options they might have and which choices can or should be made at the outset of the project.

A welcome by-product of this approach is that it is two-directional. The field of linguistics gains insight from Library and Information Sciences in how to design and curate collections, consider the needs of a variety of users, and assess the effectiveness of the collection. At the same time, the field of Library and Information Sciences can also gain knowledge from the field of linguistics. This project has the capacity to impact issues that librarians address such as defining community, determining authority, and addressing what is in peril when information is standardized or optimized for findability.

It is likely impossible for a collection to be everything to everyone. In some sense, all collections are incomplete. However, if a collection serves a need, then it has value, particularly a collection that is designed to be dynamic and flexible. While our long-term goals are the development of a collection for and about Indigenous languages of Montana, we hope this project will also provide ideas about what to consider in the development of language resource collections more broadly. We expect that there are numerous projects much like this one being undertaken and we hope to learn from each other about what challenges others might have faced or still be facing, the solutions that individuals or communities may have implemented, or any other questions, issues, ideas that should be considered in the development of a collection for or about Indigenous languages.

## References

- Administration for Native Americans. 2018. "Native Language Resources." Last modified February 15. <https://www.acf.hhs.gov/ana/resource/native-languages-resources>.
- Algonquian Linguistic Atlas. Accessed February 28, 2019. <https://www.atlasling.ca>.
- American Library Association. 2010. "Collection Development." Last modified April 29. <http://www.ala.org/tools/atoz/Collection%20Development/collectiondevelopment>.
- Association of College and Research Librarians, Rare Books and Manuscripts Section. 2003. "ACRL Code of Ethics for Special Collections Librarians." Last modified October. [http://rbms.info/standards/code\\_of\\_ethics/](http://rbms.info/standards/code_of_ethics/).
- Baldwin, Daryl, Leanne Hinton, and Gabriela Pérez-Báez. 2018. "The Breath of Life Workshops and Institutes." In *The Routledge Handbook of Language Revitalization*, edited by Leanne Hinton, Leena Huss, and Gerald Roche, 188-196. New York: Routledge.
- Bischoff, Shannon T., and Carmen Jany, eds. 2018. *Insights from Practices in Community-Based Research: From Theory to Practice Around the Globe*. Berlin: Mouton de Gruyter.
- Blackfoot Language Resources*. 2017. Last modified June 29. [blackfoot.atlasling.ca](http://blackfoot.atlasling.ca).

## *Sustaining Indigenous Languages*

- Brown, Kevin. 2017. "The Role of an Indigenous Nations Library Program and the Advancement of Indigenous Knowledge." *Collection Management* 42:196-207. Accessed February 28, 2019. doi:10.1080/01462679.2017.1367342.
- Campbell, Lyle, and Anna Belew. 2018. "Introduction: Why Catalogue Endangered Languages?" In *Cataloguing the World's Endangered Languages*, edited by Lyle Campbell and Anna Belew, 1-14. London: Routledge.
- Cameron, Deborah, Elizabeth Frazer, Penelope Harvey, M.B.H. Rampton, and Kay Richardson. 1992. *Researching Languages: Issues of Power and Method*. London: Routledge.
- Coeur d'Alene Online Language Resource Center (COLRC). 2009. Accessed December 3, 2020. <http://academic.uprm.edu/~sbischoff/COLRC/>.
- Crow Language Consortium. 2018. Accessed December 3, 2020. <http://crow-language.org>.
- Eberhard, David M., Gary F. Simons, and Charles D. Fennig, eds. 2020. *Ethnologue: Languages of the World*, 23<sup>rd</sup> ed. Dallas, Texas: SIL International. Online version: <http://www.ethnologue.com>.
- Endangered Languages Project: Supporting and Celebrating Global Linguistic Diversity. Accessed December 3, 2020. <http://www.endangeredlanguages.com>.
- Falmouth Institute. "Spoken First: Your Resource for all Language-Related News in Indian Country." Accessed December 3, 2020. <http://falmouthinstitute.com/language/>.
- Farnel, Sharon. 2017. "Understanding Community Appropriate Metadata Through Bernstein's Theory of Language Codes." *Journal of Library Metadata* 17:5-18.
- Farnel, Sharon, Ali Shiri, Sandra Campbell, Cathy Cockney, Dinesh Rathi, and Robyn Stobbs. 2017. "A Community-Driven Metadata Framework for Describing Cultural Resources: The Digital Library North Project." *Cataloging & Classification Quarterly* 55:289-306. doi:10.1080/01639374.2017.1312723.
- First People's Cultural Council. 2020. Accessed December 3, 2020. <http://www.fpcc.ca>.
- FirstVoices. 2020. Accessed December 3, 2020. <https://www.firstvoices.com>.
- Genee, Inge and Marie-Odile Junker. 2018. "The Blackfoot Language Resources and Digital Dictionary project: Creating Integrated Web Resources for Language Documentation and Revitalization." *Language Documentation and Conservation* 12:274-314. Accessed October 2, 2018. <http://hdl.handle.net/10125/24770>.
- Hauk, Bryn, and Raina Heaton. 2018. "Triage: Setting priorities for endangered language research." In *Cataloguing the World's Endangered Languages*, edited by Lyle Campbell and Anna Belew, 259-304. London: Routledge.
- Heaton, Raina, and Sean Simpson. 2018. "How the Catalogue of Endangered Languages Serves Communities whose Languages are at Risk." In *Cataloguing the World's Endangered Languages*, edited by Lyle Campbell and Anna Belew, 250-258. London: Routledge.
- Holton, Gary. 2018. "Interdisciplinary Language Documentation." In *The Oxford Handbook of Endangered Languages*, edited by Kenneth L Rehg and Lyle Campbell, 739-760. New York: Oxford University Press.
- Indigitization: Toolkit for the Digitization of First Nations Knowledge. Accessed February 28, 2019. <http://www.indigitization.ca/>.
- Lee, Deborah. 2008. "Indigenous Knowledges and the University Library." *Canadian Journal of Native Education* 31, no. 1:149-163.
- Lee, Deborah. 2011. "Indigenous Knowledge Organization: A Study of Concepts,

## *Resources for and about Indigenous Languages*

- Terminology, Structure and (Mostly) Indigenous Voices.” *Partnership: The Canadian Journal of Library and Information Practice and Research* 6, no.1:1-33. doi:10.21083/partnership.v6i1.1427.
- Littletree, Sandra and Cheryl Metoyer. 2015. “Knowledge Organization from an Indigenous Perspective: The Mashantucket Pequot Thesaurus of American Indian Terminology Project.” *Cataloging & Classification Quarterly* 53, no. 5-6:640-657.
- Moseley, Christopher. Ed. 2010. *Atlas of the World’s Language in Danger*, 3<sup>rd</sup> ed. Paris: UNESCO Publishing. Online at <http://www.unesco.org/languages-atlas/en/atlasmap.html>.
- Northern Arizona University. 2020. “Teaching Indigenous Languages.” Accessed December 3, 2020. <http://jan.ucc.nau.edu/jar/TIL.html>.
- The Regents of the University of California. 2019. “Survey of California and Other Indian Languages.” Accessed December 4, 2020. <https://cla.berkeley.edu/>.
- The Salish Language Institute: Stem lu a Spu?us. Accessed December 3, 2020. <http://www.thesalishinstitute.org>.
- Sapién, Racquel-María. 2018. “Design and Implementation of Collaborative Language Documentation Projects.” In *The Oxford Handbook of Endangered Languages*, edited by Kenneth L. Rehg and Lyle Campbell, 203-224. New York: Oxford University Press.
- Stark, Megan. 2016. “Information in the Real World: Building a Bridge Between Academic and Community Information Through Service Learning.” In *Service Learning, Information Literacy and Libraries*, edited by Jennifer Nutefall, 51-64. California: Libraries Unlimited.
- The Wakashan Linguistics Page. 2010. Last modified January. <https://depts.washington.edu/wl12/>.