

# Community consultation and the development of an online Akuzipik-English dictionary

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## Abstract

In this paper, we present a new online dictionary of Akuzipik, an Indigenous language of St. Lawrence Island (Alaska) and Chukotka (Russia). We discuss community desires for strengthening language use in the community and in educational settings, and present specific features of an online dictionary designed to serve these community goals.

## 1 Introduction

Akuzipik (ISO 639-3: *ess*) is a polysynthetic language on the Yupik branch of the Inuit-Yupik-Unangan language family.<sup>1</sup> Akuzipik is spoken in the two villages — Sivuqaq (English: Gambell) and Sivungaq (English: Savoonga) — on the island of Sivuqaq (St. Lawrence Island, Alaska), and by individuals who grew up on the island and have since moved to mainland Alaska, and on the far eastern coast of the Chukotka Peninsula of Russia.

Vakhtin (2001) estimated the total number of speakers in Russia at fewer than 200, all in their 50s or older at the time; a scholar working in Chukotka (Anastasia Panova, p.c. July 2022) estimates the current total at no more than a few dozen fluent speakers. In Alaska, the ages of fluent speakers reflect a generational divide that began in earnest in the early 1990s (Koonooka, 2005): speakers born before 1980 (now in their 40s and older) tend to have grown up with Akuzipik as their first language, learning English in school, and are essentially all fully fluent in both Akuzipik and in English. Youth under 20 are much less likely to speak Akuzipik, although varying degrees of passive fluency can be observed. Schwartz et al. (2019) estimated the total number of L1 Akuzipik speakers to be between 800 and 900 of an ethnic population of approximately 2400 individuals.

<sup>1</sup>Akuzipik is an in-language name for the language, meaning *authentic speech*. The language has previously been known in English as Central Siberian Yupik and St. Lawrence Island/Siberian Yupik.

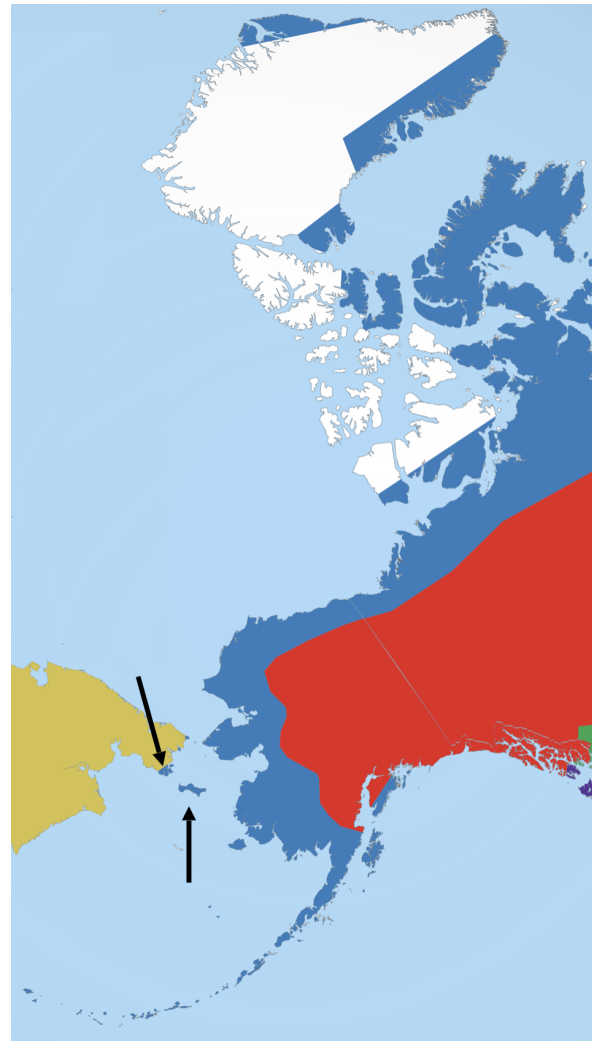


Figure 1: Traditional lands where languages in the Inuit-Yupik-Unangan language family are spoken (adapted from Krauss et al., 2010) are shown in blue. Arrows mark Sivuqaq (St. Lawrence Island, Alaska) and the Chukotka Peninsula, Russia, where Akuzipik is spoken. Other colors indicate geographically neighboring language families (Chukotkan in yellow, Dene in red).

Attitudes towards Akuzipik on Sivuqaq are generally very positive, including in younger generations, with widespread community support for language revitalization. In recent years, commu-

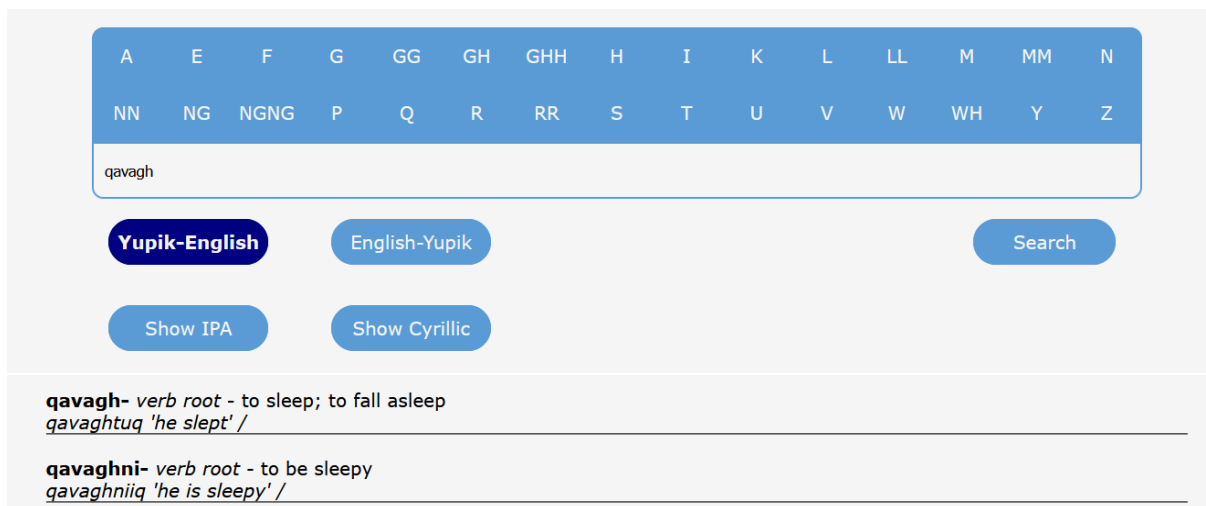


Figure 2: Example output from our 2019 Akuzipik-English online dictionary (Hunt et al., 2019)

nity members in the village of Sivuqaq established a language revitalization committee. Current goals include the short-term aim of a language nest embedding fluent Akuzipik elders within the existing pre-school program, and a long-term goal of a full Akuzipik immersion curriculum in the local school.

Over the past four years, we have conducted linguistic fieldwork in the village of Sivuqaq, both remotely (due to the COVID-19 pandemic) and more recently in person. During that time, we have consulted with community members, including the language revitalization committee and the elected tribal council, and have gathered feedback regarding community priorities and desires regarding technology in the context of language revitalization and language education. In this paper, we provide a brief overview of this feedback and present a new online dictionary that incorporates what we have learned.

## 2 Limitations of Prior Work: 2019 Akuzipik-English online dictionary

Despite the existence of a two-volume bilingual Akuzipik-English dictionary (Badten et al., 2008), access to this dictionary in its printed form is largely inaccessible to the average Akuzipik speaker for everyday use because of its cost and multi-volume form-factor. A small number of physical copies of the dictionary are kept in the local school, but are not generally available to residents of the village. Overall, this has meant that very few community members on the island have access to the Akuzipik-English dictionary; we believe the situation to be quite similar in Chukotka with respect

to the Akuzipik-Russian print dictionary.

To address this lack of accessibility, following consultation with the Native Village of Gambell, in 2019 we released the first online Akuzipik-English dictionary (Hunt et al., 2019).<sup>2</sup> Our 2019 online dictionary, illustrated in Figure 2 above, enabled basic browsing and lookup of Akuzipik words from the Badten et al. (2008) bilingual print dictionary.

### 2.1 Limitation: Exact String Matching

Using an digitized database of the data compiled for the print dictionary, our 2019 online dictionary used a simple string match function search through the database for entries that contained the user-input string in the entry’s headword. Users could also search for English words in the gloss or notes if the English-Akuzipik button was selected. One major limitation of that method was that users were required to know exactly how to spell the word they were looking for, as the string match function did not take near matches into account. When a user entered a string, the interface would return all entries where the search string matched either the entire headword or part of the headword. If the English search was enabled, entries were returned in which the search string was found in its entirety in the gloss or notes. Notably, the dictionary interface did not offer any suggestions for words that the user might be looking for based on the characters they had entered, as most modern search entries do with autocomplete/autofill.

Matching entries were then printed in a single

<sup>2</sup>[http://computational.linguistics.illinois.edu/yupik/index\\_dictionary\\_transducer.html](http://computational.linguistics.illinois.edu/yupik/index_dictionary_transducer.html)

list below the search bar in the order they were found (see Figure 2 on the preceding page). All available data for each entry was printed in a formatted text block followed by a horizontal rule to differentiate separate entries. This formatting strategy, while succinct and easy to produce, was not easily readable and often left entries with multiple example sentences appearing as large blocks of undifferentiated text.

## 2.2 Limitation: Limited morphological awareness

Given the polysynthetic nature of Akuzipik, most words are multi-morphemic and sentence-length words are relatively common (de Reuse, 1994; Jacobson, 2001). Phonological changes at morpheme boundaries are also common (Chen, 2023). As such, the simple string matching functionality described above significantly limited utility. Basic morphological analysis of searched Akuzipik words was provided through a Javascript port of our previously published finite-state morphological analyzer (Chen and Schwartz, 2018). However, results of morphological analysis were not presented to the user, and no mechanism was provided to the user to match return lexical entries identified using exact string match with specific morphemes returned by morphological analysis.

## 2.3 Limitation: Limited labels

Lexical entries were shown with basic part-of-speech information, most notably *noun root* and *verb root*. However, these part-of-speech labels are somewhat underspecified, merging part of speech groups that could otherwise be meaningfully differentiated, such as the types of verb roots (i.e., postural roots, emotional roots, etc. were all given the label "root" with no additional specification). Additional labels regarding such pragmatic or sociolinguistic information as dialectal variation, borrowings, archaisms, and word frequency were also lacking.

## 3 Community Consultation Process

Prior to the COVID-19 pandemic, we met in person with representatives of the Native Village of Gambell (the local elected tribal governing council) and other community groups, including the local language revitalization group, to discuss community priorities and desires regarding language technology in the context of language revitalization and

language education. Our methodology in these fieldwork excursions are discussed in Schwartz et al. (2019) and Schreiner et al. (2020). One issue that arose consistently during discussion with the tribal council and in informal discussions with community members was a desire to support Akuzipik language use by young adults, and especially young parents. The lack of access to Akuzipik language resources (including the dictionary) was consistently raised.

Some of the most enthusiastic support we heard in favor of the development of high-quality online-accessible Akuzipik language resources was from members of the language community who had grown up in or had subsequently moved to cities such as Nome or Anchorage in mainland Alaska. Many of these we spoke with were in their 30s and 40s fluent or semi-fluent speakers of Akuzipik, and often living away from the island. Some speakers wished to consult the dictionary for words they don't know or no longer remember, or to help in their efforts to teach their children the language. Some English-speaking non-native teachers at the school also requested access the dictionary.

We continued remote consultation with various community members and organizations throughout the COVID-19 pandemic, an undertaking we present a detailed accounting of in Schreiner et al. (2022), and in doing so identified the limitations listed in Section 2 on the previous page. As we identified shortcomings of our 2019 online dictionary, we began the development of a new online dictionary designed to explicitly address these limitations and to incorporate additional community-requested features. We describe these in detail in Section 4 on the following page.

We resumed in-person visits to the island in the summer of 2022, the fall of 2022, and the spring of 2023. During these visits, we presented our resulting new online dictionary to the Native Village of Gambell, to the local language revitalization group, and to students and teachers at the local school. Overall, reception was positive, with many community members expressing their excitement to have access to the dictionary on their own devices. Members of the tribal council expressed their support for our continued work on the dictionary project and directed us to a number of community members that would be good candidates for eventual participating in audio recordings of the dictionary's content.

Our ongoing community consultation resulted in two additional specific requests that we have since implemented. In summer 2022, the community language revitalization group requested a “word of the day” to be displayed on the front page of the online dictionary. In November 2022, a community member voiced concern that the original compilers of the bilingual dictionary (Badten et al., 2008) had not been the prominence and credit on the online dictionary’s main page that it deserved as a substantial documentary work. We promptly fulfilled both of these requests, adding a “word of the day” to the front page of the online dictionary and prominently crediting Badten et al. (2008) on both the front page and on all entries and data that were sourced from that work.

Dissemination of our online dictionary was initially by word of mouth up through early 2022, along with some mention through local use of social media. Later in 2022, several speakers made Facebook posts about the dictionary which garnered hundreds of responses on the social media platform. Following these posts, using basic web analytics, we were able to identify that the majority of the online dictionary’s regular users are located on mainland Alaska. In November 2022, following additional local consultation, we hung posters with a QR code in public buildings, and left extra posters with tribal and city officials, at their request.

#### **4 Resolving prior limitations and fulfilling community requests: 2023 Akuzipik-English online dictionary**

In this section, we present our online Akuzipik-English bilingual dictionary.<sup>3, 4</sup> This dictionary is the direct result of the ongoing community consultation process described in Section 3 on the previous page. We present features that address each of the shortcomings described in Section 2 and the community requests identified in Section 3. Overall, efforts have been made to increase the visibility of dictionary entries and to make metalinguistic data and analyses more readable to non-linguists.

##### **4.1 Morphological Parser**

Perhaps the most significant improvement in our 2023 online dictionary over our earlier online dic-

<sup>3</sup><https://bhunt6.github.io/akuzipigestun-sangaawa>

<sup>4</sup><https://github.com/bhunt6/akuzipigestun-sangaawa>

tionary is the full integration of a finite-state morphological analyzer. This integration allows users to input fully inflected Akuzipik words and receive a morpheme-by-morpheme parse and a list of search results corresponding to the word’s component morphemes. This functionality was partially available in the first version of the dictionary, but improvements to the parser and the search algorithm now provide users with a clearer parse and more accurate results. An example parse is shown in Figure 3 on the following page.

Morphological analysis is performed by a Javascript port of our Akuzipik finite-state morphological analyzer (Chen et al., 2020). In cases where the analyzer provides multiple possibly valid analyses of a word, we utilize a simple heuristic that defaults to the most parsimonious result, in this case the shortest. Following morphological analysis, the component morpheme sequence is shown, and the dictionary search algorithm returns results for each component morpheme individually, with preference given to exact matches. These features mitigate (but do not completely solve) the limitations raised in Sections 2.1 and 2.2.

We hope that in addition to enabling more robust search capabilities that morphologically aware search results will eventually be beneficial to users in educational settings, such as in the elementary and high school Akuzipik classes in the school. The integration of the morphological analyzer was an important step in targeting this use case, as it gives learners a simple way to determine the constituent parts of a word they have not encountered before.

##### **4.2 Rich labels**

Search results display a short summary of each dictionary entry (Figure 4 on the next page) that includes rich part-of-speech and etymology tags that address the limitation addressed in Section 2.3. These rich tags (Figure 5 on the following page) enable grammatical, pragmatic, and sociolinguistic aspects of each entry to be presented in a more salient manner. For example, tags for part-of-speech, root or particle class (postural, emotional, exclamatory, conjunctive, etc.), dialect usage (Chukotka, St. Lawrence Island, etc.), and productive capabilities of derivational morphemes can be easily assigned to any entry. This was in part inspired by the system used in the Yugtun (Yup’ik)

Parse

**angyagh + ghllag + ngllagh + ~fyug + [Intr][Ind][3Sg]**

Figure 3: An example parse for *angyaghllangllaghyugtuq* (He/she wants to make a big boat).

**almesimitun** PARTICLE (алмысимитун) /alməsimituṯ/  
*the same as before*

**almesiq** CHUKOTKAN NOUN (алмысиқ) /alməsiv/  
*old custom; tradition*

**almesiqe-** VERB (алмысиқы-) /alməsivə/  
*to be as expected; to stay the same*

**AmaghmeInguut** PROPER NOUN (амағмылңуут) /Aməvmtəŋu:t/  
*site in Chukotka on Ittygran Island*

**amel-** ROOT (амыл-) /aməl/

Figure 4: Example search results with part-of-speech and etymology tags.

NOUN  
 Akuzipik nouns inflect for seven cases, four persons, and three numbers.

VERB  
 Verbs inflect for eleven moods, transitivity, four persons, and three numbers and exhibit polypersonal agreement in transitive constructions.

PROPER NOUN  
 Proper nouns are listed in citation form and begin with a capital letter.

ROOT  
 The dictionary contains a number of roots that are not licit forms in their own right, but serve as the morphological base for a number of Akuzipik nouns and verbs.

Figure 5: Some example tags

dictionary.<sup>5</sup>

We intend that this system will be expanded to include tags for common lexical items, archaisms, and loanwords.

### 4.3 Mobile-friendly with auto-complete

The dictionary user interface supports mobile device aspect ratios and an auto-complete function in the search bar. The search bar supports auto-complete functionality in both Akuzipik and English, as shown in Figure 6.

<sup>5</sup><https://yugtun.com>

aku|

---

akugaaq

---

akughaghqagh-

---

akughaq

---

squ

---

squeak or crunch of snow or pet

---

squeamish; finicky

---

squirrel

---

Figure 6: Autocomplete in Akuzipik and English

### 4.4 Word of the day

Based on feedback from the local language revitalization group, we implemented a “Word of the Day” that displays an lexical entry card on the dictionary landing page and links to the full entry page (Figure 7). The word of the day is taken from

**Word of the Day**  
**palutaq** NOUN  
*brace (as used in making a skin boat)*

Figure 7: Word of the day section

a randomized list of the dictionary’s entries, and will display a new entry daily without repeats until 2045. This was one of the first explicit requests from the community for a specific functionality, so its implementation was a priority.

## Contact Us

Have questions about the dictionary or suggestions for improvements?  
Submit your comments in the form below and we will follow up as soon as we are able.

Full name \_\_\_\_\_

Email \_\_\_\_\_

037f3f4a3abe07864ede9

palutaq \_\_\_\_\_

Message...

\_\_\_\_\_

Submit

Figure 8: The contact form with entry data autofilled

## 4.5 Citations and feedback

An addition that has been in development since the beginning of the project is a comprehensive “About” page containing all information relevant to the navigation and use of the online dictionary, including a breakdown of how the analyzer functions, the anatomy of an entry, motivations and methodology behind the current implementation, and importantly, in-depth citations of the sources for the entries.

This page also breaks down the meanings and functions of the tags in the new tag system as well as the various symbologies used in the dictionary source material and includes a list of those contributors that have given their permission for their names to be publicly displayed.

A simple feedback form has been added to the contact page (Figure 8), allowing users to submit error reports and suggestions for improvements and edits to entries. This form can also be accessed via a report/feedback button on each entry page to allow users to more easily submit feedback related to a particular entry. The metadata specific to that entry is sent along with the report automatically so that users do not need to transfer any information to the feedback form and can focus on their suggestions.

## 4.6 Full entries

Each lexical entry is displayed on its own full entry page, containing all of the information available for that headword. Having a dedicated page for each entry allows us to add more entry-specific information in the future, like images, audio, additional sources, and usage examples from the corpus or user-submitted sentences. These dedicated pages

are also much more readable and their appearance is more like entry pages in popular online dictionaries with which users are likely familiar such as the Yugtun dictionary and most English language dictionaries. Figure 9 show an example of a full lexical entry for a noun, while Figure 11 shows an example of a full lexical entry for a verb.

## 4.7 Inflection tables

The addition of inflectional tables (Figure 10 on the next page) for each entry was a large step in improving the functionality of the dictionary for Akuzipik learners. These tables are located at the bottom of each noun (and, eventually, verb) entry and display all possible inflections of the base word (not including any derivational morphology). For noun entries, each grammatical case paradigm is given its own collapsible table with layman-readable row and column headers for person, number, and possession. Verb entries will receive the same treatment for each grammatical mood, and headers for person, number, and transitivity.

## 4.8 Word wheel

Another addition to the online interface that was chosen to increase the visibility of entries in the dictionary is the word wheel. This is a widget on the right side of each entry page (see Figure 9 and Figure 11) that displays a handful of words that are close to the current headword alphabetically in the dictionary database. This wheel encourages exploration of the dictionary’s content beyond direct searches. This may be of particular use given the polysynthetic nature of Akuzipik; in some cases there are a number of words with separate entries that employ the same root and some of the same derivational morphemes (but in some cases have distinct lexicalized meanings). A recent addition to the scroll wheel is an unlimited scroll behavior that allows users to cycle through the lexicon as much as they want, further encouraging exploration.

## 5 Ongoing and Future Work

A number of improvements that have not yet been implemented are currently in progress.

### 5.1 Lexical frequency

Taking inspiration from other online dictionaries such as the Scottish Gaelic dictionary, Am Faclair Baeg [<https://www.faclair.com/>], and the Yugtun dictionary, we plan to integrate an indication

# palutaq NOUN



**Cyrillic:** (палутақ)

**Pronunciation:** /palutaq/

**Etymology:**

1. brace (as used in making a skin boat)

^

pallnaghqe-	<span style="background-color: #f90; border-radius: 3px; padding: 1px 3px;">VERB</span>
pallugnaq	<span style="background-color: #333; color: white; border-radius: 3px; padding: 1px 3px;">NOUN</span>
pallugte-	<span style="background-color: #f90; border-radius: 3px; padding: 1px 3px;">VERB</span>
palngeri-	<span style="background-color: #f90; border-radius: 3px; padding: 1px 3px;">VERB</span>
palughtaq	<span style="background-color: #333; color: white; border-radius: 3px; padding: 1px 3px;">NOUN</span>
<b>palutaq</b>	<span style="background-color: #333; color: white; border-radius: 3px; padding: 1px 3px;">NOUN</span>
palutigh-	<span style="background-color: #f90; border-radius: 3px; padding: 1px 3px;">VERB</span>
pama-	<span style="background-color: #f90; border-radius: 3px; padding: 1px 3px;">VERB</span>
pamyughaq	<span style="background-color: #333; color: white; border-radius: 3px; padding: 1px 3px;">NOUN</span>
pana	<span style="background-color: #333; color: white; border-radius: 3px; padding: 1px 3px;">NOUN</span>
pana-	<span style="background-color: #f90; border-radius: 3px; padding: 1px 3px;">VERB</span>

v

Figure 9: Full dictionary entry for *palutaq*

Absolutive <span style="float: right;">-</span>			
	Singular (one)	Dual (two)	Plural (3 or more)
Unpossessed	palutaq	palutak	palutat
My (1s)	palutaqa	palutagka	palutanka
Our <sub>2</sub> (1d)	palutaghpong	palutagpong	palutapung
Our <sub>3+</sub> (1p)	palutaghput	palutagput	palutaput
Your (2s)	palutan	palutagken	palutaten
Your <sub>2</sub> (2d)	palutaghtek	palutagtek	palutatek
Your <sub>3+</sub> (2p)	palutaghsi	palutagsi	palutasi
His/her/its (3s)	palutaa	palutakek	palutii
Their <sub>2</sub> (3d)	palutaak	palutagkek	palutiik
Their <sub>3+</sub> (3p)	palutaat	palutagket	palutiit
4s	palutani	palutagni	palutani
4d	palutaghtek	palutagtek	palutatek
4p	palutaghteng	palutagtek	palutateng
Relative <span style="float: right;">+</span>			
Ablative Modalis <span style="float: right;">+</span>			
Locative <span style="float: right;">+</span>			

Figure 10: Nominal inflectional tables for *palutaq*

## angyagh- VERB



**Cyrillic:** (аңьяҕ-)

**Pronunciation:** /aŋjaɣ/

**Etymology:** PY а&yaq

1. to use a boat
2. to travel by boat
3. to hunt with a boat

angwaagh-	VERB
angwaaghta	NOUN
angwaaghun	NOUN
angyaataghqe-	VERB
angyaataq	NOUN
<b>angyagh-</b>	<b>VERB</b>
angyaghllug-	VERB
angyaghnak	NOUN
angyaghnaq	NOUN
angyaghniigh-	VERB
angyaghpak	NOUN

Figure 11: Full dictionary entry for *angyagh-*

of usage frequency into the entry data. Our future plans include a similar implementation to the Gaelic dictionary’s user-submitted usage data and rating system. In the short term, we plan to include data on each word’s frequency of occurrence in the Akuzipik written corpus. This could be accomplished using the new tag system by adding a “Common in Corpus” tag to these entries.

### 5.2 Improved morphological integration

In its current state, the integrated morphological parser often returns a number of possible parses for any given input word form. Our current strategy has been to display only the least morphologically complex result (often the shortest result). Active research is needed to develop robust mechanisms for improving reliability and interpretability of morphological results.

### 5.3 Word of the day

Currently, the “word” of the day is always an entry headword which may or may not be a licit Akuzipik surface form, depending on its part of speech. This is because of the variance in citation forms between different parts of speech; e.g. noun citation forms are given in their absolutive unpossessed singular form, while verbs are left in an underlying root form. Members of the community have suggested a system whereby speakers can submit suggestions for words of the day; those suggestions could be

displayed as specialized entries with a full morphological parse and corresponding glosses. This may better enable the use of the dictionary’s word-of-the-day in educational settings as a “start of class” activity, for example.

### 5.4 Derivational morphemes

Currently, the part of the lexicon accessible by the dictionary interface includes all noun and verb bases, particles, demonstratives, and pronouns. The inclusion of the derivational morphemes known as “postbases” is the next step in covering the contents of the print dictionary.

### 5.5 Audio integration

A major long-term goal is to add audio recordings of each entry to the database. The production of these recordings is a substantial undertaking given the size of the lexicon. Recording has begun, and community linguists (currently training with academic team members) will facilitate this process.

## 6 Conclusion: Process and Ownership

Throughout our work with the Akuzipik-speaking community, we have sought to humbly and respectfully provide the tools and expertise that we as academic researchers are able to bring to the table. We have sought to build and will continue to seek meaningful and long-lasting relationships with individuals and governing bodies on St. Lawrence



Island. And yet, it remains the case that we are not Indigenous.

As we seek to ethically engage in this work through continual relationship-building and meaningful consultation with community members and elected tribal leadership, we continue to bear in mind the moral obligations of cognizance, beneficence, accountability, and non-maleficence (Schwartz, 2022) as we work with Indigenous data.

A critically important consideration in this work is the goal of a mechanism for community input and ownership over the data contained in the dictionary. In addition to integrating feedback from users regarding word usage and glossing, indicating differences in usage between individuals, clans, and language varieties is important for demonstrating the community's ownership of the data. We hope that an eventual crowd-sourced community-governed data framework will also contribute to the tool's longevity and help to accomplish one of the core objectives of the Akuzipik reclamation project at large, namely, its self-sustainability. Ultimately, we intend feedback in the form of word frequency, clan/individual variation, and other fine-tuning of the documentary record to be received and integrated into the dictionary by a team of community linguists trained in and devoted to the upkeep of the project.

### **Ethics Statement**

The work described in this paper, as well as the accompanying work on Akuzipik that our team has engaged in, has been undertaken with ongoing discussions with rights holders in the Akuzipik-speaking community in the village of Sivuqaq (Gambell).

### **Limitations**

One major limitation of the current methodology is its predication on the existence of a recorded lexicon in some form that can be ported into an online format. This approach may not be ideal as a framework for the development of a new dictionary, as its express goal is to increase accessibility to existing resources and facilitate the expansion of those resources. Additionally, the development of a bespoke, dependency-free web-application for showcasing existing resources is likely low on the list of viable strategies for a community-led reclamation effort, especially if there are no community members already familiar with web-development.

Any replication of the work described here is more suited for a group with a set of existing resources, access to developers, and a need to quickly get those resources into the hands of community members.

The other primary limitation of this tool and its development methodology in its current form is the potential lack of accessibility in the types of communities for which it is intended. Despite the increase in access to internet-capable smart devices in communities such as that on St. Lawrence Island, in many such places, the availability of reliable wireless internet access remains relatively low. Users are often forced to use expensive cellular data plans to conduct any amount of web-browsing. While the ultimate vision for this dictionary is for it to be packaged in a downloadable, offline format, replications of the tool in its current live-web implementation may leave many people unable to use it with the frequency that they would like. Though this is certainly a limiting factor in the effectiveness of this tool, the deployment of an offline version of the dictionary remains a preminent goal of the project.

### **Akuzipik Dictionary Website**



<https://bhunt6.github.io/akuzipigestun-sangaawa>

### **Akuzipik Dictionary Code**



<https://github.com/bhunt6/akuzipigestun-sangaawa>

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