Mobile apps for Indigenous language learning

Morgan Cassels & Chloe Farr
April 26, 2019
Northwest Linguistics Conference

Mobile apps as a language learning tool

- "Fill in the gaps" left by traditional teaching methods
- Do not create proficient speakers on their own; rather offer extra support for learners
- Integrate language learning into daily life
- Increasingly popular tool for language revitalization movements

Purpose

Apps for Indigenous language learning are increasingly popular, but:
- there is very little literature on the topic
- no central collection of app descriptions exists for comparison or reference purposes

Goal: Describe the significance and diversity of the large number of apps currently available for Indigenous language learning

- build a list of possible app components
- describe considerations made during the app development process
- understand the role of apps in Indigenous language revitalization movements

Methodology

Literature review and app review conducted concurrently, informing each other

Literature review

- The use of apps for language learning
- The role of apps in Indigenous language revitalization

Hands-on app review

- Describe landscape of apps and recognize trends
- Identify app developers
- Identify features common to Indigenous language apps

Criteria for an app's inclusion in the review

- Involves a North American Indigenous language
- Built for small mobile devices — excludes tablet, computer, and web-based applications
- Publically available and free for download

Unique benefits of mobile apps

- Portability — ubiquitous learning (Park, 2011)
- Reduction of language anxiety — users can make mistakes privately (Grimshaw & Cardoso, 2018)
- Economic accessibility — learners already own the device
- Allows offline use — accessible for remote communities without internet infrastructure
- Self determination — for the community and for the learner (Koole, 2018)
- Supports adult learners who may be too busy for formal classes (McIvor, 2012)
- Fun — increased enthusiasm around the language

The App Creation Process

- Apps are created by:
    - Local cultural organizations
    - Educational institutions
    - Large Indigenous organizations or nations

    All apps reviewed were created by or in partnership with an Indigenous community

- Funding: government grants, Indigenous organizations, post-secondary institutions, etc.

The App Creation Process

- The community creating the app determines:
  - What style of app best serves the needs of their community
  - What content is most important in the context of their community
  - How contributors and Elders should be acknowledged
  - Who may have access to the app

The App Creation Process

- App development:
  - Outside company allows streamlined process
  - In-house development provides greater flexibility
  - Open source software options
- Device compatibility — iPhone and Android
- Maintenance:
  - Fixing/expanding content
  - Rapid obsolescence — periodic updates are required

App developers

All are Indigenous owned and run

Thornton Media

- Templatic appearance
- Streamlined process
- Ensures that communities retain ownership of their language and cultural property

Ogoki Learning Systems

- Started by a father creating an app for his daughter to learn Cree
- Expanded to a wide range of language revitalization technologies
- Released open source code

Binasii

- Began by training community members in software use
- Began creating apps as reference tools by request
- Offer multi-app options (e.g. dictionary app and games partner apps)

Developers of the 32 reviewed apps
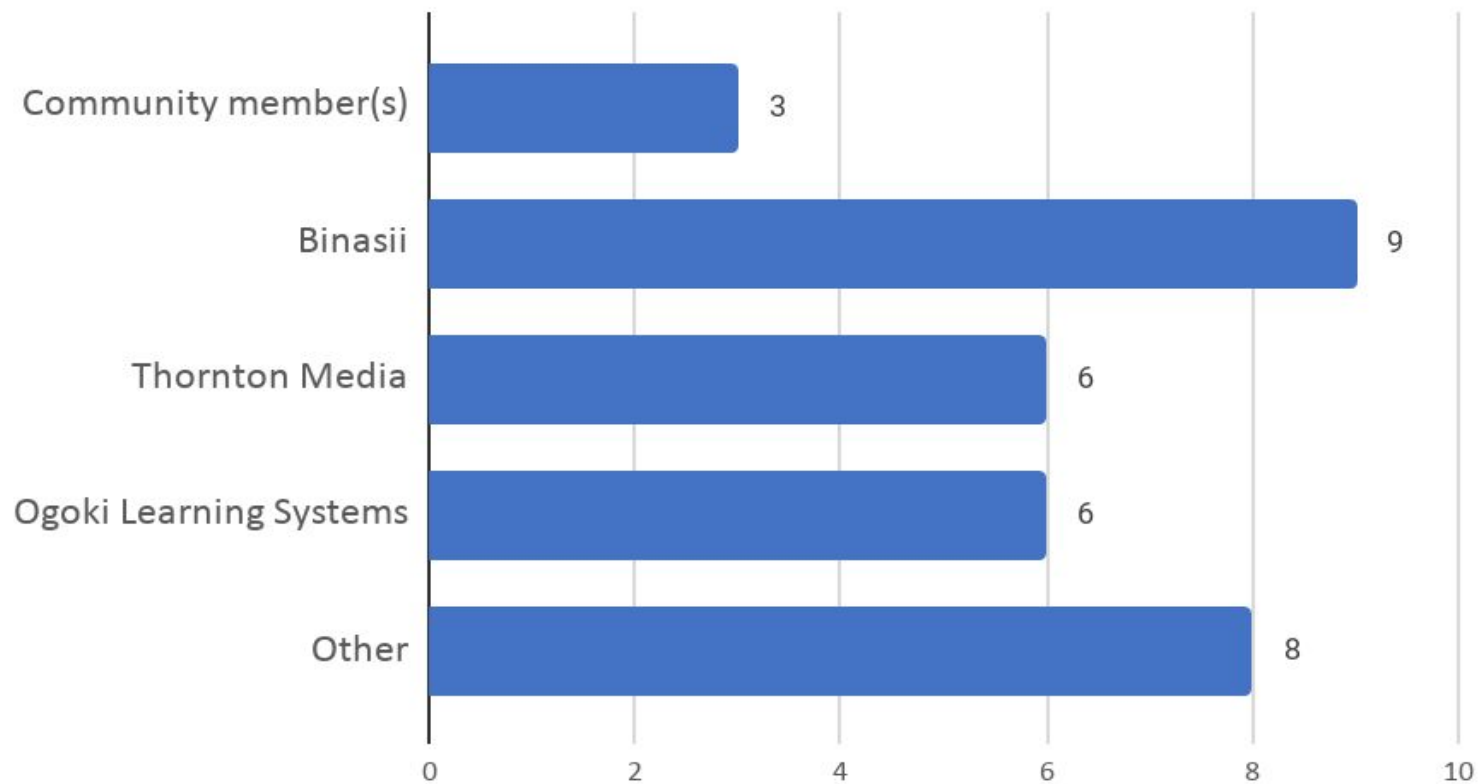
Summary of app review

- App content and goals:
  - Vocabulary
  - Grammar and morphology
  - Common phrases
  - Cultural content: Traditional stories, songs, spiritual content, ecological knowledge, history
  - Audience consideration: adults, children, or both?

- App styles and strategies:
  - Games — may gamify cultural activities/ecological knowledge alongside language learning
  - Storybooks
  - Flashcards — English translations or illustrations only
  - Dictionary — search features in English and/or the Indigenous language
  - Vocabulary quizzes
  - English-language section describing: cultural information, history, development of orthography
  - Video interviews — either in English or the Indigenous language
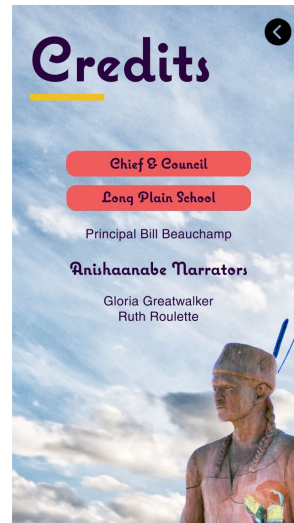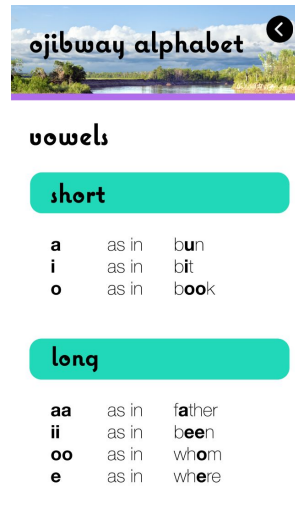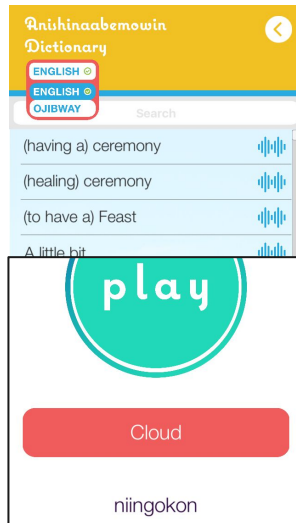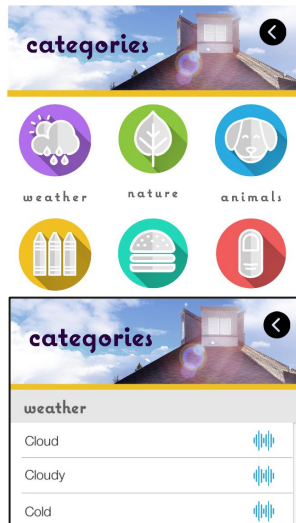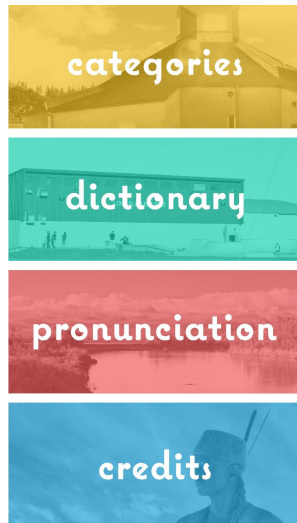
Components of reviewed apps
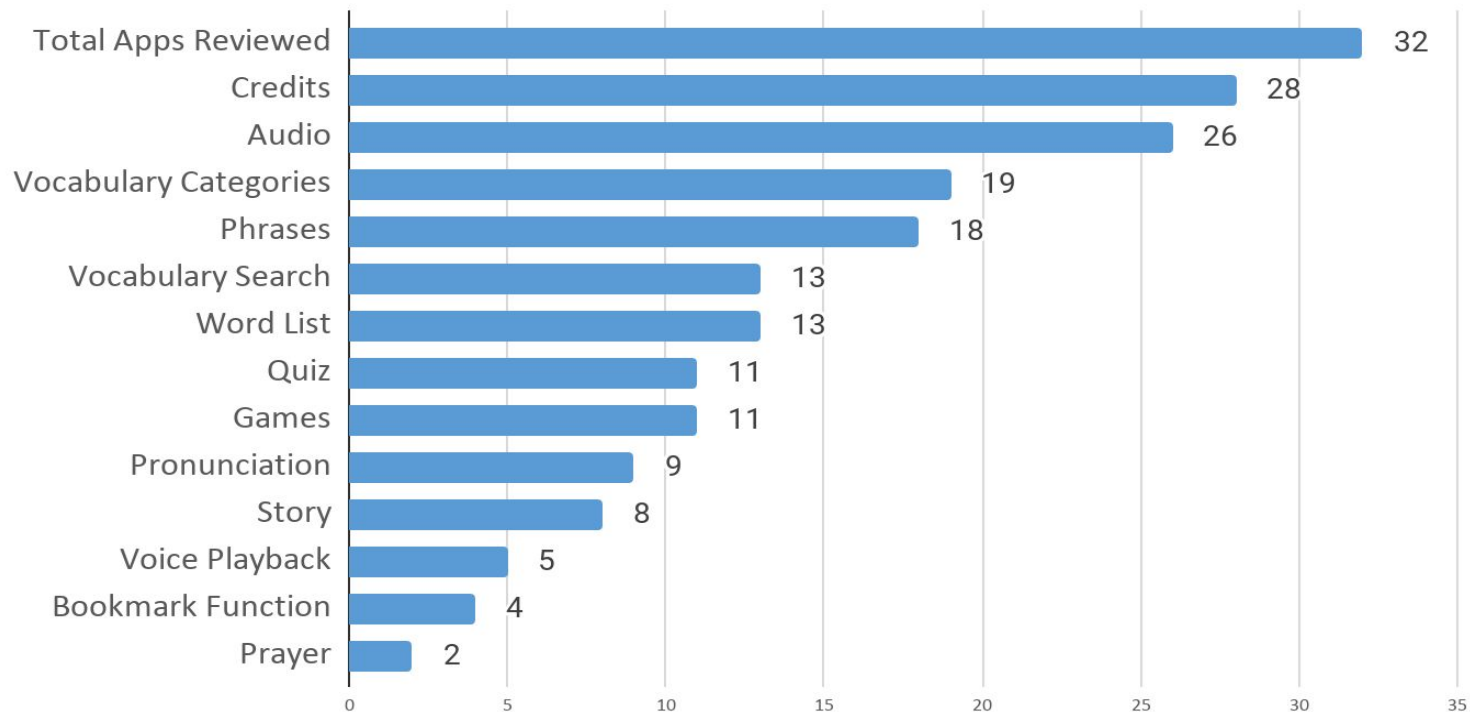
Three apps profiled in detail

- *Long Plain Ojibway Dictionary* — **reference dictionary features**

- *Speak Oneida* — comprehensive learning modules organized around grammatical features

- *L'nui'suti* — inclusion of cultural information

Long Plain Ojibway Dictionary

Ginooshkodeyaang-Anishinaabemowin

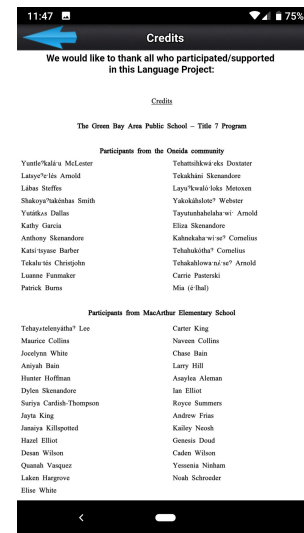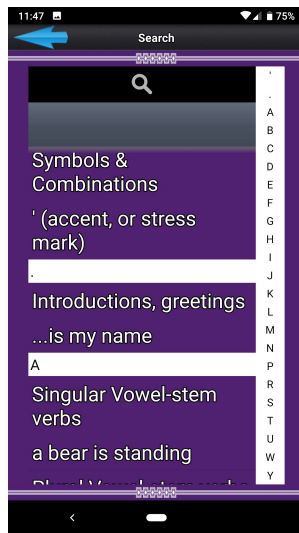*Long Plain School in partnership with Binasii*

Three apps profiled in detail

- *Long Plain Ojibway Dictionary* — reference dictionary features

- ***Speak Oneida*** — **comprehensive learning modules organized around grammatical features**

- *L'nui'suti* — inclusion of cultural information

Speak Oneida

Oneida Tribe of Indians of Wisconsin and the Green Bay School District in partnership with Thornton Media
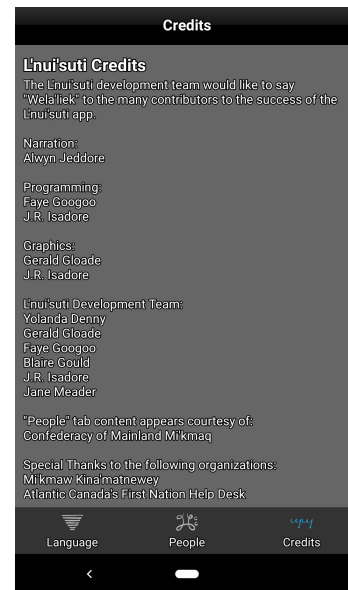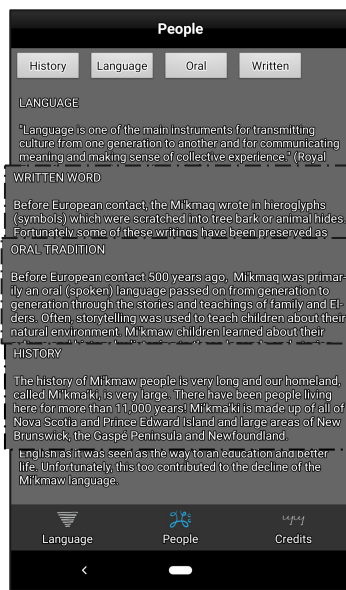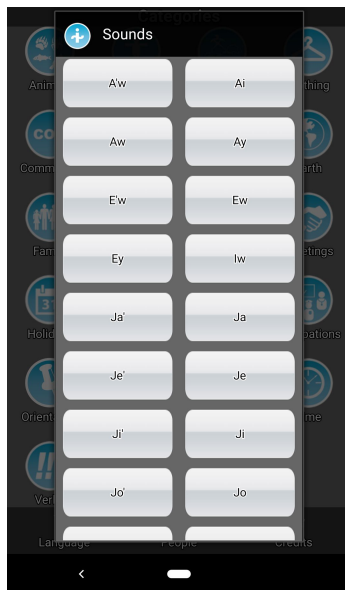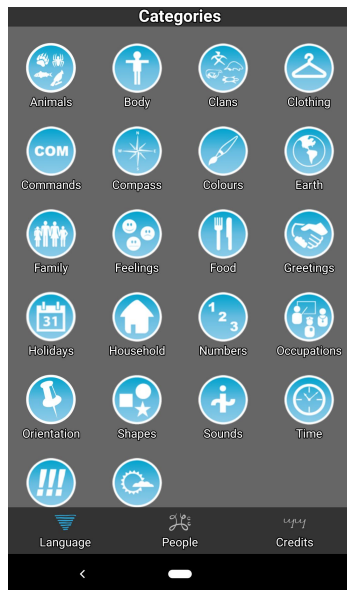
Three apps profiled in detail

- *Long Plain Ojibway Dictionary* —   reference dictionary features

- *Speak Oneida* —   comprehensive learning modules organized around grammatical features

- ***L'nui'suti* — inclusion of cultural information**

L'nui'suti

Mi'kmaw

Mi'kmaw Kina'matnewey in partnership with Ogoki

Assessment of mobile apps

What does a successful mobile app look like?

'**Successful**': popular/widely used? Achieves certain pedagogical goals? Has a positive emotional impact on the user (increasing linguistic and cultural pride)?

➔ Assessment of app success depends on goals of app creators and app users

Pedagogical outcomes are difficult to measure:
- Apps are used in tandem with other language learning methods — may be impossible to disentangle the effects of only the app
- App users vary in how they use the app — different users of the same app may have different pedagogical experiences

Public user reviews

Apple and Android app stores allow users to leave reviews. These reviews often contain:

- Evaluative comments — often enthusiastic praise
- Descriptions of how users are using the app (during their commute, with their children, etc.)
- Requests for app expansions and improvements
- Criticisms/suggestions regarding the app's design choices
- "Corrections"/criticism regarding spelling and pronunciation in the app
- Reflections on the user's relationship with their Indigenous identity

Public user reviews

"Love it use it all the time. Love to sit and play with words when the grand kids are over."
— *Anishinaabemowin, Ojibway* user

"Great app, but I really wish it had the spelling of the word in Ojibway, so you have a better understanding of what you're hearing/saying.
— *Ojibway* user

"Deadliest app ever / This app has changed my life! ... you need to tell all your friends about this app and call your band office tomorrow and get them to put this in your community's newsletter cause it's that deadly"
— *Tal-Tluen?* user

Considerations in app development

- Public vs private release
- How to acknowledge Elders and contributors
- How app will be maintained over time
- In-house vs outside development

- Potential sources of conflict within a community:
  - Teaching styles e.g. use of English translations
  - Orthography, spelling, pronunciation
  - Use of an app in general

Mobile apps for Indigenous language learning:

- Are a convenient supplement for independent learners
- Make the family home a site of learning — parents and children can learn together
- Allow learning when learner does not have access to a teacher or proficient speaker
- Help members of the diaspora connect to their culture

"I love this app. I am a 23 year old Ojibwe who was raised outside the tribe, the language and culture are inseparable. I want to embrace my Native heritage and this app allows me to do just that"

-*Anishinaabemowin, Ojibway* user

References

Begay, W. R. (2013). *Mobile Apps and Indigenous Language Learning: New Developments in the Field of Indigenous Language Revitalization* (master's thesis). University of Arizona, Tuscan, Arizona.

Binasii Inc.. (2017b). Long Plain Ojibway Dictionary (1.6). [Mobile application software].

Grimshaw, J., & Cardoso, W. (2018). Activate space rats! Fluency development in a mobile game-assisted environment. *Language Learning & Technology, 22*(3), 159-175.

Koole, M. (2018). Mobile Learning as a Tool for Indigenous Language Revitalization and Sustainability in Canada: Framing the Challenge. *International Journal of Mobile and Blended Learning, 10*(4). doi:10.4018/IJMBL.2018100101.

McIvor, O. (2012). *Îkakwiy nîhiyawiyân: I am learning [to be] Cree* (doctoral thesis). University of British Columbia (Okanagan), Vancouver, Canada.

Ogoki Learning Systems Inc.. (2017a). Ojibway (4.0.3). [Mobile application software].

Park, Y. (2011). A pedagogical framework for mobile learning: categorizing educational applications of mobile technologies into four types. *The International Review of Research in Open and Distributed Learning, 12*(2) 78-102. doi:http://dx.doi.org/10.19173/irrodl.v12i2.791

Thornton Media Inc. (2018c). Speak Oneida - Part 1. Retrieved from https://play.google.com/store/apps/details?id=com.languagepal.androidoneidawisconsin.