

Adaptive multi-use language technology for Alaska Native language preservation and education

Abstract

This work presents multi-use language technology for use in Alaska Native language education, revitalization, and preservation, explicitly designed to support a range of diverse language educational environments, including:

- Alaska Native language instruction at the university level
- Alaska Native primary and secondary language instruction in villages throughout Alaska
- Students studying Alaska Native language in both formal and informal settings, explicitly including self-study
- Parents and other caregivers wanting to teach children their Alaska Native heritage language, explicitly including parents who are not themselves fluent speakers

Specifically, this work describes web-based and multi-platform offline-capable mobile presentation technology for convenient electronic distribution of pre-primers, primers, and other digitized legacy books directly from archival XML files.

Language loss and education

Throughout Alaska, many communities have experienced substantial decrease in language use among younger generations. Native language instruction in Alaska is often of less-than-ideal quality, due in no small part to lack of high quality curricular materials, lack of formal training, instructional methods not based in best practices, and extremely high teacher turnover in many schools. These issues are extant throughout primary, secondary, and university levels.

Akuzipik Language Materials

Akuzipik (ISO 639-3: *ess*) is the language of the Yupik people of St. Lawrence Island, Alaska and parts of the far eastern coast of Chukotka, Russia. The language is polysynthetic and is in the Yupik branch of the Inuit-Yupik-Unangan language family. Intergenerational transmission of Akuzipik from parents to children remained extremely strong on St. Lawrence Island through the early 1980s. During the 1970s through 1990s, substantial pre-primers, primers, and other educational materials were developed in Alaska through the Nome and Bering Strait School Districts. Over the past

several years, we have digitized these materials, which are currently being archived at the Alaska Native Language Center.

Indigenous Rights-Holders

Over the past three years, we have actively engaged with the Native Village of Gambell, the Native Village of Savoonga, the City of Gambell, the City of Savoonga, the Gambell Native Corporation (Sivuqaq, Inc), the Savoonga Native Corporation (Kukulget, Inc), the leadership at Gambell School and Savoonga School, the Native language teachers at Gambell School and Savoonga School, the Bering Strait School District, the Alaska Native Language Center, and SIL. The result has been a consensus policy regarding language technology, which we describe in this work. This policy was recently codified through a formal resolution by the Native Village of Gambell.