

Innovative Indigenous Language Preservation Project

DRAFT PRESENTATION



FACULTY OF ARTS
AND SOCIAL SCIENCES

FIRST NATIONS LANGUAGES IN THE 21ST CENTURY,
LOOKING BACK, LOOKING FORWARD



Social Sciences and Humanities
Research Council of Canada

Conseil de recherches en
sciences humaines du Canada

Canada

Sociabl

Who we are

Marianne Ignace

For the past twenty years, Dr. Ignace has focused her research on the Secwepemc (Shuswap) people of the Plateau, where her interests are aboriginal land use and occupancy, ethnobotany, traditional ecological knowledge, ethnohistory, and the linguistic and anthropological analysis of Aboriginal language discourse.

Costa Dedegikas

SNF New Media Lab

Between 2004 and 2011 the Stavros Niarchos Foundation awarded Simon Fraser University a series of successive grants for the development of cutting edge software for content delivery in the fields of language and culture. With this funding the Hellenic Studies development team at Simon Fraser University created a unique and effective online course-offering technology currently in use at SFU and at a number of other institutions across North America and China.

SSHRC Partnership Grant



- A seven-year \$ 2.495M SSHRC Partnership Grant project engages SFU and over 20 First Nations community organizations across British Columbia and Yukon
- These grassroots organizations represent 13 indigenous languages, most with different dialects: Secwepemctsin, St'at'imcets, Sm'algyax, Xaad Kil/Xaayda Kil, Kwakw'ala, Squamish, Downriver Halkomelem, Upriver Halq'emeylem, Tsilhqot'in, Tahltan, Heiltsuk, Tlingit, and Nsilyxcn comprising several language families and isolates
- Community language practitioners are working with indigenous and nonindigenous multi-disciplinary, academic researchers to co-produce knowledge and practices that address the challenges of language loss and revitalization

The Indigenous Partners

- Xaadas Kil Kuyaas Foundation, Hydaburg, Alaska (Haida)
- Chief Matthews School (Haida, Old Massett)
- Xaad Kihlgaa Hl Suu.u Society (Haida)
- Skidegate Haida Immersion Program (SHIP - Haida)
- Bella Bella Community School (Heiltsuk)
- Heiltsuk College (Heiltsuk)
- Katzie First Nation (Downriver Halkomelem)
- Tsawwassen First Nation (Downriver Halkomelem)
- Kwikwitlem First Nation (Downriver Halkomelem)
- U'mista Cultural Society, Alert Bay (Kwakwala)
- Chief Atahm School (Secwepemc)
- Skeetchestn Community School (Secwepemc)
- Spi7uy Squqluts (Secwepemc)
- Splantsin Language Program (Secwepemc)
- Sm'algayax Language Authority, Prince Rupert (Ts'msyen Sm'algayax)
- Squamish Nation (Skwxumesh snitsem)
- Sto:lo Nation (Upriver Halkomelem)
- Upper St'at'imc Language, Culture, and Education Society (St'at'imcets)
- Iskut First Nation (Tahltan)
- Tahltan Central Council (Tahltan)
- Tahltan First Nation (Tahltan)
- Teslin Tlingit Council & Teslin Tlingit Language Champions Society (Tlingit)
- Tsilqot'in National Government

Academic Partners



- SFU First Nations Language Centre
- The Bill Reid Centre for Northwest Coast Art Studies
- SFU Library
- Stavros Niarchos Foundation New Media Lab
- Yukon Department of Education, Aboriginal Programmes and Partnerships
- SFU Indigenous Research Institute
- Yukon College

Academic Partners



Academic Collaborators, Co-investigators, Post-docs and graduate students from numerous institutions in Canada and internationally

- Multiple institutions represented - Simon Fraser University, University of British Columbia, University of Alberta, University of Victoria, McGill University, University of Northern BC
- Linguists and other academics who have done extensive work in and with particular Indigenous communities (M. Ignace, M. Anderson, N. Turner, H. Davis, L. Matthewson, D. Gerds, J. Alderete, J. Lachler, M. Turin, F. Sasama, H. Hurifumi, P. Jacobs)
- Nourishing Indigenous Talent and Scholarly work (P. Jacobs, M. Johnson, J. Thompson, K. Michel, J. Crippen)
- Graduate students and post-docs who have honed collaborative skills and language documentation skills (J. Lyon, J. Leonard, A. Blankenship)

Four Pillars to “First Nations Languages in the Twentieth Century - Looking Back, Looking Forward” Language Documentation and Revitalization



Documenting
Languages



Supporting second
language learners



Apps driven by
community design &
technology capacity
building



Enabling secure,
long-term digital
storage and retrieval

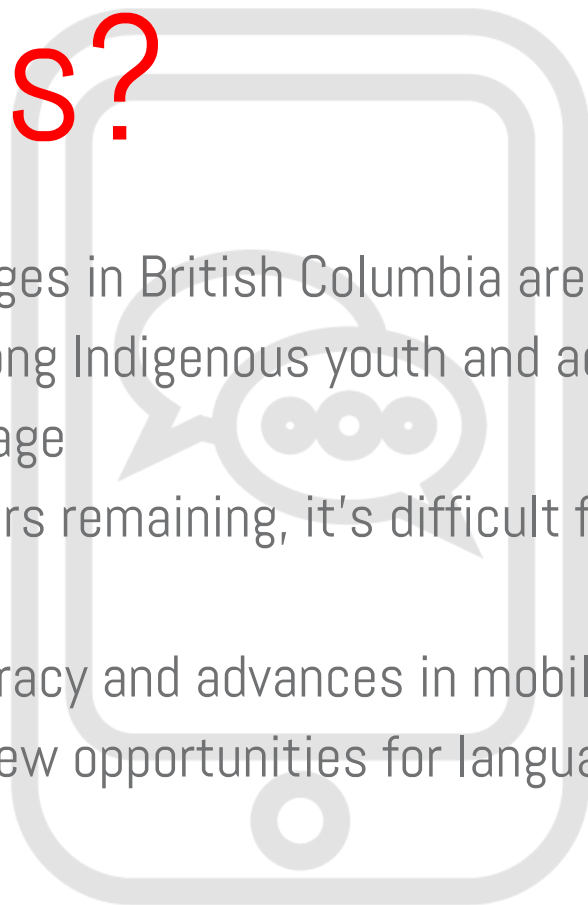
Key Academic Highlights



- Apps are not just digital “flashcards” but full suite applications that include theme-based content, exercises and assessment tools.
- Grammar acquisition features and functionality.
- “Mobile-First” Design Technology
- Allow both educators (organizations) and learners to measure success through comprehensive platform.

Why Apps?

- All Indigenous languages in British Columbia are critically endangered
- Growing interest among Indigenous youth and adults to learn or re-learn their ancestral language
- With very few speakers remaining, it's difficult for learners to connect with speakers
- Increasing digital literacy and advances in mobile, interactive technology creates new opportunities for language learners

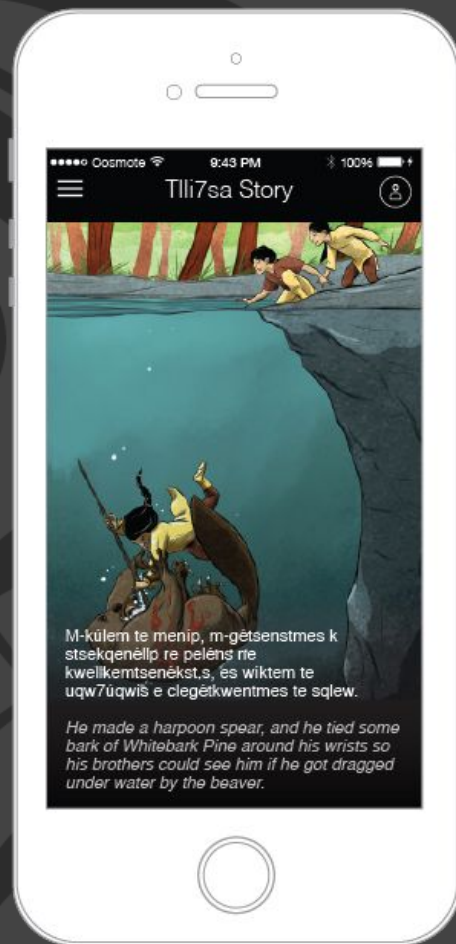
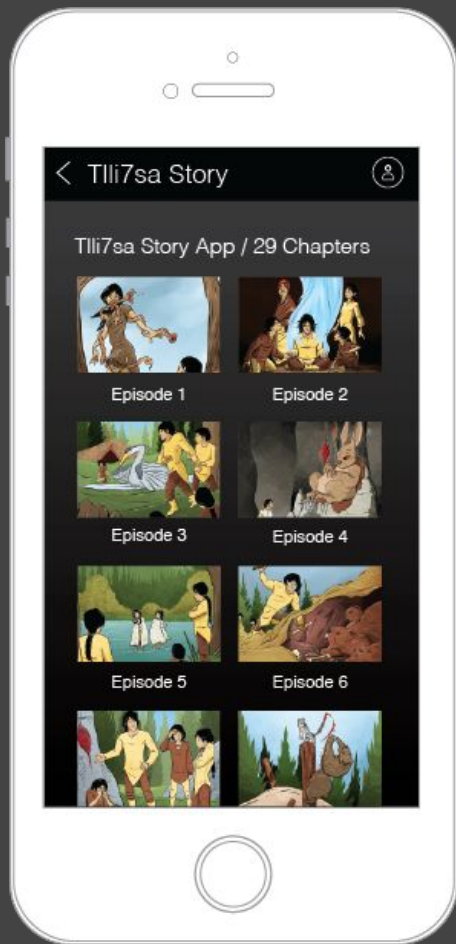


Successes so Far

- 9 courses under development
- 2 pilot courses in the field
- Platform is completed and available on desktop (web) - based language tutor platform, but also for iPads and iPhones, running iOS (Apple devices)
- Over 50+ collaborators from Indigenous partner communities are busy working on course content development

Tlii7sa Story App Screenshots

This **Secwepemc** app tells the epic journey of Tlii7sa and his brothers across B.C.'s interior, encountering cannibals, a bear, and a poisonous tobacco tree.



Language Platform Background



- New Media Lab is a part of the Stavros Niarchos Foundation Centre for Hellenic Studies at SFU, now the largest centre in the world dedicated exclusively to Hellenic Studies
- Since 2003, the Centre has received over \$15M in funding, with \$5M in R&D directed towards Online Language Technology from Stavros Niarchos Foundation, one of the world's largest private philanthropic organizations
- Over 250,000 students in secondary schools and universities across North America, Europe, and China have used the Language Platform to take courses in history, culture, and languages

Assessing Indigenous Language Acquisition and Learner Analytics



- Standard completion / performance scores are not enough.
- Competency based assessment allows both learners and educators to track progress for various skills and competencies.
- We track Logins, Completion rate, Performance scores.
- Valuable for both learners and educators.
- Data on how languages are both taught and learned online helps improve teaching methods.

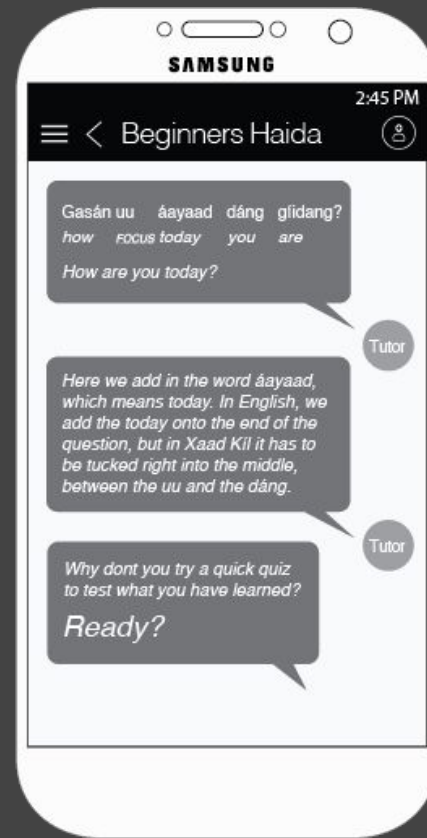
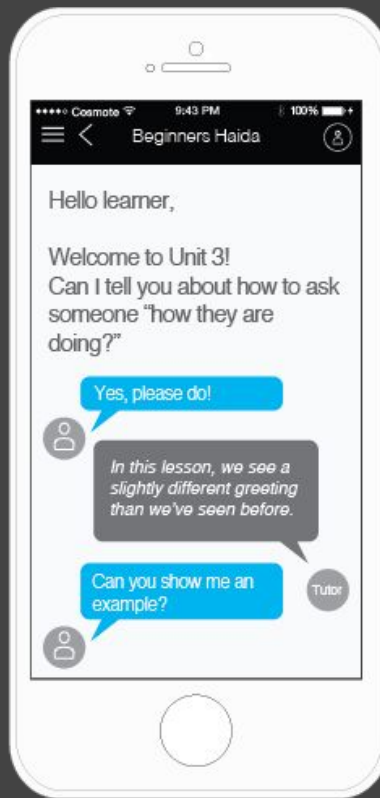
Key Tech Highlights

- Complete Scope and Sequence Courses and Apps
- Specific Language Instruction / Acquisition Tools
- “Mobile-First” Design Technology
- Allow both educators (organizations) and learners to measure success through comprehensive platform
- Opportunity to build on significant progress and work.

Beginners Haida App / Course
with traditional User Interface.



Beginners Haida App / Course
without traditional User Interface (No-UI)





Read more about this image:

<http://thetyee.ca/Presents/2016/07/13/Keeping-Endangered-Languages-Alive/>

Opportunities

- Opportunity to further develop courses to include intermediate and advanced levels
- Opportunity to expand partnership to include more Indigenous organizations across Western Canada
- Opportunity to further enhance technology for better engagement and results

Overwhelming Demand for More Levels

- Current partners want additional levels for intermediate to advanced learners
- In addition to the scope and sequence apps, we have identified a need to create apps for Preschool, K-12 learners

New Partners

- Opportunity to expand partnership to more Indigenous organizations in British Columbia and Yukon
- Additional First Nations communities have now expressed interest to also develop apps for themselves

Building on our Work

Natural Language Processing / No-User Interface

- Recent advances in the fields of artificial intelligence and machine learning have spurred interest in a new and rapidly evolving user interface standard
- This approach is based on a natural language dialogue between the software and the user
- The No-User Interface (No-UI) is a paradigm shift in the traditional computer application interaction model that employs a text chat or voice interface between user and app
- Essentially, the application will process any kind of free text input from the user and present options and responses in the form of an evolving dialogue or learning session

Building on our Work

Addressing both Platforms and all Devices

- The current platform is available for web and iOS (Apple) devices which covers a significant portion of learners
- In order to completely service/reach all learners we would need to make an Android version available...

Thank you!

“First Nations Languages in the Twentieth
Century - Looking Back, Looking Forward”
Project Team



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