The project

THE KTUNAXA INTERACTIVE
LANGUAGE LEARNING PROJECT
START HERE

Counter-clockwise from left:

Elizabeth Torres (Ktunaxa)
Randell Lum (Ktunaxa)
Bryan Dupuis (Ktunaxa)
Kayla Keplin Ridgley (Ktunaxa; middle)
Andrew Zielinski
Kathrin Kaiser
Richard Brisbois (Spokane)

An interactive language learning adventure

The Ktunaxa Interactive Language Learning Project is the ongoing, collaborative endeavour to develop a **story-based** language learning adventure. It is a mix between a **digital graphic novel** and an **interactive adventure game** that can be played on **mobile devices**. It puts the player into the role of a young Ksanka person who visits their auntie's home on the Flathead Reservation.

The player's mission

... is to develop sufficient language and culture skills to earn a Ksanka scholarship for college, while making friends, and learning about the area. To advance in the game, the player needs to navigate conversations and gain information to solve tasks and puzzles.

Supporters

The team received the blessing for their project from the **Council for the Confederated Salish and Kootenai Tribes,** working closely with Ksanka elders and teachers to ensure that their language learning materials are accurate and culturally sensitive.

In 2020 & 2022, the project was granted a Native Voices Endowment grant from the **Endangered Language Fund**.

Team

The project grew out of a language workshop in Polson, MT (USA) in April 2019. The team is led by Ktunaxa Randell Lum, Elizabeth Torres, Bryan Dupuis, Kayla Keplin Ridgley, and their affiliates.

They share the goal to create materials for learning **Ksanka**, the language of the Ktunaxa (also called Kootenai) band of Elmo at Flathead Lake in what is now Northwestern Montana, USA. Today there are 12 fluent speakers left across the Ktunaxa Nation who live on land that also includes parts of today's Idaho and B.C. in Canada.

Objectives

Ownership

One of this project's major concerns is to ensure that the Ktunaxa community retains full ownership and authority over the resource and its content, as well as its development, maintenance, and distribution.

For this reason, the team decided to base all development on open source and freely licensed software, and learn to operate these tools -- with support by project partners -- in order to be able to manage the game development process themselves.

Access

The Ktunaxa community is spread across a wide area and learners have limited access to language classes and pedagogical infrastructure.

This project aims to provide easy access to language and cultural content, especially for young learners who learn remotely and self-driven. The interactive features of the resource assist learners by providing language engagement that usually would require access to the few fluent speakers and teachers.

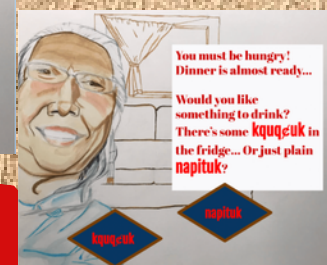## Language & culture engagement

The goal is to create a resource that...

- is **low-threshold**, fun & easy to engage with.
- is attractive for **young** people & for parents learning with their children.
- easily integrates into learners' **everyday** life.
- motivates learners to engage with the language frequently & **casually**.
- encourages **beginner** learners.
- creates a **safe** learning space where learners can practice & make mistakes in a fictional setting, without being shy about getting things wrong.
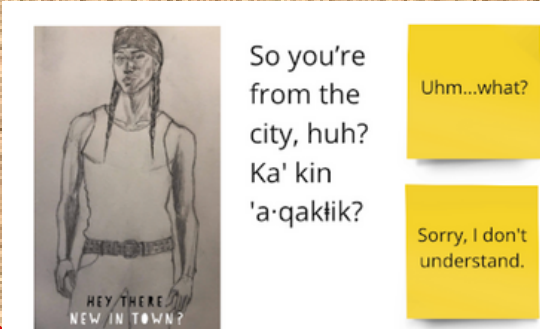
Approach

Game mechanics & interactivity

The language adventure borrows its mechanics from **Interactive Fiction**. In order to solve their **quest**, learners explore the fictional space and decide how to proceed in the story by **choosing actions** or by making **conversational choices** (e.g. pick the right thing to say, grammatically and/or pragmatically) to gain information and clues.

Players give input either via typed responses, or by choosing from a set of responses or actions (multiple choice). The game is primarily **text-based**, but the narrative is supported with illustrations and a **graphic** interface.

Kin wam! You arrived!
HELLO DARLING!

You must be hungry! Dinner is almost ready... Would you like something to drink? There's some **kuqɕuk** in the fridge... Or just plain **napituk?**

Kin wam! You arrived! HELLO DARLING!

Language learning principles

- Learners participate in **simulated conversations** that are realistic and follow a **pragmatics-oriented** curriculum, focusing on essential, everyday language functions, such as asking for information, paying respect, making requests, etc.

- New words and phrases are encountered in **context** and embedded in realistic scenarios.

- Learners need to apply their language knowledge in order to solve **tasks**, **mini-puzzles & quizzes** that are interspersed throughout the game.

- To support beginners, the adventure starts out in English as an interface language. Ksanka language content is incrementally introduced within a process of **code switching** and **scaffolded immersion**. Once a concept has been introduced in Ksanka, it remains in the language for the rest of the game.

- Following the principle of **spaced repetition**, essential concepts and content recur throughout the game.

So you're from the city, huh? Ka' kin 'a·qaklik?

Uhm...what?

Sorry, I don't understand.

Don't know much Ksanka, huh? I said, what's your name. qaklik means name. Hu qaklik Skinkuǧ. My name is Skinkuǧ.

Gotcha! Hu qaklik [player name]

And my name is [player name]

Scaffolding and supports

- **Multimodal language input**
  - audio for vocabulary & phrases
  - visual support & illustrations

- **Vocabulary splash screens** (to reinforce newly encountered words and concepts & elaborate on cultural concepts and grammar points)

- Optional **mini-puzzles & quizzes** as part of the storyline (for further language practice)

- **Emergent dictionary & phrase book** (accumulates automatically as new words and phrases are encountered in the game)

Game features

A Rewards system for language & culture?

▶ Players may earn rewards when they engage with new language content, learn about cultural concepts, or engage respectfully with another character. However, the team is debating whether or not to include such a points system, or consider other forms of rewards -- or none.

Inventory

▶ Players manage their inventory and equipment, some of which they will need in order to solve tasks in the game. The group is currently considering ideas to require players to collect specific cultural items in order to succeed in the game.

Feedback

Player choices have **consequences**.

Choices elicit **reactions and responses** from other characters in the game, impact the subsequent storyline, the player's character's reputation, and their relationships with others.

Players receive feedback on their choices in simulated conversations either **explicitly** or **implicitly**, e.g. via a character's reaction.

Conversational feedback is also supported **graphically**, e.g. by a character's facial expressions.

YEAH YEAH YEAH! you're on A ROLL!!!

You got kʸukmu'ɬ!!!

FRY BREAD!

**Example:
A splash screen for frybread**

Ksanka ʔA·kɬukaqwum:

ka·pi·, n. coffee.

Development

Teamwork

The team collaborates on all aspects of designing this resource, but each team member is encouraged to contribute according to their talents, skills, and interests, be it storytelling, puzzles and game mechanics, art and illustrations, writing proposals, or language investigation & community outreach.

The development process involves...

▶ curriculum design
▶ narrative design
▶ game design

Art & illustrations

Spokane artist Richard Brisbois creates original illustrations, and graphics designer Andrew Zielinski advises on the interface. Richard's art is inspired by **traditional parfleche designs** and by the local context and scenery of NW Montana.

The art and design process is **collaborative**: the team decides together on creative aspects, such as styles and colors. They invent brands for vocabulary assets, and even **remodel UI icons**, such as audio icons and forward arrows, to go beyond industry standards and better align with **local worldview and cultural art approaches**.
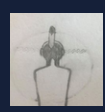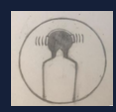
Challenges

complex development process
▼
cultural heritage protection
▼
text-based stories vs oral traditions

Skills & capacity

Learning by designing

The process of developing the language adventure is a learning-process in itself and can be considered a strong example of **project-based language learning (PBLL)**: investigating the language, cultural concepts, local habits and protocols, the team found that they are naturally picking up on language and cultural knowledge in the process.

Skills & capacity building

The team collaborates online, using mainly open source or free licensed tools for their development process. They noticed that they've acquired new skills, and developed capacity since working on this project, as a side-effect of their collaboration. This includes:

teamwork	curriculum development
project management	storytelling & character development
coordinating with partners	game design
grant writing & project proposals	language investigation
presentations & project promotion	workshop facilitation

Relationships

Community Engagement

The team has been actively reaching out to members of the Ktunaxa tribe, establishing connections with members of the Ksanka band on the Flathead reservation and in B.C., gathering feedback and ideas for the game.

Aiming to engage the wider community, artists, storytellers, speakers and learners, the team is organising an **online interactive storytelling workshop** in March 2021 with the goal to forward the game's narrative through a series of interactive, **collaborative writing** activities that focus on character creation, local **varieties & slang research**, and developing quest and missions.

Relationships with External Partners

Strong relationships with project partners are essential for this project to be sustainable, and the team is grateful for external help that has been offered, such as a team of 3 UX design students from General Assembly. In their relationship-building, the group is guided by a strong concern to protect Ktunaxa heritage, which leads to innovative ways of navigating conversations with project partners who may be used to a more fast-paced style of collaboration typical in business and tech contexts.

Please reach out to us at
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Hu sukiłqúqni!