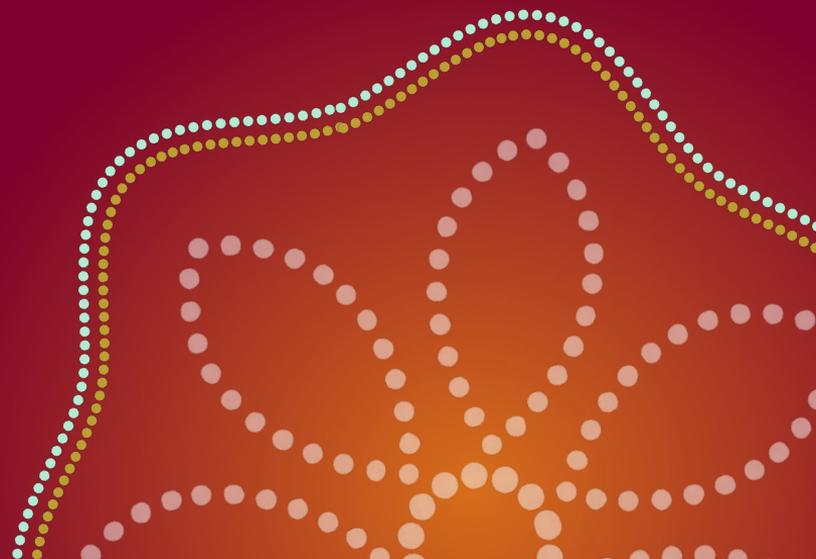






Research Project Showcase: Pedagogy Team

- ❖ Our team
- ❖ Our Guiding Principles and Vision
- ❖ Experiences 1 and 2
- ❖ Emerging Pedagogies
- ❖ 3D Virtual Learning Environments
- ❖ Where are we going?
- ❖ What we've learned?



The Pedagogy Team

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Peggy Hartwick, Pedagogy Lead



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Guiding Principles and Pedagogical Visions

- ❖ Grounded in First Nation of Na Cho Nyäk Dun values: **Respect, Caring, Sharing, and Teaching**
- ❖ Created through ongoing collaboration and co-design with community members and stakeholders (e.g., Elders, Northern Tutchone language coordinator, co-design advisory committee, native language teacher)
- ❖ Focused on moving from cultural and language preservation to revitalization
- ❖ Situated in 3D immersive and culturally authentic spaces (e.g., Grandma's house), and interactive simulations with voice, sound, and movement
- ❖ Replicated through meaningful and culturally significant experiences and the integration of community assets (e.g., Grandma's 3D scanned campfire frying pan)
- ❖ Generated through text and audio input of the Northern Tutchone language
- ❖ Informed by situated, experiential, and social learning theories



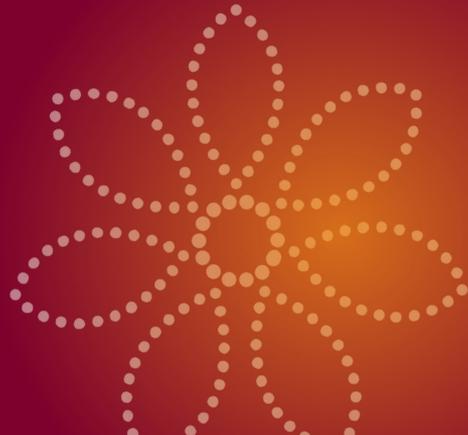
Experiences to date



Experience 1: Greetings at the Spruce tree

- ★ Focus on the language of greetings through the use of Northern Tutchone Clan characters, Raven and Wolf. Situated around the Spruce tree (completed).

Demo 1



Experiences to date



Experience 2 - Planning & Shopping for Campfire Gathering

- ★ An intergenerational experience where a learner and their Grandma **plan food (Bannock) for a small campfire** with the learner's new friends. Grandma supports the idea by helping make a **shopping list**.

Demo 2a

- ★ Next the learner practices warm, respectful **greetings** with a relative and the cashier while **collecting ingredients** for Bannock, tea, and canned meat at **Mayo Foods**. Short interactive moments of greeting, thanking, and naming ingredients reinforce comprehension and light conversational skills.(completed).

Demo 2b

Together Today for our Children Tomorrow: Combining Indigenous and Western knowledge “...for a shared better tomorrow”

- ❖ Family is paramount
- ❖ Education is through observation, surroundings, and modeling
- ❖ Changes to the education system need to come from within the community
- ❖ “... it is about life...”, the land - “The whole Yukon is our school” (Council of Yukon, p. 21)
- ❖ Learning is land-based and rich
- ❖ Focus is on preservation and factual representation of culture
- ❖ Trust, reciprocity, respect, and maintaining relationships are key
- ❖ Two-Eyed Seeing is about the meeting of Western and Indigenous knowledge for a shared better tomorrow
- ❖ Sharing of knowledge, “... Meeting of Western and Indigenous knowledge for a shared, better tomorrow” (Bardwell & Woller-Skar, 2023, p. 582).



“SIGHT- All the Ways We See”

(Designed by E. Winter)



Pedagogical Strategies behind the designed experiences

Language Exposure: In the First Nation Na Cho Nyäk Dun context, goal is often to create opportunities to connect with Northern Tutchone language and culture through immersion (Glassburn et al. 2024)

Task-based Language Teaching (Ellis 2003)

- Authentic use of language to complete meaningful tasks.
- Culturally relevant activities.
- Task has a clearly-defined, non-linguistic outcome.



What do we know about VR and language learning?

3D Virtual Learning Environments

- Creation of contexts that are otherwise not possible
- Single or multi-user immersive environments
- Fidelity of space Immersion and sense of presence, users have the “illusion of interaction with real objects and in simulated spaces...” (p. 30)
- Real-time interaction, synchronous voice, text, and movement
- Customizability = graphic representations of real world places and scenarios, replicated cultural assets

Language learning

- Interactive, social, variety of input, situated, experiential,

(Hartwick, 2018).



Where are we going?



Experience 3 - Making Bannock & Packing for a Campfire - Grandma and Grandchild (learner) are **making the bannock mix** and **packing for campfire** gathering. Focus is on counting; words for food and kitchen items; following directions; prepositions of place e.g. “it’s over there”; and terms of endearment e.g. “I love you Grandma”. (In progress)

Experience 4 - Campfire Building & Frying Bannock - The Uncle and Grandchild (learner) are **building a campfire** and the Grandma is **cooking the bannock** and getting ready for the guests to come. The learner will learn directive words for fire building and mixing and frying the campfire Bannock, as well as forest specific nouns, e.g. birch paper, kindling. (In progress)



Where are we going?

Experience 5 - Campfire & Traditional Stories - The friends and family enjoy eating **Bannock**, **having tea** and listening to an elder (Auntie) tell an old **Northern Tutchone story**. This is a two part story that teaches traditional law. The learner will practice greetings, learn words for small animals and birds, as well as the words for sharing and caring. (In progress)

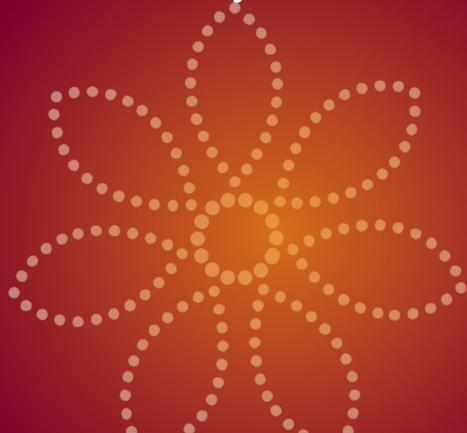
Future Experience Themes - Fishing, moose hunting and berry picking experiences that incorporate game-like features.

Future Directions

- Review-style exercises to ensure strong retention of the words in the VR experiences.
- Multi-user, synchronous experiences
- Integration of AI chatbot as conversational partners
- 2D pedagogical opportunities emerging: hologram, songs, recorded conversations between elders in Northern Tutchone

What we've learned

- ★ Need more videos of elders using Northern Tutchone
- ★ 2D Version of Kiosk Content needs to be in the schools
- ★ Constraints of 3D design
- ★ Collaboration is key





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