

Playing For Keeps: Digital Games to Preserve Indigenous Languages & Traditions.

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ABSTRACT

This paper examines the potential for digital games to be used as a conduit to preserve and share Indigenous languages and traditions. It does this by interviewing game industry and academic representatives from a variety of Indigenous communities around the world to ask their opinions on the topic via three questions. The paper aims to provide justification for a model of co-design utilizing the methodology of two-eyed seeing which allows Indigenous communities to be involved in every step of the design process and also to retain Sovereignty over their cultural practices and how they are portrayed and shared with the wider populace. The benefits of which may be felt by not only the Indigenous communities themselves but also communities like DiGRA as it will help to inform and build lasting bonds between the game industry/academia and Indigenous peoples.

Keywords

Two-Eyed Seeing, Co-Design, Gamification, Digital Artefacts, Curation, Inclusion, Game Design, Game Development.

INTRODUCTION

This paper is written with specific examples of successful examples of Indigenous culture and heritage drawn from the authors' own cultures and their experience cooperating with members of Indigenous communities. By exploring how different heritages have been represented in games, the aim is to show the potential for a model to be created that will allow for greater representation and involvement of Indigenous peoples in the digital artefacts created about them. The paper puts forward arguments for the use of digital games to be used to preserve and share traditional Indigenous

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heritage and cultural practices including endangered languages. Drawing from a variety of sources, including academic, industry and Indigenous knowledge keepers, it sets out to answer three simple questions:

1. What are the benefits of preserving or sharing Indigenous language and culture?
2. Are there games that depict Indigenous peoples or practices well, or are there Indigenous heritage/traditions that could be captured within a game?
3. Can you tell me anything about the learning pedagogy of your culture and why would online/game learning may be beneficial?

To provide as rigorous an insight as possible, Indigenous peoples and game designers from around the world were contacted:

- An Elder from The Mississaugas of Alderville First Nation
- An Indigenous Cultural Advisor at a Canadian University, The Mississaugas of Scugog Island First Nation
- Carl Peterson, game designer, American Indian, Sioux Lakota tribe
- Dr Phyllis Callaghan, game designer and academic, Māori from the Iwi (Tribe) Ngāi Te Rākatō,
- Jake McCullagh and Christopher Walker, game designers, Scots.

Although this is a very small selection of Indigenous peoples, it is hoped that as the exploration of this topic progresses more and more in-depth research can take place. For the purposes of this paper, and due to tribal protocols and respect, some of the respondent's answers will be unattributed to them personally. This is because they do not wish to be seen as speaking for all of their people, they are merely giving their opinion based on their own lived experience.

After giving a brief background into some issues faced by Indigenous peoples regarding their traditions, languages and culture, we will then go on to look at the three questions posed to the participants. Firstly, each question will be given a literature review based on the topic then the responses given to that question will follow. Before progressing to solutions, recommendations and conclusions drawn and will then finish with details of how the authors see this important research progressing and the potential impact that it may have on Indigenous game design and development.

It is essential to note that without the input of the Indigenous participants this paper could not have been written with the same integrity and respect needed for such an important topic. For this reason, the responses will be in the participants' own words uncut and verbatim because their voices are the most important in this paper and future research. 'Nothing about us, without us.'

CONTEXT

All Indigenous languages are intrinsically linked to heritage and cultural identity. Sadly though, many of these languages are endangered and as they disappear so too does a part of that heritage. Furthermore, this is not a phenomenon exclusive to far-flung corners of the world, it is happening everywhere. From the authors' cultural perspective, Scots Gaelic has been steadily declining and now potentially faces demise within the next decade without promotion and support.

Indigenous peoples face a number of challenges, including maintaining their Indigenous languages, traditions, and culture on their ancestral grounds (Wotherspoon & Hansen, 2013; Battiste & Youngblood, 2000). In North America, as with many other areas of the world, the colonization of lands was directly responsible for the majority of these problems. Numerous Indigenous children were taken from their parents and placed in residential schools as a result of this process, which lasted from 1831 until 1996. During this time many of the children who were taken to these schools, went missing and were never spoken of again. Sadly, their fate has recently come to light with many bodies being discovered in the grounds of residential schools throughout Canada and the United States of America. Language, legacy, and culture were removed from them during this time, often under force, in what has been branded "cultural genocide" (Pidgeon, 2016). As a result, many of these Indigenous peoples are no longer able to use their traditional language, stories, knowledge, or ceremonies, jeopardizing their legacy as these languages and traditions die.

An additional problem highlighted by speaker demographics is that the majority of speakers are elderly. An exception here is the massive uptake of Gaelic on Duolingo, which may be cited as an example of how technology can help save vanishing cultures and languages. Many Scottish Indigenous language initiatives have stated that they wish to tap into the 16 to 30-year-old demographic, an age range less engaged with learning Scots Gaelic. These initiatives have expressed a desire to explore how Indigenous language learning can be enhanced with the integration of new media such as gaming (Tjoa & Poecze, 2020). We will look at this next.

GAMES DEVELOPMENT AND TRADITIONAL CULTURES

The marriage of heritage and traditions and modern technologies like digital gaming works well because the traditions, language and practices shape the game world adding richness and depth (Cunsolo Willox, 2013). The process of integrating Indigenous and colonial pedagogies into curricula and society is known by many different titles. Decolonization and Indigenization are two examples, both of which may be problematic from an Indigenous perspective.

One aspect that has become apparent through the research conducted by Harbord, Falconer & Hung (2021) is that Indigenous knowledge holders are not sufficiently consulted when an outsider is developing solutions for Indigenous-related concerns (The Mississaugas of Alderville First Nation Elder, personal conversation, 2021). Furthermore, there is frequently very little dialogue between designers and Indigenous peoples when it comes to designing video games that represent Indigenous culture and traditions (Copplestone, 2008). The term Two-Eyed Seeing is a phrase created by the Mi'kmaw Elder Albert Marshall. It is the harmonious merging of the best components of both Indigenous and Eurocentric ideas and pedagogies, resulting in an amalgamation of both techniques' strengths and equality of belief systems. Marshall defines Two-Eyed Seeing as "seeing from one eye with the strengths of Indigenous methods of knowing, and to see from the other eye with the strengths of Western methods of knowing and to make use of both of these perspectives at the same time" (Reid et al., 2020; Peltier, 2018; Bartlett, Marshall, & Marshall, 2012, p. 335).

Elizabeth LaPensée, an Indigenous academic and game designer, gives Indigenous game development a genuine or Sovereign voice. The term Sovereign refers to the level of involvement of Indigenous peoples within the game design, development and every

step of that process. This also takes into account the protection of the intellectual property (IP) and controlling who can access the game and who has the right to use its content. For a game to be truly Sovereign, Indigenous peoples need to be actively involved in the process of making the game, not just brought in towards the end as advisers or fact-checkers (LaPensée, 2018a, 2020). LaPensée has designed and developed many games that highlight her people's ownership of their own stories. Games like *Thunderbird Strike* and *When Rivers Were Trails* not only share heritage but also serve as effective tools for demonstrating colonialism's catastrophic effects (LaPensée, 2021).

QUESTION RESPONSES, SUMMARIES AND ANALYSIS

Question 1: What are the benefits of preserving or sharing Indigenous language and culture?

Christopher Walker, Scots game designer:

Indigenous culture is part of the human story whether you grew up steeped in its customs and values or not. To lose it would be to watch part of ourselves and the history of how we got to this moment in time disappear. All too often Indigenous cultures are viewed as relics behind glass but it's a living organism, a community of people whose often oral histories are under threat because the number of mouths who can articulate them are dwindling. Even beyond a desire to preserve, there is a creative consideration – we are more empathetic people and imaginative artists when we learn from cultures that seem so distant and on closer inspection teach us about ourselves.

Jake McCullagh, Scots game designer:

Ancient cultures should be preserved and have their stories retold over and over again because the sad truth is that if they go unspoken, they become forgotten.

Books get burned, files are lost, archives eaten away by mould and mites. The past can't be expected to be immune to decay. It's only the fresh re-telling of the tale that keeps it alive. Memories unrecalled become increasingly inaccessible. Sure, every time we remember something we change it slightly, re-contextualise what was by relating it to what is. But without the preservation of ancient culture, they become a forgotten memory.

First Nation of The Mississaugas of Alderville Elder:

No language on earth should be allowed to disappear. They are like the many precious species that inhabit our planet and which are facing extinction. Indigenous languages from my limited perspective are like living organisms. Most of the words are directly connected to the Earth and nature. As an example, I like to use the Anishinaabemowin word for teapot -- "zhiishiib-kik" -- literally, a pot with a neck shaped like a duck! These are beautiful descriptive words that are artforms in themselves in a way that most languages are not. We don't destroy art.

Indigenous Cultural Advisor at a Canadian University, The Mississaugas of Scugog Island First Nation:

I have heard many times, that if a language dies off, so does the culture. Our languages are tied so closely with our culture, I believe this to be true. Anishinaabemowin is a

verb-based language, so the meanings of words are very literal, and the meanings teach you a lot about the culture. Language and culture is also tied directly to identity. Because of the government's and church's tactics, many Indigenous people experience identity issues. This is a huge topic and different for everyone, but in my own experience, I grew up feeling like I didn't fit in. I felt I wasn't Indigenous enough to identify as Indigenous, but not "white" enough to fit into the dominant culture.

This brings about a host of other issues, such as low self-esteem and self-worth, shame, etc. For my grandparents, if the fear of having their children taken away to residential school did not exist, my mother would have been a fluent speaker of the language and would have passed it down to her children. Unfortunately, the fear was real, and my grandparents chose not to pass the language down, and only spoke it to each other, or when relatives came to visit. This is very confusing to a child, and they are sub-consciously taught to be ashamed of who they are. Being denied a beautiful and meaningful language is being denied a human right. We need to instill pride in our youth, and teaching the language and culture is the only way to do that. They will know who they are, and that they belong.

Game designer, American Indian, Sioux Lakota Tribe:

Why bother, preserving or sharing Indigenous culture and language. Okay, so I'll start with this. We don't need to share these two with people unless there's a person who's really willing to learn our way of life, and then learn the struggles and they come to us, you know, we don't need to go out to non-native people and tell them these things even our own people. A lot of them aren't ready for these lessons, and you know going out and sharing it with them only. It only hurts our culture, it doesn't really help it because then other people start telling our stories for us. And, you know, using us as, as the excuse of why they're qualified to, to tell our stories, yes. And so that's, you know one thing of it.

You know, digital I think can't cut it. Yeah, it's it has to be experienced as opposed to play, as opposed to experienced in any, in a fabricated sterile way. And the same thing about a museum, games don't bring any more of the life of a culture to a person, than a museum. It might engage people more. But it doesn't engage them in a way that carries the culture onward, it just, it just engages them in, in a way that, you know, this is, this is what it was like but not, not this is, you know, the thing that if unless you've made it that way, you could make it that way, but that is true in our culture too, to pass those things on in an accessible way, passing things on in an accessible way is a taboo in my culture.

The reference is taken away, and there's so many in our culture, they're tied directly to our spirituality, that I would never want to put in a game. So, the origin of our culture that you get that can be shared openly. You know, it can be shared, shared non discriminately isn't our culture, anymore, it's just a picture. Don't play with that if you play with our way of life, it will burn you up.

If you share the language, the same thing with the language, as, as any cultural practice. If you share the part of the language that is decoupled from the culture, then all you're sharing is words, and they'll never understand the true meaning of the words or the true importance of, of speaking the language that in our culture every word, every phrase has a deeper meaning behind it than just what said. And in order to convey that you need to be in the room with a fluent speaker, and even then it's difficult because these,

most of our fluent speakers who are left don't have the total understanding of these concepts, or can't convey them in a way that makes it to an English thinking brain.

Dr Phyllis Callaghan, game designer and academic, Māori from the Iwi (Tribe): Ngāi Te Rākatō:

I think it is very important to preserve the culture of Indigenous peoples throughout the world. It is a connection; an inherent gift that has been handed down by their tipuna (ancestors) before them. For Māori and many other Indigenous peoples throughout the world, that journey or narrative has had to survive against the backdrop of colonisation, which stripped the Indigenous of their identity, lands and culture, the fall-out from this was catastrophic; the most damaging was the attack on the Indigenous psyche and loss of their identity and language (Callaghan, 2016),

Preservation and restoration therefore of Indigenous culture becomes crucial in the fight for survival and keeping their traditions alive. The move behind *Katuku Island* to Indigenize the gaming space is exactly that; a way to respectfully and inclusively build and design a platform where we can heal from the effects of colonisation.

Technology in my view is just another arena where we can excel at being Māori/ Indigenous, where we can bring our collaborative dreams and storytelling together to look at better and more engaging ways of connecting with our people across all facets of life and heal. Mainstream Western approaches tend to not work well for my people; Māori, this is seen by our large incarceration population and our education statistics, where Māori are the highest incarcerated group in New Zealand prisons and we also lag behind non-Maori in the education statistics.

I can't speak on behalf of other Indigenous peoples and their experiences, but what I can say is that for me as Māori, I was sadly not brought up speaking my native tongue, my mother went through a schooling system that denied her of this right. I inherited, like many other Māori my age, those catastrophic consequences. I can remember as a young child and then onto my teenage years, all I ever longed for was to korero Māori (speak Māori), I felt like one of my body parts was missing. I didn't feel that when I eventually went back to school and was taught by a pakeke (elder/mentor) to speak my language.

Why is all that important, because it makes us who we are as a people. When we feel like we don't belong, a part of us is missing. Why shouldn't you look at every opportunity to embrace, celebrate and devise new and innovative ways of celebrating who we are as a people and a culture. The question you asked first, was: Why bother with Indigenous language and culture, my reply is ... "Why not, why wouldn't you"!

Question 1 Response summary.

The responses to Question 1 show that there is indeed a desire to preserve Indigenous heritage. Often coming from the very real experience of having a part of culture taken away and a deep yearning to reclaim it. The problems arise when there aren't enough people left who possess the knowledge or know enough words to be able to translate or conceptualise a tradition fully so that others can understand. But still, the desire to preserve heritage and language comes across strongly. Tied to the idea that if a language dies it can take cultural identity with it.

Additionally, after having language and/or traditions taken away by colonisers, the level of trust needed to co-design is something that needs to build gradually. There is a feeling also that some Indigenous practices should not be played with, they are deeply

spiritual and not for gamifying or sharing with outsiders. The caveat is that the language, heritage and culture and not separate entities and that for them all to thrive they must be treated as a whole.

GAMES THAT HAVE TACKLED THE ISSUE:

Gaming's younger demographic is a valuable resource in preserving culture. Games promote learning in different ways and engage different audiences than traditional mediums like art, literature, and dance. They allow for the easy mixing of traditional and fine arts with modern art forms such as digital design. Bringing together differing disciplines, thereby creating the opportunity to work and research within a wider area. Through the enhancement of collaborative networks, unique and exciting avenues of research and interest are opened. Blending approaches and methodologies to create new and innovative results. Allowing for a multitude of crossovers with new audiences. Additionally, providing the perfect forum to share digital art and creativity with others.

The phrase 'Nothing about us, without us' demonstrates the importance of involving Indigenous peoples in every step of the design process. Many games have created Indigenous characters or characters with Indigenous identifiers with little or no research and unfortunately end up producing potentially offensive stereotypes. Other games have cherry-picked cultural practices and traditions without enough background research to do so honourably and/or correctly.

An example of this incorrect use of Indigenous practices would be in *The Mark of Kri* (San Diego Studio, 2003) where the male protagonist was designed having 'Moko Kauae', a sacred and spiritual tattoo given only to female Māori as the physical manifestation of their true identity, family, clan and tribe (Pihama, 2018).

Games like *Assassin's Creed* have gone some way to bring history to life with dedicated research teams working to bring authenticity to their stories. However, there is still a long way to go to be truly inclusive. For example, in *Assassin's Creed III* they had already set the main character as half-Mohawk half-English and then retroactively involved Indigenous peoples to help flesh out the character's heritage and culture.

The following are excellent examples of how digital games can not only be conduits to preserve traditional practices but also allow them to be shared with a wider audience on the terms of the knowledge holders, thereby maintaining the Sovereignty of the IP and the way that the cultural artefact is shared. Protecting the Sovereignty of games also helps to limit 'cultural tourism', where people can play at being another culture without understanding the significance or spirituality of the world they are embodying.

All game artwork has been granted the kind permission for use in this paper by the Indigenous originators of the work. Whilst the following games do not represent all Indigenous designed games, they do represent a selection of the most seminal. All games represented were created, sometimes entirely, by Indigenous designers and developers directly related to the peoples that the games portray. And as such embrace the sovereignty of Indigenous game design and development as well as supporting the concept of nothing about us without us.

Tipi Kaga:



Tipi Kaga, which began development in 2019 by Northern Plains Games, gamifies the experience of constructing a traditional Lakota tipi. All of the dialogue within the game is Lakota. The designer Carl Petersen had the hope that the game would help to not only preserve but to revitalise the Lakota language.

Red Rampant:



Red Rampant, currently being developed by Eclectic Synthesis in 2021 aims to bring to life an important part of Scottish history that is not often taught in schools. To enhance the educational and realistic aspects of the game it will also use Scots Gaelic and Scots so that the player can really feel immersed in that era and atmosphere.

Katuku Island:



Katuku Island (2021), developed by Dr Callaghan over many years, draws from not only traditional Māori culture but also years of teaching and research experience. *Katuku Island* is the first-ever Indigenous mobile gaming app and aims to not only share Indigenous practices and traditions but also to normalise Indigenous culture.

Honour Water:



Honour Water, developed by elder Sharon Day, the Oshkii Giizhik Singers, and Elizabeth LaPensée with programming support by Pinnguaq in 2016, is a game that focuses on sharing Indigenous water teachings through song. The songs are sung in Anishinaabemowin, which is the spoken Anishinaabe language. By healing water through these songs, the player can feel a connection to the Indigenous teachings.

When Rivers Were Trails:



Winner of the 2019 Adaption Award at IndieCade, *When Rivers Were Trails*, developed as a collaboration between the Indian Land Tenure Foundation and Michigan State University's Games for Entertainment and Learning Labs in 2019, takes the player on the journey of a displaced Anishinaabeg person. Through the gamification of the impact of colonisation on Indigenous peoples in America an important part of history, that is generally not taught in schools, is put into the public domain. Another important factor in this game is that it emphasises the importance of balancing well-being, only taking as much as you need and giving back; all of which are deeply important pillars of many Indigenous philosophies.

Question 2: Are there games that depict Indigenous peoples or practices well, or are there Indigenous heritage/traditions that could be captured within a game?

Christopher Walker, Scots game designer:

Journey springs to mind instantly, which presenting the player with the ruins of a forgotten civilisation to float and glide through in gleaming audio and visual splendour. The story of this fallen people, albeit fictional, wasn't strictly told to the player rather the game embedded them into the environment and atmosphere. It was incumbent on the player to traverse this destroyed land and vanished people so they could understand the narrative. *Journey* is the template for a game determined to store an interactive retelling of a heritage and history through its emphasis on player exploration. Unlike

decaying documentation and fleeting oral history, if a true to life Indigenous culture took the place of this fictional one it would be preserved and shared in the digital space

Jake McCullagh, Scots game designer:

The most famous depiction of Indigenous culture I can think of is *Assassins Creed 3*. A hybrid gameplay between the European colonialists and the native Americans. But the problem with the depiction of the native Americans in this game stems from the inherent violence in the protagonist, the gameplay, and therefore the representation of the natives.

The composition of mechanics present means that the only way to play is to fight and kill. The somewhat subconscious implication here is that all the Indigenous people could do was fight, when in reality they have a rich culture of ceremonies, smoke signals, and a colourful, harmonious equilibrium with nature.

But of course, all of this came about because they set out with the idea of making a combat game, and built the gameplay around it, rather than starting with the premise of telling the native American story.

Elder from The Mississaugas of Alderville First Nation:

I would research games that have historically been played by Indigenous peoples. My grandfather used to tell me about the "snow snake", where participants see who can slide polished wooden rods of various length the furthest distance in a long, iced groove made in the snow -- sometimes for hundreds of metres or further. The Inuit have high leg kicks trying to touch a ball dangling above their heads. There were also many Indigenous games of chance.

Modelling online games after real games is important -- as is avoiding spiritual appropriation and gambling elements.

Indigenous Cultural Advisor at a Canadian University, The Mississaugas of Scugog Island First Nation:

One teaching that comes to mind immediately, is the Seven Grandfather Teachings. I am not creative enough to figure out what that would look like, but the Seven Grandfather Teachings are: Love, Respect, Bravery, Wisdom, Humility, Honesty and Truth. They are basically what should be, our way of life, our virtues. Each teaching is represented by an animal. Perhaps the game could have different levels, and a lesson from the teachings would have to be learned before going on to the next level...??? Some Indigenous teachings are not widely shared due to the possibility of appropriation, and the sacredness of them, but the Seven Grandfather teachings are there for everyone to learn from.

Carl Petersen, game designer, American Indian, Sioux Lakota Tribe:

The AAA level is still the AAA level. And, you know, they could tell much better stories but that's not what sells. And at the indie level, I've seen a few people doing good work. You know, but they don't have the funding to do what they really want to do, and I've seen a few people who think they're doing good work, who may not be the right people to do that work. And I've seen a few people who are definitely the wrong people. You know, trying to fit in this space Indigenous, you know. So, you know, any, these are numbers less than 10, each of these groups is numbers less than 10 of people who are actually in the space for native North American Indians. I know there's a big Māori group that's doing quite a bit of good work and Māori, you know are Indigenous

but as the other side of the world, and they have an entirely different experience of where they're at, you know, with their culture and how that culture was assimilated into the broader New Zealand society. And then for as far as other Indigenous cultures, you know, I just don't know about enough of those cultures to know. I can only speak from my culture. And there are a few people, you know, doing, you know the language work, but everyone has its problems. Yeah. And every time you try to make this information palatable to a larger audience. Even if that's your own kids, of your culture. Money is going to get involved, personal ego is going to get involved.

Dr Phyllis Callaghan, game designer and academic, Māori from the Iwi (Tribe) Ngāi Te Rākatō:

Katuku Island is about changing the methodology to fit our narrative, to do things differently. Informed by 10 years of award winning Masters and Doctoral research with Indigenous populations, it concluded that Māori and Aboriginal peoples who carried negative codes or trauma, such as racism during their early and later schooling years, could actually heal from these factors; to allow these codes to become beneficial, if the environment they entered was inclusive, celebrated and normalised their cultural values and norms and looked like them, spoke like them, then they could re-boot these negative codes and go onto get a second chance at learning, some have gone onto complete degrees and Masters, despite leaving school with no qualifications. In terms of *Katuku Island*, technology has allowed us to create a virtual kōhanga (nest), where cultural inclusiveness, cultural literacy, cultural art, cultural music, cultural storytelling and cultural music are brought to life inside of virtual world of Mātauranga Māori and Indigenous to celebrate who we are as Indigenous. This allows us to build better resilience, agency, collaboration skills and goal setting through cultural survival and literacy tasks inside of the game.

Question 2 Response Summary:

The most interesting aspect of the responses for Question 2 was that no one suggested a game based on their culture created by someone else. *Assassins Creed* was mentioned but from an outsider's point of view. *Katuku Island* is the first of its kind to celebrate Māori culture so there were no other suitable alternatives to suggest. But here is a definite belief that gamifying aspects of culture, with the consent and direct involvement from the Indigenous peoples, can lead to positive outcomes. The potential for aiding healing within a community and the giving back of pride in who they are is worth exploring.

The Indigenous Cultural Advisor and Elder are both non-gamers and are not involved in the game industry at all so the question that was posed to them was about Indigenous traditions or games that may work well when gamified with digital media. The consensus was that cultural appropriation must always be considered as well as the understanding that some aspects of Indigenous life are not to be shared. However, children's games played within the communities would be a good option. The transfer of a physical game to a digital version seemed quite appealing. Additionally, there are some Indigenous philosophies, like the Seven Grandfather Teachings that are meant for everyone. Again, the most important point here is that there must be Indigenous

involvement. Research on the internet is not enough, there must be first-hand expertise from the knowledge holders themselves.

PEDAGOGIES OF LEARNING AND INDIGENOUS LEARNING:

The teaching and learning methods and pedagogies of Indigenous and non-Indigenous learners and instructors are not the same (LaPensée & Emmons, 2019). This is an often-neglected component that can also cause interference with a simple inclusionary approach to education. Conversations with Elders as well as access to Elizabeth LaPensée's teachings have shown that education, instruction, and problem-solving is not best served by a one-size-fits-all method.

Indigenous education has a more reciprocal aspect to it, in which information is passed from the teacher to the students, but also from the students back to the instructor. To allow for this lack of hierarchy in the classroom, the tables should be arranged in a circle so that everyone can see each other, and no one stands in front as the leader (Indigenous Cultural Advisor at a Canadian University, The Mississaugas of Scugog Island First Nation, personal conversation, 2021). The circular layout also encourages more spontaneous interaction and questioning. The teacher will ask the students questions, and the students are invited to respond with questions of their own (The Mississaugas of Alderville First Nation Elder, personal conversation, 2021). In addition, many Indigenous students benefit from a more hands-on, kinaesthetic, and visual approach to learning. This is similar to traditional learning methods, which rely on seeing and then doing (Indigenous Cultural Advisor at a Canadian University, The Mississaugas of Scugog Island First Nation, 2021). A methodology often replicated in onboarding or tutorials at the beginning of a game.

Question 3: Within your Indigenous culture's learning pedagogy, would learning through a game be beneficial?

Christopher Walker, Scots game designer:

Our adolescence saw the franchises of *Total War*, *Age of Empires* and *Assassins Creed* teach us the stories of Joan of Arc, Julius Cesar and William the Conqueror. Of course, this wouldn't adhere to the most academically validated of histories, but it immersed us in those ideas and that spell of time. Video games is oft derided as a source of historical learning but whatever its creative license, these stories ignited the passions of the player through interactivity and living the past.

Jake McCullagh, Scots game designer:

A lot of the research I did for '*Red Rampant*' involved talking with the expert historians. One of the historical gaming series that I've learned a lot from over the years is the *Total Wars* series.

Seeing the geopolitical make-up of Europe throughout the ages provided a baseline context. But it was being able to interact with it that made me understand its motion and its potential. Pushing armies across borders, seeing alliances collapse from betrayal, watching over-extended giants of centuries past buckle under their own vastness, that gave me the feeling for the evolution of history.

The Mississaugas of Alderville First Nation Elder:

The best learning is through storytelling or demonstration that helps learners better visualize topics, instead of trying to grasp intangible "concepts." I always remember

my Grade 8 (non-Indigenous) teacher who was introducing some of his students to the type of mathematics we would be facing for the first time in secondary school the following year. In our village there was a 300-foot-tall, decommissioned smokestack from an abandoned plant. He marched a group of us to the site one sunny day with a tape measure and told us that if we measured the length of the chimney's shadow, he could show us how to calculate its actual height. He was introducing us to trigonometry in a very appealing way. I always thought that was similar to our Indigenous pedagogy. The dynamics of sitting in circles, without podiums or other hierarchical trappings are also central to Anishinabek ways of sharing knowledge.

Online game learning focuses on the visual aspect of learning, an approach that tends to be more relevant to Indigenous peoples, as opposed to listening to someone preach a lesson, or even reading about how to do something. Show-me learning.

Indigenous Cultural Advisor at a Canadian University, The Mississaugas of Scugog Island First Nation:

Storytelling comes to mind for this one. This is a huge part of any Indigenous culture, so perhaps a game that tells a story (usually a lesson of some sort is involved), would be an idea. Technology has been embraced by Indigenous communities, especially among the youth so I think online/game learning would be very beneficial to them. In some cases, especially if they are urban youth, there aren't many resources available for them to learn about their culture so gaming would certainly help in that area. Some unfortunately, grow up not knowing their culture so I believe games that include Indigenous culture, especially with a learning component will help them to learn more about their culture.

Carl Petersen, game designer, American Indian, Sioux Lakota Tribe:

I think I thought about that, but basically that it was an oral culture that things need to be passed from a knowledgeable person to someone who's willing to learn, in a way that makes the culture personal.

And so, gaming online, so there's not really, there's potential I suppose for games that are based on sort of an oral gameplay. It's more hands on and the language needs. The traditions need to be experienced first-hand and not played. It could work but it's not worth the resources in my community. Okay. The issue is that we have so few people that they need to be doing the work on the ground, there's not anyone we can spare to create those resources.

Question 3 Response Summary:

Overall, all respondents pointed to the oral traditions of their communities, whether that be storytelling traditions or teaching methods. The notion that an oral tradition or teaching could be gamified and shared with urban youths; Indigenous community members that grew up in cities and as a result live away from their cultural way of life, is one worth exploring.

Through the gamification of cultural teachings, they can be made more accessible to the urban youth and provide a link back to their heritage. Additionally, attention was brought to the visual aspect that digital games naturally have, that mirrors the seeing and doing style of learning that is preferred in the Indigenous communities that the respondents came from. Furthermore, the lack of hierarchy and degree of autonomy afforded by digital gameplay was noted as a positive. However, the negative aspect of the number of resources needed to create a game that is truly representative of the

Indigenous community is a large barrier. Many of the games created by Indigenous designers and developers are as a result of small grants and funding. The games themselves are often free to download and play so that they can be more accessible to the communities they represent.

SOLUTIONS AND RECOMMENDATIONS:

The first point to be made is that there is not a one size fits all solution to the gamification of Indigenous practices traditions and languages. Further to that point some traditions and practices have a deep spiritual meaning and are therefore not open to being gamified and shared outwith the community that possesses that knowledge. Some aspects of Indigenous culture are not to be shared with outsiders and that must be respected. As was suggested by a couple of the respondents, traditional games played by children using their Indigenous language would be a good option of helping not only their community to engage with their own culture but also to share an aspect that is not deeply tied to their spiritual beliefs. Similarly, folklore and stories are often replicated across many different cultures with localized variations so are also open to sharing. This is particularly poignant because many of these stories are purely oral tradition and as the knowledge holders pass, sadly, so too do the stories. This is an area that digital media can be used to help to preserve. This would also help to restrict negative cultural tourism.

Often, Indigenous games like those mentioned previously are created as not-for-profit products. Many are available for free and have only the aim of sharing or preserving Indigenous heritage; not making money or with the aim of making the developers rich. It is this level of altruism that has sometimes stopped these kinds of games from becoming huge mega-hits. As the budget is not there to create the mass media promotion and hype needed to become the bestselling games. However, the most important point to be made, that must always be forefront in any gamification of Indigenous practices and language, is that the people themselves must be involved in every step of the design and development process from the very beginning until the very end. In this way, gamification can be done with Sovereignty and respect.

FUTURE RESEARCH DIRECTIONS:

As the world grows smaller due to the increase in technology use and our recent adaption due to Covid-19 to conducting business, socialising, working and even learning in an entirely online environment, has meant that there has been an increased interest in gamification for the above purposes. The authors' own sphere of research focuses specifically on how digital media can be used to enhance the learning of not only language but also Indigenous practices. But, instead of doing research and then making a game for the Indigenous peoples, we wish, via the creation of Indigenous language and culture extended games jams, to be able to give the tools to the peoples themselves to be able to make their own games, for their own people which they can choose to share with a wider audience.

Additionally, through this process, the authors wish to have a greater understanding of the differing pedagogies and teaching practices to create a deeper understanding of how

to make education truly multicultural. But the implementation of theories such as Two-Eyed Seeing it will be possible to create a model that incorporates the best of all worlds.

CONCLUSION:

The conclusion is clear. There is the space and desire for the gamification of Indigenous culture, traditions and language but only on the terms of the peoples themselves. It is their stories, their heritage, their language and their Sovereignty. Digital media provides an excellent forum to explore and share this heritage, whether that be for only the peoples themselves or for sharing with a worldwide audience.

Through the use of digital media, we can bring lost traditions and stories back to life and allow a modicum of immersion into that world. Engaging the demographics that are not as connected with their heritage as a result of colonization and oppression of their traditional ways. Reigniting a passion for heritage and a sense of pride in where we come from and how we share that with others.

Gamification of endangered Indigenous practices requires an understanding and commitment to the concept of Sovereignty so that the Indigenous people that the game is about are involved in all stages of the design and development process not just as fact-checkers but as contributors and active participants to the sharing of their heritage. As well as the application of Two-Eyed Seeing to ensure that all perspectives can be included, not just Eurocentric methods of game design/development. By incorporating other perspectives into the design process the resultant game can benefit from a deeper level of co-design and a more authentic experience for the player and an increased possibility for innovative design methods and gameplay.

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To our contributors we would just like to say:

Miigwetch!

Miigwech!

Maururu!

Tapadh leat!

Pilaymaya!

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