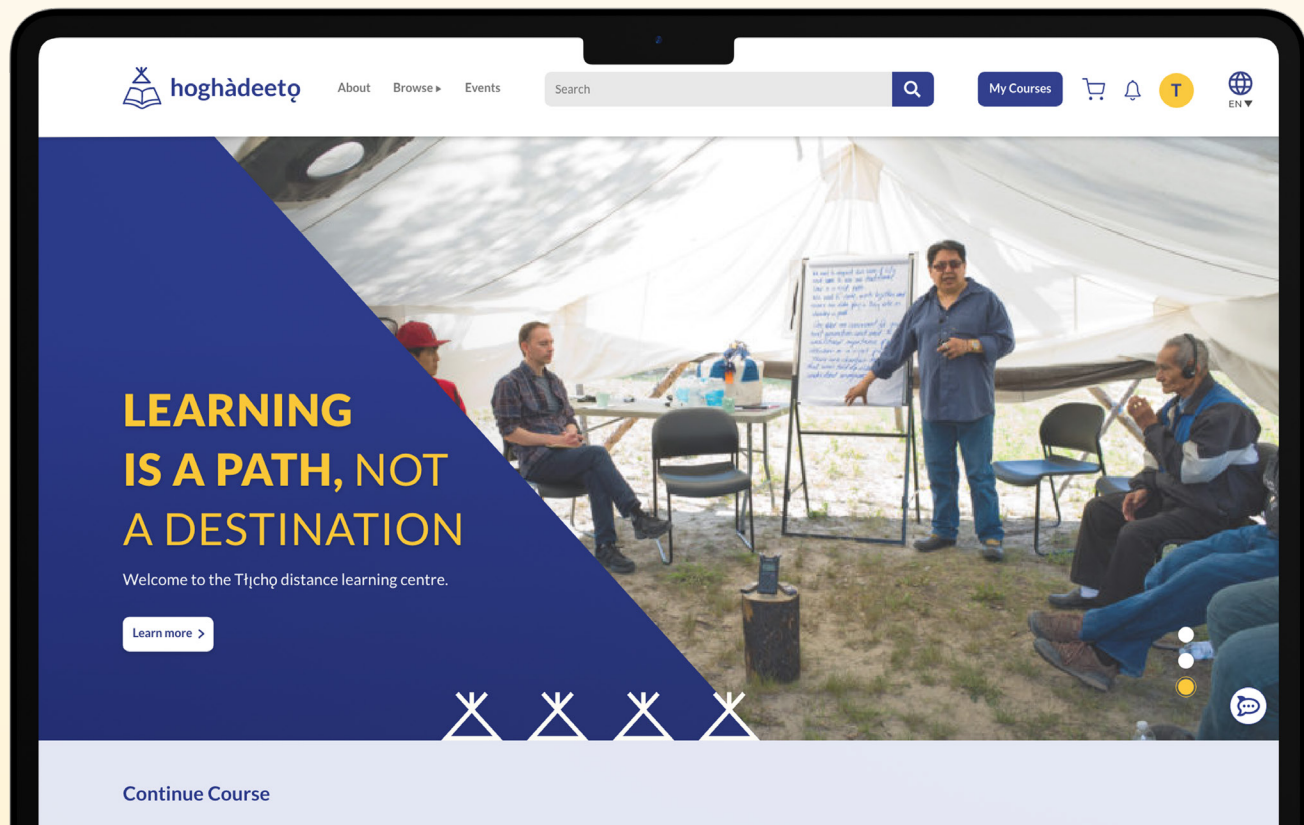# Designing a Culturally Appropriate Distance Learning Platform for Students in the Tłı̨chǫ Region of the Northwest Territories.

Tejas Ambarani

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Designing a Culturally Appropriate Distance Learning Platform for students in the Tłįchǫ region of the Northwest Territories.

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A thesis submitted in partial fulfillment of the requirements for the degree of:

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Acknowledgement:

As a settler, I would like to acknowledge that all the work I will share with you was gathered and conducted on *Treaty 6 territory*. This land is a traditional gathering place for diverse Indigenous peoples including the *Cree, Blackfoot, Métis, Inuit, and many others* from past and present, whose histories, languages, and cultures continue to influence this vibrant community.

Throughout the research and writing on the thesis, I have had guidance, motivation and constant backing from numerous individuals. I would first like to thank my research supervisor and mentor, *Dr. Gavin Renwick*, for his unwavering support and confidence throughout my research journey. His patience, vision and guidance have prepared me to revise existing research methods to adopt Indigenous practices by understanding Indigenous research practices and its philosophy. In addition, Gavin pushed me to involve myself in this research and to better understand and state my role as a researcher. He helped me recognise the importance of offering my opinion and analysis rather than only stating the facts. His approval and support throughout this journey have helped provide confidence and reinforced the significance of my work. Furthermore, his insights and suggestions have provided a clear direction in moments of haze and lack of focus.

The research activities conducted were attended and supported by numerous people from the Tłı̨chǫ government. The creative contributions and enthusiasm from the Tłı̨chǫ Government representatives have been the basis of all the design decisions taken to develop the final distance learning prototype. I want to thank everyone involved who has given me their time,

Abstract:

Background to the thesis:

In January 2020, *(as part of my master's programme before my thesis)*, I began a creative collaboration with the community representatives from the Tłįchǫ region of the Northwest Territories. I worked as part of a team of four designers for three months, where I had the opportunity to read, learn, and understand the history and culture of Indigenous people and the Tłįchǫ region. This Master's thesis is the next phase of this collaboration which has enabled me to learn more about their community and help establish a strong collaborative relationship.

I have been an outsider in the many places I have lived in throughout my life. For example, I am from India, but I lived in *Saudi Arabia, Bahrain, and now Canada*. Reading and understanding Indigenous history has made me reflect on my role as a settler. *Decolonization* is a significant issue cited throughout this research, which has also made me reflect on the impact of colonialism in my life. As an Indian, my grandparents and family relatives still remember and are impacted by the oppressive rule of Britain in India before our independence. Numerous Indians were stripped of their culture, lands, and families like the colonialism in Canada. Seventy years after independence from the British, India is still impacted by colonial rule.

Despite my multi-cultural background, I have been exposed and impacted by the colonial system, through the language *(English)* I speak, to the television I watch and the books I read. It is important to be aware that despite my background and experience in working with different cultures, I must avoid making biases in assuming there is one specific way of going through the

process and avoid the assumption of a *"right"* or *"wrong"* way of doing things. Lastly, my multi-cultural background as a designer has taught me the significance of customizing design experiences by considering the role of culture and values of the people you design for.

Summary

The geographic isolation of remote Indigenous communities limits education opportunities for their students. As a result, many indigenous students are forced to choose between an education and their community. Creating a culturally appropriate distance learning platform that considers their needs and concerns can provide those students with new possibilities for education. This study aims to create a practical distance learning experience for the needs of students seeking education in the Tłı̨chǫ region of the Northwest Territories.

The initial sections of this research provide background knowledge on several subjects, such as; The Tłı̨chǫ region, distance learning, distance learning case studies and design. Gathering existing literature on these separate topics provides valuable information and insight into understanding the issue and possible solutions. Finally, I use the insights collected from the literature review to design four distance learning models. Once created, we involve Tłı̨chǫ community representatives in the design process to help guide us through a series of three user testing sessions. Indigenous voices are consulted throughout the process of designing medium-fidelity and high-fidelity prototypes. This creative collaboration helps us understand their culture, needs, struggles and wants to create a distance learning prototype that is customized for the experiences of Tłı̨chǫ students.

Preface:

This thesis is an original work by *Tejas Ambarani.* The research project, of which this thesis is a part, received research ethics approval from the University of Alberta Research Ethics Board, Project Name *"Designing a Distance Learning Platform for future design candidates in the Tłįchǫ region of the Northwest Territories,"* No. Pro00117652, March 15, 2022. Some of the research for this thesis is conducted through a creative collaboration with Tłįchǫ community representatives.

Keywords:

Distance Learning, User Interface Design, User Experience Design, Human-Centered Design, Indigenous communities, Tłįchǫ, Education, Remote Communities, Decolonializing Education.

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Acronyms:

UX: User Experience Design

UI: User Interface Design

NWT: Northwest Territories

LMS: Learning management systems

CAI: Computer-aided instruction

CSI: Computer supported instruction

TEL: technology-enhanced learning

IBT: Internet-based training

OL: Online learning

HCD: Human-Centered Design

TCSA: Tłı̨chǫ Community Services Agency

"I have asked for a school to be built... on my land...

and that school will be run by my people, and

my people will work at that school and

our children will learn both ways,

our way and the white man's way."

- Chief Jimmy Bruneau ("Chief Jimmy Bruneau", n.d.)

1. Introduction

The isolation and distance created during the COVID-19 pandemic have increased the use of distance learning services worldwide. According to The United Nations Educational, Scientific and Cultural Organization (UNESCO, 2020), in 2020, the education system found over *1.37 billion children* and nearly *60.2 million teachers* globally were out of their classrooms. Despite the initial struggle to deliver education through technology, most institutions adopted *distance learning, eLearning, virtual classrooms, or online learning services* to continue providing education to their students.

What is Distance Education?

Distance education is a form of education that involves the physical separation of teachers and students during the entirety of *instruction and learning* (Allen, 2017). As an *educator, student, and designer*, I had a unique understanding of the difficulties in transitioning to distance learning. Post-pandemic, these services remain highly important, particularly in remote communities that lack education resources and funding (*First Nations Schools are chronically underfunded,* n.d.). However, the rapid technological improvement in distance learning recently offers an opportunity to design customized experiences for Indigenous communities' needs and requirements, providing them access to educators around the country and the capability to preserve Indigenous knowledge.

1.1 Background

Indigenous people have had a contentious history with education in Canada due to the oppression and control through colonialism. The focus of the imposed colonial-based education for Indigenous people centered on segregation and cultural assimilation from their communities and their worldviews. Western notions of education involved the ideology of *"educating the savage"* implemented with their presumed supremacy. At the same time, Indigenous ways of living, such as community involvement and preservation of their oral histories, were considered inferior. This resulted in adopting an education system that forced individuals into adopting western values by evaluating

them through structured and categorized western educational systems and practices and western norms of living while ignoring any tradition or Indigenous knowledge. In part, this belief by western scholars made them proclaim their intellectual superiority over Indigenous scholars (elders and spiritual leaders). As a result, the role of traditional education was suppressed, further victimizing more Indigenous people and their education. (Lindberg et al., 2003; Toulouse, 2016; MacLean, 2007)

"Like dandelions, [Indigenous people] have been seen as a nuisance cluttering up the landscape; like weeds, [they] have been pulled up by their roots and expected to die." (Blaeser, 1994, as cited in Davison, 2007).

They have had to endure years of deep oppression from having their culture, lands and independence taken from them. Despite these experiences, their improvement today is due to their resiliency in their community, culture, traditions and their shared knowledge (Davison, 2007). According to Statistics Canada (2016), *10.9%* of Indigenous people *aged 25 to 64* had a bachelor's degree or higher, compared to over *54 %* of Canadians with college or university qualifications. Indigenous communities struggle with a lack of access to services due to their geographical isolation. Many Indigenous students have restricted post-secondary opportunities, requiring them to leave their homes and communities to further their education. In addition, most of the curriculums and their delivery does not acknowledge or include Indigenous ways of knowing and learning, which further drives Indigenous students from enrolling.

Distance learning offers new possibilities to Indigenous students and teachers by removing the constraints of their geographical location. Students can access educators around the country, removing the need to leave their homes and communities, along with the possibility of building an educational platform with content by Indigenous educators about their culture and Indigenous ways of knowing. In addition, the internet be a space for Indigenous communities to create educational content that fits their

morals and control by having a say on what they want, how its designed, what features they want, how it looks, how it feels and what content it holds. Distance learning in Indigenous communities can also offer an opportunity for rest of Canada to learn about and from *Indigenous culture* and *Indigenous educators.*

However, the research process must maintain these values by giving them control over the direction of the final design instead of leading them to a path that I think would be best for them. In the past, a lack of success of distance learning services in Indigenous communities was due to their distinct learning styles, lack of comfort with utilizing the technology and a lack of motivation due to design that did not consider their needs. Regardless, the pandemic has made people more comfortable working and studying online, offering an opportunity to create a service they would open to distance learning.

Every student and community has different values, qualities and stories that must be represented and included in the learning experience. Therefore, it is crucial to recognize and incorporate individuality and cultural context into the distance learning experience. (McMullen & Rohrbach, 2003, p. 11)

1.2 Role of Design in Distance Education:

All institutions in Canada, from education, healthcare, business or entertainment, design experiences with a western cultural context in mind, which can often alienate people who do not have the same context. Example: If a student from Canada studies in an Indian education system like the Central Board of Secondary Education (CBSE). They will face a massive disadvantage compared to an Indian student due to their lack of understanding of the language, culture, tradition, history, learning style, and differences in education delivery. Despite both the Indian and Canadian being students of an equivalent educational level, the Indian education system is not designed for a Canadian student, making the experience far more challenging for the Canadian.

The lack of a culturally appropriate customized experience leaves Indigenous students at a disadvantage every day. While distance learning can be a powerful tool for Indigenous people, it is essential to acknowledge that most popular distance learning services today are designed for a western audience. These services would include Google Classroom, Class Dojo, Moodle, Canva etc. The pandemic showed us how a large collective of people could adopt distance learning services despite the difficulties they faced in the transition. As a result, more students and teachers have adapted to these new services, which has become acceptable today. However, the existing services have a Western contextual framework, and it is crucial to acknowledge that *one size cannot fit all.* Each school in different regions should be responsive to its students' requirements and contexts. Hence, to create a distance learning service sustainable for the Indigenous people, we must design a customized experience for the needs of their people. For this to happen, we must understand the people we are creating, narrowing the audience further and avoiding the assumption that all Indigenous people are the same and want the same thing. Therefore, this thesis will focus on designing a solution for a specific Indigenous community.

1.3 Research Statement

According to Lindberg (2003), western institutions have an unspoken belief that Indigenous students do not learn well in distance learning models. Indigenous students prefer a more hands-on experience in the classroom than non-Indigenous students. The stereotype of Indigenous people not performing well except in an active classroom is partly created from the assumption that Indigenous students cannot adapt to technology, perpetuating the false notion that Indigenous cultures are frozen in the past. Many distance learning services proposed to Indigenous communities have failed in the past due to the education curriculum or the delivery *(technology).*

People often fail to identify how Indigenous learners are evaluated by the measuring stick of culturally insensitive non-Indigenous standards. At the same time, there may be

some truth to the notion that Indigenous learners prefer experiential activities over a more structured experience. However, western institutions failed to recognize that distance learning can adapt to the needs and provide a more interactive and experiential experience that benefits Indigenous students. *This research study aims to design the delivery of a culturally appropriate distance learning prototype for the needs and requirements of Tłı̨chǫ students of the Northwest Territories.*

The Tłı̨chǫ is a First Nation based in the Northwest Territories. The Tłı̨chǫ region is comprised of four districts: *Behchokò, Gamètì, Wekweètì, and Whatì* ("Tłı̨chǫ", n.d.). The thesis aims to construct a distance learning prototype for a singular Indigenous community allowing for a more immersed solution that considers their needs, requirements and environment. A distance learning platform will offer students access to education from educators around the country to enhance their skills and support growth in their careers. At the same time, it provides a digital space for Tłı̨chǫ educators and elders to share their stories and knowledge.

"Traditional stories are the roots of their culture and identities - planted and nurtured so, as long as the sun rises and the river flows." (Scott, 2015)

A culturally appropriate distance learning platform can serve as a space to share and conserve stories and culture for future generations of Tłı̨chǫ. It aligns with a famous saying in the Tłı̨chǫ by Chief Jimmy Bruneau (1936), *"Be Strong like two people."* It means one should be open to contemporary society while retaining traditional knowledge and culture. In practicality, we must attempt to combine traditional knowledge and Indigenous ways of knowing with modern technology to design a platform that will benefit future generations of Tłı̨chǫ students. The primary challenge in achieving this includes understanding the needs of the Tłı̨chǫ people. In addition, we must create a research environment that is comfortable for the Tłı̨chǫ representatives by offering them control and agency throughout the design process.

1.4 Limitations

It is important to acknowledge that the development of a distance learning platform includes several essential sections, such as *curriculum development, instructional design, front and back-end development, data management, user interface and user experience design*. However, this research purely focuses on the delivery of a distance learning prototype based on the needs of the Tłı̨chǫ people. Numerous distance learning models exist with various features designed for people in different circumstances. Therefore, this research will start by narrowing a single distance learning model and developing numerous low and medium-fidelity screens into high-fidelity mock-ups that will showcase a user interface and user experience suitable for the needs of the Tłı̨chǫ.

1.5 Objectives:

The objective of this thesis is to build and document the development of a culturally appropriate distance learning prototype (delivery) through a series of user testing sessions in collaboration with Tłı̨chǫ Government representatives to create a suitable prototype based on their needs.

1.6 Research Methods and Analysis

Secondary research was conducted on distance learning, Tłı̨chǫ history, Tłı̨chǫ students, ethics on Indigenous research, user interface design, human-centered design (HCI) and instructional design. Additionally, the literature review documents several case studies on various distance learning models used worldwide. This study will also discuss the importance of relationship building to establish trust with the Indigenous people (Tłı̨chǫ). Finally, I had to modify and adjust the current conventional research methods to work with the Indigenous values ethically and adapt our design process to apply their inputs throughout the development of the prototype.

The qualitative research involves a series of three user testing sessions conducted

remotely with four Tłįchǫ Government representatives during the design process. The process was divided into three sections, with the participants consulted before and after each phase. This research method includes an iterative design process which offered the Tłįchǫ Government representatives control over the direction of the design. The purpose of employing this process was to deliver the participants the agency to make their choices and provide feedback throughout the design process. Hence, this prevents assumptions about what they want or need, as they tell me their problems and decide the project's direction as a client. During the user testing session, I avoided using technical terms and created visuals to clearly communicate the various details of distance learning. Additionally, it was crucial to develop a research environment that made the Tłįchǫ participants feel safe to provide criticism and offer suggestions to feel in control of the direction of the final design. Therefore, research methods that made them feel disconnected from the design process were avoided.

The User testing sessions were divided into the following:

a. **Design Phase 1** (User Testing Session: Distance Learning Models): I created five fictional user personas for different target audiences with distinct needs. Based on the personas and their necessities, I developed and presented four distance learning models; each solved various concerns and was suitable for separate audiences. The participants were offered the *pros and cons* of each approach in detail and agreed with which distance learning model they preferred. Additionally, they provided feedback and suggestions they would like to have executed.

b. **Design Phase 2** (User Testing Session: Medium-Fidelity Prototype): The selected distance learning model was developed into low-fidelity and mid-fidelity mock-ups. The purpose of this user testing was to test the *layout, navigation and features* added to the website. The participants had the opportunity to interact and offer feedback on numerous screens and features presented. Additionally, five high-

fidelity mock-ups were created to test possible colour palettes and typography for the final user testing session.

c. **Design Phase 3** (User Testing Session: High-Fidelity Prototype)**:** Feedback, suggestions and insights collected from the testing are implemented to create a series of high-fidelity prototypes. This phase of the design process finalizes the identity design and user experience. The final testing aimed to gain their insights and inputs on the platform's user interface and user experience. It was essential for the participants to connect with the visuals and symbolism used throughout the interface. I also discuss the future of the platform and design improvements that will need to be made.

Every user testing session is recorded, and its audio is transcribed. After every session, suggestions and feedback are considered and implemented in the distance learning prototype development. Design is an iterative process, and feedback is a crucial element in the constant refinement of the final design prototype.

1.7 Overview:

This thesis contains three sections following this introduction (Section 1). *Section 2 (Literature Review)* contains this thesis's existing literature on various subjects. The literature review conducts secondary research by gathering and analyzing information on multiple topics and issues, offering a broad overview of different subjects. *Section 3 (Design Outcome)* establishes, documents and showcases the entire iterative design process, which involves creating design personas, three user testing sessions, data analysis, wireframes, sitemaps, and low/medium and high fidelity prototypes. The documentation provides background information on various screens and explains the reasons for different design decisions. The design process follows a human-centered approach detailed in the *Literature* review *(Section 2).* Finally *Section 4 (Conclusions)* summarizes the research, expands on the limitations and provides future recommendations for further development of this study.

2. Literature Review

Introduction: This section conducts secondary research by researching existing literature on several subjects such as; *The Tłįchǫ region of Northwest Territories, Indigenous research practices, human-centered design approach, user interface design, culture-based user interface, instructional design and case studies of existing distance learning model*s in *remote areas*. A primary bulk of the information gathered is from peer-reviewed articles and published books. Certain sections have information taken from websites due to a lack of current peer-reviewed information due to the remote nature of the distance learning platforms in the case studies and the Tłįchǫ.

2.1. The Tłįchǫ Region

The Tłįchǫ is a First Nation Indigenous people of the *Athapaskan-speaking* family from the Northwest Territories in Canada. The Tłįchǫ land *(Figure 1)* exists east of Mackenzie River between the Great Slave Lake and Great Bear Lake in the Northwest Territories (Helm & Andrews, 2020). On August 22, 1921, *Chief Monfwi* represented the Tłįchǫ people to sign *Treaty 11* with Canada. However, many provisions of the treaty were never fulfilled by the government. The Tłįchǫ lobbied and negotiated a comprehensive self-government and land claim with federal and territorial governments by August, 2005. *The Tłįchǫ Land Claims and Self Government Agreement* is the first combined land, resources and self-government agreement in the NWT. The land claim provides the Tłįchǫ ownership of *39,000 square kilometres* of land, which includes subsurface resources with four Tłįchǫ communities (Tłįchǫ, n.d., Andrews, 2011).

The Tłįchǫ people reside in four communities: Behchokò (*formerly Rae-Edzo),* Gamètì *(formerly Rae Lakes)*, Wekweètì (*formerly Snare Lake),* and Whatì *(formerly Lac La Martre)* (Andrews, 2011). According to the NWT Bureau of Statistics (2022), a population of the *3,027* live within the Tłįchǫ region as of July, 2022.
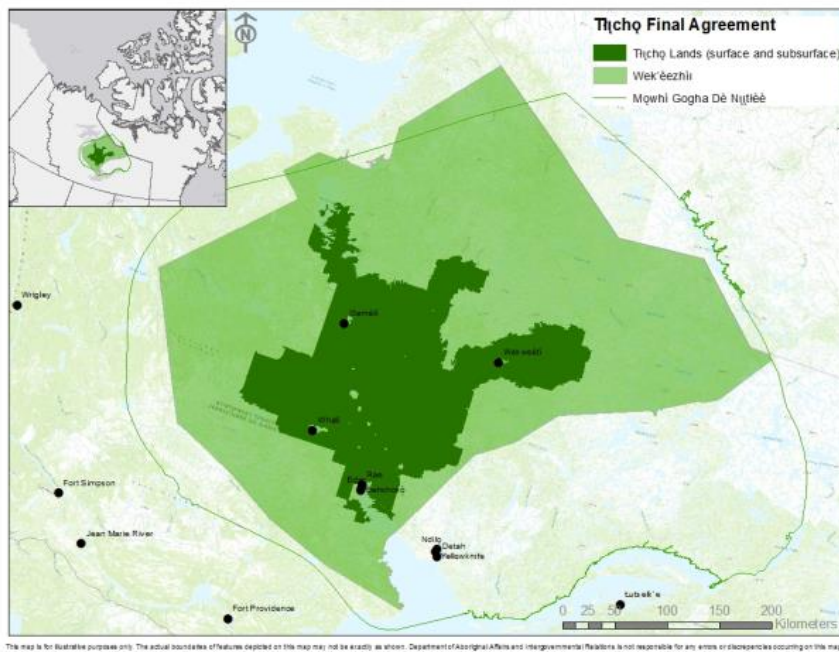
Figure 1: The Tłıchǫ self-governed region of the Northwest Territories. ("Tłıchǫ", n.d.)

Starting, developing and sustaining a creative, collaborative relationship for a community-based research project is not easy (Davison, 2007). I was fortunate to have support from my supervisor, *Prof Gavin Renwick*, who had a collaborative relationship with the Tłıchǫ Dene since 1996, when they first invited him to work with and for them. It is this established relationship with the Tłıchǫ that offered me the opportunity to work on this study with Tłıchǫ Government.

Researching a culturally appropriate distance learning prototype involves more than simply designing a distance learning prototype; it is essential to establish a good working relationship based on trust and respect. Establishing trust involves creating a research environment where Indigenous voices *(Participants from the Tłıchǫ Government)* are given the agency to lead the direction of the study by providing feedback and advising me on what they wanted they wanted me to build and create. The Tłıchǫ were involved throughout the design process, where they decided on the *distance learning model, features, layout, navigation and visuals* of this study while offering consistent feedback and suggestions from the start of the design process.

Design is the focus of this thesis, which involves using visuals, layout and navigation to tell a story. Storytelling is a fundamental Indigenous methodology, and culture plays a vital role within Tłıchǫ. Culture is often depicted and displayed through powerful visuals. This distance learning prototype will feature visuals that help symbolize stories, knowledge and emotion that connect with the Tłıchǫ people. In addition, this platform will help preserve and share Indigenous knowledge and their ways of knowing with future generations.

2.1.1. Tłıchǫ Student Engagement

Creating a flourishing educational platform requires an engaging learning environment for students. Davison (2007) conducted a study of school engagement among Tłıchǫ students from the *Chief Jimmy Bruneau School* in *Behchokò*. The purpose of the research was to understand the contextual factors that influence the educational behaviours of students in the north. The primary insight from her experience was the importance and value of school-based education, expressed in her conversations with students and evident in the educational patterns observed. Achieving high school diploma opened many doors, while college and university education was considered as a higher achievement that was valued. An elder supported this observation and noted that getting an education meant they could do everything, which was a common belief (Davison, 2007). Education has been a focus of the *Dene Nation* since its establishment in 1968 (Legat, 2012).

Davison identifies the following factors that affected Tłıchǫ student engagement:

a. **Employment opportunities post education:** Student motivation was strongly linked to their desire to find a job or pursue post-secondary education for better employment prospects (Davison, 2007). The focus and importance of employment as the primary purpose in student engagement *guides us to*

prioritize offering credential qualification as a primary feature for the distance learning platform. Students may not engage with the platform without the possibility of gaining certification. Additionally, providing credential qualifications would require good evaluation capabilities.

b. **Providing appropriate resources for students:** First Nation students have limited access to resources and an *educational funding gap of 30% in comparison to other schools* across Canada (Dart, n.d.). This scarcity affects all Indigenous students; however, it is also essential to acknowledge the mismanagement of resources. According to Davison (2007), students with few stressors require limited resources, while students with more stressors require more resources in the form of support systems that are well-aligned to meet their needs. Unfortunately, students often do not receive the appropriate support to meet their specific needs, which affects their engagement in the class. Possible resources that can support students include; Counselling services, alternative education options, and support from parents for students struggling in their academics. "*It is difficult to support a minority group of students, particularly those with behavioural issues, without putting the needs of the majority at risk.*" (Davison, 2007).

We must consider including various resources such as; *counselling for psychology, counselling for career, support staff for academic support, IT staff for technical support etc*. The following services can help support and promote positive student engagement. The resources provided must be based on the needs of the students using the platform.

c. **Geographical location:** Some students struggled to travel to the school's location, disrupting their engagement within the class. Some areas lacked suitable public transport, while other students faced difficulties getting to the

bus on time. Additionally, the bus system would sometimes arrive late, delaying and limiting student participation (Davison, 2007). Most distance learning models eliminate this challenge by not requiring students to travel or be present at a particular geographical location. Removing the hassle of transport gives students more time to be prepared for their classes and reduces the stress of being late, which should improve student engagement.

d. **Language barriers:** Davison (2007), states that *English* was the primary language for the *Chief Jimmy Bruneau School*, despite *"Dogrib"* being the traditional language of the Tłįchǫ people. There was a lack of Tłįchǫ teachers at school, which offered challenges for students who were not comfortable speaking English. Language barriers is a critical factor that can affect student engagement, as they may feel more detached and less confident. The following problem identified tells us that we must consider creating a bilingual distance learning platform. It is essential we create an accessible digital space for students or elders who may prefer to learn in their language of comfort. A culturally appropriate distance learning platform needs to promote and embrace the culture and language of Tłįchǫ people.

The factors that affect student engagement presented above are based on a study of student participation in 2007. The environment, behaviours and attention of students and classrooms have likely changed. However, it is also helpful to study the past and resolve the factors identified above to foster student engagement.

2.1.2. Tłįchǫ Education Transition during the Pandemic

The pandemic forced a massive shift by moving in-person education online. Distance learning services are far more acceptable, prevalent and accessible to students today. This section gathers and examines data relating to the changes

and adjustments made by the Tłįchǫ and NWT to continue educating their students through the pandemic.

As detailed by McBride (2020), schools in NWT were closed on *March 25th, 2020* as a safety measure against the pandemic and a transition to educating students remotely began on *April 14th, 2020*. Within the Tłįchǫ region, around half of the families were connected to online education, while the other half were learning through paper-based assignments. The following steps were taken to transition students to study online.

1) The Tłįchǫ high school students studying online used the popular *Moodle program* to connect to their classes (McBride, 2020). *Moddle* is a widely used open-source learning platform that offers communities *offline capabilities,* which are valuable in communities with limited access to the internet (Moddle, n.d.).

2) According to McBride (2020), The Tłįchǫ Community Services Agency (TCSA) supported students by offering supportive technologies such as; WiFi hotspots to download courses to study offline, USB sticks with course access and borrow laptops. Additionally, students were offered Turbo sticks with access to internet services. (TCSA, 2021).

3) The COVID-19 pandemic increased stress, anxiety and isolation for all students. The Tłįchǫ schools supported students by providing mental health and wellness support (TCSA, 2021).

The following observations show that most Tłįchǫ citizens have access to the internet, or can be provided access by Turbo sticks. Internet-dependent distance learning platforms have more capabilities in comparison to platforms that do not

rely on the internet. However, different distance learning models require varying levels of bandwidth which we do not know. We also do not know the preferences, behaviours and needs of the Tłı̨chǫ students. The gaps of data mentioned will be asked and discussed during the user testing sessions.

2.1.3. Indigenous Knowledge and Research

Indigenous knowledge is often dismissed and understood as a binary opposition to *"scientific"* or *"western"* knowledge, even though Indigenous knowledge has always existed (Battiste, 2005). Eurocentric perspectives have conventionally depended on blind reliance on a systematic process and a static method to identify an objective truth. Participant contributions are often undervalued instead, with a preference to follow rules that guide a researcher's process while being detached from the population (Snow et al., 2016). Indigenous people have their methods for passing down knowledge and information to their future generations, which improves and evolves with time (Battiste, 2005). Indigenous knowledge is holistic, which is harder to define for western scholars since it does not follow a fixed set of rules or parameters.

Cognitive imperialism is a form of manipulation that has led cultural minorities to believe their poverty and impotence are due to their race. This belief has been empowered through public education, which has denied indigenous people their language and cultural integrity (Battiste, 2005). True decolonization requires acknowledgement that the long-standing education policies in Canada were designed to deprive students of their cultural identities (Mackay et al., 2013).

"Indigenous knowledge is an adaptable, dynamic system based on skills, abilities, and problem-solving techniques that change over time depending on environmental conditions, making the taxonomic approach difficult to justify or verify" (Battiste, 2005).

Indigenous research involves looking inwards to investigate how we are made of cultural identities as researchers and individuals. It is essential to be aware and humble to the role of *culture, privilege, oppression and colonization*. Unfortunately, research is often synonymous with power and control over what ideas or findings matter and from whose perspective (Snow et al., 2016). During this research, I wanted to create a research environment that gave Indigenous voices the agency to control what they wanted me to make. Giving agency would require me to give up my control by being willing to listen and observe what they wanted; while being flexible throughout the process. Indigenous voices were consulted on critical design decisions instead of assuming what was best for their interest. Encouraging Indigenous participation requires establishing a relationship based on *trust and respect* (Snow et al., 2016)*.*

"Our intentionality and relationships with our communities will determine all aspects of the research we undertake" (Weber, 1999).

2.2. Distance Learning

Distance learning has existed since the 1700s (Harting & Erthal 2005, p.35), throughout which it has been delivered through newspapers, radio, television, mobile and now primarily the internet. Each of these different mediums were used due to an evolution of technology with pros and cons on each approach. This section aims to show the wide variety of possibilities while narrowing our focus through every subsection. We must deconstruct distance learning from how we currently see it today, to how its evolved through its time. This is crucial because we must avoid basing our designs into how distance learning is seen today before understanding its history and the different possibilities that may give us references, inspirations and ideas for how we may best customize the distance learning experience for the Tłı̨chǫ people. A common challenge

most researchers face while enquiring about distance learning is the inconsistencies and misrepresentation of its term and understanding. Without a clarity on what distance learning encapsulates, we cannot begin this research.

Section 2.2.1 defines different terms available for the numerous learning environments by studying relevant research to segregate each and identify how they overlap. Understanding what distance learning is and isn't helps avoid making assumptions during the analysis. *Next,* ***Section 2.2.2*** examines the literature on the history and evolution of distance learning. Understanding history broadens the perspective on what is possible when we look at the scale and growth of distance learning throughout the last two centuries. Finally, ***Section 2.2.3*** explores the literature on three popular distance learning methodologies encompassing most distance learning models. Each type has its strength and weakness, applicable in different situations.

The following research questions will be discussed in this section:
1. Difference between the eLearning, online learning and distance learning
2. Which learning environment would work best for the Tłı̨chǫ people?
3. What can we learn from analyzing the evolution of distance learning?

2.2.1. What is Distance Education?

The rise in digital technology has brought a plethora of different terms and abbreviations which fall under the broad definition of distance education such as, online learning, *blended learning, e-learning), computer-aided instruction (CAI), computer supported instruction (CSI), technology-enhanced learning (TEL), Internet-based training (IBT), remote learning, virtual learning environments,* etc (Siemens et al, 2015). Their meaning can often mix with one another, but a few of them may have a completely distinct learning management system (LMS) and purpose for their existence. It is crucial for us to clearly understand what

"distance learning" entails, and what are the primary differences between some of the most popular terms.

According to a 2010 study conducted by Moore, Deane and Galyen, a common issue faced by many researchers is tendency to confuse and interchange the numerous terms available for different learning environments, which have their own characteristics (Moore et al, 2010). A clear understanding is crucial to be able to create a curriculum or design an appropriate prototype for a delivery platform. I will be focusing our discussion on the differences between distance learning, E-learning and online learning for the purpose of this thesis.

Distance Education: *Distance education* is a practise of providing education to students who are geographically distant from the instructor. Distance education offers education to students who cannot and do not want to take part in a classroom teaching (Holmberg, 1995). Students can access education at their own time, their own place and without face-to-face contact with the educator. Distance learning covers instruction through a variety of mediums from printed newspapers, postal services and more recently the internet. Distance Learning is an umbrella term covering terms such as *correspondence education, correspondence study and remote education*. Distance Learning in comparison to the other forms of learning offers covers a larger spectrum of possibilities, while being more flexibility in how it could be conducted. (Moore et al., 2010)

E-Learning: The term *e-Learning* is said to originate during the 1980's within a similar time frame of online learning. Unlike distance learning, there has been a lot more contention of what e-Learning is, with different people defining the term differently with conflicting views. E-Learning is defined by most to be instruction strictly accessible through technology involving either CD-ROMs or web distributed. (Moore et al., 2010) An e-Learning course or program is

conducted entirely with technology which may or may not be a part of an in person class.

Online Learning: The term *online learning* is described by most researchers as a learning environment that is conducted partially or entirely over the Internet. This definition excludes purely print-based education, broadcast television, radio, video cassettes or a stand-alone educational software programs that do not have a significant Internet-based instruction. The rise in digital platforms and the internet has increased the use of online learning elements in education.

Difference between the eLearning, online learning and distance learning

Online learning and e-learning are primarily dependent on being delivered through technology, while LMS for distance learning services aren't limited in its method of providing education. Distance learning may include elements of eLearning and online learning by taking place on web, but it doesn't have to be conducted online. The defining feature of distance Learning is the geographical distance between the teacher and the student which isn't as prevalent for either eLearning or Online learning. Online Learning maybe a part of a larger in-person class while eLearning involves a course or programme being conducted through *technology (CD or web-based)* which may or may not be a part of an in person class. Due to the narrow differences between the three, there is a lot of overlap between all these definitions which is why they are often interchanged.

Which learning environment would work best for the Tłı̨chǫ?

The main purpose of this research study is to provide a culturally appropriate quality education to the Tłı̨chǫ community, with its geographical isolation being a primary factor creating a distance between the students and the teacher. Hence, distance learning is a more appropriate medium of education for the Tłı̨chǫ, since the distance between the instructor and student is a primary factor.

The distance Learning platform created, may include elements from online learning or e-learning, but it shouldn't be restricted to their constraints.

2.2.2. Evolution of Distance Learning

Distance Learning is practised in most parts of the world to provide opportunity for those who cannot -or do not want to-take part in classroom teaching (Holmberg, 1995). More recently, the distance created during the COVID-19 pandemic have brought a rise in distance learning in schools and universities worldwide. According to The United Nations Educational, Scientific and Cultural Organization (UNESCO, 2020), in 2020, the education system found over *1.37 billion children* out of their classroom globally and nearly *60.2 million teachers* out of the classroom. The rise of the internet and digital media have escalated the growth of distance learning, but it has existed long before the internet.

The concept of distance learning first existed as a correspondence education in the 1700s (Harting & Erthal 2005, p.35). Distance learning has now evolved into primarily an electronic form of delivering education to learners from a distance. Understanding and learning the history of distance learning is crucial to better understanding the medium. Effective distance learning requires working around the needs, requirements and constraints of its learners and teachers. Technology has impacted and influenced distance learning and how its conducted, as its provided opportunities for further interaction between teacher and students.

Harting and Erthal (2005) highlights reliable postal services as a contributor to the rise of correspondence education since they enabled teachers to offer lessons and students the opportunity to respond to them. By 1920s, some schools used radio for adult education accompanying them with reading lists and notes. According to Robinson's 1982 investigation (as cited in Bates, 2015, p.229), the first adult education radio broadcast was operated by the *British*

Broadcasting Corporation (BBC) in 1924. The discussion was on *"Insects in Relation to Man,"* and the same year, J.C. Stobart, the new Director of Education at the BBC, mused about *'a broadcasting university'* in the journal Radio Times."

In 1969, Open University (OU) was established by the British Government which was a distance teaching open to all, created using a combination of customised *printed text books, broadcast television and radio* (Bates, 2015, p.229). By 1970s, students had access to a variety of different mediums in the space of distance learning, such as *textbooks, television, radio programmes, video tapes and computer software's* (Harting & Ethal ,2005). *Television* became a prominent medium to provide education, which quickly spread around the world, but it had some limitations. Developing countries lacked electricity and couldn't afford the cost of offering televisions to the masses.

Technology is a powerful instrument in building interactive experiences which weren't possible in the past, but just because these services exist doesn't mean they always must be used. Example: Despite the invention of telephones dating back to the late 1870s, the standard telephone system never became a major educational tool in distance learning due to the high cost of conference calls. Telephones offered far more interaction than other technologies, but it wasn't scalable or sustainable in the past. Similar to telephones, despite the benefits televisions offered, it wasn't able to be as scalable and telephones or audio calls were more relevant as a medium to provide education in 1980s. (Bates, 2015)

One of the first locally customised distance learning applications was seen in India, when they launched their own satellite, INSAT in 1983. This satellite initially offered educational content in several Indian Indigenous languages using Indian-designed receivers and television sets in local community centers and

schools. India still uses satellites to provide tele-education to their poorest parts of the country. (Bates, 2015, p.230).

The 1990s saw a massive reduction in the cost of creating and distributing video, due to digital compression and high-speed internet access. This reduction in the cost of recording video, led to the development of lecture capture system, which allowed students to have access to review their lectures at any time and place with an Internet connection. This led to Massachusetts Institute of technology (MIT) to start making recorded lecturers available to the public. YouTube started in 2005, were increasingly used as a medium to provide short educational clips. The invention of mobile phones, larger access to the internet and the development of technology has evolved distance learning into being more accessible to a much larger audience (Bates, 2015).

What can we learn from analyzing the evolution of Distance learning?

Distance learning has adapted and evolved tremendously with the advancement in technology. Throughout its existence, distance learning has always brought great value to people and time has only helped improve the experience of its delivery. Despite the advancement, it is crucial that we must learn from the past which shows that distribution of technology is often unequal. People living in remote communities are often left behind and we must remember that we can always provide customised, independent educational solutions based on the needs and requirements of the people.

Distance learning is not limited to a particular form of delivery or model. We must stray away from the temptation of replicating and recreating a popular existing model and explore concepts that may differ from what is normal. The path that will be taken should and will be directed by the Tłı̨chǫ people.

2.2.3. Distance Learning Methodologies

Distance learning has a variety of different approaches and philosophies, each of which can offer a unique educational experience to students. Some of the primary methodologies of distance learning include:

Asynchronous Learning: *Asynchronous learning* is often a self-paced approach to education in which students learn independently from other students or teachers. The exchange of information and ideas often occurs through pre-recorded lectures, online discussion boards, web-based content, or self-directed online activities on a learning platform. An asynchronous learning environment offers students far more flexibility with their schedules by not requiring them to depend on educators or other students for their education. (Stuart et al., 2022)

Synchronous Learning: *Synchronous learning* involves exchanging information and ideas simultaneously with one or more participants. In the case of distance learning, synchronous learning often occurs through real-time online lectures, webinars, video conferences and online lectures, which include real-time interaction between the teacher and numerous students. Synchronous learning environments help facilitate efficient education by providing students and teachers with various ways of communicating and collaborating in real-time, allowing students to ask questions and flexibility in communicating information. (Stuart et al., 2022; Ogbonna et al., 2019)

Hybrid Learning: Hybrid learning differ from the terms stated above, combining study elements from an in-person classroom and online learning. As instructors become more familiar with online learning and learning management systems (LMS), they gradually introduce online study elements into their classroom teaching. Such as presenting lectures in the form of slides or PDFs, links to online readings and online forums for discussions. Some instructors have recently

followed a *"flipped classroom"* model, which involves recording their in-person lectures. The flipped classroom model allows students to access the study material on their own time, using the classroom as a more interactive session for collaborations and problem-solving (Bates, 2015, p.38).

Each of these models has its own place and offers an entirely different learning environment for students. A synchronous learning environment can offer a far better experience to learners allowing them to communicate with the instructor and other students in real-time. However, synchronous learning also requires far better internet due to the need for higher bandwidth, time restrictions for students, and a higher cost. In comparison, an asynchronous learning environment offers students the flexibility to study on their own time and pace at a lower cost. Each learning environment is beneficial for diverse circumstances and has limitations. While blended and hybrid approaches may not be applicable in this thesis due to a lack of in-person interaction. Understanding the concept is helpful because we can carry components and ideas from hybrid learning by possibly combining elements from synchronous and asynchronous learning.

2.2.4. Conclusion

Today the internet is far more accessible. According to Statista Research Department (Statista, 2022), *5 billion people* around the world use the internet, which is equivalent to *63%* of the total population as of April, 2022 . The internet offers users access to audio and video conferencing to connect people around the world. It is for this reason that most distance learning services provide education to its students through the internet, since it provides interactive experiences. Students are no longer are forced to rely on books and pre-made study material to consume by themselves, but the introduction of video and audio conferencing has made distance learning more collaborative. However, it is important to note that around *3 billion people* do not have access to the internet

and we must avoid excluding people because of it. We must learn from our past, which shows that distribution to technology is unequal. The people that get left behind are often remote communities and we must provide customised, independent educational experiences for their needs.

2.3. Design

All the artificial things and experiences we go through are designed for us by humans. Everything ranging from clothes, furniture, books, houses, appliances, and technology are experiences created by people for people. Each product or service was created for a specific function offering different experiences for different people. As a designer, it is essential to observe and consider the quality of the entire experience you make for the users of your creation (Norman, 2013).

Design is a broad term covering a large variety of products and services. For this thesis, we focus primarily on *human-centered design* (HCD), *user interface design and instructional design*. People tend to assume that design focuses entirely on aesthetics, but I firmly believe that good design is concerned with creating meaningful experiences that can help and support people. Problem-solving is a critical part of the design process, starting with understanding the problem. This thesis presents a unique design problem: *we do not entirely understand the difficulties Tłįchǫ people face or what they want*. I understood the value of a distance learning platform, but required further exploration before I began the design process. First, I needed to identify a distance learning model that was appropriate for Tłįchǫ people by gaining further insight into their functional needs and limitations. Secondly, I had to identify the best visual approach that authentically represents the Tłįchǫ people and a simple user experience.

2.3.1. Human-Centered Design (HCD)

According to Norman (2013), good design starts with understanding the psychology of people and technology. The two problems identified above

require a *human-centered design* (HCD) philosophy that prioritizes a human's needs, capabilities and behaviour first, then creates designs to accommodate those factors. This understanding is gained primarily through *observations* since people are often unaware of their needs and difficulties. Specifying and defining a problem is often one of the most challenging parts of the design process.
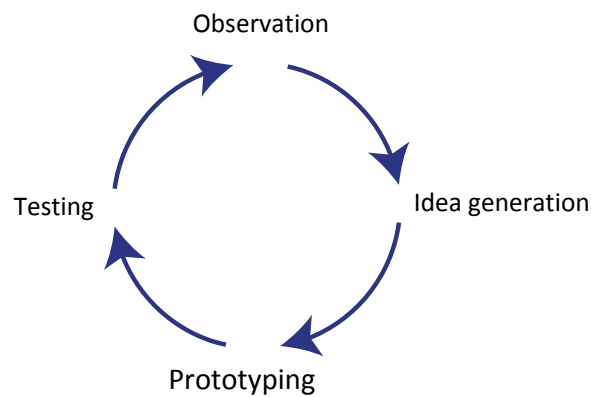
Figure 2: Human-centered design process

HCD uniquely avoids narrowing the pain points for as long as possible but instead iterating upon *repeated approximations.* This design process is only successful through the rapid testing of ideas and building upon the feedback of each test to constantly modify and improve a solution. Problems are discovered and narrowed through repeated trials, producing products and services that genuinely meet the needs of the people (Norman, 2013, p.8-9). HCD depends on the idea that the people you are designing for are the roadmap to innovative solutions. You must consistently empathize, understand and bring people into the design process (IDEO, 2015, p.22).

HCD is an important tool for social innovation. Its process involves *observation, idea generation, prototyping, and testing* in a constant cycle (Norman, 2013). We start the design process by observing various concepts and people, generating ideas based on observations collected, creating quick prototypes out of those ideas and testing prototypes created to gain feedback, which helps

constantly improve the design. HCD works perfectly for this thesis where we do not entirely understand or clearly know our audience and their needs. Bringing participants from the Tłı̨chǫ within this process allows us to constantly test our designs and lead the solution to place that works for them.

2.3.2. User Interface Design for Education

Designing the user interface (UI) for a platform is vital in creating an effective teaching and learning environment. The UI focuses on developing the front-end of the website, which includes all the visuals and interactive elements of a website, such as; images, buttons, colours, navigation, patterns, icons or footer. UI design involves building an aesthetically pleasing, functional and interactive interface for the needs and requirements of users (Kreimer, 2021).

Understanding the needs and behaviours of students is vital in creating interfaces that offer seamless experiences for students. Effective communication is crucial in creating designs requiring limited learning from students, so they can focus their time on understanding the content being taught rather than learning how the website works (Kamaruddin & Sulaiman, 2016). Effective design is invisible, requiring limited time spent by students to find the functions they want. Therefore, trying to make the visual experience seem instinctual is essential, which involves making the designs as straightforward and obvious as possible.

The development of UI for this thesis had two objectives. Firstly, the UI needed to be simple and functional in communication, which involves creating an effective navigation, layout, visual contrast and readability throughout the interface. Secondly, the UI required visual components to connect with the Tłı̨chǫ people. The interface should give a sense of belonging to students by using visual cues that relate to their culture, upbringing and environment.

Creating this link and connection through symbolism is only possible with the support of feedback and guidance from Tłįchǫ community representatives.

Researchers have analyzed, narrowed and combined international scholars' most frequently established principles by outlining five basic design principles for effective UI design. (Kamaruddin & Sulaiman, 2016).

1) **Consistency within interface design:** Consistency is an essential principle, within all the design elements *(typeface, font size, layouts, icons, colour palette or navigation)* and the language throughout the interface (Kamaruddin and Sulaiman, 2016). Establishing consistency throughout all the interfaces within a platform help create unity, while making the platform more intuitive for users. Consistency reduces the learning required by students, making the platform more accessible to navigate since the functions and design elements are consistent.

   "Jakob's Law states that people spend most of their time using digital products other than yours. Users' experiences with other products set their expectations. Failing to maintain consistency may increase the users' cognitive load by forcing them to learn something new." (Nielsen, 2020)

2) **Hierarchy of information in interface design:** Hierarchy aims to highlight important information by creating consistent variations for different levels of information throughout a platform. Visual hierarchy emphasizes content through *placement, scale, colour, contrast and grouping* of design elements. Information needs to differentiated with one another by visual hierarchy using different type styles *(regular, bold, italics)* or scale *(Important information should be more prominent).* Effectively structured hierarchy

improves the *readability and legibility of information* (Kamaruddin and Sulaiman, 2016; Gordon, 2021).

3) **Contrast within interface design:** Creating visual contrast is crucial for improving *the legibility and readability* of an interface. The contrast of colours between the text and the background is essential for good *visibility and readability.* Colour, callouts and titles are powerful tools in directing attention to important information. Lastly, creating effective contrast is a fundamental principle that improves the user experience, communication and accessibility (Kamaruddin & Sulaiman, 2016; Moran, 2022).

"When visual design elements appear clearly different (for example, have contrasting colors) users are able to easily deduce that the contrasting item is different or special in some way. So if it actually is different, this enhances usability" (Gordon, 2021).

4) **Balance within interface design:** Creating balance within a layout of an interface through symmetry and alignment can help support a positive user experience. Using grids during the design process can help support the creation of balance by keeping all the design elements aligned and effective. In addition, a balanced layout can help reduce confusion and cognitive redundancy by minimizing clutter (Kamaruddin & Sulaiman, 2016).

5) **Harmony in interface design:** The fifth and final principle includes the creation of harmony between all the various design elements *(text, colours, icons, layout, navigation, logo etc.)* Harmony is essential in creating an aesthetic environment which helps facilitate learning. Furthermore, creating a visual environment that offers users a sense of unity and belonging is vital. Therefore, all design elements need to co-exist with one another to

communicate, motivate and support a similar message among its users. (Kamaruddin & Sulaiman, 2016).

Following these principles will help in creating user interfaces that offer simple and effective learning and teaching environment. These principles help in improving communication and user experience. Communication is critical in delivering an intuitive and empowering experience to users. However, *cultural diversity* influences how *people communicate, understand and interact with information*. Different communication styles are suitable for people from different cultural backgrounds (Xie et al., 2009). Simply following the above principles is not enough; we must include Indigenous voices within the design process to help guide us through the design of the interface. We must reduce clutter and strive for simplicity while always seeking to include visual cues that connect with the Tłı̨chǫ people.

2.3.3. Instructional Design

The development of a distance learning platform has various components, challenges and approaches. Before designing a distance learning platform, we must understand instructional design and follow the most applicable systematic framework to help break the instruction design process into a series of clearly defined steps. *The ADDIE model* is one of the more widely used effective forms of instructional design. This instructional design model offers educators a systematic framework of an iterative design process for educators. The ADDIE model focuses on a learner-centred approach and has been used in developing Master level instructional courses. (Peterson, 2003)

The *ADDIE framework* is a cyclical process that evolves and is built through instructional planning and a rigorous implementation process. The model is divided into five phases *(Analysis, Design, Development, Implementation and*

Evaluation), each of which serves its purpose and function in the progression of the instruction design (Peterson, 2003).
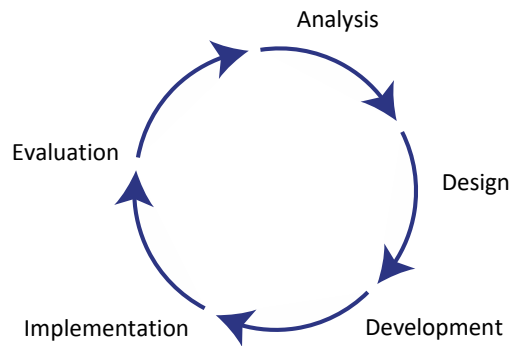
Figure 3: The ADDIE framework

a. **Analysis (Phase 1):** The primary consideration of the analysis phase is the target audience. Before designing any product, we must understand the behaviours and needs of our target audience. The analysis phase helps clarify the instructional goals and establishes the most appropriate learning environment to help achieve their goals (Peterson, 2003).

b. **Design (Phase 2):** The design phase deals with designing a distance learning environment based on the analysis *(Phase 1)* by developing assessment instruments, establishing a structure for the content, logical navigation, design visuals through the creation of user interfaces for the various distinctive features of the website along with providing a cohesive user experience to help students achieve the learning objectives of the curriculum. The design process will further include a series of user testing sessions to help constantly evaluate the distance learning prototype (*InstructionalDesign.Org,* n.d.).

c. **Development (Phase 3):** The development phase involves transforming all the static design prototypes into a functioning website with the help of

developers. Programmers help develop all the technologies required in the backend while testers perform debugging procedures. Further design alterations are conducted in the case of any changes or feedback (*InstructionalDesign.Org,* n.d.).

d. **Implementation Phase (Phase 4):** The implementation phase involves uploading all the educational content, conducting usability testing to evaluate the modules' functionality and fixing all the possible errors within the content, navigation or interface to improve the user experience (Patel et al., 2018).

e. **Evaluation Phase (phase 5):** The evaluation phase involves an in-depth evaluation through qualitative feedback from early platform users (teachers and students). They will provide in-depth feedback on the platform, content, user and learning experience (Patel et al., 2018).

Instruction design involves a deep collaboration between *professionals in the field of design, education and technology*. However, this thesis solely focuses on designing a distance learning prototype, which is why this study only covers *Phase 1 and 2* of the ADDIE model.

This study follows a Human centered design (HCD) approach, to develop a distance learning prototype through a series of iterations. The user interface will follow the principles mentioned above which will constantly be tested by participants in three user testing sessions. The ADDIE framework serves as the framework of this research, which will need to be continued beyond this thesis.

2.4. Case Studies

In this section, we intensely analyze and explore various distance learning platforms designed for remote regions around the globe. The purpose of all these case studies is to understand and learn from the unique and creative solutions distance learning solutions that are designed for a specific community. The best way to learn about the barriers to distance education is to examine, analyze and adopt similar best practices principles, avoiding the temptation to suggest an obvious or common solution that may not work without testing or verifying with the community.

A scoping review of grey literature was conducted for the following case studies to better understand the model and design of the distance learning platforms.

2.4.1. Kolibri

Kolibri is a free distance learning platform recommended by UNESCO for its robust offline teaching functionality ("UNESCO", 2020). It is an open-source educational platform designed to provide offline access to education for a wide range of people through openly licensed educational resources (OER) in low-resource contexts like *rural schools, refugee camps, prisons, orphanages, and non-formal school programs* ("Kolibri User guide", 2022).

Most western countries take the internet for granted, but almost 3 billion people don't have the internet (Statista, 2022). Distance Learning has existed since the 1700s, and we have made enormous technological advancements throughout this time. Kolibri is not prevalent in many western countries since internet access is not limited, however it is widely used in many remote countries with limited resources. During the pandemic, the Uganda Government were forced to close schools due to their high risk in transmitting the disease. In response, selected government secondary schools in Uganda used Kolibri in their teaching to achieve their learning outcomes (Kabugo, 2020).
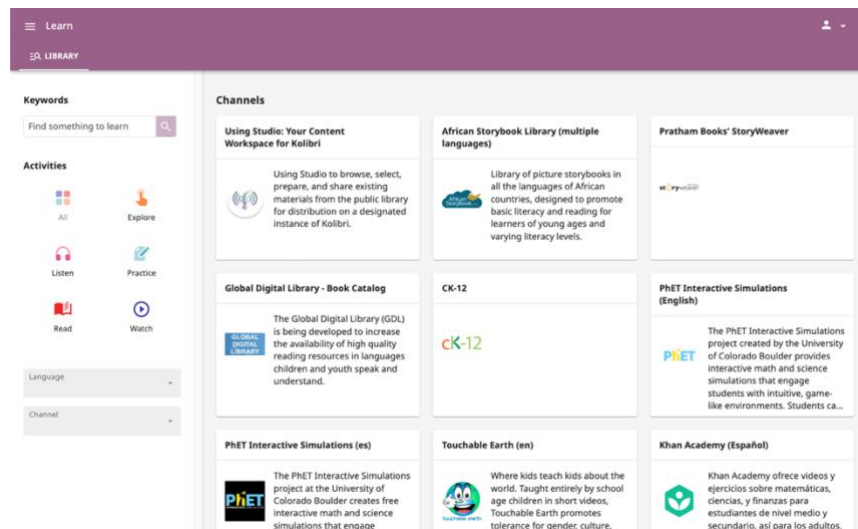
Figure 4: Homescreen, Kolibri ("Kolibri: Demo", n.d.).

Kolibri is used for its educational materials being publicly available through channels, collections of educational resources *(exercises, videos, audio or document files)* and additional study materials, prepared and organized for its users in remote locations around the globe. Through Kolibri studio, instructors can build custom channels and align them with their local curriculum and language (Kolibri offers courses in many languages) ("Kolibri User guide", 2022).
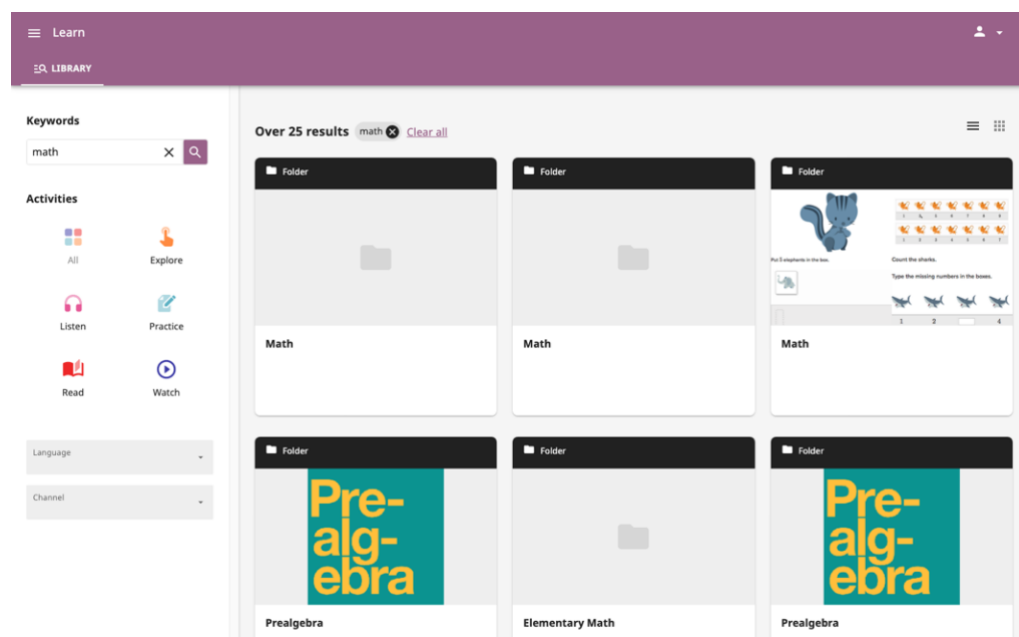
Figure 5: Search interface, Kolibri ("Kolibri: Demo", n.d.).

How it works: Kolibri functions on all devices *(Phone, tablet and desktop).* It enables content to be seeded onto devices in areas with an internet connection and shares it with others over an offline local network. This function allows the platform to work in remote areas with limited internet capabilities while being cost-effective ("Kolibri", n.d.).

Kolibri Demo testing: Kolibri is easy to use and offers a wide range of content through its universal educational content available in channels with a wide range of languages. The platform is easy to use and gives students study material in the form of videos, documents and audio. In addition, Kolibri offers asynchronous education to students who can use this service to self-study. Instructors can create channels, offer content and create practice materials to test and evaluate their students through automated quizzes. While Kolibri does not offer intensive evaluation, such as an exam or a test, it works well for certain subjects like mathematics. Due to its flexibility, Kolibri can also be used in hybrid or blended setting, where teachers can use this service on top of their in-person education ("Kolibri: Demo", n.d.).
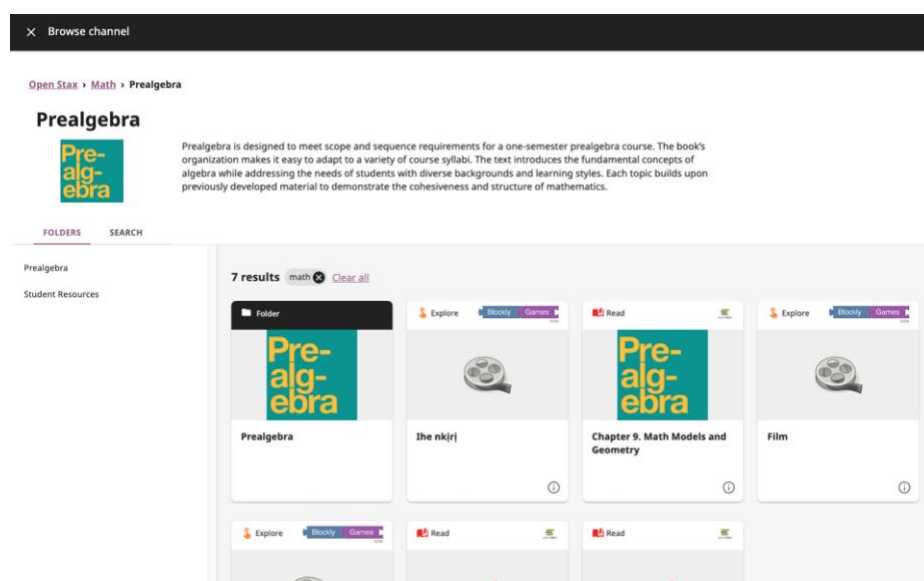
Figure 6: Prealgebra class, Kolibri ("Kolibri: Demo", n.d.).

Design: Kolibri has published a standardized design system which contains their design principles, philosophy, style guide and design assets for designers and developers building Kolibri channels. Their design principles include community ownership, designing consistent experiences and equitable access for effective learning. ("Kolibri-Design System", n.d.). Consistency is an essential factor in the application's colours, icons, patterns and language. Kolibri needed to establish similar experiences throughout the application with limited learning of new features in the website to offer ease of use to the users. All the design elements are minimal, further establishing Kolibri's focus on ease of use.

Takeaway: The ease of use, focus on offline/recorded content, and asynchronous learning allows instructors to support students by creating courses online, offering high scalability in range while being cost-effective. Kolibri is an excellent example of a service that works for areas with low learning resources *(such as inadequate infrastructure, low connectivity and limited support from educators).* The flexible service allows educators to create numerous information channels with customized curriculums in multiple languages for all devices. Teachers can log into the application and create multiple channels by building a robust package of educational material by attaching images, documents, videos and a series of practice tests (*quizzes).* However, lack of live interaction between student and teacher and limited evaluation capabilities reduces the quality and depth of education that can be provided. Kolibri offers asynchronous education since it is designed for offline use. Kolibri provides a format that allows educators to create different curriculums, but doesn't allow for different teaching styles as teachers are unable to have a direct relationship with the student if Kolibri is used as a primary tool of education. Lastly, Kolibri is designed for remote communities in general which works well for a wider audience, but it doesn't always take into accounts the needs for individual communities.

2.4.2. Future Classroom 2.0 and World on Wheels by HP.

This case study offers a unique and creative distance learning model for the needs and requirements of rural India, unlike the previous case study, which showcased the design and features of a distance learning platform.

Figure 7: A shipping container converted to a Future Classroom 2.0 ("HP India Gallery", n.d.)

Future Classroom 2.0: This is a learning environment developed by Hewlett-Packard (HP), which involves creating a classroom designed to be contained in a single 30 feet shipping container. The shipping containers are custom designed to have computers with internet access to operate in remote rural locations with limited or no infrastructure support. The current version of this Classroom offers a completely off-grid solar-powered computing and learning center for students without the restriction of power, internet, Infrastructure or equipment. Additionally, the Classroom comes with 16 H.P. workstations, a printer, appropriate classroom management software, video conferencing and remote training capabilities. Lastly, H.P. Classroom 2.0 offers Digital Literacy training, Entrepreneurship Development training and E-Education for students (K-12) etc. (*The new age classroom for the new generation*, n.d.). HP classroom 2.0 operates only in *India* currently. It facilitates learning by bringing electronic devices and technology capabilities to rural India (*Future Classrooms,* 2016).

Figure 8: Interior of a Future Classroom 2.0 ("HP India Gallery", n.d.).

HP World on Wheels: Similar to Future classroom 2.0 , World on wheels (WoW) is an IT-enabled 20-seat vehicle (bus) equipped with HP technology (hardware and software) designed for efficient learning. Each moving vehicle is equipped with solar panels and battery packs to generate and store power for the lab's daily needs. In addition, the bus offers access to education by having teachers travel to remote locations along with video conferencing capabilities to rural India. This is a creative method of reaching communities that have limited access to education (*HP*, n.d.).

Figure 9: H.P. World on Wheels bus on the road ("HP India Gallery", n.d.).

Figure 10: Interior of a class being conducted inside a bus. ("HP India Gallery", n.d.)

Takeaway:

Future Classroom 2.0 and *World on wheels by HP* offer a unique solution with pre-built classrooms within a shipping container and a moving vehicle with the appropriate technology and power requirements for remote locations with limited Infrastructure. Models such as the above can work exceptionally well in Indigenous communities with limited Infrastructure and internet capabilities while providing high interactivity. Distance learning does not have to be isolating; creating a classroom within the Tłı̨chǫ could get Tłı̨chǫ students to a single location enabling a community learning experience.

Figure 11: KiHS Logo ("Keewaytinook Internet High School", n.d.).

2.4.3. Keewaytinook Internet High School

Keewaytinook Internet High school (KiHS) delivers asynchronous online high school education serving First Nation Indigenous communities in Northern

Ontario. The platform *(KiHS)* began in 1999 at the request of the Northern Chief Tribal Council *(Keewaytinook Okimakanak).* The program was created for young students to receive high school education without needing to leave their communities. KiHS has grown, expanded and evolved with the development of technology and education into currently offering *80+ accredited courses* to students in a variety of fields *(Science, Math, English, Native language, Arts, etc).* The school provides an excellent example for what I am attempting to research and create (Keewaytinook Internet High School – Home, n.d.).

How it works: KIHS educational model includes the delivery of asynchronous education using *Moodle* as its primary LMS. Instructors develop courses for students and post the lessons online, offering activities to students weekly monitored by local teachers. The school uses synchronous technology with video conferencing tools such as; *Elluminate, Adobe Connect* and they provide face-face monitoring by local KiHS teachers. Local Indigenous communities support the program by creating classrooms and accommodations for local teachers. Lastly, the school offers an intensive community learning experience by creating local land based and cultural activities in numerous Indigenous communities (Keewaytinook Internet High School, n.d.).

Takeaway:

KiHS offers an excellent example of a platform serving post-secondary education to Indigenous communities within Canada. The platform was created to provide students with educational opportunities that did not require them to leave their communities. KiHS is an example of a distance learning platform serving the needs of local Indigenous communities. Students are connected to local mentors, inclusion of classrooms, community involvement activities, and workshops help young students form deeper connections and relationships within their communities.

Figure 12: Community learning experience ("Keewaytinook Internet High School", n.d.).

KiHS teaches us the value of working with local Indigenous communities to create a curriculum and a learning experience that brings students closer to their communities. Distance learning does not have to be isolating despite being an asynchronous experience. The platform we create could offer a broader approach to education by providing high-quality education to students through an effective LMS similar to Moodle. Including community involvement activities, workshops and events can help students form deeper connections with their community and people covering the limitations of asynchronous learning.

KiHS's vision statement is *"Weaving Education from Traditional and Technology"* (KiHS – Our Vision Statement, n.d.). This statement matches the popular Tłįchǫ saying by Jimmy Bruneau, *"Strong like two people."* These phrases speak of the value of embracing the benefits of the modern world while holding onto your cultural heritage and traditions .

3. Design Outcome

This section showcases the design process for creating a culturally appropriate distance learning prototype for the needs and requirements of the Tłįchǫ region of the Northwest Territories. As stated in the literature review, we will follow a human-centered design approach involving rapid prototyping and constant feedback. This research aims to include, involve and empower Tłįchǫ by collaborating with the Tłįchǫ Government in building this distance learning prototype. Three user testing sessions will be featured in this study to assist in the development of a distance learning solution for the Tłįchǫ people of the Northwest Territories. The project was proposed to the Tłįchǫ Government, and four participants were assigned to help develop the study based on their occupations and experience. I will document every user testing session's process, purpose, preparation, post-session analysis, and design implementation.

3.1 Design Process:

A human-centered design process consists of an iterative process of observation, idea generation, prototyping and testing. Therefore, the design will be conducted in a constant cycle explained below

1. **Observation:** *Human-centered design (HCD)* philosophy starts with understanding people and their needs through observation. People are often unaware of their own needs and the difficulties they face day to day. Observations are collected through secondary and qualitative research of users. The observation process starts in *Section 2.1 (The Tłįchǫ region)*, upon learning about Tłįchǫ student engagement and their accessibility to internet services. The following steps are conducted to collect further observations.

    a. **Design Personas and Scenarios:** *Creating personas* helps identify possible target audiences that may use this platform. Creating user scenarios for those personas helps identify their needs, frustration, and potential features.

b. **User testing sessions:** Observations of participants will be collected during each user testing session, as well as their feedback post-user testing session.

2. **Ideation:** Ideas and solutions are created based on observations from the literature review, design process and user testing sessions. We will focus on generating many ideas during the ideation phase rather than fixating on the final solution. We must avoid constraining ourselves with limitations during this phase and resist the urge to focus on one solution. This thesis's idea generation phase would include *brainstorming different distance learning models, possible features, and user interface designs.* (Norman, 2013)

3. **Prototyping:** This phase of the design process involves *building potential solutions*. ideation focuses on generating ideas, whereas prototyping focuses on building and developing a vision to test them. During the early stages of the design process, the mock-ups can be rough sketches or wireframes that visually showcase a concept. In this study, we will create mock-ups as a presentation of numerous distance learning models, medium fidelity and high-fidelity mock-ups (Norman, 2013).

4. **Testing:** The only way to know if an idea can work is by testing it with a group of people that are a part of the target audience. This process helps to gain genuine, credible feedback offering opportunities to further improve the product. During the design process, all prototypes were tested with four participants from the Tłı̨chǫ Government. After every user testing session, all the observations were collected and the human-centered design cycle restarts (Norman, 2013).

3.2 Creating User Personas and Scenarios

The observation phase of Human center design starts with an exercise of creating user personas. A user persona is a process of creating descriptions of users whose motivations and characteristics represent the needs of a larger group of users (Faller, 2019). I have created below five personas to understand better the needs, experiences,

and frustrations of various users. In addition, I have offered an analysis of potential distance learning methodologies and features that would help each persona's needs and frustrations. *All the characters below are entirely fictional; they help understand potential users and their motivations.*

a. **Ted**

   Bio:

   Age: 17 years

   Occupation: Student

   Tłįchǫ citizen: Yes

   Education Credential: High school

   Background: Ted is 17 years old high school student in his last year from the Tłįchǫ region of the Northwest Territories. Like many high school students, Ted is unsure of what he should pursue and is anxious of making the wrong choice. Ted prefers not to go to university unless he is passionate since university is expensive and requires him to leave home. He intends to explore online courses on a different subjects. However, Ted does not resonate with the content shared. The curriculum seems distant, and he struggles to self-study during his free time due to a lack of interaction with teachers or students. The online course makes him feel isolated and lose interest in the class.

   Frustrations:

   - Existing services are too technical or are not engaging enough to follow.
   - Ted feels forced to spend more money and time on a course he may not love.
   - He feels lost and anxious about his future because he needs to apply for university in a few months and move away from his family despite not knowing what he wants. Moreover, he is not sure which choice of the subject would be best for him.
   - He is busy with his last year of school, extracurricular activities, and researching possible universities, limiting his time to explore different subjects.

Needs:

- Ted needs a possible online learning space where he can explore different courses by experienced educators from various fields for a lesser cost.

- Ted would prefer a minor *part-time course* that he can study in his free time.

- Ted needs a platform that offers content designed for his recent educational experience and understands his culture while still engaging.

- Ted would prefer a learning environment that allows him to interact with other students in similar situations where he can learn with people rather than by himself.

- Ted prefers not to leave Tłı̨chǫ and would like to join an institution online.

Potential Solution: *An asynchronous distance learning model* may work better for Ted's needs. As a student, Ted prefers a part-time course due to his busy schedule, and he does not want to leave Tłı̨chǫ. An asynchronous distance learning model offers flexibility to self-study at his own time and pace. He will not need to follow a tight schedule; instead, he can explore different courses for a lesser cost. The asynchronous platform allows him to try beginner-level classes for a limited time allowing him to explore his interests. A drawback of an asynchronous system is the lack of one-one interaction with students and teachers. *A synchronous part-time course* can work well for Ted as his schedule does not often change, and he will be able to participate in a class that takes place once or twice a week. A synchronous platform would offer him a more substantial *community learning experience* and interaction with other students in a similar situation. However, a synchronous platform offers limited courses to explore.

b. **Gloria:**

Bio:

Age: 36 years

Occupation: Payroll Clerk

Tłı̨chǫ citizen: Yes

Education Credential: Graduate Student *(Bachelor in psychology)*

Background: Gloria is a married 36 years old mother of 2 children from the Tłı̨chǫ. She holds a bachelor's in finance with six years of work experience working for the finance department as a payroll clerk. Gloria is seeking advancement in her role in the company but requires additional certifications to secure a promotion. As a mother of two, Gloria does not have the time due to her commitments as a mother, daughter, wife and worker. Her schedule does not allow her to leave her family and community for months or pursue intensive synchronized distance learning courses. Gloria feels frustrated as she is not able to grow in her occupation but does not have accessible and reasonable options could pursue her career growth.

Frustrations:

- Gloria is not willing to leave her family and community to pursue in-person educational options.
- Synchronized learning offers credential qualifications subject without needing to leave her community. However, they require a higher time commitment which is not sustainable as her schedule constantly changes.
- Asynchronous courses do not provide credible qualifications for higher-level classes.
- She is frustrated because she is unable to grow in her career. She feels forced to choose between her family and her career.

Needs:

- Gloria needs a platform that offers content for her current educational experience.
- Gloria has a hectic schedule as a mother working full-time. Therefore, prefers a platform that allows her to study part-time at her own time and pace.
- Gloria prefers a platform that can offer credential qualifications.
- Gloria wants an institution she can access without leaving.

Potential Solution: *An asynchronous distance learning model* would be the most appropriate solution for Gloria's needs. Gloria does not have the time to follow a strict

learning schedule or leave the Tłįchǫ. An asynchronous distance learning model offers her the flexibility to self-study at her own time and pace. She is not forced to follow a strict schedule and can take her time in her education. The platform should also help offer her basic knowledge of her role, helping with her confidence in getting back to work. This platform should also allow her to gain various certifications that can help her stay up to date in case she has missed out on any recent developments in her study.

Gloria's primary concern is flexibility, but she would also prefer a course that can offer her a *credential certification* to help her grow in her career. Credential qualifications also need evaluation tools that are more than completing quizzes which do not provide enough depth. A distance-learning platform allows her to stay in the community, which is crucial in her situation.

c. **Mason**

   Bio:

   Age: 25 years

   Occupation: Website Developer

   Tłįchǫ citizen: Yes

   Education Credential: Graduate

   (Bachelor in Computer science)

   Background: Mason is 25 years old website developer who graduated from the *University of Alberta* with a Bachelor's in computer science, part of the Tłįchǫ region of Northwest Territories. He returned to Tłįchǫ to work as a freelance developer for the past four years. He has established a large client base and hopes to start a business in a few years. However, before starting his firm, Mason hopes to reduce work to focus on business education. He does not feel confident about starting his own company and would like to get a formal education (Diploma or a master's) before starting his business. Although Mason has left the Tłįchǫ previously, he is unwilling to move again.

Frustrations:

- Mason feels restricted by educational opportunities in his field within the Tłı̨chǫ. However, he is unwilling to leave his friends and family again. Additionally, moving is expensive, and he would like to avoid spending since he is reducing his work hours.

- Starting a business does not need a degree, but Mason is not confident about running a business. Learning from professionals on current standards will help him feel more confident.

- Mason has been working by himself as a freelancer for the past four years. He hopes pursuing further education can also give him a break from his isolation of working alone and allow him to interact, collaborate and make connections during his study.

Needs:

- Mason is looking for an platform that offers an intensive business course, with a high credential qualification.

- Mason prefers a educational platform to offer community learning opportunities.

- Mason wants to join an educational platform he can access without leaving Tłı̨chǫ.

- Mason would like to study full-time, so he can complete the course quickly.

Potential Solution: A *synchronous distance learning model* would be preferable for Mason's needs. First, Mason wants an institution with solid community learning capabilities and a lack of time restrictions. A synchronous learning platform would allow him to interact with students and teachers. In addition, he would love for the platform to have collaborative assignments and opportunities to engage with different people. Second, Mason needs a platform with *high-level courses* that meet his qualifications. The service would need to offer intensive full-time courses allowing him to specialize. The platform would also need a robust LMS enabling him to test his knowledge and offer him credible qualifications. This is essential for him to feel confident in his skills. Lastly, this platform should be useable in Tłı̨chǫ without requiring him to leave.

d. Susan

Bio:

Age: 58 years

Occupation: Writer, Researcher and Educator

Tłı̨chǫ citizen: Yes

Education Credential: Ph.D. in Philosophy

Background: Susan is a 58-year-old mother of 3 children with Bachelor, Masters and Ph.D. qualifications in Philosophy. As a Tłı̨chǫ citizen, she has taught students for the past 25 years about *Indigenous history, culture and ways of knowing*. Susan is now interested in sharing her knowledge with a broader audience by creating a library of educational content on various Indigenous topics. She has previously written two books but prefers to share her stories verbally. Susan is ambitious and wants to grow and challenge herself; she is interested in possibly creating a content library online but is not comfortable using technology or completely understands how she can set things up.

Frustrations:

- Susan wants a learning environment that allows her to build a library of educational content for numerous topics without needing to re-teach the same subjects.
- Susan is passionate about educating future generations about stories and knowledge passed down to her by her parents and elders.
- Susan is not comfortable using technology and hopes or a user friendly experience.
- She feels frustrated that she is not able to grow in her career. She understands the importance of Indigenous knowledge but does not have the platform to create the educational content she would like to share.

Needs:

- Susan would like a digital system that offers her the freedom to create a library of content on subjects she is interested in teaching.

- Susan would prefer if she did not need to re-teach courses as it does not allow her the time to explore building new curriculums for different classes.
- Susan is uncomfortable using technology and would like a user-friendly platform that gives her straightforward instructions to convert content online.
- Susan would like the platform to offer her the flexibility to teach different courses using various teaching methods and assignments.

Potential Solution: *Asynchronous distance learning* would be the most appropriate solution for Susan's needs. She can record lectures, compile study material, create assignments and upload files online for each course. Future students can enroll and study her courses while Susan can create new courses. She would only need to maintain classes by being active on the discussion board and grading papers. She could also enlist a teaching assistant to help support the course under her supervision. Lastly, she can make editions to her study in future and has the opportunity to interact and connect with her students through a *community learning feature.*

Susan is not comfortable with technology. She would require a website or an application that would be easy user friendly to navigate for her needs. Any medium that does not communicate effectively or requires a longer learning curve may limit her confidence. Therefore, the medium must empower her to feel comfortable using the website. This model of distance learning would allow her to create library content that offers her the opportunity to explore and teach different student material.

e. **Rachel**

   Bio:

   Age: 27 years

   Occupation: Public Health Inspector

   Tłįchǫ citizen: No

   Education Credential: Master's in Science

Background: Anna is a University of British Columbia graduate in science, part of a public health agency in British Columbia. The agency is collaborating with the Tłı̨chǫ to research infectious diseases, and Anna is assigned to work on this assignment. Before working with Tłı̨chǫ, Anna wants to learn more about their history, culture and custom. Unfortunately, information on the internet is too general or unreliable. Books were helpful but did not offer her the specific knowledge she required. She prefers to learn a course from about the Tłı̨chǫ where she can ask questions and receive reliable context.

Frustrations:

- Anna would like to avoid making assumptions about the Tłı̨chǫ and does not want to assume that all Indigenous people are the same. In addition, she is worried about receiving unreliable information.

- Anna wants to learn more about the Tłı̨chǫ before working with them but cannot find the exact information she would like to know.

- Anna would like to know specific information about the community concerning their Indigenous health practices.

Needs:

- Anna would feel confident about receiving credible information if she received it from citizens of the Tłı̨chǫ directly.

- Anna would like to answers to questions or contexts she needs prior to her visit.

- Anna would like a medium that offers a variety of basic information about a community that is easy to comprehend.

- Anna prefers a course she can learn independently due to her current full-time job.

Potential Solution: *Synchronous and asynchronous* learning would work for Anna. As a researcher who loves to learn, having the opportunity to ask questions and receive additional context on her subject would only be possible through a synchronous platform. However, an asynchronous learning platform offers her the flexibility to learn

independently. Anna would like to learn a course on Tłı̨chǫ history and culture from Tłı̨chǫ educators. She cannot attend a class during work hours, so she prefers an asynchronous setting that allows her to self-study independently. The possibility of community learning by interacting with other students could also be valuable for her learning experience.

3.2.1   User Persona Comparison and Analysis.

Distance learning methodologies and models are chosen based on the requirements of their users. Every community requires a different learning solution. The design personas provided a basic understanding of various usability features needed for each persona.

User	Preferred Distance Learning Methodologies	Features Needed (Usability)
Ted (Student)	Synchronous and Asynchronous	Community learning tools, limited cost requirements, part-time courses, gamification and user-friendly LMS.
Gloria (Mother)	Asynchronous model	Community learning tools, credential qualifications, evaluation tools, full-time courses and user-friendly LMS.
Mason (Freelancer)	Synchronous model	Community learning, credential qualifications, collaboration opportunities, evaluation tools, full-time courses and user-friendly LMS.
Susan (Teacher)	Asynchronous model	Flexibility teaching approaches, community learning, scalability and user-friendly LMS.

Rachel (Researcher)	Synchronous and asynchronous	Discussion Boards, community learning, collaborative opportunities, evaluation tools and User-friendly LMS.

Table 1: Summary of Usability Needs for the Personas

3.3 Design Phase 1: User Testing Session 1 (Distance Learning Model)

The first user testing session focuses on completing the *Analysis phase* of the **ADDIE framework** by collecting further data directly from Tłįchǫ Government representatives regarding their distance learning model preference. I prototyped and presented the participants with four different distance learning models for this user testing session. Each distance learning model showcases different features as its strength. No platform can work perfectly for everyone; highlighting one feature will always come at the cost of another. During the presentation of the various models, I stated their distinct focus and individual pros and cons for each approach.

The purpose is to communicate to the participants through words and visuals the different types of distance learning and how they can serve different people. Furthermore, this user testing session empowers the Tłįchǫ Government representatives to dictate the design's direction, offering us insight into their needs, feedback and suggestions. While developing the various distance learning models, the following factors were taken into account:

a. **Educational Qualification:** For a course to be qualified, the platform must have a robust evaluation system. Quizzes are a standard evaluation tool for many online learning websites, but they can be easily gamed and do not test students well enough to permit a suitable certification.

b. **Pricing:** Pricing depends on the staff's required time to build and maintain a course. Therefore, asynchronous learning is far more affordable than synchronous learning,

as one does not have to pay teachers to teach the same course once completed. A licensing fee may be involved, but it is a far cheaper option. Courses with higher qualifications will also generally be more expensive, as it would require teachers to spend more time evaluating the student.

c. **Community Learning:** Good teachers are crucial for students and effective student learning experience. However, one factor that is often overlooked is the impact of how much they can learn from each other. Creating a sound community learning environment involves creating areas within the platform where students can interact with one another. Community learning tends to be far more substantial in synchronous experiences as it forces students to be present together.

d. **Scalability:** The platform's scalability refers to the ease of offering more courses. A distance learning model that requires more time and effort to create and maintain a course has lower scalability, such as synchronous courses. Synchronous learning involves students and teachers being present at a particular time; this would mean a teacher can only offer limited classes. Asynchronous learning platforms allow teachers to keep building new courses while only requiring them to maintain them, expanding the scalability of a website. Platforms with a wider variety of courses will reach more users.

e. **Audience Scale:** Every platform is designed for a different audience; some prefer to be more specific, while others focus on a wider audience. Platforms that offer higher qualifications may require students to have existing knowledge on the subject, reducing the number of people who can take that course. Neither approach is wrong, but generalizing courses may come at the cost of their quality.

f. **Teaching approach flexibility:** Different platforms offer different levels of flexibility to teachers with how they can teach. Asynchronous platforms offer teachers limited flexibility, as they are restricted from communicating with their students through a

recorded video. This limits teachers' ability to interact and communicate with their students live. They cannot analyze their students' understanding, nor can they make immediate adjustments like in the classroom. Synchronous learning platforms can offer them that flexibility, offering them more control of the class.

g. **Student Motivation** Every platform requires different levels of dedication from the student. Most asynchronous learning platforms involve high levels of self-learning, which is excellent for some highly motivated students but may not work well for students who require high encouragement. Understanding the balance between keeping the website open without any evaluations and having strict deadlines with vital evaluation tools is crucial to offer students a robust learning experience.

h. **Bandwidth requirement:** Platforms require different bandwidth levels depending on the website's content. Live video conferencing tools require a much higher level of bandwidth in comparison to recorded videos. This is important because remote Indigenous communities may not have access to high-bandwidth internet all the time. It is essential to consider the current technology of a community before we create a distance learning platform. The literature review found that students were given access to laptops and the internet during the pandemic, which lets us know that using the internet should work fine. However, we do not know the strength of their connection *(bandwidth).*

i. **Sustainability:** Synchronous learning systems offer students a much better chance for a higher quality of education since they offer teachers flexibility in their teaching methods to help create a better community learning experience. However, this comes at the cost of more time commitments for students at a higher cost. Teachers are required to commit far more extended work hours than asynchronous learning systems, which increases the cost of each course. Additionally, video conferencing requires a higher bandwidth which may not be sustainable for many students. The more you depend on technology and demand time commitment from students and

teachers, the less sustainable the platform can be for a broad audience. Asynchronous learning systems, in comparison, require less bandwidth, time-commitments making them far more affordable and sustainable for a wider audience.

3.3.1 Presentation

The purpose of creating four different distance learning models was to target different users established in the personas. The proposed models will be left open enough for us to make changes and combine the features of different models. This user testing is part of the ideation phase, where we avoid constraining ourselves with limitations and allow the participants to decide and communicate their needs and constraints and choose a direction they prefer. The following distance learning models were proposed based on *observations* from the design personas and literature review:

1) **Option 1 (Self-Paced Asynchronous learning):** This distance learning model offers users a course-based asynchronous learning experience. *Option 1* permits students to work independently from other students and teachers, allowing them to study at their own pace and time. All lectures created by the teachers are pre-recorded, offering flexibility to people with challenging time schedules or who struggle with comprehension of information. Additionally, the lack of live-video conference lectures gives educators more time to create more courses by pre-recording new content. This allows teachers to explore creating new courses constantly.

   Features: Automated evaluation tools (Such as; quizzes), Find/Search, online discussion boards, offline educational content, pre-recorded lectures, LMS, gamification in learning and analytics to track progress.

Figure 13: Student taking notes of a recorded lecture (Cameron, 2020).

Strengths: The primary advantages of using a self-paced distance learning model include the following:

a. **Scalability:** This education model allows educators to create courses by pre-recording videos without requiring precise, in-depth evaluation tools. They can create automated quizzes, which do not require any additional input or management of the class. Teachers may only have to answer questions through the discussion boards but will not be required to grade and assess their student's performance.

b. **Flexibility:** This education model provides students with flexibility for when and how long they can study. There are no time restrictions, allowing students who have hectic lives to study at their own pace, independent from a teacher and other students. This flexibility makes it available and accessible to a broader audience.

c. **Affordable**: A self-paced distance learning model is far more affordable than the other options. The lack of evaluations and video conferencing makes it more affordable as it reduces the dependence on the teacher. In

addition, this website can offer offline access functionality similar to *Kolibri* due to its low bandwidth requirement making it more sustainable.

Weakness: While *Option 1* offers very beneficial features, it does come at a cost in other areas. The main disadvantages of using this model include the following:

a. **Community Learning / Collaboration opportunities:** A self-paced and flexible learning environment removes collaboration opportunities since every student works independently at their own pace. Discussion boards would be the only space for students to clarify their questions and interact with other students. In addition, most students will never have the opportunity to interact with the teacher since all the assignments are automated, making the experience more disconnected. Therefore a lack of a community or relationships with teachers and students will require high motivation from a student to complete a course.

b. **Lack of credential qualification:** This distance learning model does not offer comprehensive evaluation tools, so there is no way to test the student's educational qualification. Lack of credential qualifications means the platform will not help enhance students' careers or be an alternative for university, further impacting student motivation. Instead, it can solely assist students willing and able to learn and explore new courses in various subjects. Additionally, courses that do not offer credible qualifications tend to be shorter *(1-3 months)*.

c. **Restricted Teaching tools:** Teachers cannot test students' understanding without assessments and evaluation tools. Teachers have limited or no interaction with the students since students can self-study the entire course. The only tool available for teachers are the videos they create,

but they will not be able to evaluate students' understanding of the content. The lack of teaching tools restricts the various methods teachers can use and requires them to focus on improving the recorded videos. Students cannot receive context with recorded lectures and must use the discussion board to ask additional questions.

Potential Target Audiences: *Option 1* works for a broad audience interested in learning and exploring different subjects.

a. **High school graduates** *(such as; Ted)***:)**: Students looking to explore their interests might find this helpful website due to its low cost and flexibility.

b. **Parents:** Parents with busy and ever-changing schedules might find this website helpful to keep learning in new areas and growing their skills. The self-study element of the website would be appealing to them.

c. **Professionals/ Part-time Students** *(such as; Rachel)***:** People or agencies outside the Tłįchǫ interested in learning about the community may find this website appealing. They can learn from individuals within the Tłįchǫ on various topics in the community.

2) **Option 2 (Time-restricted Asynchronous learning):** This distance learning model is a time-restricted asynchronous learning experience which demands students to enroll in a course with limited student capacity. Comparable to a class with deadlines for assignments, the courses for *Option 2* will offer extensive assignments that would allow teachers to grade students. A more intensive evaluation will help teachers better access their students, which would lead to offering credential qualifications that could lead to career growth. All lectures will be pre-recorded, allowing students to work on their

own time with a deadline in place. Recorded lectures would also help students struggle with comprehension of information.

Features: Find/search, pre-recorded lectures, online discussion boards, message/group message capabilities, assignments, evaluation tools, credential qualifications, scheduling & calendar capabilities, LMS, gamification in learning and analytics to track progress.

Figure 14: Student watching a recorded lecture (Cameron, 2020).

Strengths: The primary advantages of using a time-restricted accredited distance learning standard include the following:

a. **Scalability:** This education model requires educators to create a course by pre-recording videos and maintaining them once active. Teachers would be required to preserve the course by grading assignments, responding to students' messages, and using online discussion boards and meetings by themselves or teaching assistants. Unlike *Option 1*, the scalability of the course is reduced due to a higher maintenance

requirement. However, ***Option 2*** continues to be *sustainable* since it does not require teachers to re-teach courses weekly, offering them the freedom to work on new courses.

b. **Flexibility:** This education model allows students to receive credential qualifications in various subjects by studying whenever or wherever they want. There are no geographical restrictions, allowing students who may be travelling or have irregular time schedules to work independently from the schedules of teachers and other students. In addition, while this learning approach reduces flexibility for teachers due to higher levels of maintenance required, introducing limited enrollment spots for each class will help teachers control their classes by limiting the papers they need to grade. ***Option 2*** is not as flexible as ***Option 1***. However, its flexibility offers students the opportunity to gain *a credential qualification*, *community learning experiences* and *opportunities to collaborate* with other students at a *lower bandwidth* and a limited cost.

c. **Community learning (Balanced**): This education model is a more balanced approach to learning that reduces the main disadvantages of ***Option 1***. The time-restricted nature of courses requires students to follow and maintain a similar schedule at the same pace of learning. This alignment in pace allows us to create *stronger community learning* ties by including message/group message and collaboration features. Teachers can create group assignments requiring students to communicate with one another. Assignments would help create a more active message board, as students would need their questions or concerns answered to complete assignments. In addition, students may ask for meetings with the teachers to clarify their questions, further establishing a teacher-student relationship. However, even after stating all the above, the community learning experience may still be limited in an asynchronous

setting since students are not required to communicate with one another.

Weakness: *Option 2* offers many beneficial features, which come at the cost of others. The main disadvantages of using this model include the following:

a. **Community Learning / Collaboration opportunities:** This educational model is primarily self-paced and flexible, with limited collaboration opportunities despite the addition of time-restricted courses since students are not required to communicate with one another. There are minimal possibilities of community learning for the same reason, with discussion boards and messaging being the primary space for interaction. Therefore a minimal community learning experience will require higher motivation from a student to complete the course.

b. **Primary self-learning:** One of the most considerable advantages to students is the ability to study at their own time and pace. Unfortunately, this education model limits the flexibility of studying at their own pace by introducing time restrictions. In addition, self-learning can be isolating and requires students to be self-motivated. However, unlike *Option 1*, *Option 2* offers elements of community learning experiences and credential qualifications that can help motivate students.

c. **Limited Teaching tools:** This education model offers teachers assessment and evaluation tools to help gauge students' understanding of the subject. However, teachers have limited interaction with students, as they can work independently without interacting with the teachers. The primary tools teachers have to teach are pre-recorded videos. This limits teachers on the various methods they can use to track and observe their

student's understanding and learning experience. Students cannot receive context on their subject through recorded lectures and need to use the discussion board or the messaging tool to ask questions or receive additional clarification. The lack of a variety of teaching methods and the dependence on self-reliance makes ***Option 2*** unsuitable for courses longer than *6-months*.

Potential Target Audiences: *Option 2* works for a broad audience due to the scale of courses it can offer, along with a credential qualification.

a. **Graduate students***:* Students with existing qualifications might find this platform enticing to improve their knowledge further while adding a certification to their resume. This model can help improve their knowledge and further accelerate their career growth.

b. **Authorities/Researchers working with Tłı̨chǫ** *(such as; Rachel):* People or agencies outside the Tłı̨chǫ interested in learning about the community may find this website appealing. Option 2 offers access to interaction with other students that can help foster deeper discussions and connections. This model also features assessments to gain more profound knowledge, which will be evaluated. Students will receive insight and knowledge from individuals within the Tłı̨chǫ on various topics in the community.

c. **Professionals** *(such as; Gloria)***:** People or agencies outside the Tłı̨chǫ interested in learning about the community may find this website appealing. They can receive and learn from individuals within the Tłı̨chǫ on various topics in the community.

3) Option 3 (Synchronous Distance Learning): This distance learning model allows students to interact with other students and teachers through a live-video conference. A synchronous learning experience replicates an in-class experience by offering teachers more teaching tools to track student's understanding through questions, assessments and discussions. Students receive further context on their study material, improving the quality of education. All classes taught will be recorded, supporting students who miss a class or struggle with retaining information. Lastly, Option 3 will offer students comprehensive assignments allowing teachers to grade students. A more intensive evaluation will help teachers better access their students, offering credential qualifications that could lead to career growth.

Figure 15: Student participating in a synchronous class (Shvets, 2020).

Features: Find/Search, Live video conferencing, Recorded videos, Online discussion boards, Message/Group Message capabilities, Assignments, Evaluation tools, Collaborative capabilities, Scheduling & Calendar capabilities, High-Credential qualifications, LMS, Gamification in learning and Analytics to track progress.

Strengths: The primary advantages of using a time-restricted accredited synchronous learning model include the following:

a. **High-credential qualification:** One of the biggest strengths of synchronous learning over an asynchronous learning experience is the *increase in quality of education* due to the ability to provide further context, have deeper discussions on the subjects and the ability to nurture relationships between students and teachers. The interactive nature of synchronous learning allows teachers to explore different teaching methods making it a better educational experience for the students. Teachers can also better access and support their students, which offers the capacity to have longer courses *(1-2 years)* with high-credential qualifications. A synchronous learning system allows students to get a diploma without needing to leave their community.

b. **Experiential learning capabilities:** Based on the literature review, we know that Tłı̨chǫ students prefer experiential learning as a powerful tool to receive their education. A synchronous learning model with a well-adapted curriculum can offer students that experience with the wide range of collaborative capabilities that the internet can provide. Features like breakout rooms, Jam boards, whiteboards, discussions, debates and group projects can help students form engaging classroom relationships and learning.

c. **Community learning:** This education model can offer vital components of community learning within and outside of class. Teachers can now have standard breakout rooms forcing students to talk and communicate with one another. Teachers can also create more group projects due to their aligned schedules, further building student-student relationships and

making them comfortable with collaboration. In addition, teachers can conduct office hours out of class for one-one meetings with students to further foster the teacher-student relationship. Finally, the introduction of assignments would make supporting features *(such as messaging capabilities and online discussion boards)* more active, further fostering community learning.

Weakness: *Option 3* offers many strong capacities, which come at the expense of others. The main disadvantages of using this model include the following:

a. **Higher commitment requirements:** Synchronous learning involves teachers and students attending a class at a particular time. ***Unlike Options 1 and 2***, this model requires far higher levels of commitment from teachers and students. This platform will offer recorded videos of classes to students who miss a class; however, the platform is not designed to be used that way. The recorded videos will miss the information from breakout rooms, chat messages, live- discussions and other activities meant to be conducted together. In addition, students will be expected to adhere to a stricter schedule due to weekly classes and assignments, making it less accessible to a larger audience.

b. **Higher cost:** Higher commitment by teachers and supporting staff make this approach to education more expensive. Teachers have more responsibility in comparison to the previous options since they are required to teach and manage classes weekly, assess students' performance, conduct office hours, manage discussion boards and answer regular emails. Lastly, live video conferencing requires higher bandwidth making this approach less sustainable.

c. **Limited Scalability:** Unlike ***Options 1 and 2***, a synchronous learning experience requires a higher time commitment for teachers and students,. Teachers are unable to re-teach courses or build a library of content. Increasing the responsibility of teachers will reduce their ability to create more courses. Additionally, ***Option 3*** will not be able to attract a wide variety of students due to the higher time and commitment needed. Students may also be required to have a pre-existing knowledge of subjects which may further reduce the applicable students. This model of education focuses on the quality of learning over quantity.

Potential Target Audiences: *Option 3* works for a limited audience with the time and desire to gain a high-credential qualification.

a. **Graduate students** *(such as; Mason):* Students looking for higher-level courses within the Tłı̨chǫ may find this platform enticing. A synchronous education model can provide diploma courses of *1-2 years* within the Tłı̨chǫ, which can help them to grow in their careers. In addition, students are provided with the ability to interact with other students and have their skills evaluated by teachers.

b. **Part-time student***:* Courses offering certificates and diplomas may deliver by covering the courses for a more extended time for people looking to study part-time. A longer course can help make courses more accessible to a broader audience. Part-time students looking to improve their skills in their free time may find this option appealing.

4) **Option 4 (Hybrid Distance Learning):** This distance learning model offers students in Tłı̨chǫ high-quality education while providing students with the ability to interact and collaborate with other students *in-person within the*

Tłı̨chǫ. Teachers can create collaborative assignments and have deeper discussions and debates. A classroom will be created within the Tłı̨chǫ region that allows students to attend an in-person setting. Educators can interact with the students through a large screen using *video-conferencing tools*, allowing instructors from around the country access to the classroom. Students who do not attend can join the video conference, and the entire class will also be recorded. Therefore, this educational model works as a synchronous, asynchronous and in-person setting that replicates the capabilities of a classroom. This model is inspired by the case study of *Future Classroom 2.0.*

Features: Find/Search, Live video conferencing, Recorded videos, Online discussion boards, Message/Group Message capabilities, Comprehensive assessment, Evaluation tools, Intensive collaborative capabilities, Scheduling & Calendar capabilities, High-Credential qualifications, LMS, Gamification in learning and Analytics to track progress.
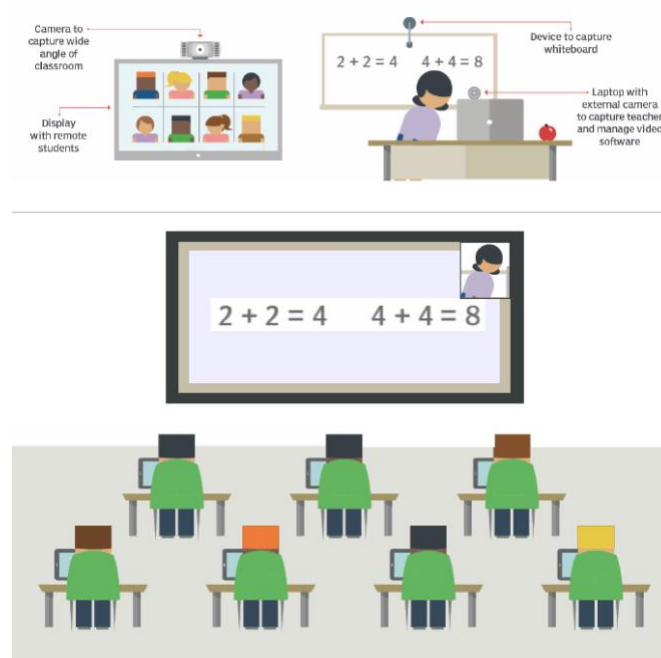
Figure 16: Student in a hybrid class with a teacher teaching remotely ("TechTarget", 2022).

Strengths: The primary advantages of using an experiential hybrid learning platform include the following:

a. **High-credential qualification:** A hybrid learning environment offers high levels of interaction and collaboration between students. Students can see, talk and learn from the entire class. Teachers can monitor the whole class through cameras and interact with students, similar to an in-person environment. This setting provides teachers with the tools to monitor student progress by observing them in class and through evaluations of assignments. The variety of tools and high interaction capabilities create a high-quality learning experience for students. In addition, this hybrid learning experience can provide students with a degree-level course *(2-3 years)* without needing to leave their community.

b. **Experiential learning capabilities:** The literature review mentions the importance of experiential learning as a powerful tool for Tłı̨chǫ students. Teachers are essential for a practical learning experience; however, students can learn much from one another. *Option 4* offers the ability for solid community learning by giving students the ability to interact with one another. This education model can replace a college experience and would require support from a well-adapted curriculum with a wide range of collaborative capabilities. Teachers will also have to think of unique ways to involve students who cannot attend the classes live through features like breakout rooms, Jam boards, whiteboards, discussions, debates and group projects. Students can collaborate in person, watch each-others progress, and learn together.

c. **Community learning:** This education model can offer vital components of community learning within and outside of class. Teachers can now

monitor the entire class and ask questions to assess their understanding through their answers and expression. Teachers can foster interaction between students by grouping them easily and building student-student relationships. The more comfortable the class gets with one another will improve student engagement in discussions and the opportunity for more regular group assignments, further improving students' ability to collaborate. In addition, teachers can conduct office hours out of class for one-one meetings with students to further foster the teacher-student relationship. Finally, the platform will help support students out of class by offering messaging capabilities and online discussion boards to further foster community learning. All the above capabilities can help students learn from the entire community.

Weakness: *Option 4* offers many powerful capabilities, which come at the cost of others. The main disadvantages of using this model include the following:

a. **Less sustainable:** Hybrid learning involves most students attending a class in person, while some students may attend the class synchronously with the teacher at a particular time. This model depends on the internet and technology working perfectly and seamlessly. A hybrid learning experience would require cameras, microphones, a computer and a high bandwidth internet to work well. In addition, we would require more extensive support staff to monitor and maintain the classroom setting and the highly committed teachers required to create adaptive curriculums for the hybrid learning environment. While this platform will offer recorded videos of classes to students who miss a class, the platform is not designed to be used that way. The recorded videos will not include all the in-person conversations between students,

discussions, and other activities meant to be conducted together. In addition, students and teachers will be expected to adhere to a strict schedule due to weekly classes and assignments, making it less accessible and sustainable for a larger audience.

b. **Higher cost:** Construction of a classroom, higher commitment of teachers and an extensive supporting staff make this model far more expensive. Teachers have more responsibility in comparison to other options since they are required to teach, manage an in-person class remotely, assess students' performance, conduct office hours, control the discussion boards and answer regular emails. In addition, this education model is highly dependent on technology requiring high-quality monitors, speakers, microphones, projectors and internet. The support staff will be crucial in maintaining and monitoring the classroom. All the above factors increase the cost of operation making it the least sustainable.

c. **Limited Scalability:** A hybrid learning environment may appear flexible to a larger audience. However, it offers an advantage to students who attend the class in-person unless teachers can adapt the curriculum to be more inclusive to students in various learning environments. Dependence on an in-person classroom with high technology capabilities limits the number of classes that can be taught simultaneously. Not every teacher is capable of teaching hybrid classes. The scalability of courses is hence reduced further since teachers cannot re-teach courses or build a library of content. Additionally, a hybrid learning environment is better for a more comprehensive education, which requires more commitment from students narrowing the students that would be interested. This model of education focuses on the quality of learning over quantity.

Potential Target Audiences: *Option 4* works for a specific audience who have the time and can afford a high-credential qualification

c. **University students** *(such as; Mason):* Students looking for a higher-level university experience within the Tłı̨chǫ may find this platform enticing. A hybrid experiential learning model can provide students with a degree course of *2-3 years* within the Tłı̨chǫ.

Each distance learning model works for different people and circumstances. The participants *(Tłı̨chǫ representatives)* were shown the various models *(with pros and cons)*. Selecting one option helped narrow the focus of the design process. I was also able to collect insights on their needs.

Usability Features	1 Low	2 Medium	3 High	4 Very High
Scalability	Option 4	Option 3	Option 2	Option 1
Pricing	Option 1	Option 2	Option 3	Option 4
Bandwidth Requirement	Option 1	Option 2	Option 3	Option 4
Target Audience	Option 4	Option 3	Option 2	Option 1
Educational Qualification	Option 1	Option 2	Option 3	Option 4
Community Learning	Option 1	Option 2	Option 3	Option 4

Teaching Approaches	Option 1	Option 2	Option 3	Option 4
Quality of Education	Option 1	Option 2	Option 3	Option 4

Table 2: Comparison of Usability Features for all Distance Learning Models *(As shown in the User testing session).*

Each distance learning model works for different learning environments showcasing the various possibilities to the participants. Therefore, clear communication was necessary to explain each model to gain valuable insights into what they would like.

3.3.2 Design phase 1: Data Analysis

The reception from the participants to the distance learning models presented was positive. The Tłįchǫ participants understood the benefits and weaknesses of each model and offered valuable insights for the future.

Comments by Participants	Recommendations *(Based on insights received)*
Participant G Marion asked if the website could be user-friendly for seniors who would prefer the website in the Tłįchǫ language *(Dogrib).*	**Bilingual website:** The Tłįchǫ have their language *(Dogrib)*, which is the primary language elders use to communicate. The website must have the **bilingual capability** to be accessible to elders. This would allow elders to access and teach on possibly teach on the website to the future generation. Courses could be taught in either language. Every recorded video should ideally have subtitles

	making it **accessible** for English and non-English speakers.
	Typeface: We would need a typeface that can translate to Dogrib well.

	Simplifying the User experience: G Marion highlights the importance of making the *design experience as straightforward as possible.* People may not be very comfortable using distance learning websites, so we must avoid using functionality that is challenging to understand or use despite how effective they may be.
G Marion states the importance of creating a *simplistic website*. The website must be *easy to follow and manage for anyone* on her staff because it is about empowering people. The most manageable model would be the most favourable.	**Creating an engaging visual interface:** The website needs to be easy to navigate and visually engaging to have students stay interested in joining the website. **T.Lim** highlights the challenge of student buy in. Creating a good user interface can help, along with strong branding.
Participant T.Lim stated challenges regarding student engagement being low in northern settings during the transition to distance learning platforms during the pandemic. He also stated the challenge of getting students to try and buy into a distance learning model.	**Interactive features: T.Lim** highlighted the low student engagement as a challenge during the pandemic online.
	Creating a good interface can attract users to explore the website, however it needs to include features that offer value for their time and money. Usability features such as; *community learning, gamification of learning and an interactive LMS* can help increase

	student engagement by making the experience more interactive and fun.
G Marion was interested in partnering with other organizations and embedding their programming into ours.	**Numerous modules of courses:** Each distance model presented during the user testing session focused on providing a particular course and student experience. However, the platform could offer **different modules and models of courses as stated by T.Lim,** For example**:** Option 2 focuses on offering paid courses requiring students to enroll. We could offer a free tier courses that are entirely automated. Offering different kinds of courses increases opportunities to partner by being more flexible.
T.Lim asked about the possibility of having various **models and modules within the website**. He is interested in having self-learning courses, more collaborative courses to support courses such as Tłı̨chǫ language education and pre-existing courses from other platforms. Partnering with other organizations such as; *the University of Victoria,* would help grow the content in the website quickly.	
G Marion stated the importance and preference for self-learning compared to a more interactive model due to the time restrictions and higher bandwidth required.	**An adaptative, sustainable and self-learning model:** **An asynchronous option** works perfectly for the features highlighted by G Marion. She prefers a learning environment that provides *self-learning, sustainability, and lower bandwidth.* It also works well for one
G Marion stated the importance of a sustainable website which would not require holding heavy databases. She further stated the limitation of the	

internet and would like a model that would not require high internet dependence.	or ten students since it does not require a large community of learners.
G Marion mentioned she was interested in an adaptable model that would work for ten students as well as one student in a course.	
G. Marion liked the hybrid approach but is uncertain if it is sustainable for the Tłįchǫ currently. Therefore, she preferred to start with option two and work on developing courses for that first. In the future, Marion would like to introduce a live or hybrid approach to learning. In addition, she would like a **phased-in approach** to include more features in time.	**Phased approach:** A synchronous or hybrid learning platform is not sustainable due to higher bandwidth required, data consumption, higher cost and resources. G.Marion suggested designing and developing the platform through a series of **phases**. Phase one focuses on "**Option 2",** but the platform would keep adding more features and functionality over time. **Well structured, open-layout interface:** The design for the interface would need to follow a strict grid, to help create an *information architecture* and layout that allows for additional functionality and adjustments in the future.
G Marion prefers option 2: She liked that students are required to register for courses within the website; they will be tested on the website, and students can follow their progress on the website through a dashboard.	**Final Consensus:** The participants stated many challenges and preferences, pointing to options 1 and 2 as potential solutions. The main factors include

sustainability, low bandwidth, flexibility, simplicity and scalability.

G Marion prefers option 2 because **bandwidth is a significant issue**, and she prefers a website that can provide **recorded videos** while helping students grow in their careers. She does not feel that the Tłı̨chǫ is ready to have live modules or events which require high bandwidth capabilities. **Marion would like the first course on this website to be the Tłı̨chǫ agreement course as a sample that could be presented**. She would like to share this platform with people outside the Tłı̨chǫ in the future and sell courses to the government and organizations wanting to learn more about the Tłı̨chǫ. She views this learning platform to centralize and safeguard Tłı̨chǫ information for future generations.

T. Lim stated that option two is a great starting point which should work well. However, he would like to see two case examples of content for the prototype to be used. He suggested we start with the Tłı̨chǫ agreement course, and in the future, with additional functionality, we should try to develop a Tłı̨chǫ language piece.

P. Turner stated her preference for option two due to the *flexibility of target audiences* it can reach and because students can study at their own pace.

However, **Option 2** offered the capability of *evaluating students* and providing a *credential qualification*, making it a far more viable solution.

Credentials offer students higher motivation and allow career growth. T.Lim and G Marion highlighted the focus on using the *Tłı̨chǫ agreement course* as the first course they would like to have developed. Post user testing session, I received educational material for the *Tłı̨chǫ agreement* course to adapt and use for the final distance learning prototype.

Table 3: Summary of User testing session 1 findings

Conclusion:

Conducting this user testing session as a group was vital for a clear consensus. Furthermore, it was essential for the community to select the model since they understand the needs and requirements of their people. The participants valued *sustainability, flexibility, scalability, credential qualification and lower bandwidth* as primary factors in selecting **Option 2**. Additionally, the participants identified features they would like to include, such as *tracking student progress, course discovery and purchasing courses and dashboards.* While we moved forward with **Option 2**, it is necessary to confront its limitations which include; a lack of *community, self-learning and restricted teaching methods,* which can affect a student's motivation. The website's development process will look for creative solutions to minimize these weaknesses.

"G Marion stated her interest in this learning platform serving as a tool to safeguard Tłı̨chǫ knowledge for future generations." The preservation of Indigenous knowledge is powerful and altered the vision of the purpose of this website. I believed the primary function of this platform was to support Tłı̨chǫ by offering them access to educators from around the country. However, I now believe *the primary function of this platform would be to preserve Indigenous knowledge and be a provider of Indigenous education to Tłı̨chǫ and Canada.*

3.4 Design Phase 2: User Testing Session (Medium Fidelity Prototype)

We begin the *design phase* of the *ADDIE framework* by developing a robust infrastructure for information in the interface. We will create a structured layout creating appropriate spaces for content features and include additional functionality required. As Marion mentioned, *" The website must be simple and easy to follow."* Creating a functional yet simple structure is crucial for effective navigation. The design process includes building a *sitemap, creating wireframes, developing low-fidelity mockups and creating medium-fidelity mockup*s.

This phase aims to build and test numerous medium-fidelity website mockups. We will test the *website's layout, navigation and features* before adding colours or imagery. The previous test focused on providing options to let them decide a clear direction, whereas this phase required feedback and assurance on the direction of the final design. Additionally, **four high-fidelity** mockups of the home screen will be tested to gain insights on future design solutions concerning *colours, typeface, identity and symbols*.

3.4.1　Sitemap

Sitemaps are created to *represent* the site's functionality visually, how different sections are linked together, and their relationship (Babich, 2019). A sitemap shows an overview of all the functionality offered by the platform. A sitemap helped create a fundamental structure for the website and where different information should be placed. Three sitemaps were created to showcase different sections of the website.
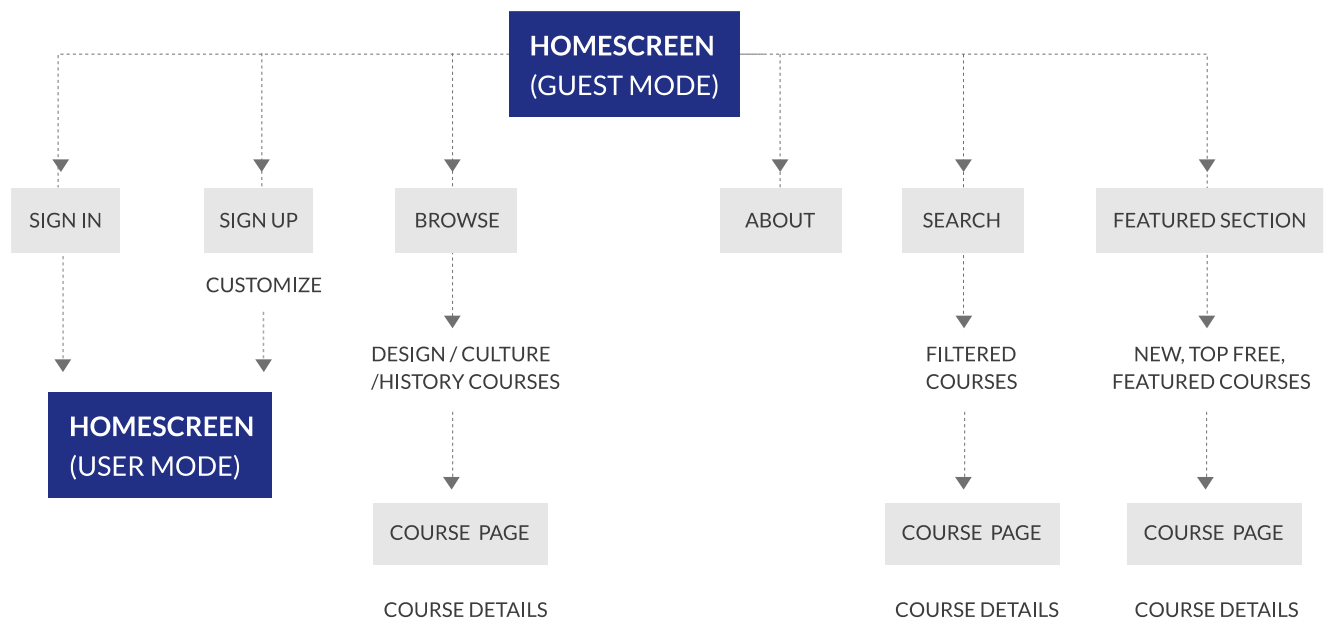
Figure 17: Sitemap, Discovery Phase (Guest Access)
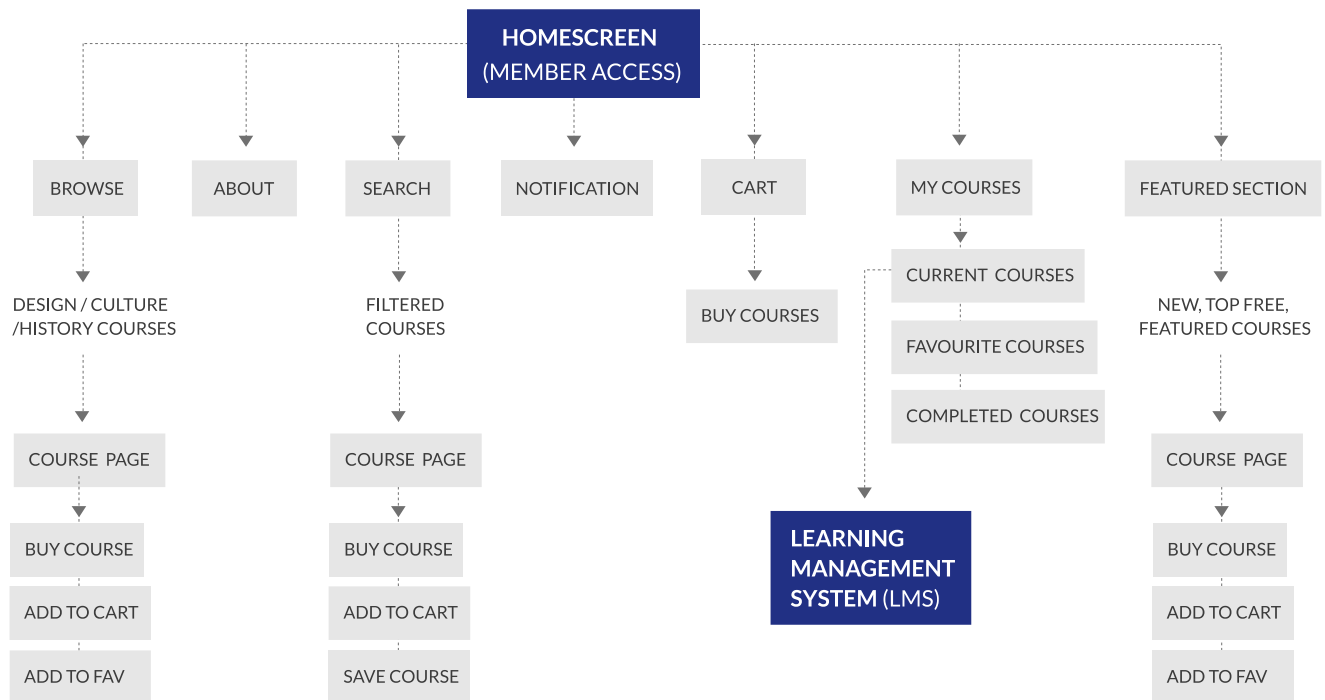
Figure 18: Sitemap, Discovery Phase (Member Access)
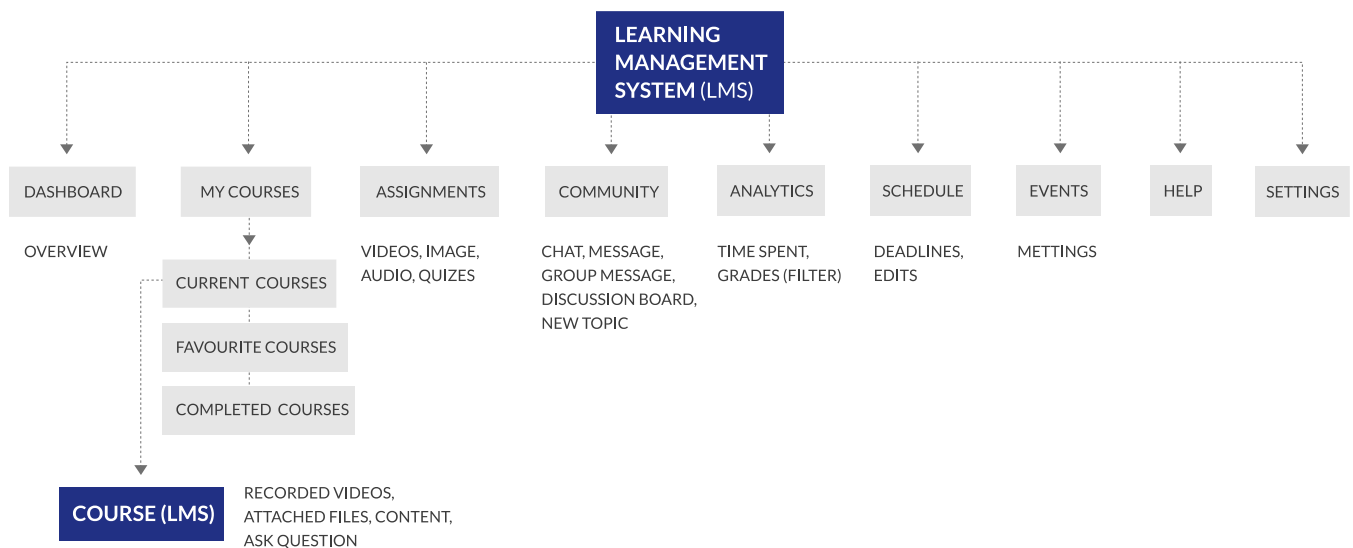
Figure 19: Sitemap, Learning Management System

3.4.2 Wireframes

Developing wireframes involves *visualizing and creating a skeleton* framework of the website through sketches. Basic sketches of the primary screens were developed to help establish a layout for *essential interface elements* of key repetitive features.
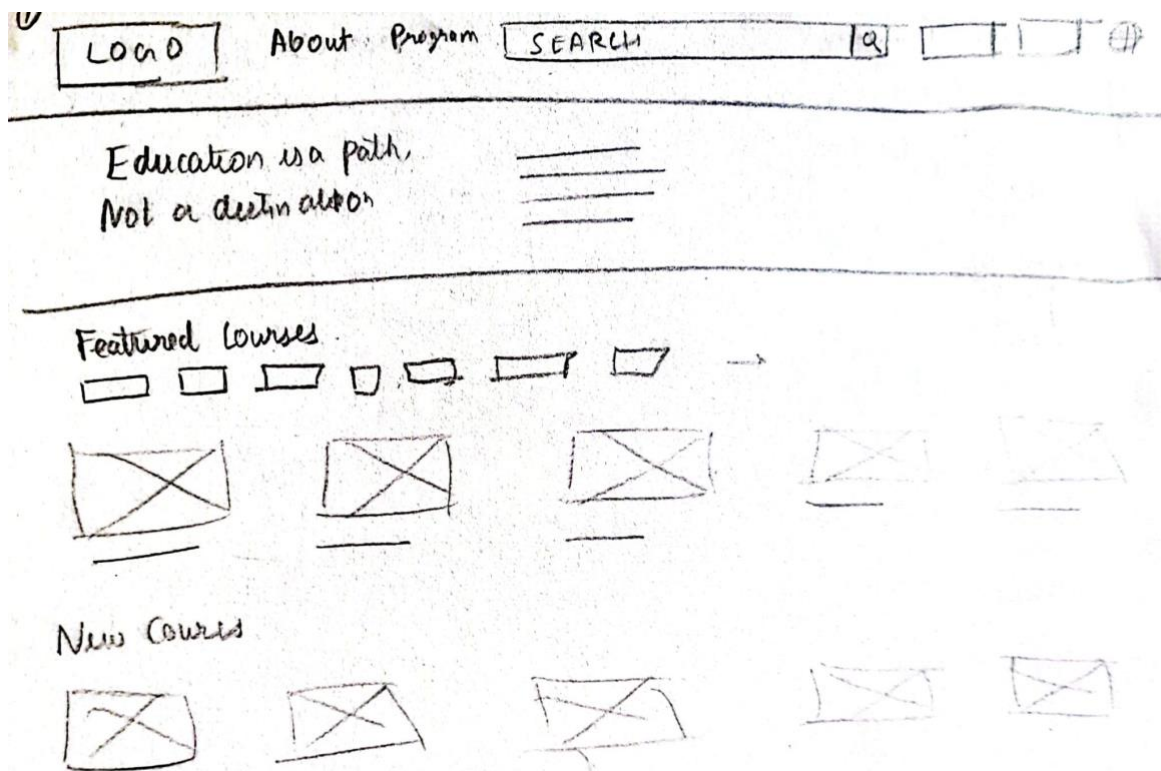
Figure 20: Homepage, Wireframe
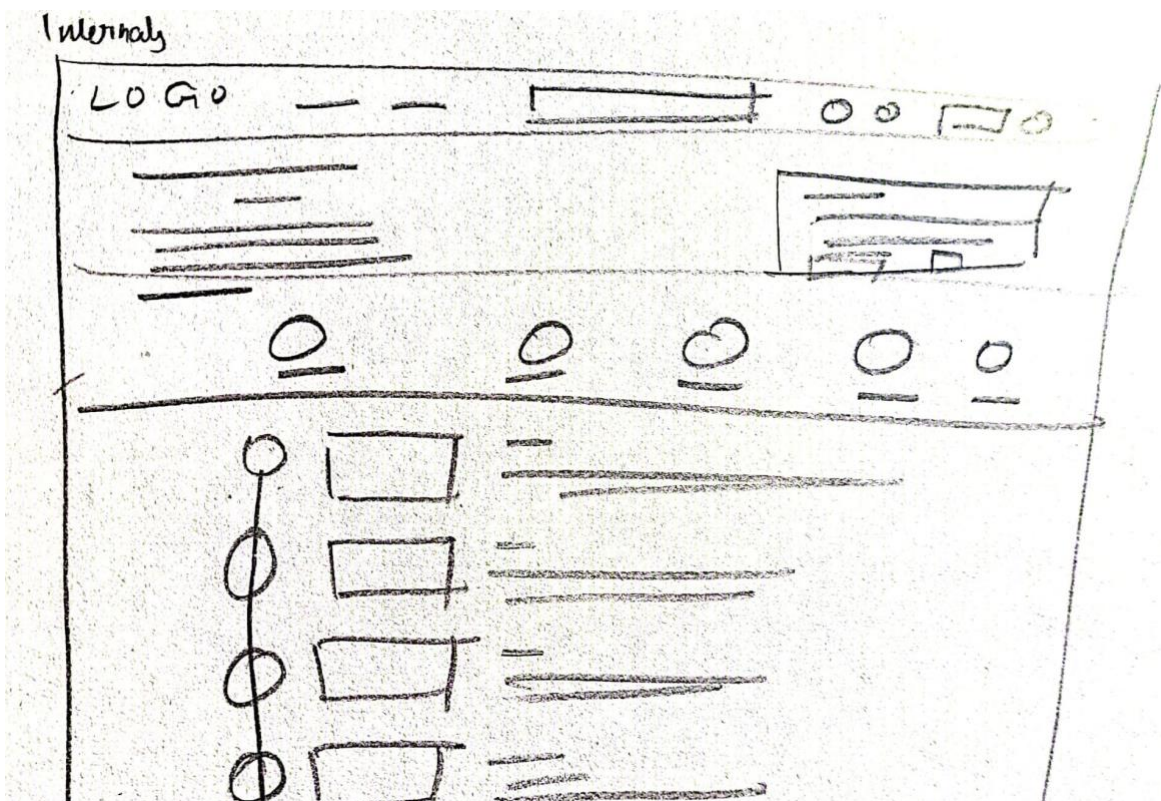
Figure 21: Course, Wireframe
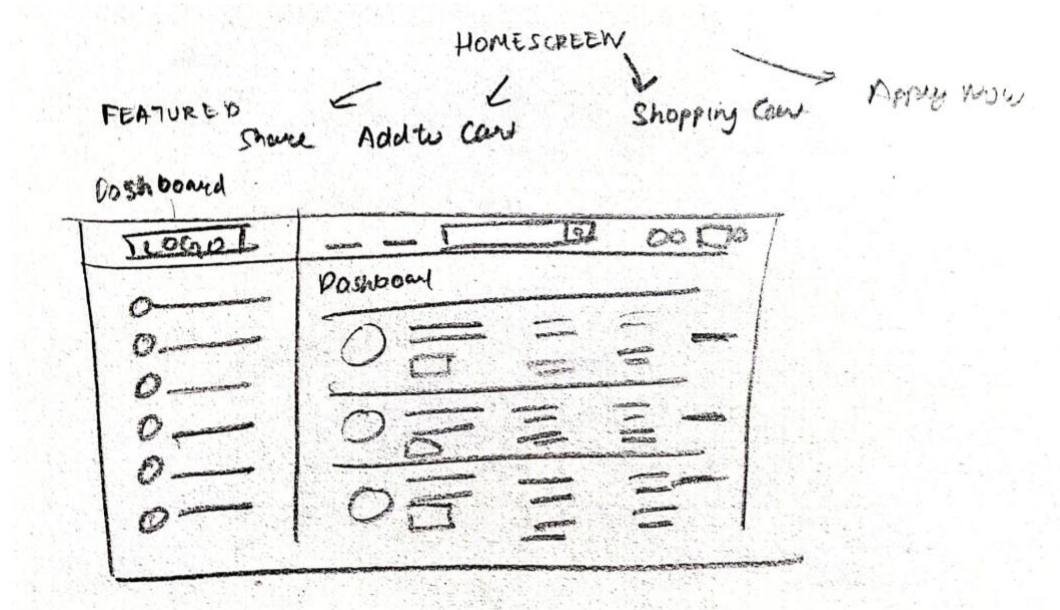
Figure 22: Dashboard, Wireframe

3.4.3   Design References

Design references are a compilation of screenshots of various platforms and design solutions that inspire the final product's creation. In addition, the design references offered inspiration and insight on different visual representations:

a. **Home Screen:** I was inspired by *Figure 23* for its hero section. The banner immediately tells the story and purpose of this website, while the logos at the bottom reinforces its credibility.

b. **Course list:** A design challenge for this study simplified the course list while offering a wide range of filters since an asynchronous model is scalable. *Figure 24 and Figure 27* provide excellent examples of using simple navigation with a depth of filters.

c. **Profile:** Profile sections can be tricky since they are almost unique in their layout from the other interfaces. Besides the header and footer, most of the screen displays striking visuals. *Figure 25* caught my eye for the *gamification* design visuals it shows.

d. **Search:** Creating the interface for the *"search function"* was interesting since we had to create numerous versions and applications of the search function. It had to be useable on the homepage and lead to an independent page. I found *Figure 26* *well-balanced* since it focuses on the search while sharing other pieces of content toward the bottom of the page.

e. **Dashboard:** The dashboard displays an overview of various sections and data within the LMS. *Figure 28* showcases a simple and effective visual representation of information.

f. **Browse:** The browse function has a similar challenge as the course list interface due to the filtering of a variety of courses. splay an overview on various sections and data. *Figure 29* handles the complexity of information by good hierarchy of information.

g. **Course LMS:** This will be the primary interface that students will interact with to learn courses. Therefore, we must give them the functions and tools to enhance their experiences. I was impressed with *Figure 30 and Figure 31* for their focus on the content (video), while the secondary information was well structured *(content + resources)*.
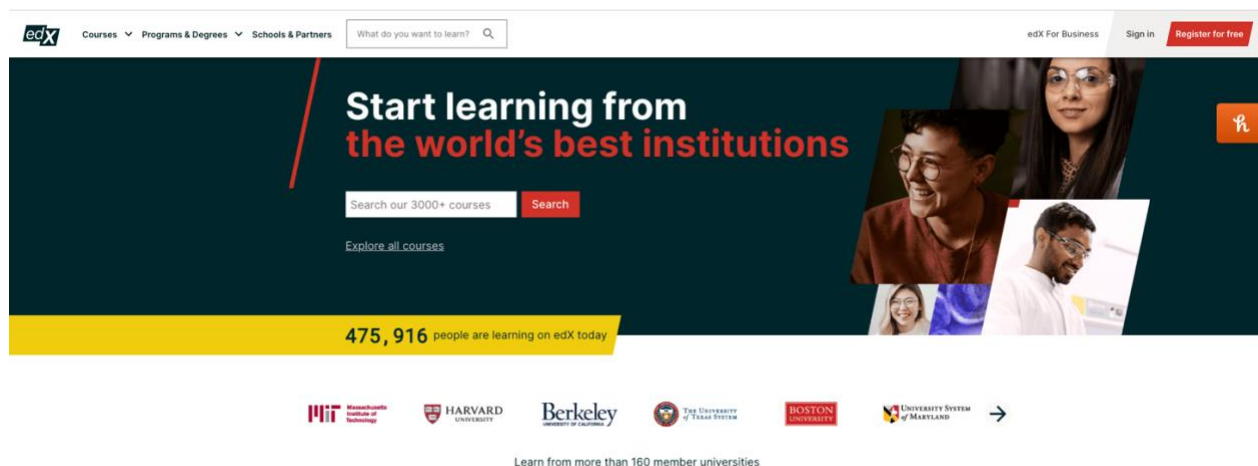
Figure 23: Home Screen, Edx (Edx, n.d.)
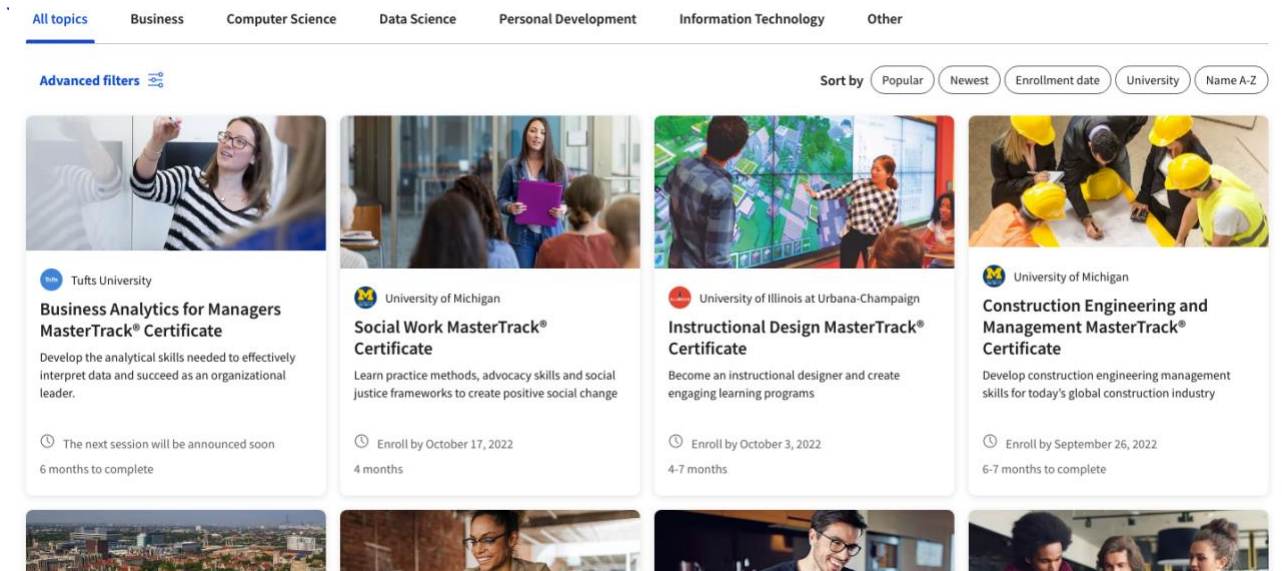
Figure 24: Course list, Coursera (*MasterTrack Certificates*, n.d.)
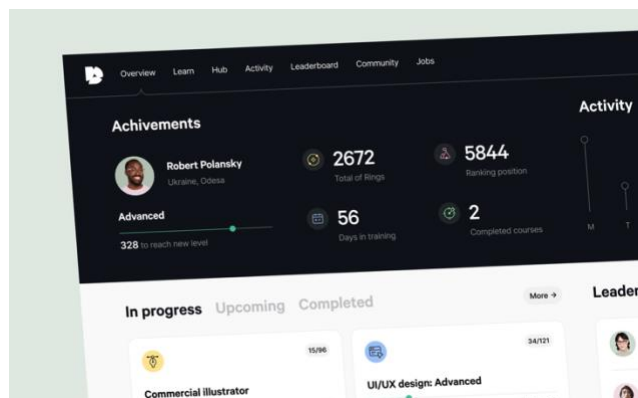
Figure 25: Profile, Reference (Sun, 2022)
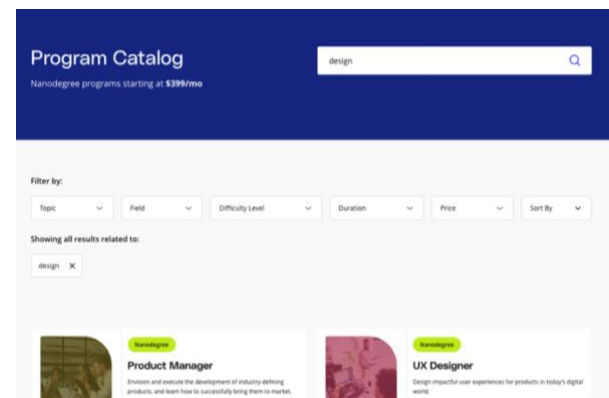
Figure 26: Search, Udacity (Udacity Catalog, n.d.)
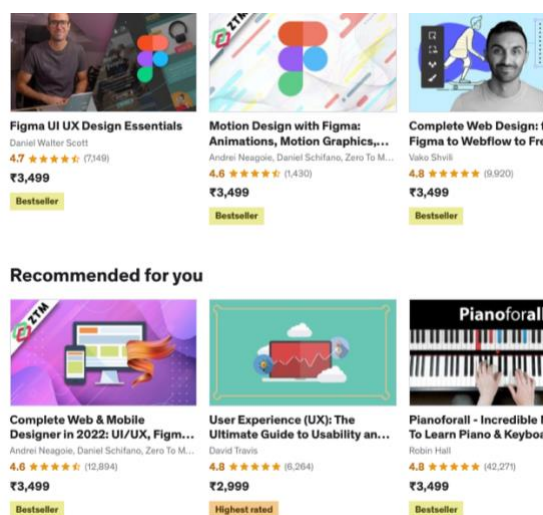
Figure 27: Course list, Udemy (Udemy, n.d.)
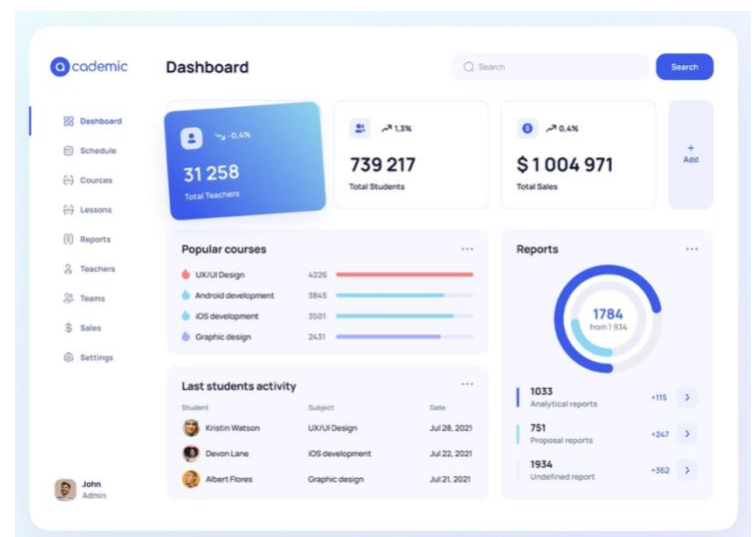
Figure 28: Dashboard, Reference (Cleveroad, 2022)
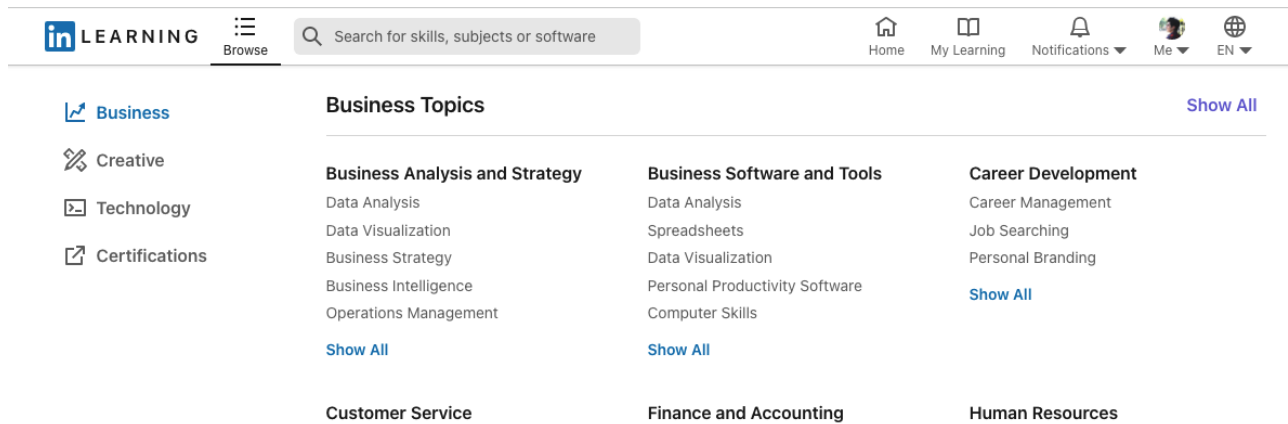
Figure 29: Browse, LinkedIn (LinkedIn-Browse, n.d.)
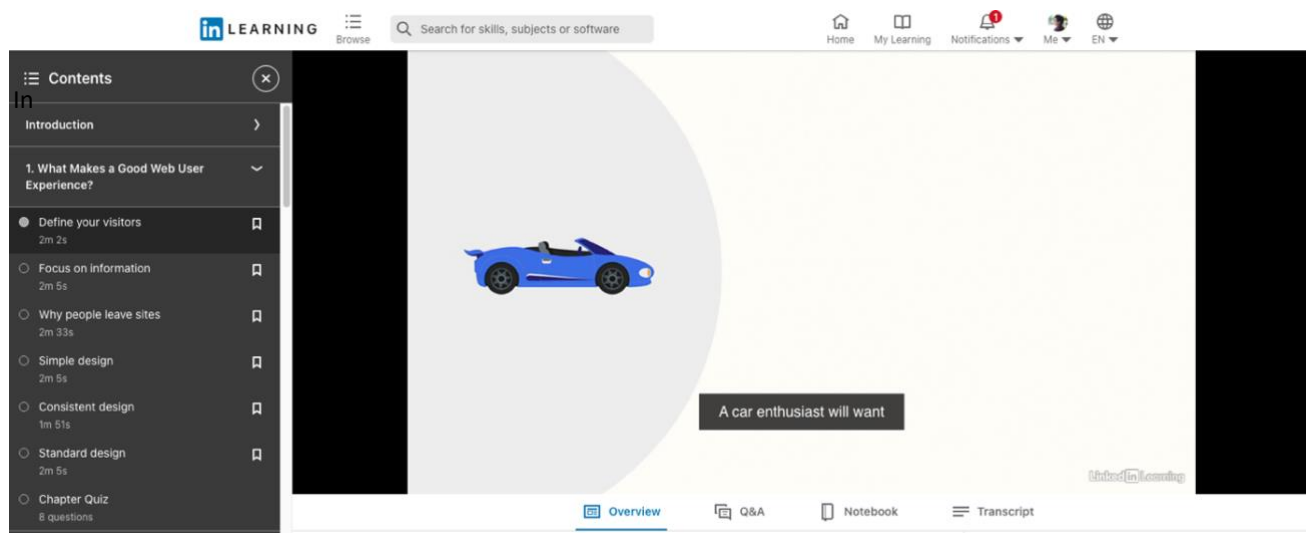
Figure 30: Course LMS, Linked In (*Sketching for UX Designers*, n.d.)
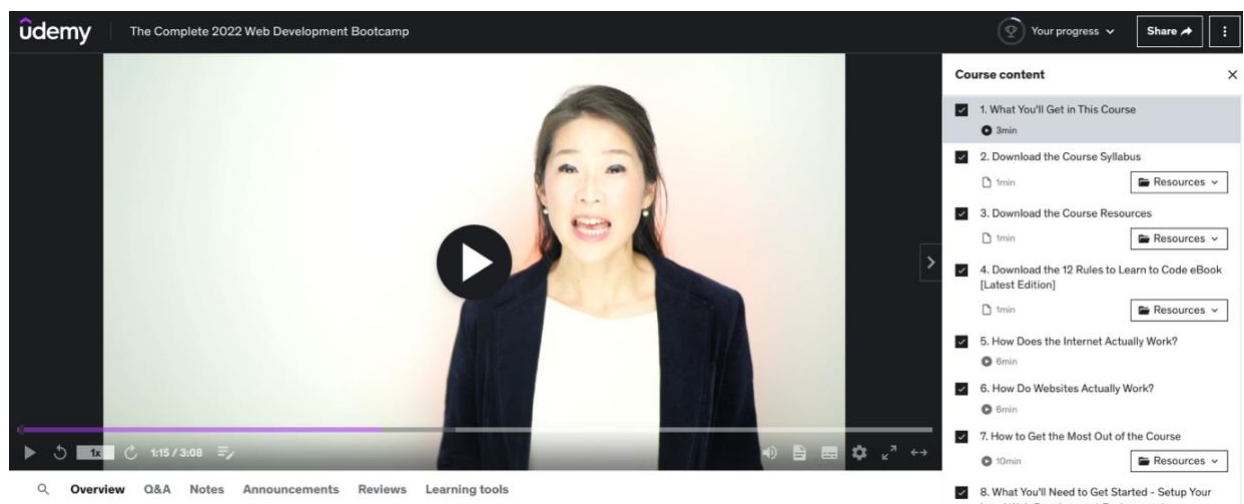
Figure 31: Course LMS, Udemy (*The Complete 2023 Web Development Bootcamp*, n.d.)

3.4.4 Low Fidelity Mockups

Low-fidelity prototypes are the first step in creating a digital version of the wireframes which helps establish future website versions.

a. **Headers:** Two versions *(Figure 32 & Figure 33)* of headers were created for guest and member access. It was essential to keep the navigation simple.

b. **Homepage:** The home screen *(Figure 34 & Figure 35)* introduces users to the platform. It includes a variety of different information which needed a good layout and hierarchy to support users' intuitive experience.

c. **Course:** The course page *(Figure 36 & Figure 37)* offers details for a course. I attempted to create a layout that can works as an adaptable template with different information styles since every class is distinct.

d. **Register/ Log In:** I wanted to avoid making a separate page for these screens *(Figure 38 & Figure 39)*, and a pop up screen seemed more appropriate. Users are able to easily transition to and away from these screens.

e. **Course LMS:** This interface *(Figure 40)* is the primary learning environment for students, focusing on the content with additional features on the side.
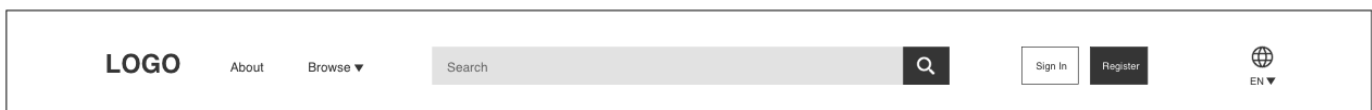
Figure 32: Header, Low Fidelity (Guest Access)

Figure 33: Header, Low Fidelity (Member Access)
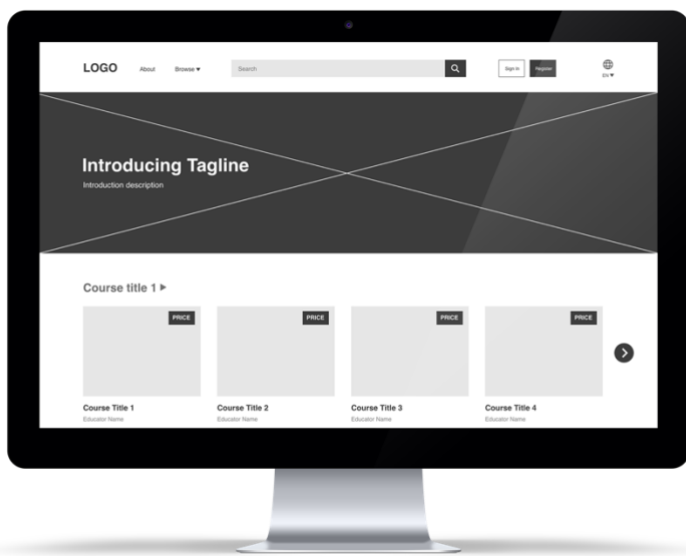
Figure 34: Homepage (1), Low Fidelity

Figure 35: Homepage (2), Low Fidelity
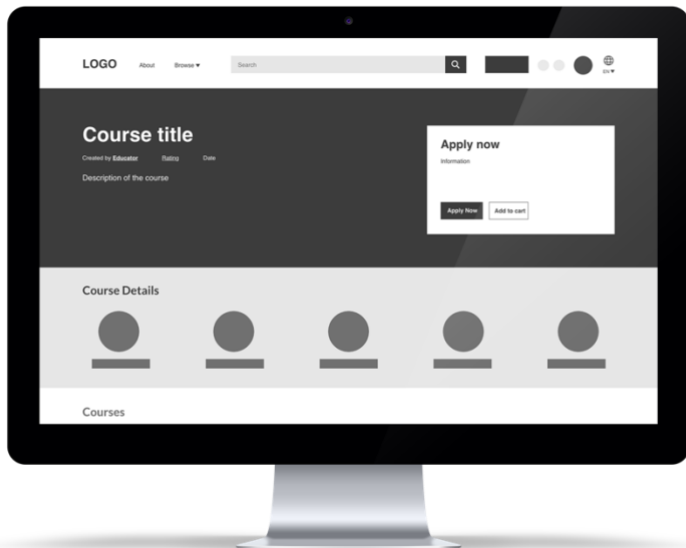
Figure 36: Course details (1), Low Fidelity
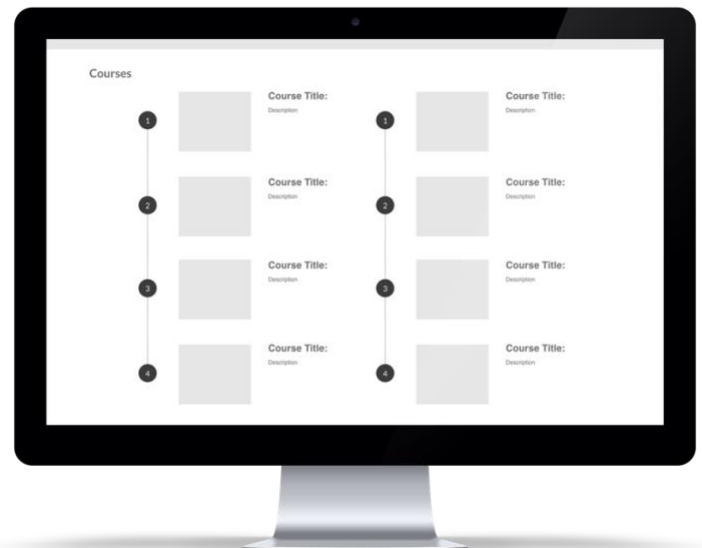
Figure 37: Course details (2), Low Fidelity
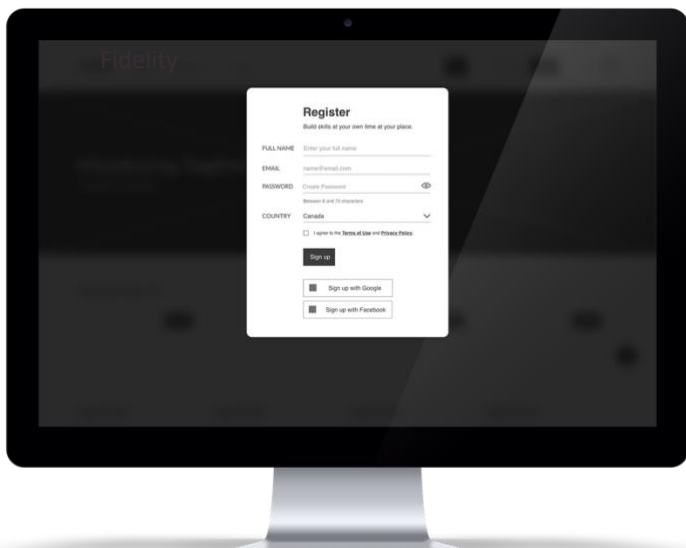
Figure 38: Register, Low Fidelity
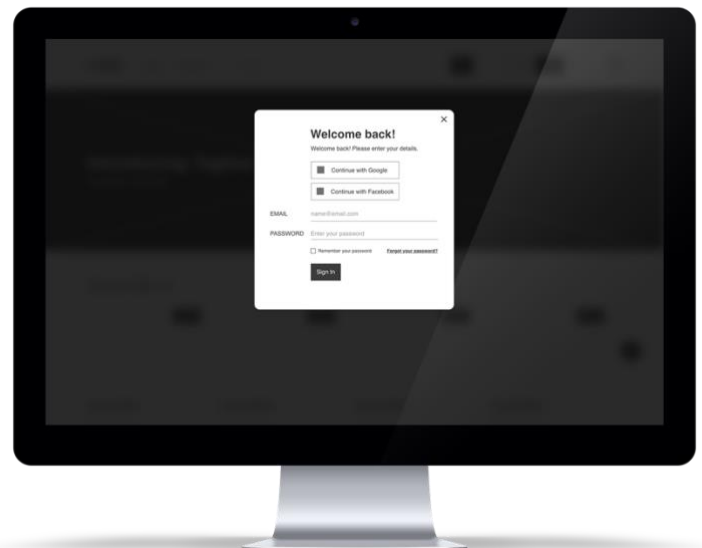
Figure 39: Sign In, Low Fidelity
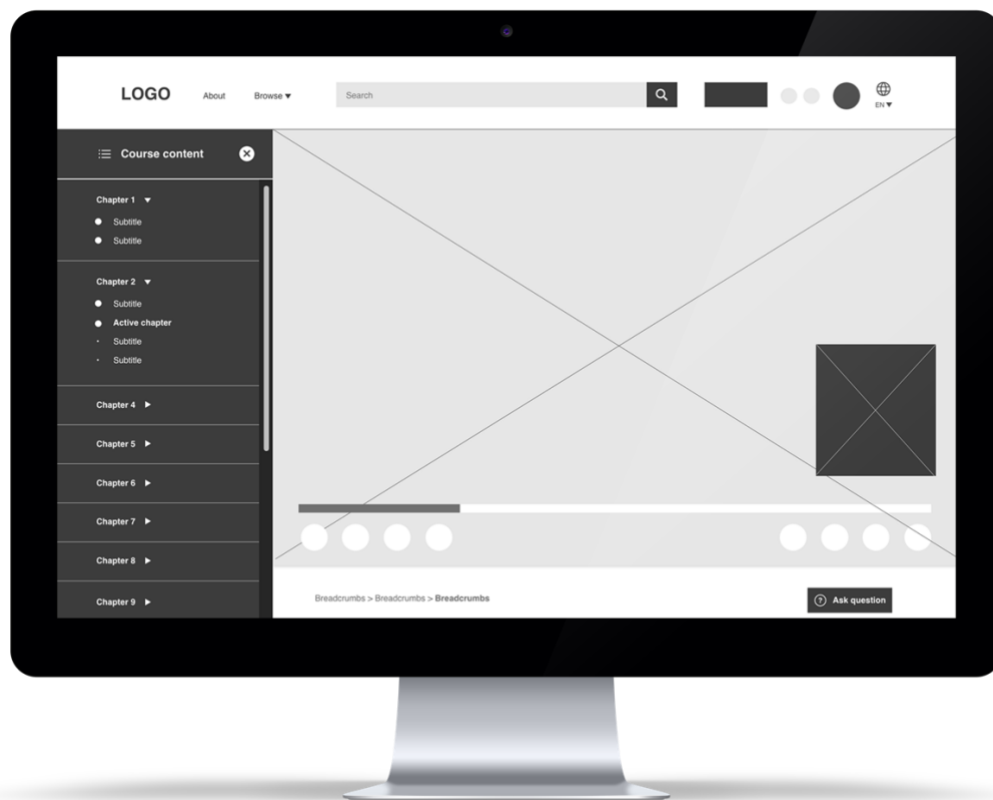
Figure 40: Course LMS, Low Fidelity

Grid System: A twelve-column grid system was used to build this design. Grids help create cohesive layouts and provide a guide to keep the interface *aligned, proportional and uniform* throughout. Grids also help users to scan information quickly improving the user experience. (Gordon, 2022)
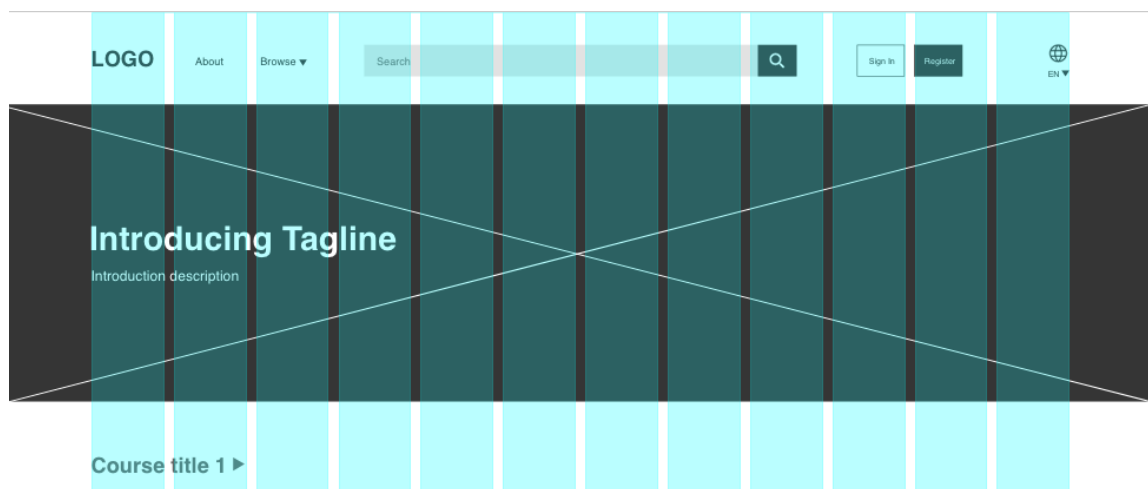
Figure 41: Twelve-Column Grid System, Low Fidelity

3.4.5   Medium Fidelity Mockups

The low-fidelity digital drafts are further refined to offer people a clearer sense of a final solution. The medium-fidelity mockups have a more refined layout with placeholder text, finalized features and numerous additional screens created (Dam & Siang, 2020). Finalizing the primary screens helped create additional screens by taking keeping reusing sections. *Consistency* in interface design helps users feel more comfortable by reducing their need to learn new representations for each task (Nkemchor, 2022).

Building a distance learning platform is complex since it involves the inclusion of a variety of features and access points. The website will have users who are not Registered *(Guest),* Registered users *(Members)*, Registered users who instruct *(Teachers)* and a few additional levels of access. Each user depending on their tier may have different capabilities. This thesis will narrow our focus to *guest and student acce*ss to the website. We have divided the design process of the distance learning platform into three sections.

1) **Discovery Phase** *(Guest access)***:** The discovery phase of the website will introduce users to the website and showcase the library of courses offered. These screens will be the first impression new users will gain of the website; hence it needs to build intrigue while communicating the purpose of the website. This section will also feature the purchase of courses (suggested by G Marion), however only registered users will be allowed to buy courses.

    Screens featured: Home screen, About, Browse, Search, Featured Courses/ New Courses /Free Courses, Course Page, Register and Sign In

Possible Navigation Flows:

1) **How to register:** Home > Register

2) **How to Log In:** Home > Sign In

3) **Explore the variety of courses:** Home > Featured / New / Free Courses

4) **Explore specific courses:** Home > Browse > Apply filters

5) **Find a specific course:** Home > Search (Type course)

6) **Find more details on a course:** Home/ Browse/ Featured > Select course

7) **Change language to Tłı̨chǫ:** Home > Select language (Header)
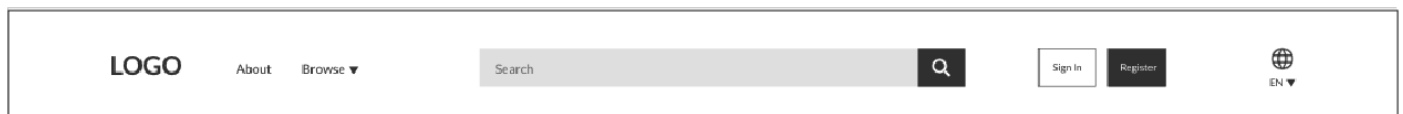
Figure 42: Header, Medium Fidelity (Guest)
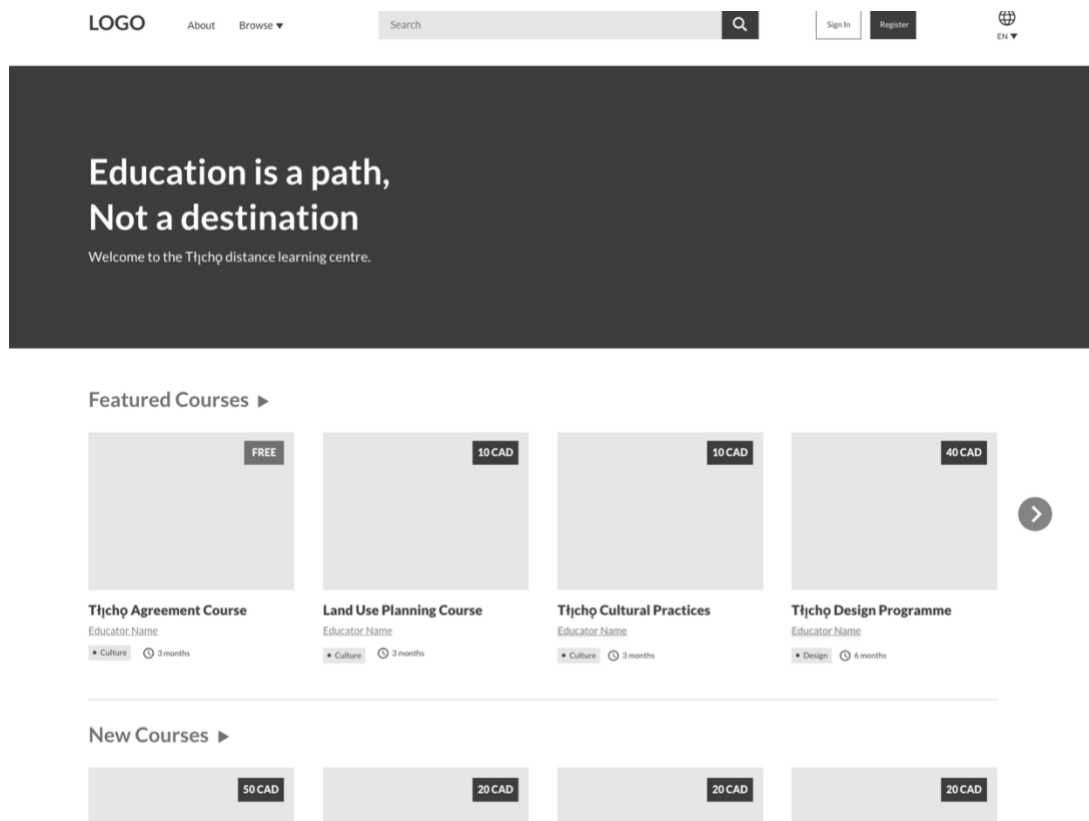
Figure 43: Homepage, Medium Fidelity (Guest)
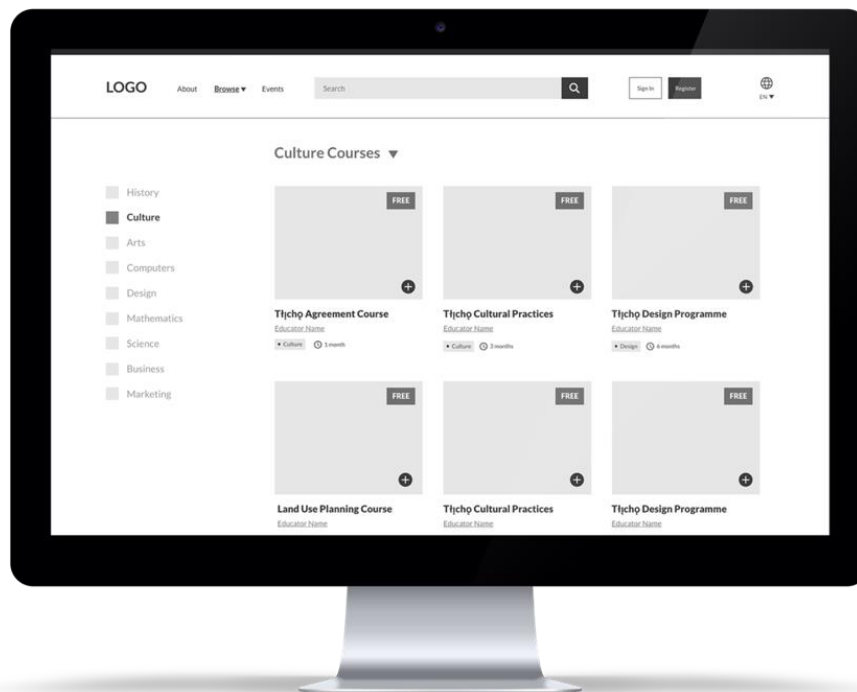
Figure 44: Browse, Medium Fidelity (Guest)

Figure 45: Register, Medium Fidelity (Guest)

F**igure 46:** Sign In, Medium Fidelity (Guest)

2) **Discovery Phase** *(Member access):* The discovery phase for members features similar screens as the guest access with added functionality. *Members* (registered users) will be allowed to purchase courses *(suggested by G Marion in the first testing).* The screens in this phase help filter content and provides functionality such as; *Notification, Shopping cart, Favourite courses, Profile and My courses. "My Courses"* offers users access to *"Current courses, Favourite (Saved) courses and Completed courses* ." The above sections help users view the progress for all their existing courses, view all favourite courses and access. Lastly, the discovery allows users to view and edit their *profile*s.

Screens: Home screen, About, Browse, Search, Featured Courses/ New Courses /Free Courses, Course Page, Shopping cart, Profile, Buy course, Save course and My Courses

Possible New Navigation Flows:

1) **Buy a Course:** Home > Select course > Buy Course

2) **Add to Cart: Buy a Course:** Home > Select course > Add to cart

3) **Buy from Shopping Cart:** Home > Select Shopping cart (Header) > Buy

4) **Change language to Tłı̨chǫ:** Home > Select language (Header)

5) **Explore Educational events:** Home > Events

6) **Access Current Courses:** Home > My Courses or Home > Continue Course

7) **Access Favorite (Saved) Courses:** Home > My Courses > Favorite Courses

8) **Access Completed Courses:** Home > My Courses > Completed Courses

9) **Access Profile:** Home > Profile
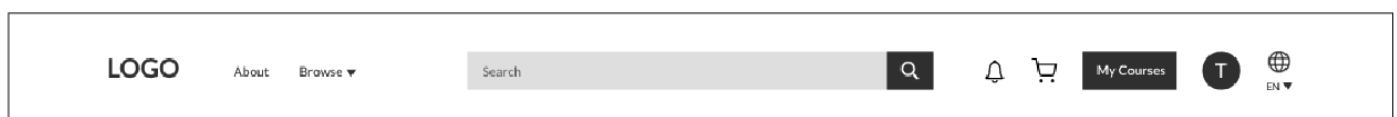
Figure 47: Header, Medium Fidelity (Member)
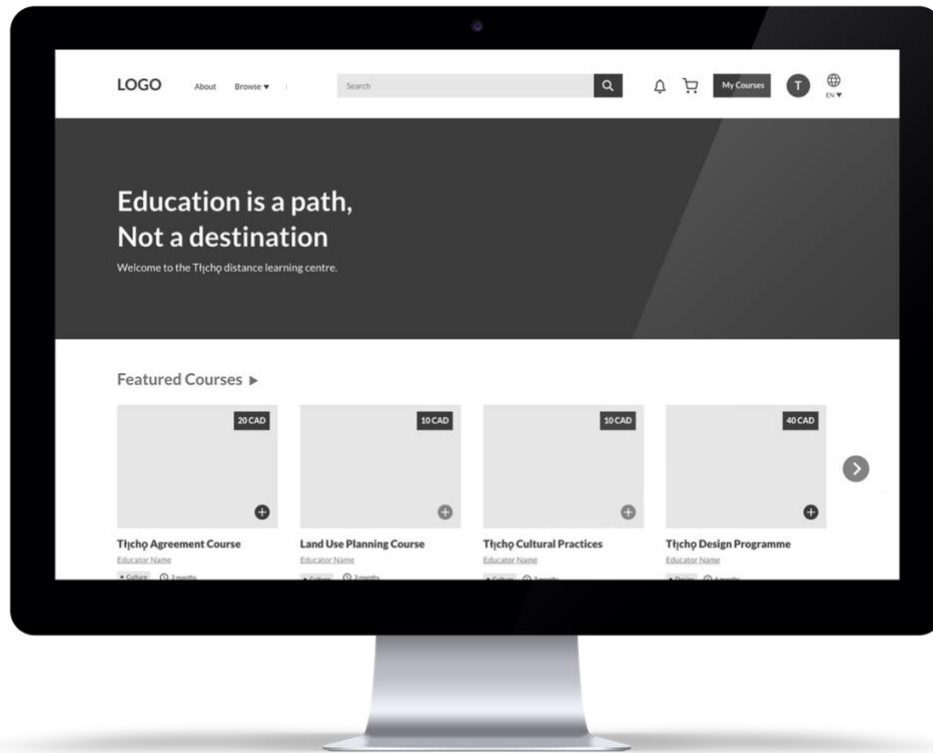
Figure 48: Homepage, Medium Fidelity (New Member)
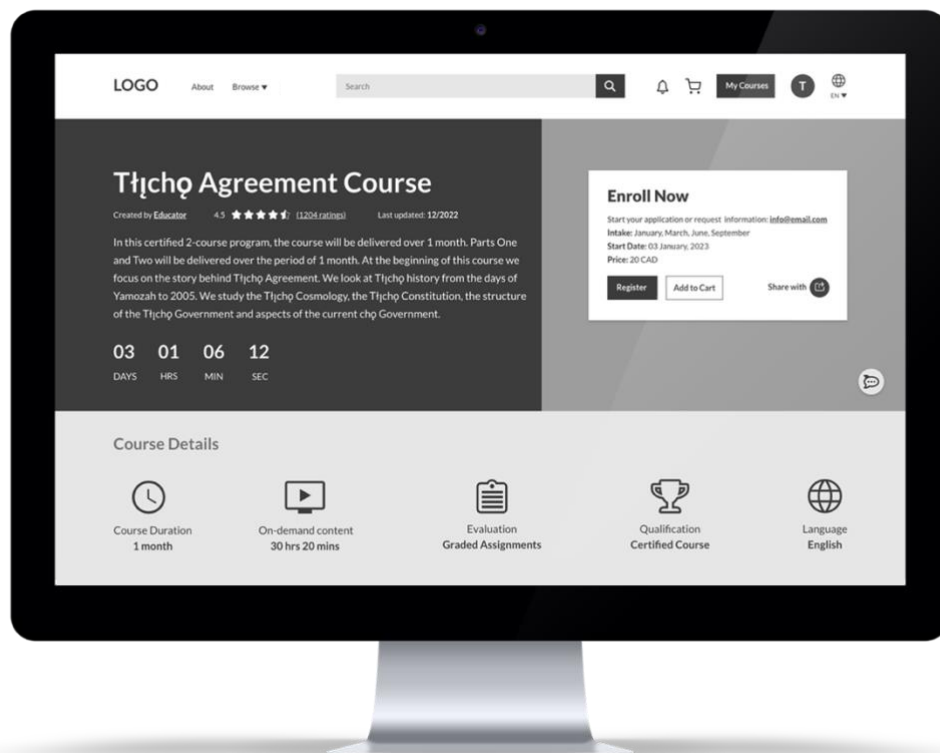
Figure 49: Course Details, Medium Fidelity (Member)
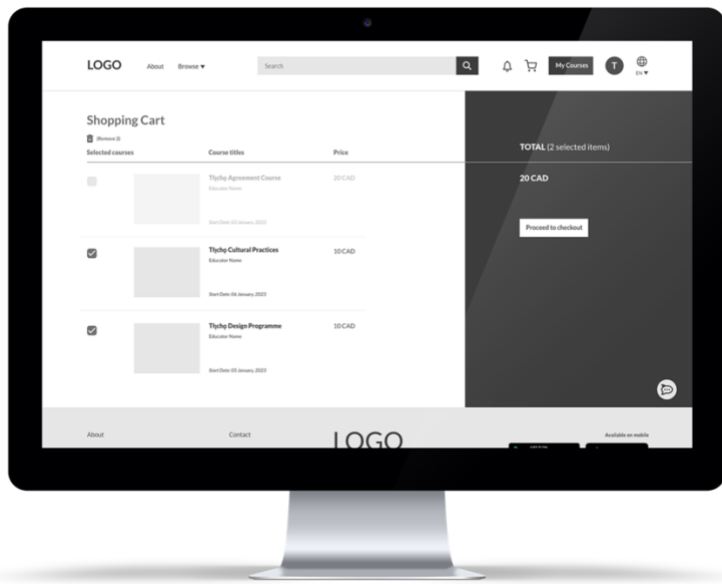
Figure 50: Shopping Cart, Medium Fidelity
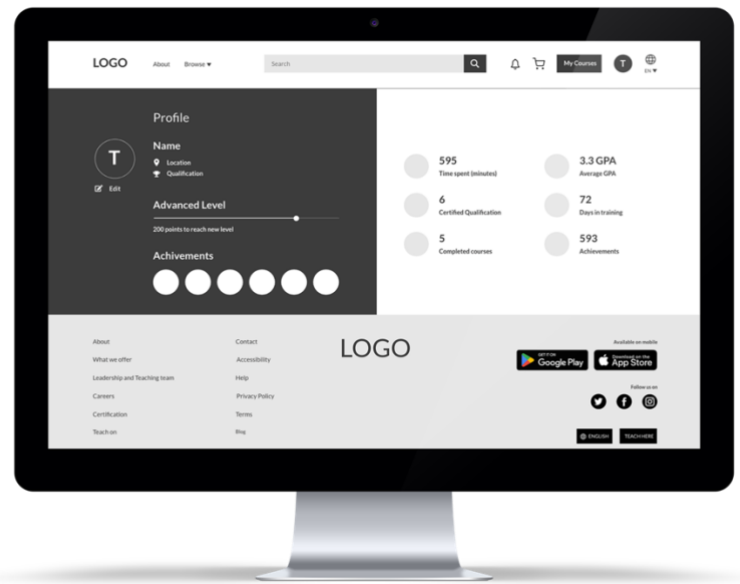
Figure 51: Profile, Medium Fidelity
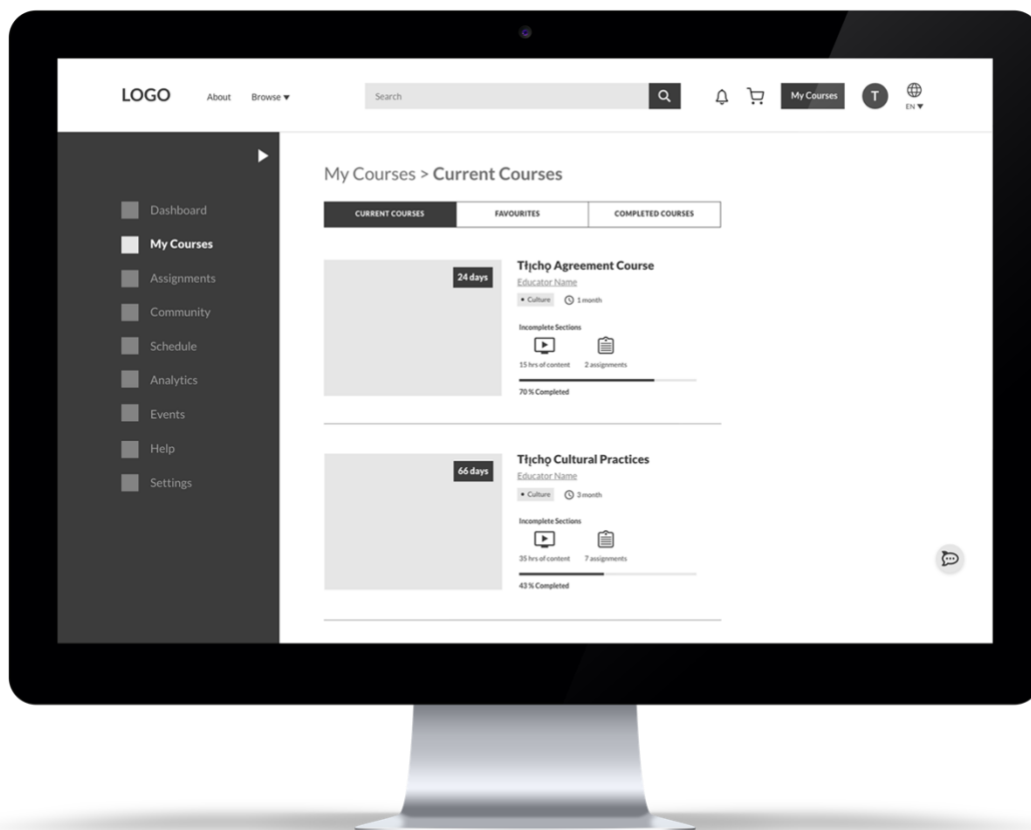
Figure 52: Current Courses, Medium Fidelity
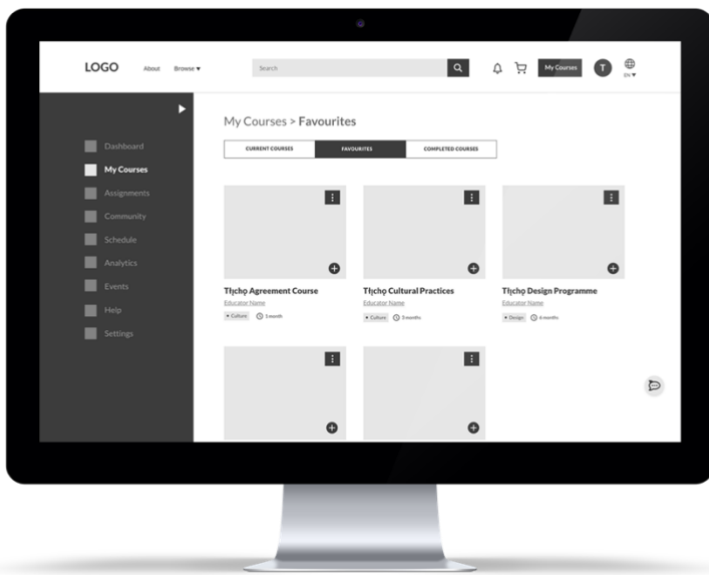
Figure 53: Favorite Courses, Medium Fidelity
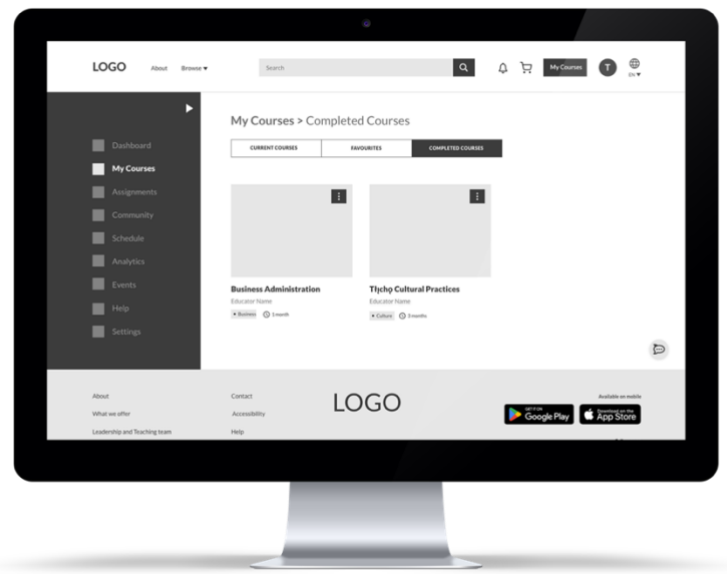
Figure 54: Completed Courses, Medium Fidelity

3) **Learning Management System (LMS):** The LMS of the website is the backbone of the distance learning model. The purpose of this section is to support and train students in the various subjects/ courses they study. The learning management system must support students by including community learning features, tracking student progress, scheduling assignments and displaying the course learning environment. Despite the variety of features offered, it is crucial for students to feel comfortable navigating through an effective yet simple LMS, despite the depth of usability offered.

Students will have access to community learning elements like chat features to communicate with teachers and students and online discussion boards in the community section. Additionally, students can track their progress in their dashboards (suggested by G. Marion) and submit assignments in the Assignments tab. Lastly, students can view the content by selecting their enrolled course in the dashboard, which would provide video, written and downloadable content.

Screens: Dashboard, My course, Course (LMS), Assignments, Community, Analytics, Schedule, Help, Event, Deadline Extension, Chat and Settings

Possible New Navigation Flows:

1) **View Course Progress**: Home > My Courses > Dashboard

2) **Request extension:** Home > My Courses > Dashboard > Extend Deadline

3) **View Community**: Home > My Courses > Community

4) **Make a Community post**: My Courses > Community > Add post

5) **Submit Assignment:** My Courses > Assignments > Submit

6) **Message Classmate** Home > My Courses > Community > Send Message

7) **Access Course**: Home > My Courses > Dashboard > Select Enrolled Course

8) **View Dashboard**: Home > My Courses > Dashboard
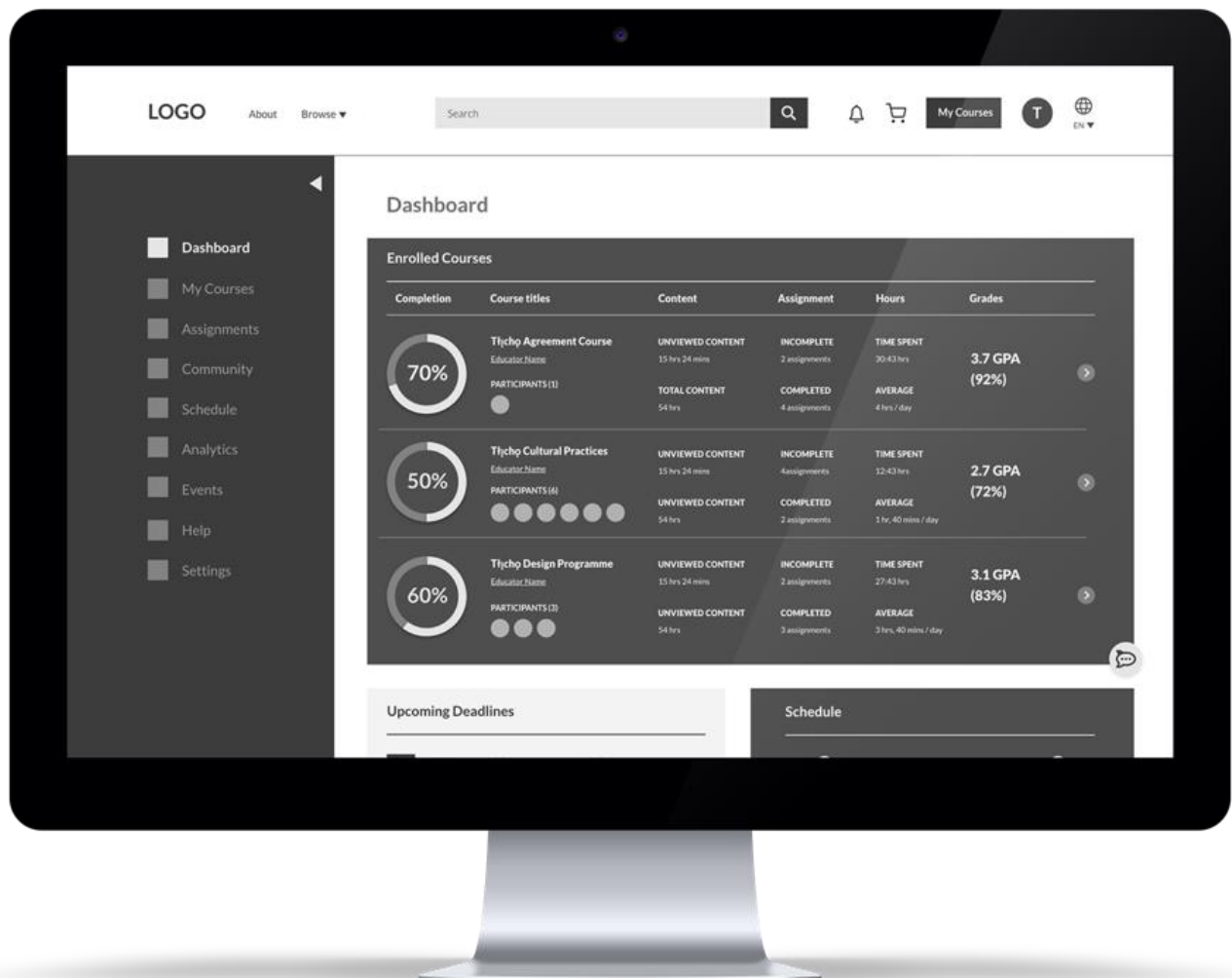
Figure 55: Dashboard, Medium Fidelity
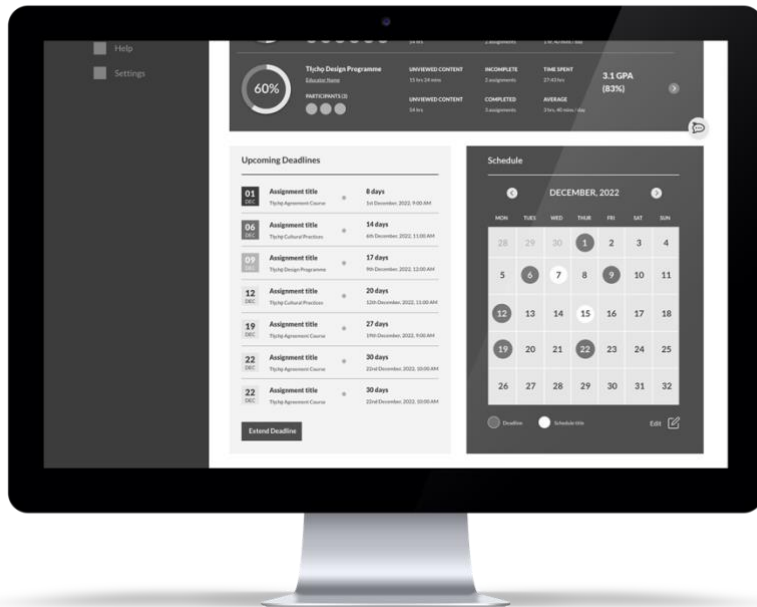
Figure 56: Dashboard 2, Medium Fidelity
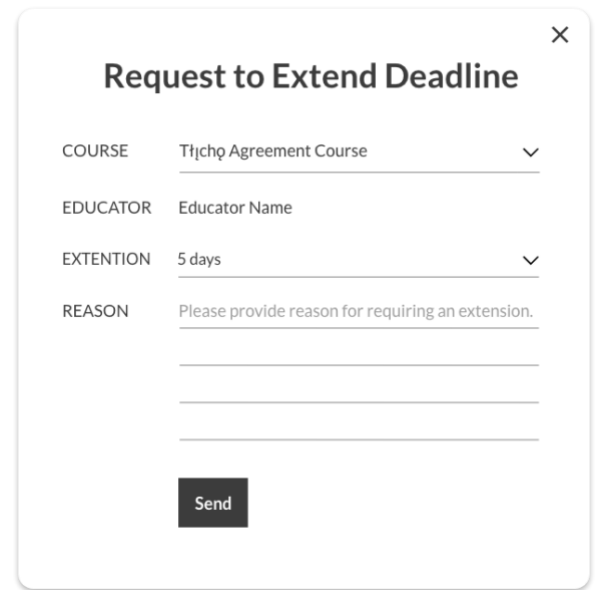
Figure 57: Extend Deadline, Medium Fidelity
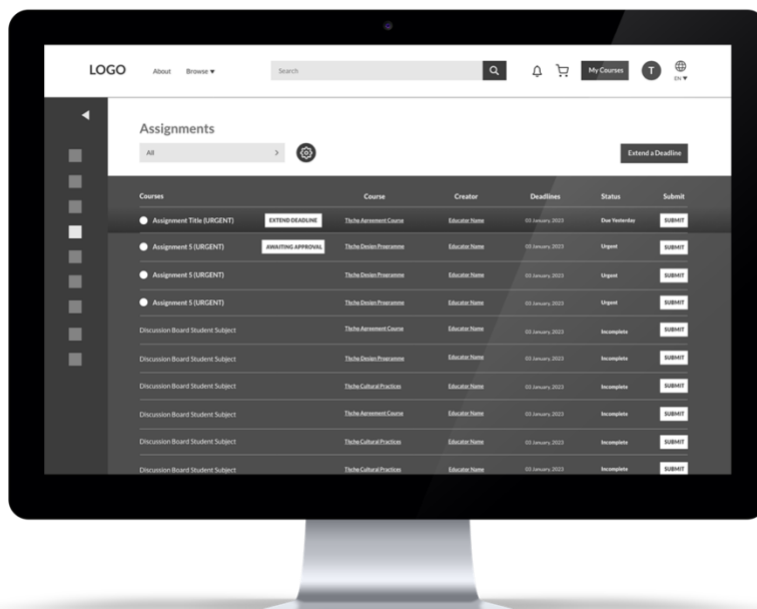
Figure 58: Assignments, Medium Fidelity

Figure 59: Submit Assignment, Medium Fidelity
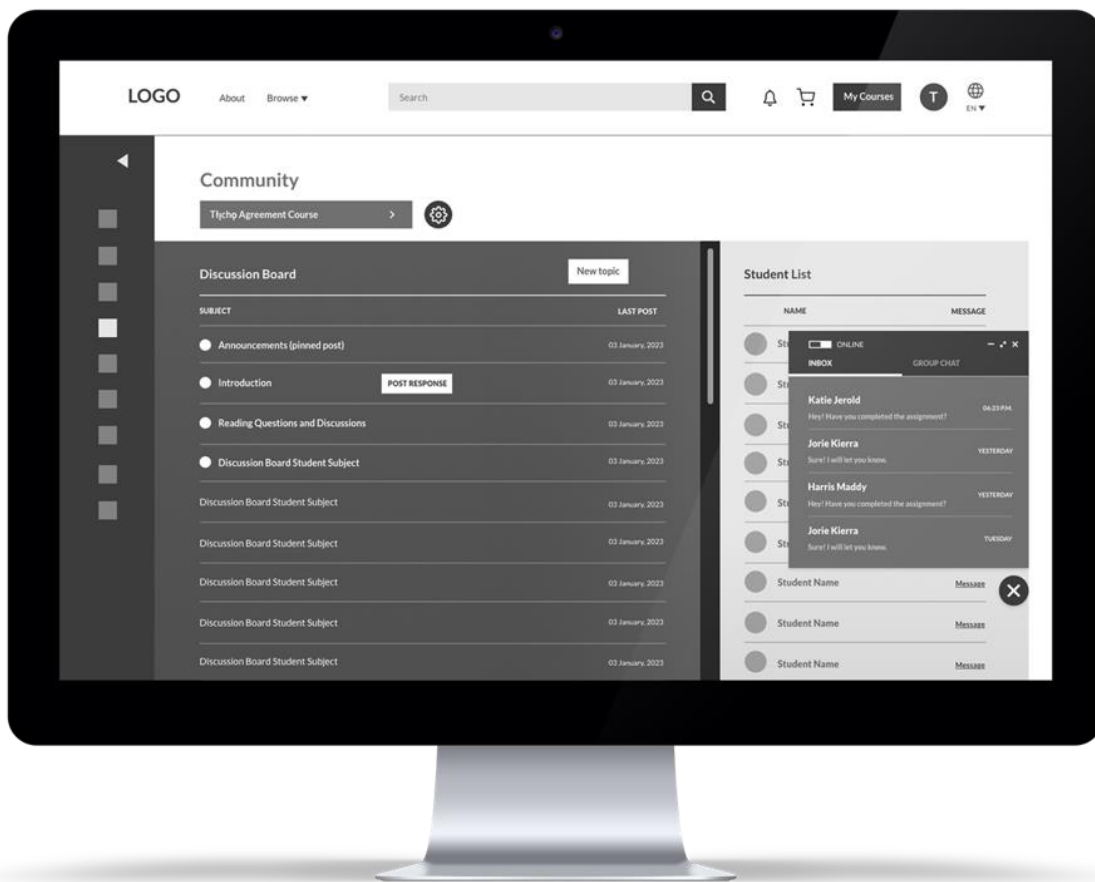
Figure 60: Community, Medium Fidelity
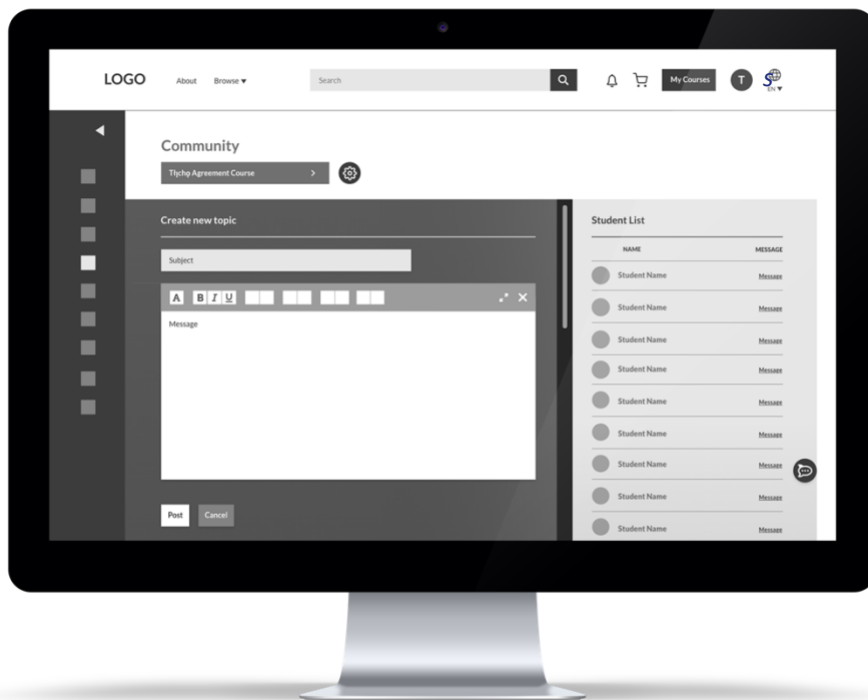
Figure 61: Discussion Board Post, Medium Fidelity
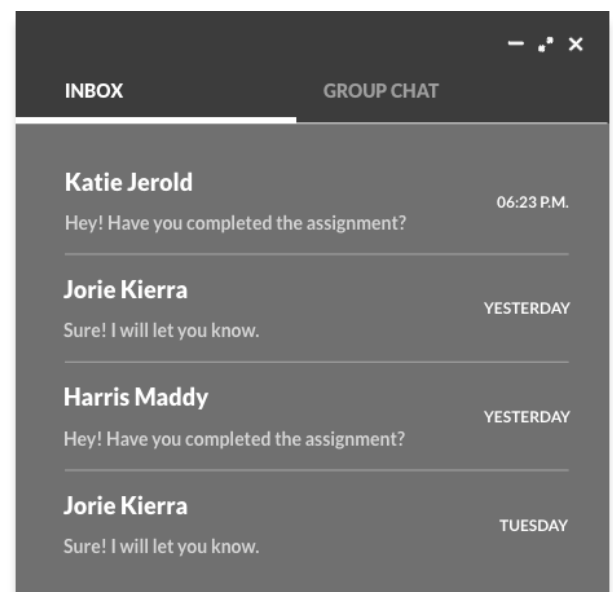
Figure 62: Chat Interface, Medium Fidelity
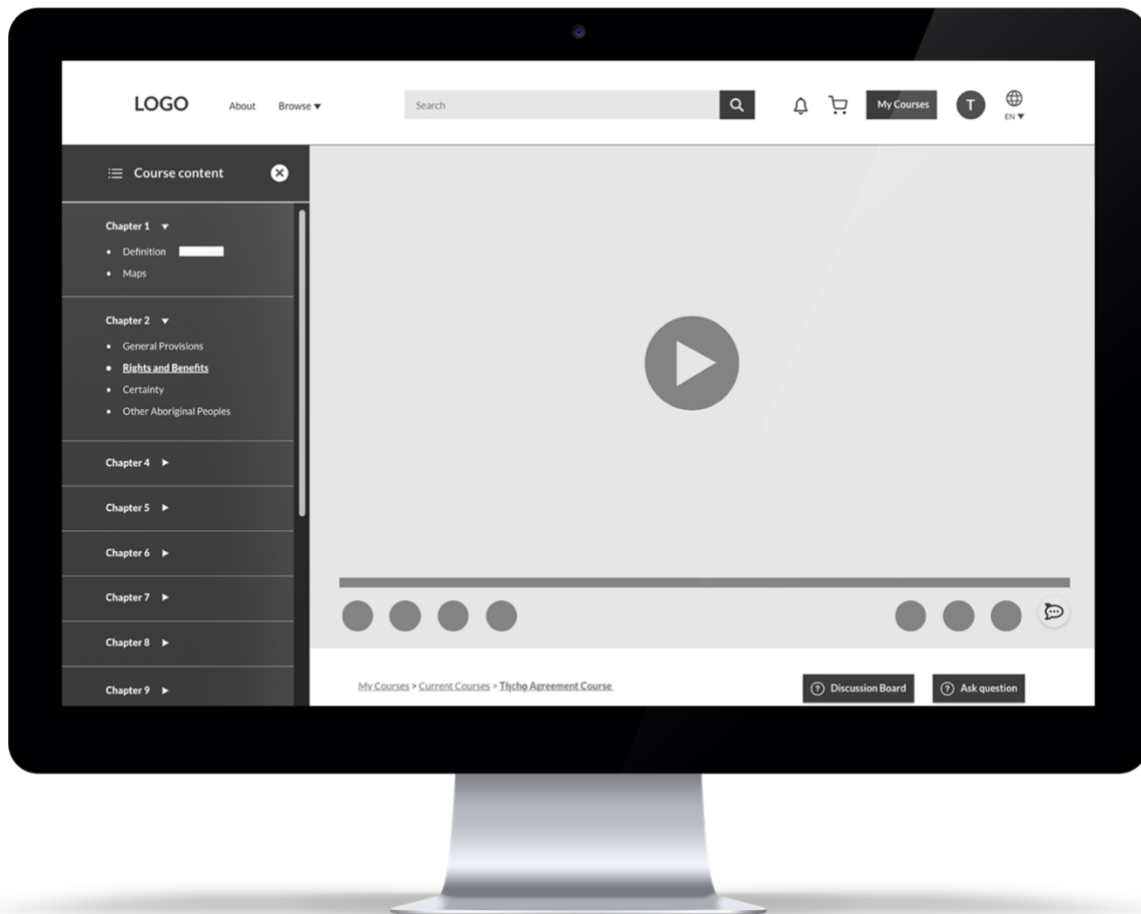
Figure 63: Course LMS, Medium Fidelity
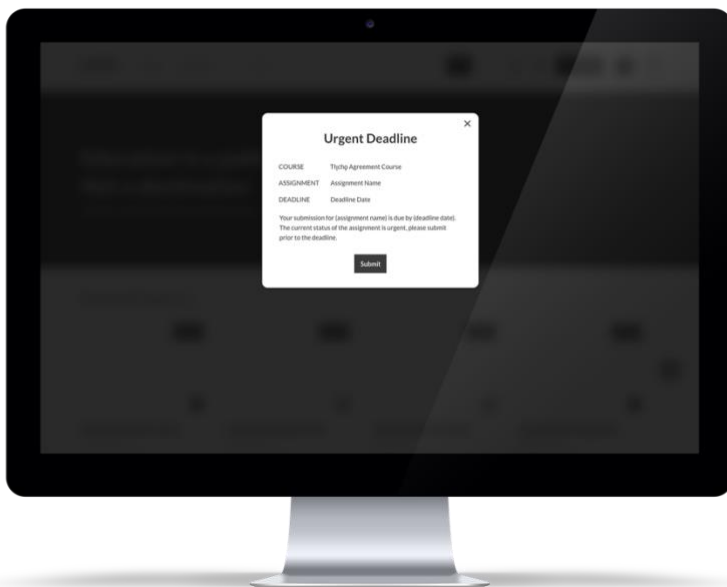
Figure 64: Notification 1, Medium Fidelity

Figure 65: Notification 2, Medium Fidelity

3.4.6 High-Fidelity Design Interface Alternatives:

The primary purpose of *design phase 2* involves testing the medium fidelity interfaces. However, prior to designing, We must do an initial test of the preference of typeface, icons and colour palette. I tested this by creating four high-fidelity digital mockups with different design directions. Each interface features differing brand values ranging from very traditional to a more modern look to help target various audiences. The previous user testing session told us they hoped the website could reach a wider audience. However, I did not know if they wanted this platform to follow existing brand guidelines from other components offered by the Tłı̨chǫ government.

Furthermore, I did not know how traditional or modern they wanted the website to be. This test aimed to find answers to these and gain feedback and suggestions on what they would like to see. Narrowing on a detailed glimpse at the early stages helps reduce the number of changes to be made in the future.

The following are the basic design elements that are showcased and tested:

Typography

Montserrat	Lato
ABCDEFGHIJKLM NOPQRSTUVWXYZ	ABCDEFGHIJKLM NOPQRSTUVWXYZ
abcdefghijklm nopqrstuvwxyz	abcdefghijklm nopqrstuvwxyz
ABCDEFGHIJKLM NOPQRSTUVWXYZ	**ABCDEFGHIJKLM NOPQRSTUVWXYZ**
abcdefghijklm nopqrstuvwxyz	**abcdefghijklm nopqrstuvwxyz**

Figure 66: Typeface options

1) Typography Comparisons:

Clear communication with a suitable typeface in a readable size is crucial for *accessibility* and a compelling user experience. Since the website needed to be *bilingual*, we needed a typeface that would work in English and Dogrib. Unfortunately, no typeface currently (2022) translates all the accents in Dogrib perfectly. *Montserrat and Lato* are among the few typefaces that translate Dogrib well, and we will be testing them both.

2) Colour Palette Comparisons:

Colours are essential tools that help set the brand tone of the website and attract users. Colours can express and affect emotion, increase usability and communicate information without words. Finding the right combination of colours can support your user experience. (Gordon, 2021)

Colours mean different things to different people. I wanted the visuals to connect with the Tłįchǫ for this project. The website needed to feel like it belonged to them rather than creating a design that did not represent them. Selecting the right colours was a vital part of this process since it is one of the first design elements to draw the user's attention.

Figure 67: Tłįchǫ Flag (The Tłįchǫ Flag, n.d.)

The Tłįchǫ flag embodies the strength and unity of the communities *(designed by James Wah-shee).* The flag was inspired by Chief Monfwi's

words*, "As long as the sun rises, the river flows, and the land does not move, we will not be restricted from our way of life."* The navy blue reflects the Tłı̨chǫ territory, with the yellow sun and north star representing a new day and a new era for the Tłı̨chǫ (The Tłı̨chǫ Flag, n.d.).

Tłı̨chǫ people have a strong connection to these colours; hence it was essential to create a colour palette that represented those colours *(Blue, Yellow).* Other colour palettes took inspiration from the flag to combine one colour from the flag with new colours to create something familiar but different *(Blue, Purple/ Green, Yellow / Orange, Blue).* It was essential to test these colour palettes before implementation.

Colour Options

PRIMARY COLOUR	PRIMARY COLOUR	PRIMARY COLOUR	PRIMARY COLOUR
#25317B	#25317B	#C18F4B	#E85A4F
SECONDARY COLOUR	**SECONDARY COLOUR**	**SECONDARY COLOUR**	**SECONDARY COLOUR**
#553D67	#FCC52E	#295186	#25317B
BODY COPY FONT	**BODY COPY FONT**	**SECONDARY COLOUR**	**SECONDARY COLOUR**
#3C3C3C	#3C3C3C	#94CEBC	#FFFDF5
		BODY COPY FONT	**BODY COPY FONT**
		#3C3C3C	#3C3C3C

Figure 68: Colour palette options

3) **Symbolism:**

The website must incorporate visual elements that connects with Tłı̨chǫ culture and people. Students and Teachers must feel a sense of belonging to the website, rather than creating a generic look. We can create visual cues by using design elements such as; *illustrations of beaded patterns and icons* from the flag.

The Tłı̨chǫ are famous for their beaded jewellery, clothing and products. The mockups will feature creative solutions for incorporating different beaded patterns into the website. Some websites will also feature the icon of a teepee from the Tłı̨chǫ flag. During the test, the participants were asked if they preferred a modern or traditional look. The icons, patterns and designs will be evaluated during the user testing session.

Figure 69: Tłı̨chǫ Beaded product (Beaded Earrings on Moosehide, n.d.).

4) Identity (Logotype):

The *logo or identity* you create is the first impression you give users. The identity must represent the platform's values through compelling visual symbolism. *Creating an effective identity system* is essential to have *buy-in* from students, which is a concern T.Lim had stated (Figure). At this point, we did not confirm a name for the platform. Hence, the identity systems showcased below feature generic identity systems. Furthermore, the Tłı̨chǫ representatives will be asked suggestions for possible name for the platform. Suitable names will be discussed and brainstormed toward the end of the session

The mockups shared below serve the purpose of showcasing distinct design elements (typefaces, colours, patterns and identity systems). The purpose of the

variations was to offer participants choices for the design components they could pick and choose.

Figure 70: Colour Option 1 (2), High Fidelity
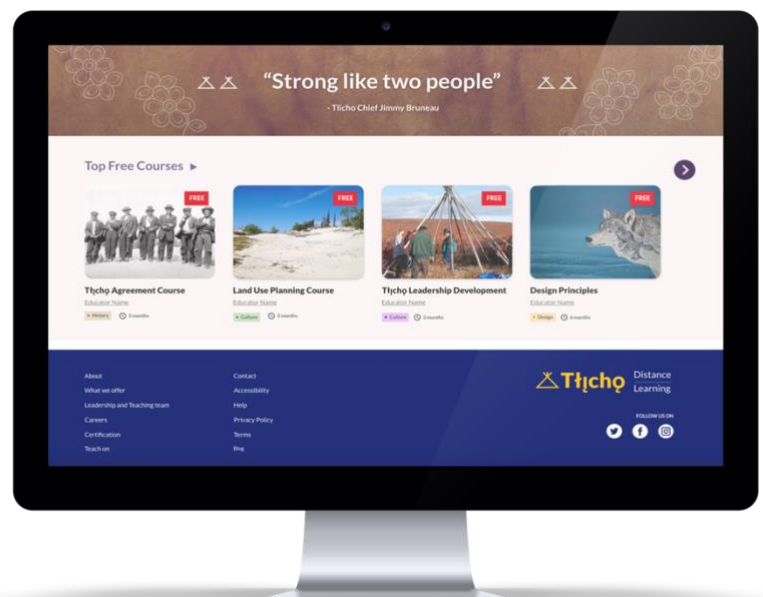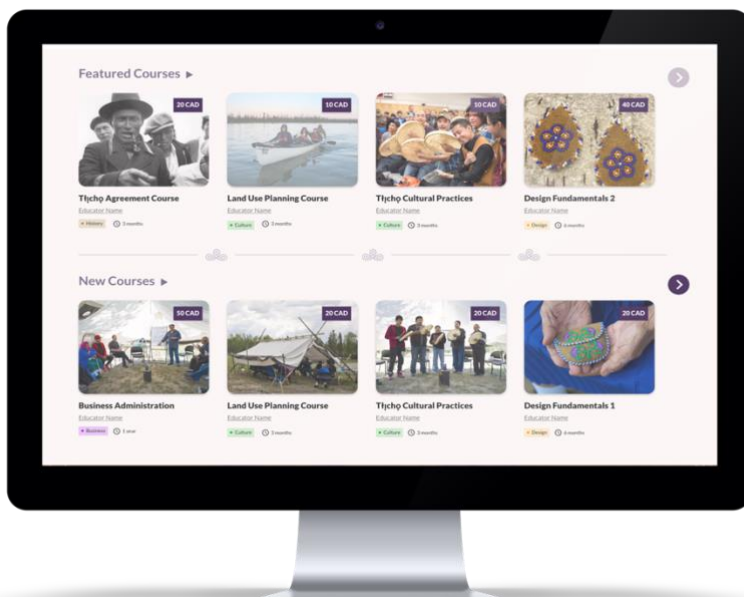
Figure 70: Colour Option 1 (2), High Fidelity   **Figure 71:** Colour Option 1 (3), High Fidelity
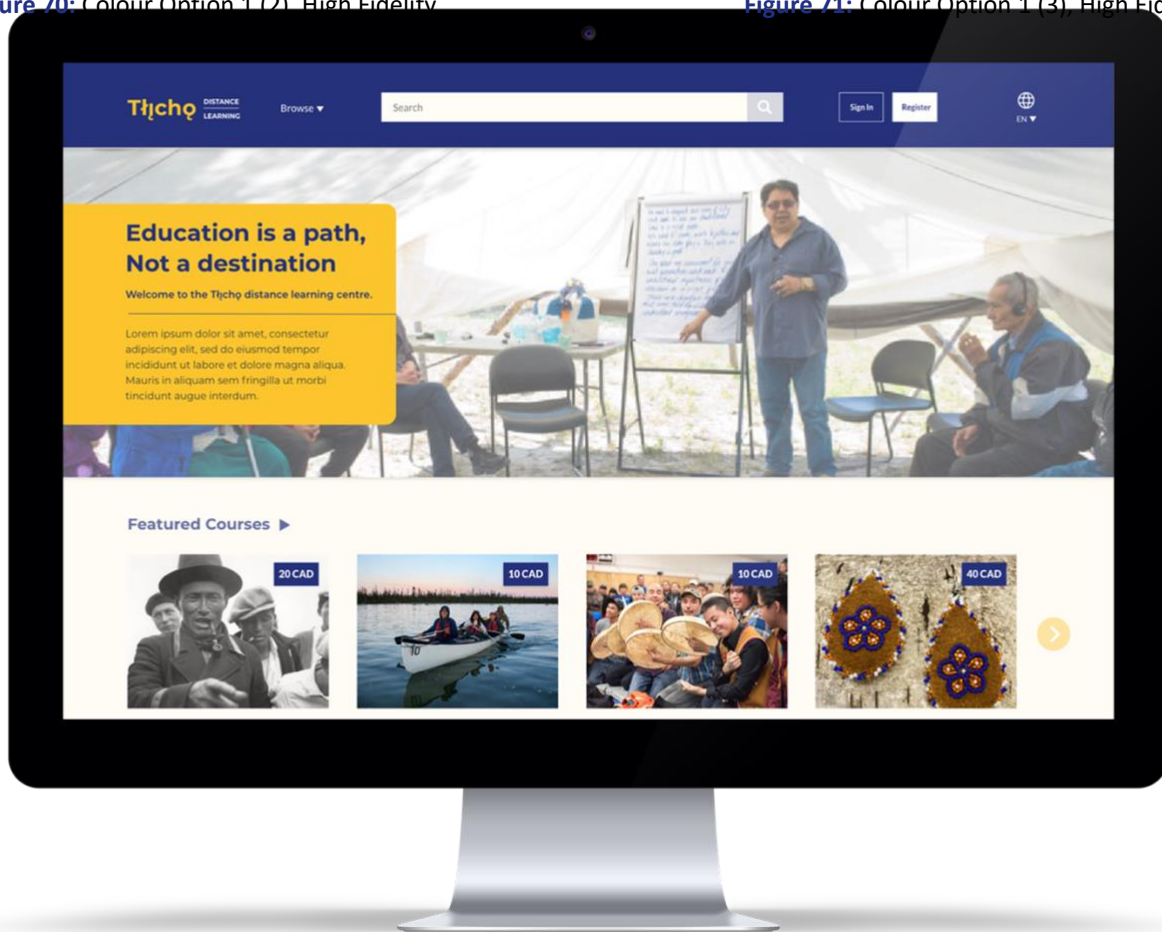
Figure 72: Colour Option 2 (1), High Fidelity
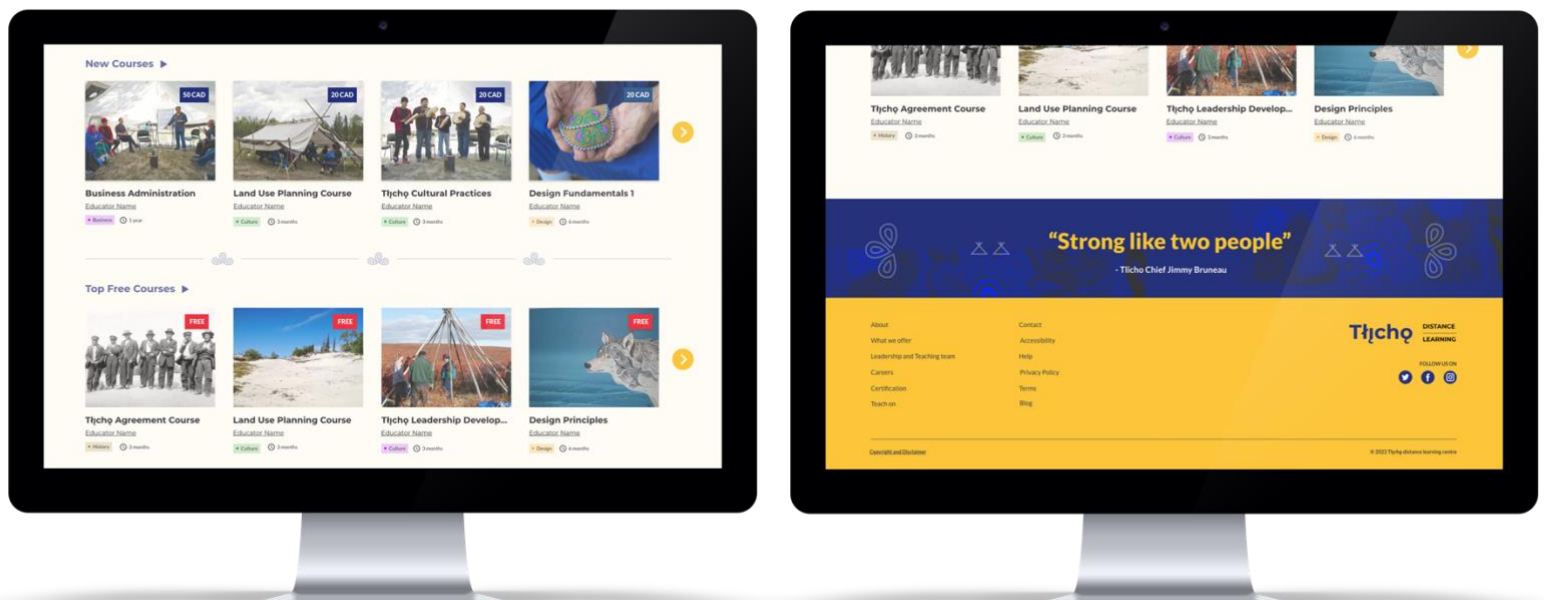
Figure 73: Colour Option 2 (2), High Fidelity   **Figure 74:** Colour Option 2 (3), High Fidelity
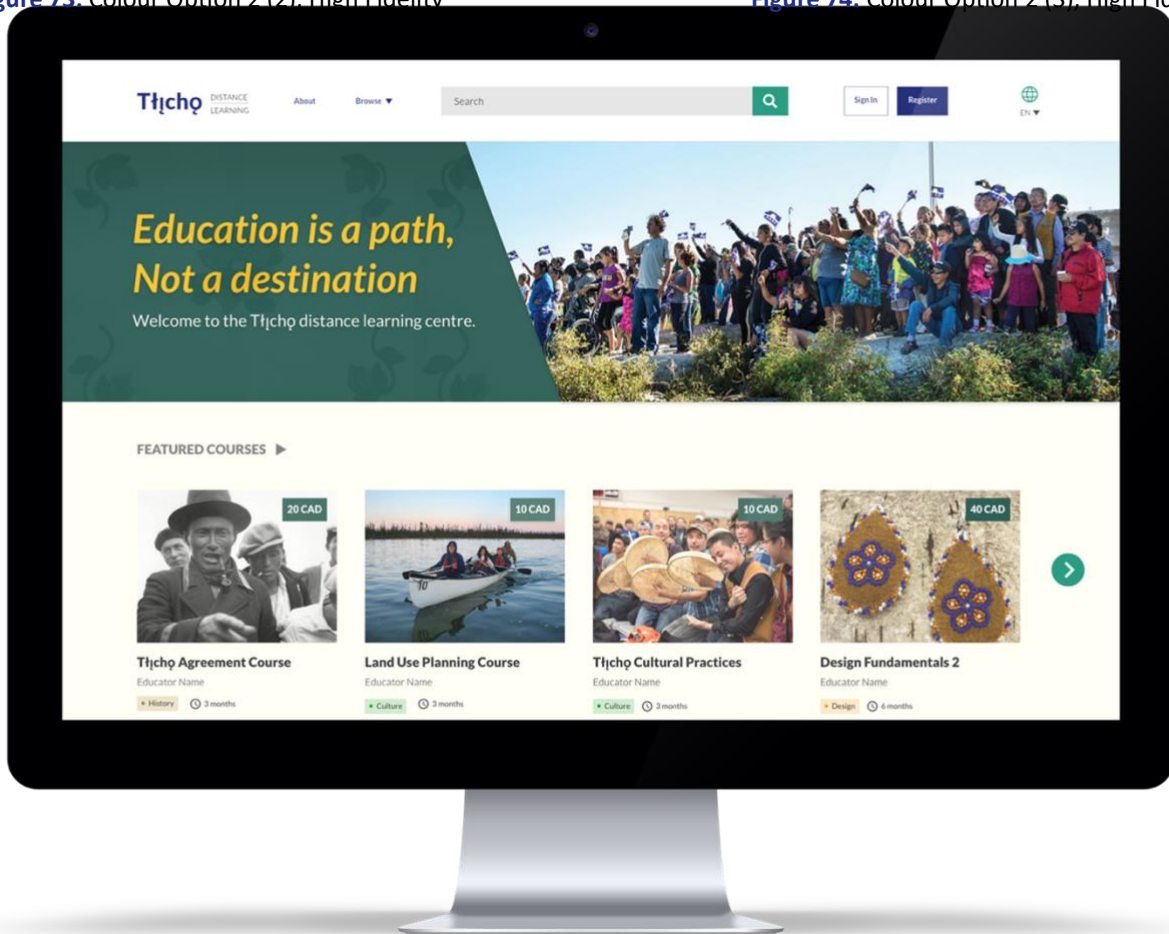
Figure 75: Colour Option 3 (1), High Fidelity
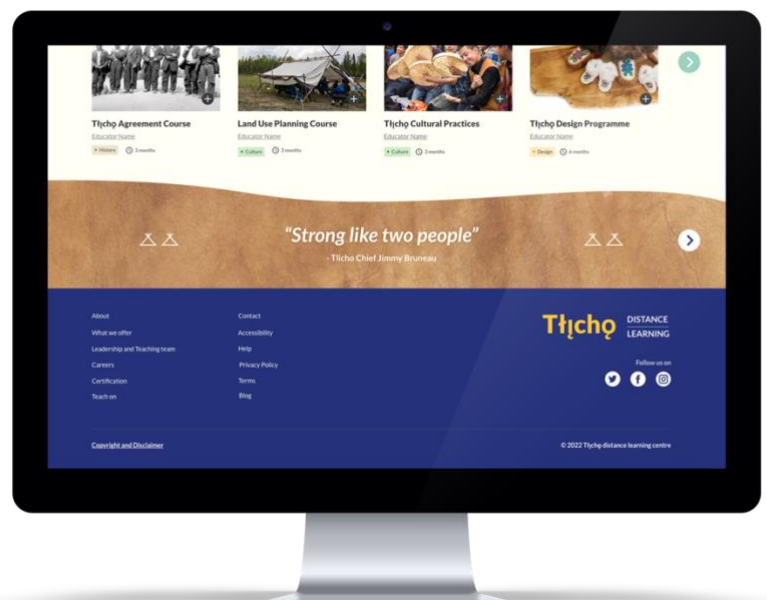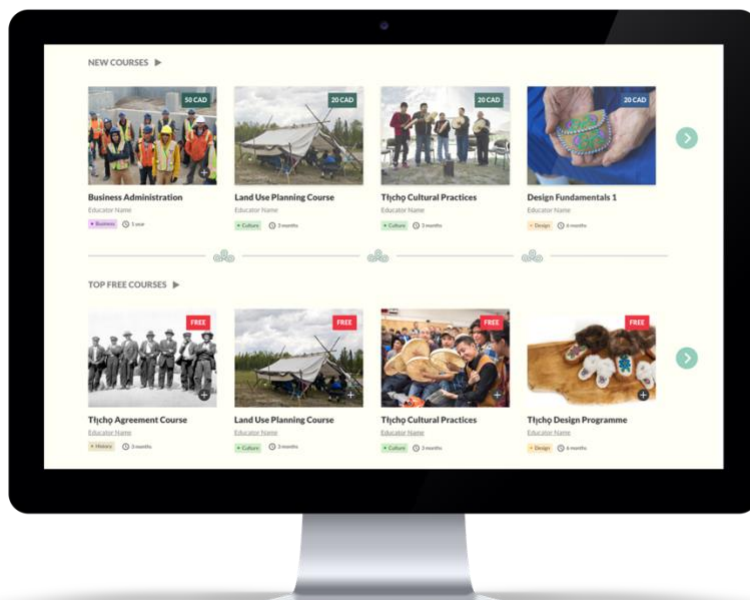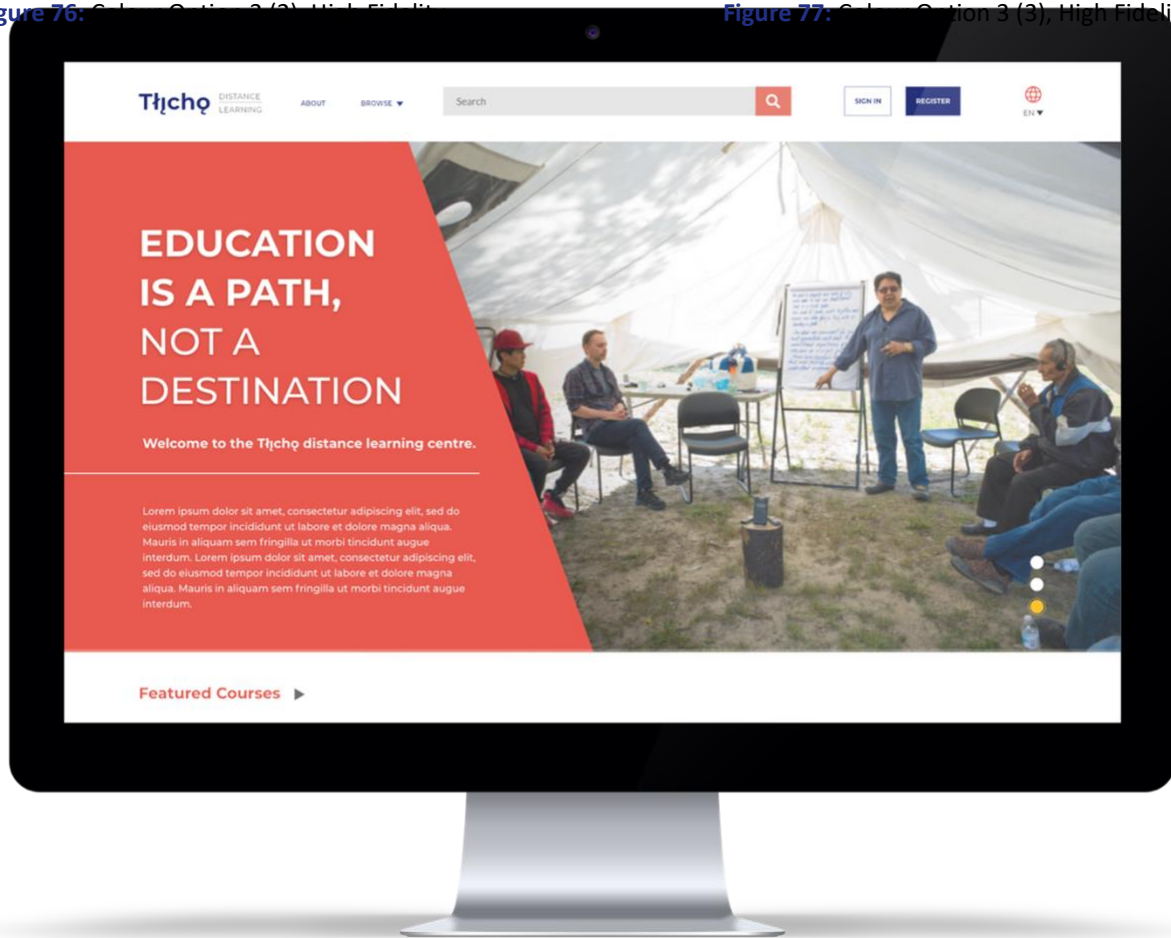
Figure 78: Colour Option 4 (1), High Fidelity
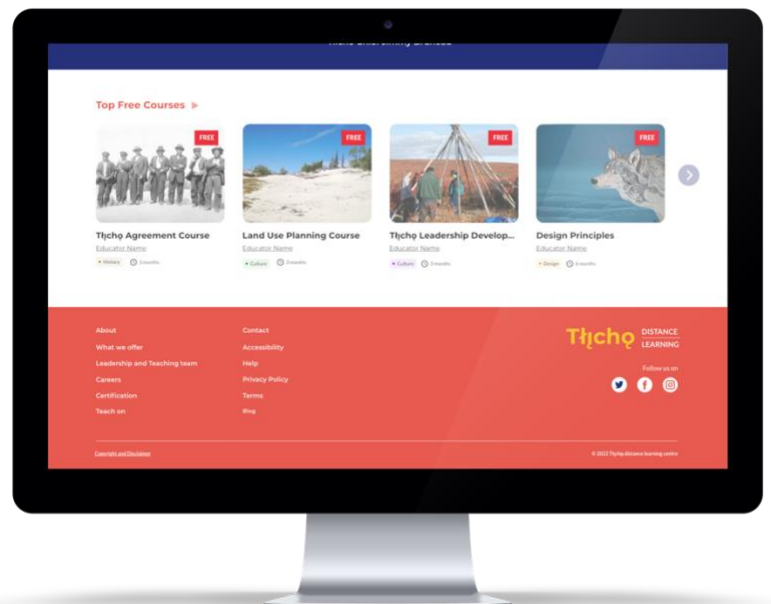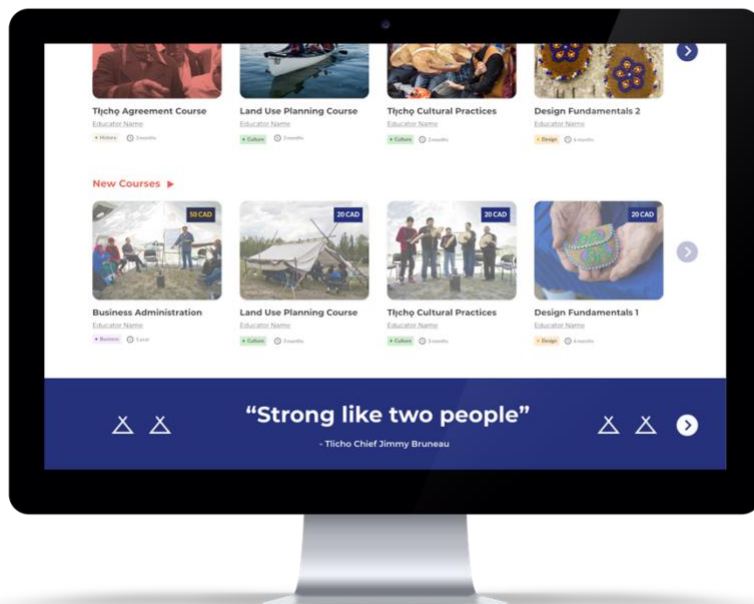
Figure 79: Colour Option 4 (2)**,** High Fidelity   **Figure 80:** Colour Option 4 (3)**,** High Fidelity

3.4.7   Design Phase 2: Data Analysis

This user testing featured the first designed solution for the participants. The overall reaction from the participants was highly positive. They offered a few recommendations on the functionality they wanted to see, but they did not want too many alterations. The participants did not provide much input on the high-fidelity mockups. This user testing featured the first designed solution for the participants. The overall reaction from the participants was highly positive. The participants preferred their (Tłı̨chǫ Government) designer to review the prototypes and offer feedback.

Table 1: Summary of Medium fidelity User testing findings: This table features insights and feedback on the medium fidelity mockups from the participants.

Comments by Participants	Recommendations *(Based on insights received)*
Participant G Marion stated that she would prefer a registration process for courses, rather than offering people free access to all courses. She would want users to register per course despite having a registered account. **P Turner** stated the value of vetting students who apply for courses. They would like to know exactly who is enrolling for what class, and what they have completed. She would want that data to be collected in the backend.	**Registration for courses:** In the medium fidelity prototype, users were able to access education by either buying them, or access them freely without any registration. The idea was to only involve registration for higher level courses. However, G Marion states an important issue to create further moderation prior to letting everyone have access to any course they want.

G Marion would like for the registration to require additional vetting by a person. She would want to confirm if the users are Tłı̨chǫ an confirm the data they shared.	**Comprehensive registration for accounts**: For the registration process, I added a section that would ask users if they are Tłı̨chǫ citizens or not. The purpose for this question was to offer the possibility of offering different content and pricing based on the user. G Marion seemed to love that idea, but she would want a more compressive registration process to evaluate users. **Privacy:** Observing their comments gave me the insight that privacy was a crucial a factor.
G Marion stated that she would like to track student skill development and keep in touch with them. She would like the website and the teachers to have data to track their students, progress and provide career support to students. The whole point of this program is about skill development. She would also like for students to provide feedback, evaluation and a review of the module that they took. She would like to know if they would be interested in taking the other courses? And what value would it be for them to take these courses. The purpose of knowing gaining this data is verify and improve the sustainability, eligibility, requirements	**Analytics and tracking progress:** The website will need tom include elements of tracking progress and data collection for the users, teachers and the website. Data is crucial in order to track what works and what does not. However, a factor to consider is the privacy of the users. We need to be aware of the rights of users and they should be aware of what data is tracked and what is not. The following will not be explored in this thesis, but it should be explored deeply. **Gamification of learning:** The website will feature some data collection as a means to gamify learning. Students could receive points to level up their account the more courses they complete. Providing incentives to students after every level can make the experience more enjoyable, in addition to giving students a further motivation to progress.

and process of the courses. Lastly, data is crucial to continue gaining funding for this project. She would require data to show the Tłı̨chǫ Government the importance, value and effectiveness of this distance learning model to continue funding.

G Marion stated the requirement of some sort of **dashboard** which provides stats, or generates reports per individual, just so they can follow up with anything that is needed from the client.

Suggested courses:
G Marion highlights the importance of having student to explore new courses. We could do by offering students a *"suggested course"* section in the homepage that recommends courses to students based on their stated interests in their registration, along with the courses they have completed.

Collecting feedback:
The website will need to collect feedback for completed courses, in order to receive data and reviews for each course. There needs to be data collected that allows teachers to improve their courses and for the website to include their platform.

G Marion asked if it was possible for the platform to have more capabilities than just online learning modules. She would like to users to register for in-person learning events from the website.

Events page:
The website will now also feature an events page that will support the online learning experience with in-person seminars. The website will allow Tłı̨chǫ students to explore the various events along with registering for them.

G Marion highlighted her appreciation for the structure and visuals created. She liked the look, design and the readability of the website. She mentioned the importance of keeping the website very visual for Tłı̨chǫ people, through the use of infographics that are simple to follow.

Visual design:
A primary factor highlighted by G Marion, was the value of having the website visual. She appreciated the ease of navigation, use of icons and space for visuals. I was also able to observe the importance of symbolism in the Tłı̨chǫ culture.

G Marion mentioned she liked the overall application and the direction of the design, however, she felt that they would need a good visual instruction manual for teachers on how to create and use the website. Teachers would need to know how to upload, since not everyone is very comfortable using computers.	**Designing an Instruction manual** Designing a user friendly website with good navigation and engaging visuals is crucial for an effective user experience. However, teachers will require additional support to help them create and use the platform. This will be mentioned as a Future *Recommendation (Section 4.3)* since educator access of the website will not be completed.
G Marion highlighted her appreciation for the medium fidelity prototype and looked forward to the further development. She did not have any problems with the layout so far. **P Turner** compared the website with her experience studying her masters online. She finds the website created more accessible, simpler and better. She especially liked the effective navigation since she did not feel lost. She hopes the website would continue to feel simple and straightforward.	**Straightforward layout and navigation:** The design must continue to stay simple, despite the addition of pictures, colours, icons and patterns. **Creating alternative navigation paths:** During the user testing session, I observed the website to appear linear. Each task had a single navigation route, which can be restrictive for users. Creating a small amount of redundancy in navigational paths can help improve the users experience with navigation. (Nielsen, 2002) For example: Users currently need to go through the following screens in order to access courses they are enrolled in. *Home > My Course, Current Courses> Click the course they want.* We could in addition provide users a "Current Courses" section in the homepage. Users can then find the course they are enrolled in with one click. We can include multiple navigational pathways for specific pages without over doing it.

P Turner suggested we use *"Learning"* over the use of *"Education"*. **G Marion** agreed with P Turner and also suggested we could use the Tłįchǫ word for learning.	**Platform Identity (Title of the website):** The high fidelity mockups have a logo for *"Tłįchǫ dstance learning center"*, as a placeholder. **Hoghàdeetǫ** is the Tłįchǫ word for learn, teach oneself (Dogrib Dictionary, 1996). Using the Tłįchǫ word for "Learning" may be more difficult for some English users to understand or remember. However, it requires users to instantly learn a Tłįchǫ word for learning which seems appropriate.

Table 4: Summary of User Testing Session 2 Findings

Table 2: Summary of High fidelity Post User testing findings: The participants were given a link to the prototype to provide feedback. This table offers a comprehensive review and recommendation post user testing by the designer of the Tłįchǫ Government. *(Email detailing changes is shared in the appendix).*

Insights and feedback from the Tłįchǫ Government designer	Recommendations *(Based on insights received)*
Create identity options for the website. The logo should have the Tłįchǫ teepee, with *"learning"* in Dogrib. They also suggested that I could use the flag along with the logo. (Tłįchǫ Designer, personal communication, October 13, 2022)	**Identity System**: Creating a strong identity system is crucial to create a strong brand presence on social media. As **T.Lim** mentioned in the previous user testing session, it is important to gain a buy in from the students. Creating an inviting identity system can bring users to the website, along with create a strong symbol for the platform. Different identity systems will be explored and one logo will be featured in the next test.

The Tłı̨chǫ Government designer liked the "Continue course" section, since it allowed students to enroll into their current classes quickly. They encouraged using multiple navigation routes. They also mentioned the value of having the chat feature throughout all the member screens along with a "Online and Offline" option. Students should not feel forced to get notifications.

They highlighted the importance of creating consistency for the thumbnail sizes for all images to reduce redundancy. Lastly, she suggested for the course page to showcase the image of the course to keep it visual.

(Tłı̨chǫ Government designer, personal communication, October 13, 2022)

Multiple Navigation Routes:
The designer liked the concept of multiple navigation routes that I had suggested. I will incorporate that for pages that require them.

Online/Offline option:
The chat function was only available in certain Learning Management System screens. This is a drawback since, users are restricted to talking to their classmates on specific pages. However, including the chat function everywhere may be intrusive and bothersome for some students. Hence, creating the online/offline features allows students to disconnect if they prefer not to communicate.

Thumbnail size:
All images shared will need to continue being proportional in size with one another.

Course Page:
The thumbnail image of the course will be added to the course page.

User interface design: The designer preferred the fourth interface in orange. The slant in the hero section would need to align with the slant in the teepee. Additionally they would like to add four teepee's within the hero image.

Colours: They would like the design to include colours from the Tłı̨chǫ flag *(Blue and yellow).*

High-Fidelity User interface Design:
The design option selected will be implemented for all the screens. The adjustments regarding the slant and using the teepee will be implemented.

Colours:
Blue (Primary colour), Yellow (Secondary Colour) and Red (Secondary colour) will be implemented throughout the layout. More colours will be used to support these three colours.

Patterns: Incorporate the **s**pecific bead patterns shared within the website. The patterns should be outlined as circles. **Hero Section:** Three pictures should be included (*Past, present and future students)* to show different generations. (Tłįchǫ Government designer, personal communication, October 13, 2022)	**Bead Patterns:** They liked the incorporation of the bead patterns within the designs, but adjustments will be made on the style and pattern used.
The Tłįchǫ Government designer stated that the footer should include the *"Red section of footer"* from the Tłįchǫ website. The purpose would be to create a relationship between all Tłįchǫ websites. Typeface: They suggested using *"Lato"* throughout the website. (Tłįchǫ Government designer, personal communication, October 13, 2022)	**Building a relationship with the primary Tłįchǫ websites.** The suggestion to incorporate the section from the original website will be included. More design elements in the future could be included from the main website, to create a symbiotic relationship between each of them. **Typeface:** The website will feature the humanist typeface *"Lato".*

Table 5: Summary High-Fidelity Design Interface Alternatives

Conclusion:

Design phase 2 involved compiling and visualizing all the features and functionality highlighted from the design personas, with the implementation of all the suggestions and feedback provided by the participants in the first user testing session. Finally, the website's skeleton was created with the help of the sitemap and wireframes into medium-fidelity mockups for numerous screens.

The feedback was divided into two tables for this phase. The first table highlights the insights provided by the participants for the medium-fidelity mockups. The

participants helped provide valuable insights and clarification on the direction of the design, which were very positive. The primary design adjustments highlighted were creating *multiple navigational routes, an events page, gamification and a more developed registration process*. The participants did not provide insight for the high-fidelity mockups, as they preferred to have their designer provide feedback for the design decisions.

The Tłı̨chǫ designer provided valuable insights on the prototype shared. Their feedback provided a clear design direction for the platform. We finalized the *platform's name, typeface, colours, patterns and design template* for the website. Based on the suggestions and feedback, the design will be functional and modern, supported by minimal visuals connecting with the Tłı̨chǫ people.

"G Marion and P Turner shared their appreciation for the visuals, layout, and structure created. P Turner preferred the layout of the prototype over her experience studying as a Masters's student." **We must continue prioritizing the user experience despite the inclusion of the design elements such as;** *pictures, patterns, colours and content***.**

View the latest Medium fidelity mockup: **Click here**

3.5 Design Phase 3: User Testing Session (High-Fidelity Distance Learning Prototype)

This section explains the design decisions taken to create a high-fidelity distance learning prototype. The insights, feedback and suggestions offered in the previous sections will be implemented in the designs created. A prototype is an early sample of the final product, which will require further testing. The design process begins by developing the *design guidelines* for the platform and incorporating them within the interface. High-fidelity mockups will then be created, where all the data provided will be

implemented and context will be provided on the primary screens. The final prototype will be tested, and changes the final changes will be shared.

3.5.1   Design Guidelines

We begin the design process by establishing a series of design guidelines that help with maintaining visual and functional consistency across the entire interface.

a) **Colour Palette:** The previous section presented various colour combinations in the high-fidelity mockups presented to the p[participants. Based on the testing *(Table 4 & 5),* the Tłı̨chǫ preferred the colours *Navy blue, Yellow and Red*. These colours are from the Tłı̨chǫ flag *(Figure 67)* and embody the strength and unity of their people.

The primary colour *navy blue* represents *calmness, trust and stability*. Communicating trust and stability is vital for a platform providing education to students. Navy blue also works well for its calming and *less attention-seeking* nature, which is helps in keeping the design more subtle and less overwhelming. (Project stability with stately navy blue, n.d.).

The secondary colour *yellow* represents positive feelings such as; *joy, happiness and hope*. Yellow works excellent with the primary colour (Blue), as it can *grab attention, highlighting valuable information and providing contrast*, which is vital for *accessibility*. Additionally, yellow boosts *confidence and curiosity*, which is essential for an effective learning experience. (The meaning of yellow, n.d.). The second secondary colour, red symbolizes passion and strength. This colour is used sparingly to highlight specific information and works primarily as an accent colour on top of images.

PRIMARY COLOUR

#25317B

SUPPORTING COLOUR

#08134E

BODY COPY (ACTIVE)

#3C3C3C

SECONDARY COLOUR

#FCC52E

SUPPORTING COLOUR

#E2E5F2

BODY COPY (PASSIVE)

#3C3C3C

SECONDARY COLOUR

#D12A37

Figure 81: Hoghàdeetǫ colour palette

b) **Identity Design:** Identity or a logo helps establish a connection between the platform and a potential user by representing the platform's *identity or philosophy*. An identity serves as the identifier *conceptually, stylistically and symbolically*. A practical and clever identity helps create a strong first impression for potential users. (Bokhua, 2022).

hoghàdeetǫ: learn, teach oneself
hoghàetǫǫ kò: classroom
hoghàgoetǫǫ: education
hoghàyeehtǫ: teach

Figure 82: Tłįchǫ word for "learn" in dictionary. (Dogrib Dictionary, 1996)

During the previous testing *(Table 4), G Marion* recommended we use the Tłįchǫ word for learning. *"Hoghàdeetǫ"* is a clever title for the platform since it requires users to learn a Tłįchǫ word instantly. A logo representing this platform would need to include a basic letterform to familiarize users with the name *hoghàdeetǫ* and a pictogram icon to visually communicate the platform's function. Symbolism was identified as a powerful tool to

communicate within the Tłįchǫ. Hence, the pictogram icon will feature

a teepee from the Tłįchǫ flag, as recommended by the *Tłįchǫ Designer*

(Table 5) in combination with a symbol to represent learning.

Figure 83: Pictogram   **Figure 84:** Letterform

Figure 85: Identity design for hoghàdeetǫ (in White)

Figure 86: Identity design for hoghàdeetǫ

c) **Typography:**

Different typefaces are appropriate in different situations, and choosing the

suitable typeface is essential for effective communication. A typeface must

align with the communication and design philosophy of the entire interface.

Two typefaces (Montserrat and Lato) were tested *(Table 5),* and *Lato* was

selected as the preferred option. *Lato* is a *humanist sans-serif typeface*,

drawing inspiration from *the old type*. The humanist aesthetic fits with the visuals of the interface by being subtle and less attention seeking.

Lato

ABCDEFGHIJKLM
NOPQRSTUVWXYZ

abcdefghijklm
nopqrstuvwxyz

**ABCDEFGHIJKLM
NOPQRSTUVWXYZ**

**abcdefghijklm
nopqrstuvwxyz**

Figure 87: Lato typeface   **Figure 88:** Teepee Icon

d) Visual components

1. **Symbol:** The user testing sessions showed the value of visuals and symbolism as powerful tools to communicate emotion and culture within the Tłįchǫ. We must create and use visual cues that connect with the Tłįchǫ people within the interface. For example, the *Tłįchǫ designer (Table 5)* recommended incorporating four teepees *(Figure 88)* from the Tłįchǫ flag *(Figure 66)* within the hero banner. The four teepees represent *the unity* between the four communities within the Tłįchǫ.

2. **Pattern:** Tłįchǫ is famous for its *beaded jewellery, clothing and products*. The test proved they liked incorporating beaded patterns as an illustration within the website. The *Tłįchǫ designer* shared a particular pattern from *Figure 89*, which they wanted to include as an illustration *(Figure 90)*.

Figure 89: Tłı̨chǫ beaded bag

Figure 90: Tłı̨chǫ beaded pattern

Icons: The interface displays various *icons (Figure 91)* with different functions. Some icons are straightforward and communicate their role. Whereas more complex processes have icons labelled to offer clear communication, supported by an icon that helps provide engagement. Icons need to be visually aligned and consistent.
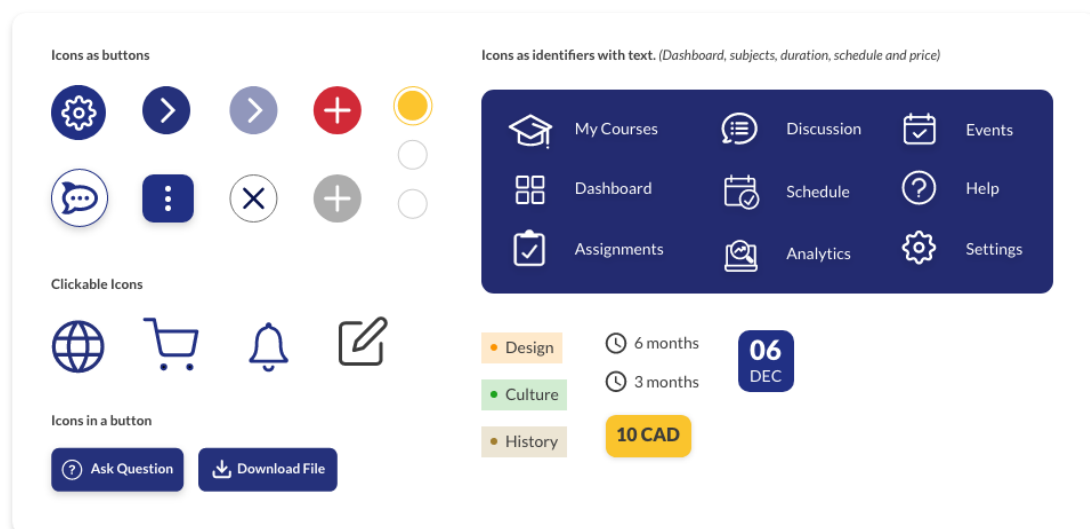
Figure 91: Variety of icons used within the interface.

3.5.2   High-fidelity Distance Learning Prototype

The design process follows a human-centered approach involving a series of iterations with constant testing. This section compiles all the feedback from the previous tests and applies the design guidelines to create a series of high-fidelity interfaces. The following screens will go through the last round of user testing to

collect the participant's final inputs. The final prototype created will be shared at the end of this section, showcasing the blueprint of the website's *structure, function, layout, navigation and visuals*.

Priority is given to the content *"above the fold" (everything visible on the webpage without scrolling).* This includes the "header" and "hero section" from the homepage, which are critical sections since they provides the first impression to the user. Therefore, the content above the fold must provide value and keep users interested enough to scroll or visit additional pages. *"What is visible on the page without requiring action encourages us to scroll."* (Schade, 2015). The primary pages and sections of the website include the following.

a. **Header:** The header serves as the primary navigation for users by connecting all the primary pages. The header is altered based on the type of users accessing the platform. For example, A guest *(Figure 92)* or member *(Figure 93)* access different versions of the header. The header *(Guest access)* allows users to explore courses offered and allow users to register or sign into the website. *Members* have additional access with the inclusion of the LMS *(My courses)*, shopping cart, and notifications. As G *Marion* suggested *(Table 3)* the website is accessible to Dogrib speakers with the *"Change language"* function.

Figure 92: Header (Guest)
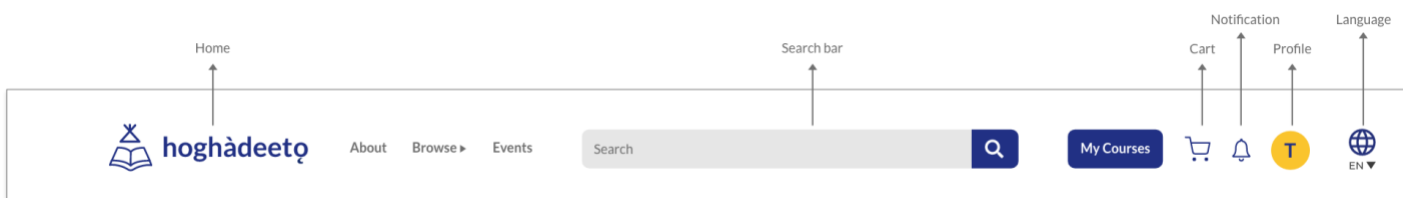
Figure 93: Header (Member)
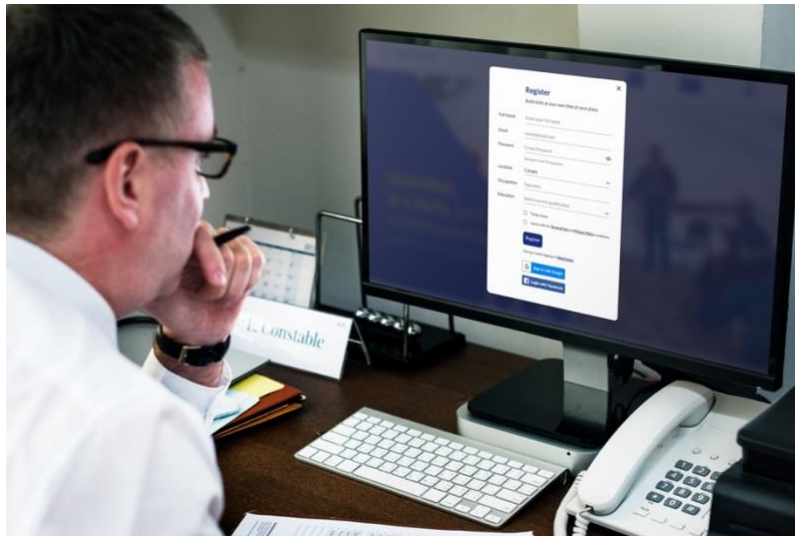
Figure 94: Register

b. **Footer:** The website's footer *(Figure 95)* remains at the bottom of every page. The footer receives less attention since most users spend disproportionately more time at the top of any given screen (Fessenden, 2019). However, the footer provides secondary information that could be vital, such as; *terms of conditions, privacy policy, contact information etc.* While most users may not use this website to find this content, it may be valuable to existing users.
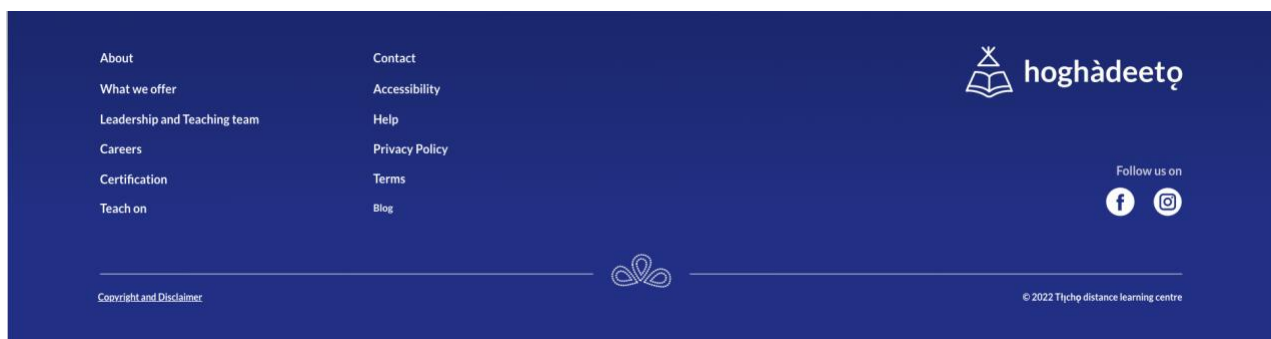
Figure 95: Footer

c. **Home:** Users can access the *"Home"* screen by clicking the logo. The Homepage is the first interface users access when they enter the platform. It displays the *hero section*, which is above the fold. The hero section must communicate the purpose and function of the website instantly. The Tłįchǫ designer

suggested *(Table 5)* showcasing three images that represent the different generations of Tłı̨chǫ students and incorporate the four teepees *(Figure 88)* within the hero banner.

Below the fold, the home screen includes filtered courses which helps users inquire the various courses available immediately. We have included the *Suggested Courses* which offer courses based on members interest taken from the registration. We also include *New courses* and *Top Free Courses,* which offers a different module as suggested by *T.Lim (Table 3)*. This intersection of courses allows the expansion for numerous modules in the future such as; *live courses*.
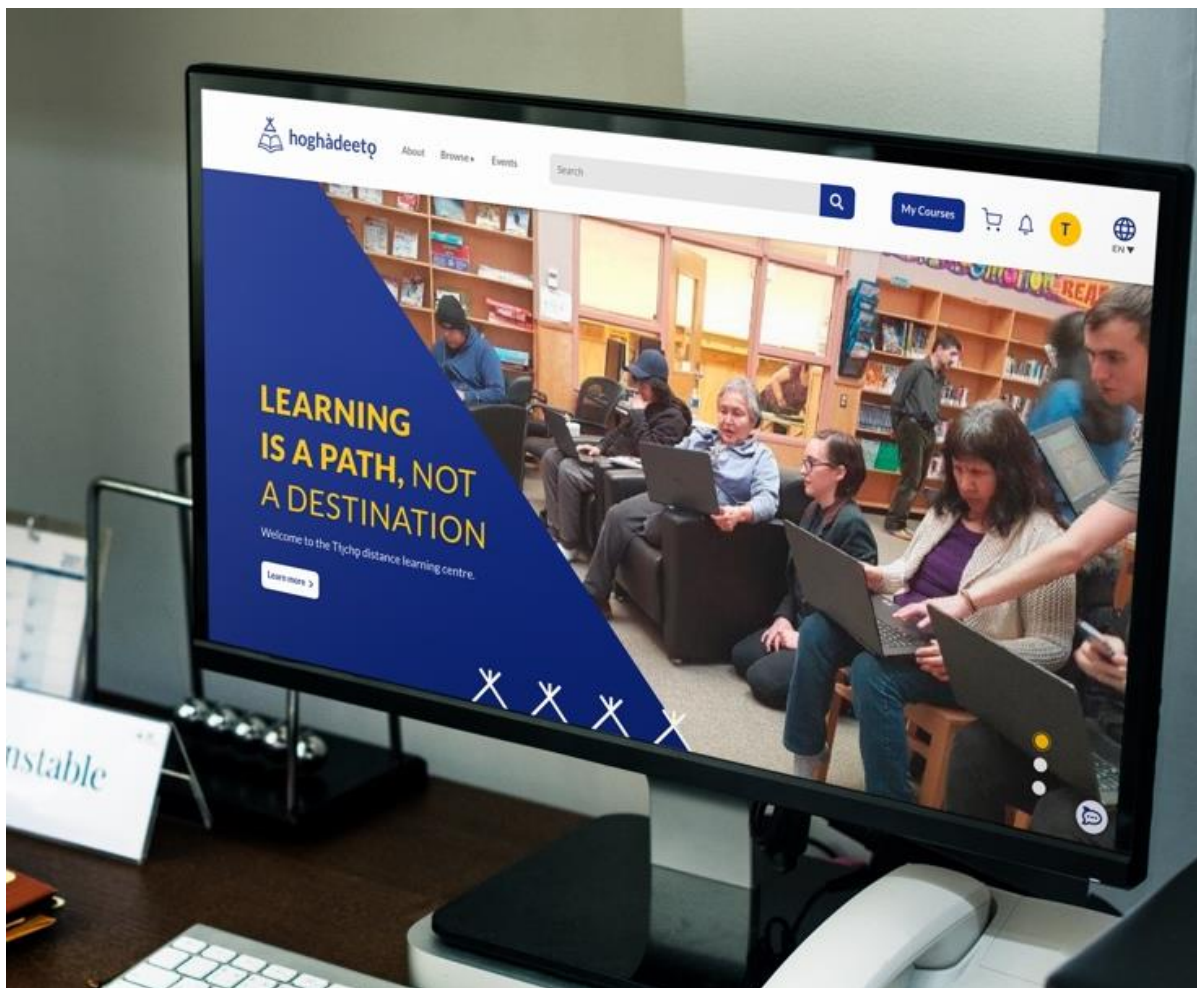
Figure 96: Homepage (Member)

Creating multiple navigation paths
for users in registered courses
(Similar to Netflix)

Suggestion Section (Based on algorithm)

Next (Hover)

Call to Action (CTA)

Using beaded pattern as a divider

Price

Next (Passive)

Using beaded pattern

Saved Courses (Passive)

Section from Tlicho government website

Footer
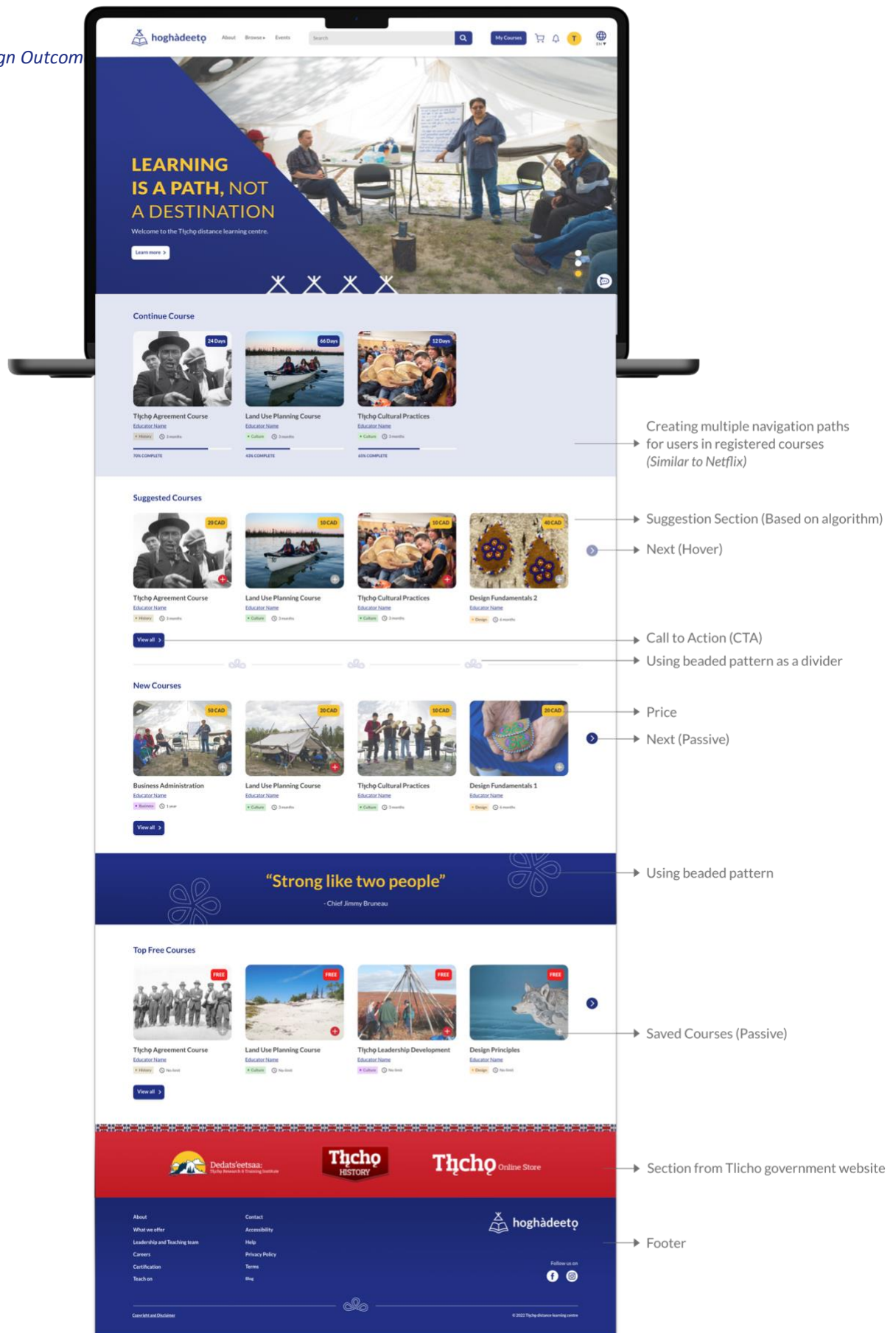
Figure 97: Homepage (Existing User)
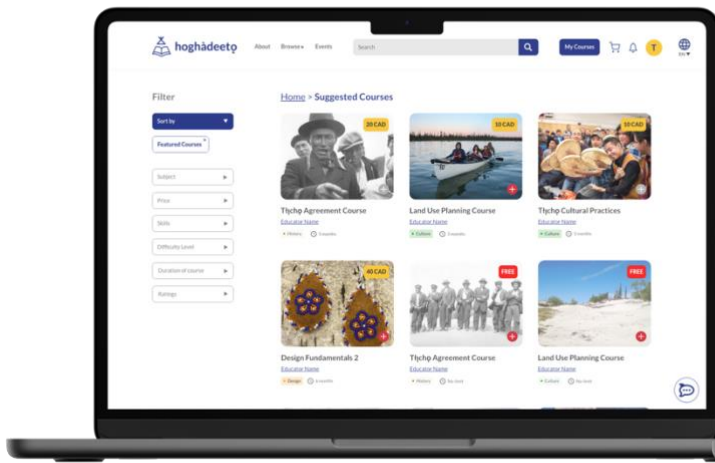
Figure 98: Suggested Courses
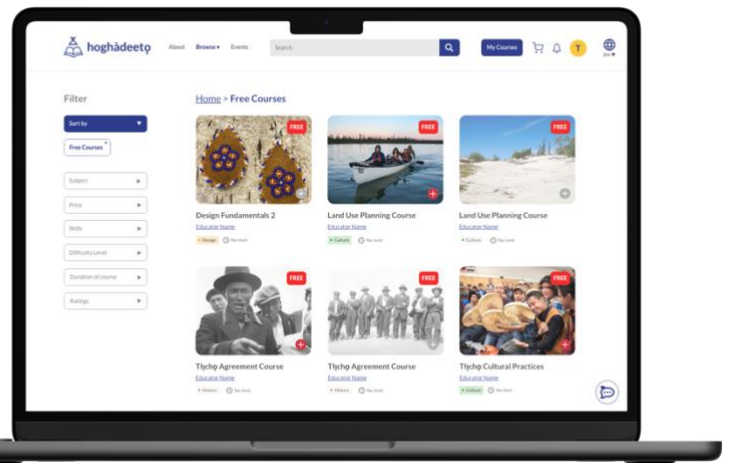
Figure 99: Browse Courses
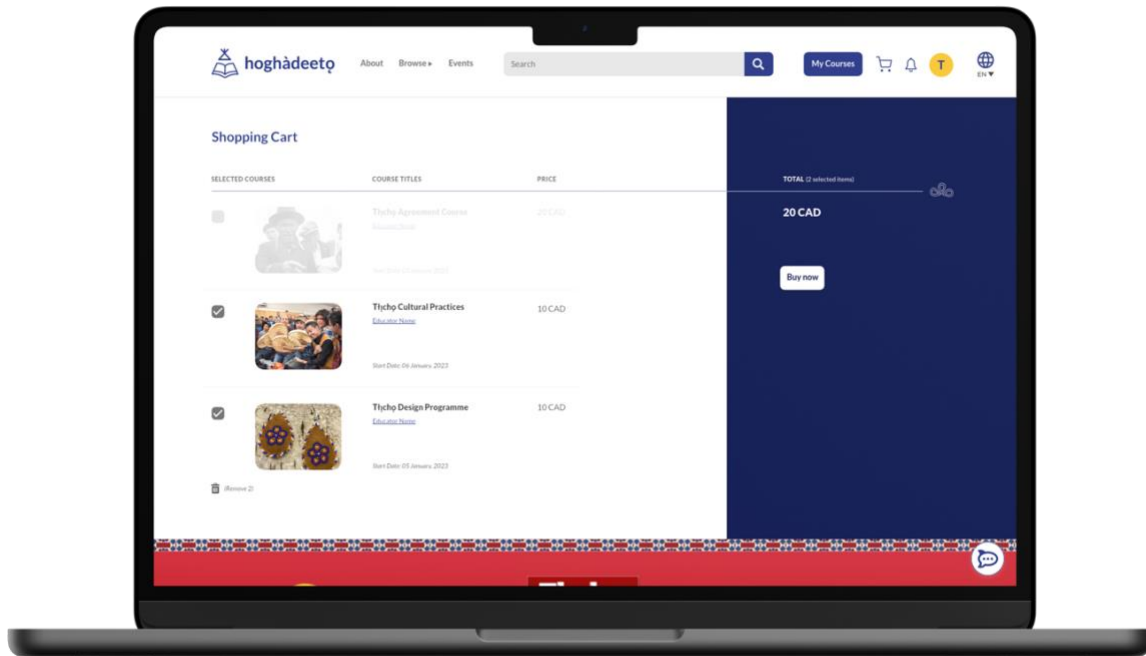
Figure 100: Shopping Cart
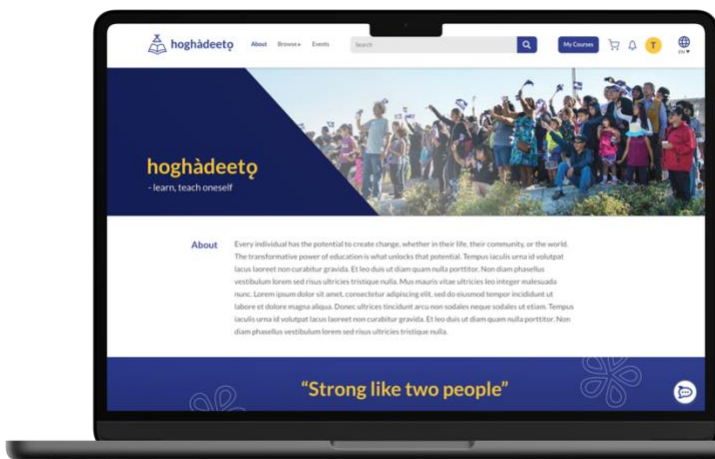
Figure 101: About
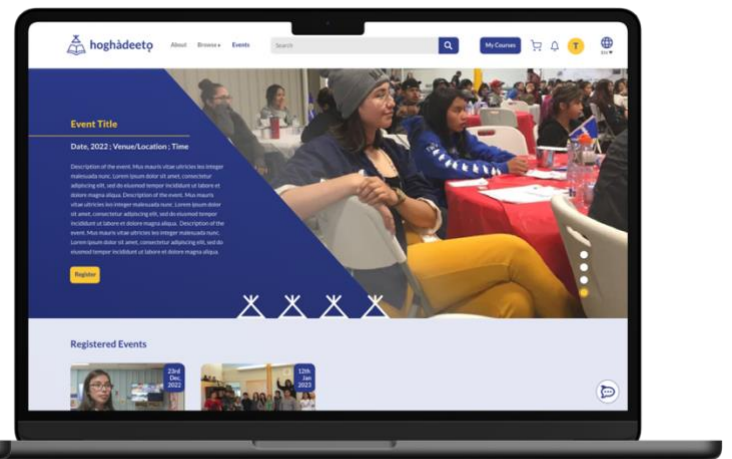
Figure 102: Events

Figure 103: Tłı̨chǫ Agreement Course

d. **About:** The about interface *(Figure 101)* shares the *story, purpose and hope* for what *hoghàdeetǫ* intends to deliver.

e. **Events:** *G Marion* suggested *(Table 4)* we include an events section *(Figure 102)* to expand the role of *hoghàdeetǫ* to a digital space that can lead to in-person community events such as; discussions and debates on various subjects. Users can view past and future events, and the allows them to register online.

f. **My Courses:** My Courses serves as the hub for students to access three divisions of courses which include:

    1. **Current Courses *(Figure 104)*:** Students have quick access to registered courses; showing deadlines, incomplete assignments and hours of content not viewed.

2. **Saved Courses:** Favourited Courses from the home screen, browse and filtered sections will be collected in this section *(Figure 105)*.
3. **Completed Courses *(Figure 106)*:** Completed courses will be archived here. Students can access and share certificates or view their grades.
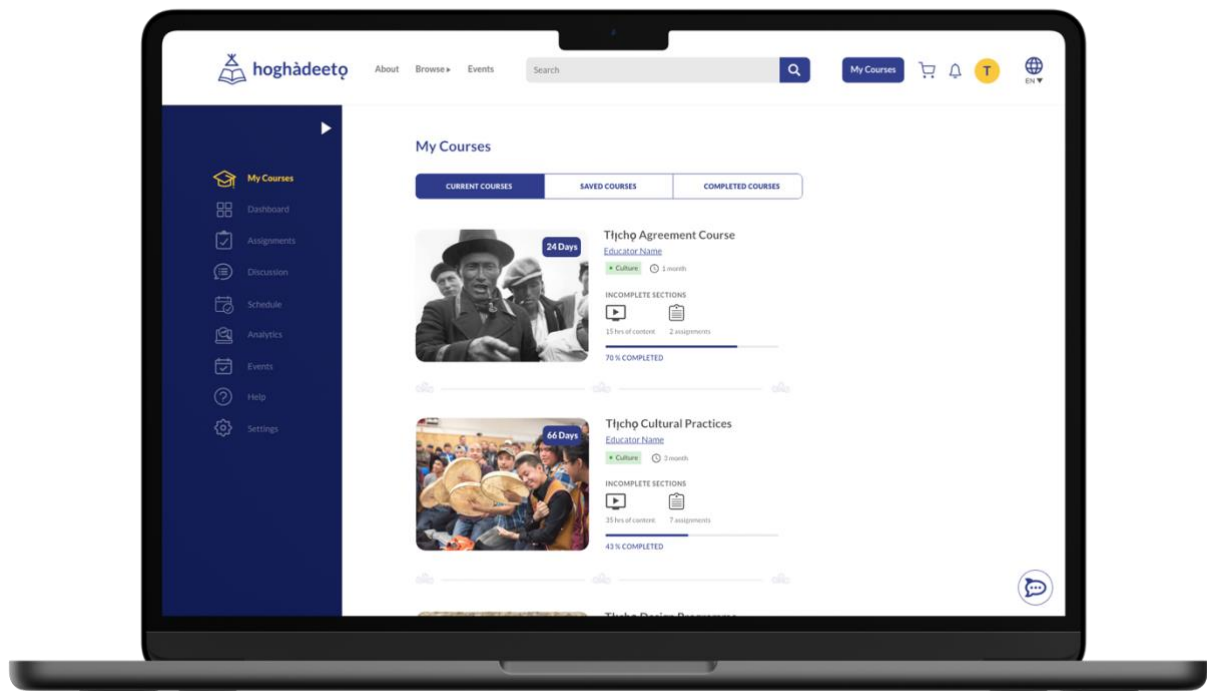
Figure 104: Current Courses
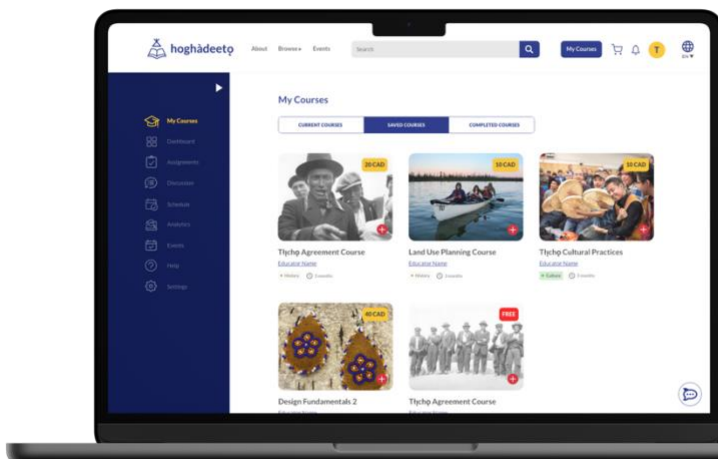
Figure 105: Saved Courses
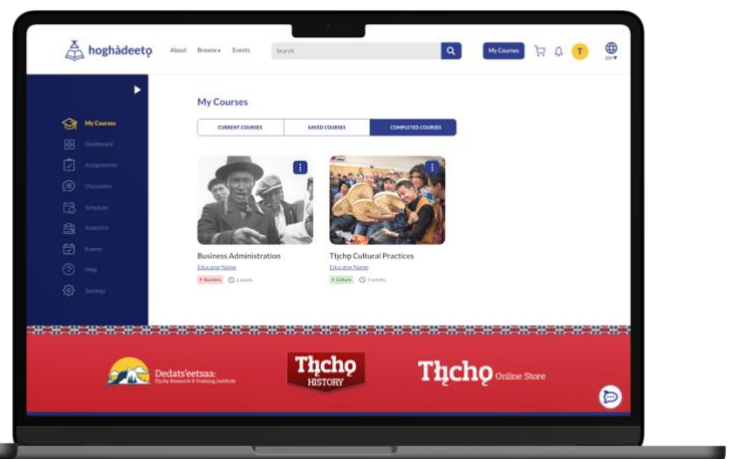
Figure 106: Completed Courses
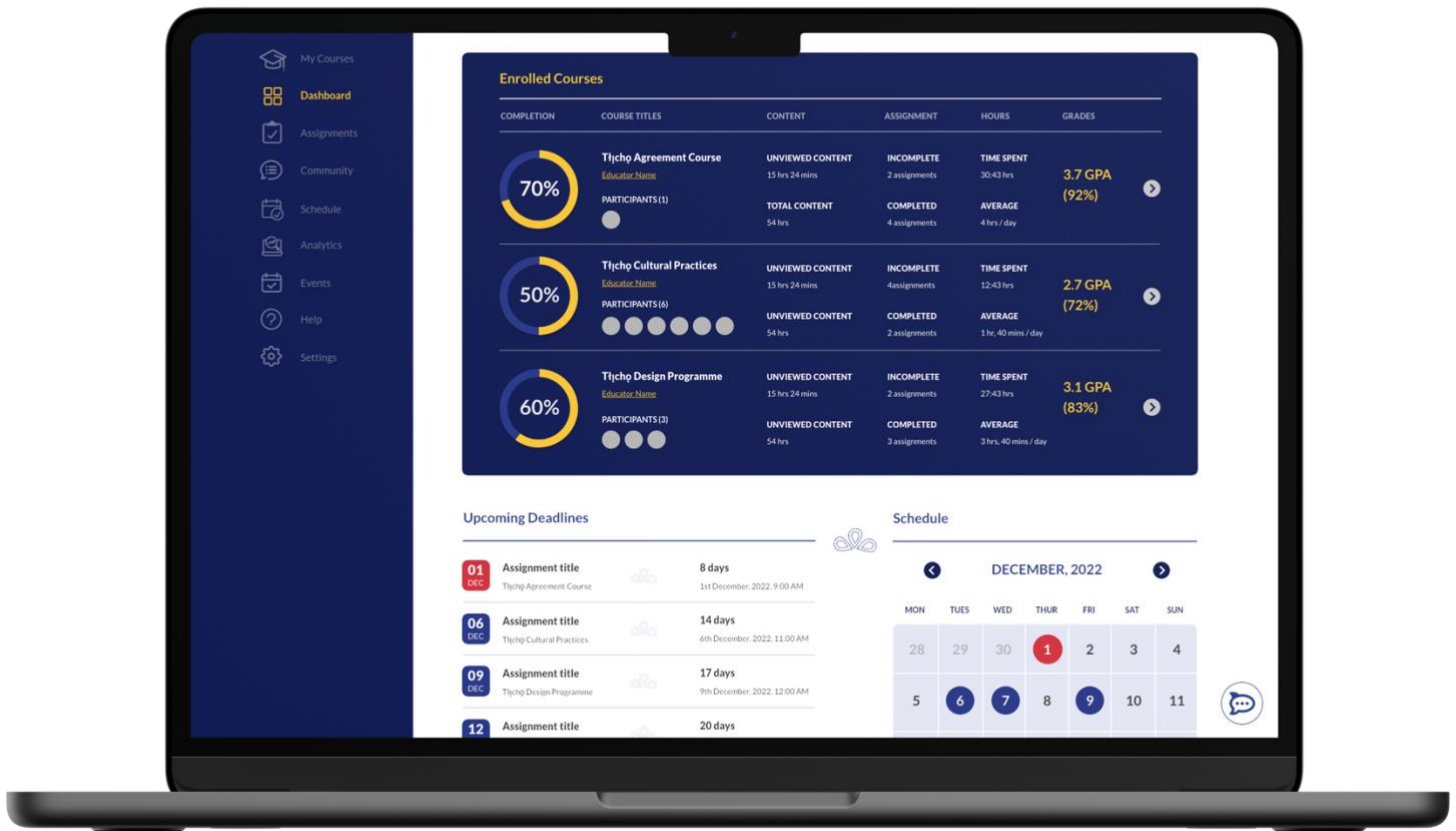
Figure 107: Dashboard

g. **Learning Management System (LMS):** This section of interfaces serves as the digital learning environment for students to receive their education. Members can access their purchased courses LMS through My Courses *(Figure 104)* or through the homepage *(Figure 97)*. The LMS offers the following functions.

1. **Dashboard:** The dashboard *(Figure 107)* offers students a quick overview on all their registered courses. Students can view their progress on the basis of their deadlines, GPA, assignments, schedules and completion.

2. **Assignment:** This section *(Figure 110)* is the primary location for students to submit all their projects. Assignments can be filtered based on courses. Students can view their *deadlines, contact teachers, request extensions and submit assignments.*

3. **Community:** This section *(Figure 108)* is an online gathering space for students and teachers. Each course has a discussion board that allows students to have debates, ask questions and receive advice. This section also serves as the primary space for students to chat and interact with other students through the *"message"* function. The chat feature will be available for existing users throughout the website.

4. **Course LMS:** This page features *(Figure 111)* a large video displaying the content of a course. The content is divided into small videos based on the topics. The players track the content watched, and students can revisit the content viewed. In addition, teachers can attach downloadable and text content below the player. This page's primary challenge was creating an easy user entry and exit navigation. Existing users can access this page directly through the Homepage *(Figure 97)*, *My Courses (Figure 104)* and the *Dashboard (Figure 107)*. Users can exit this page through the header or breadcrumbs, which allows users to revisit the dashboard. Users can also access the discussion board or ask teacher questions through CTAs below the player.
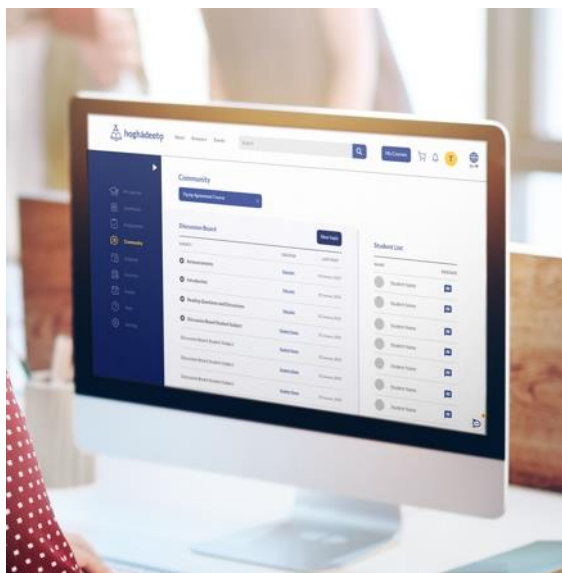
Figure 108: Community
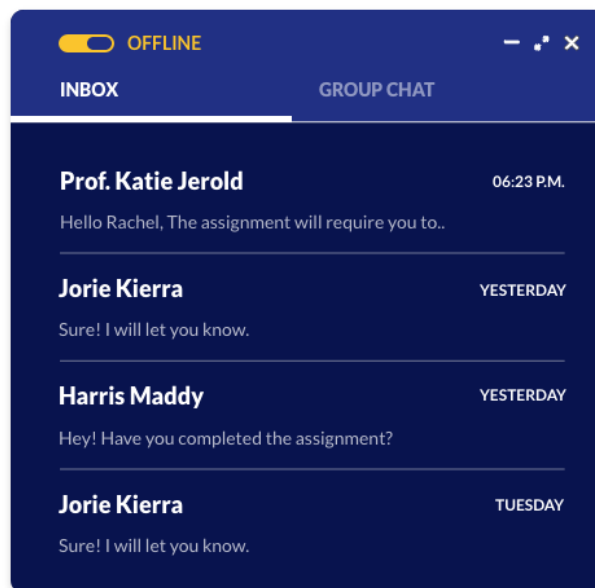
Figure 109: Chat Interface
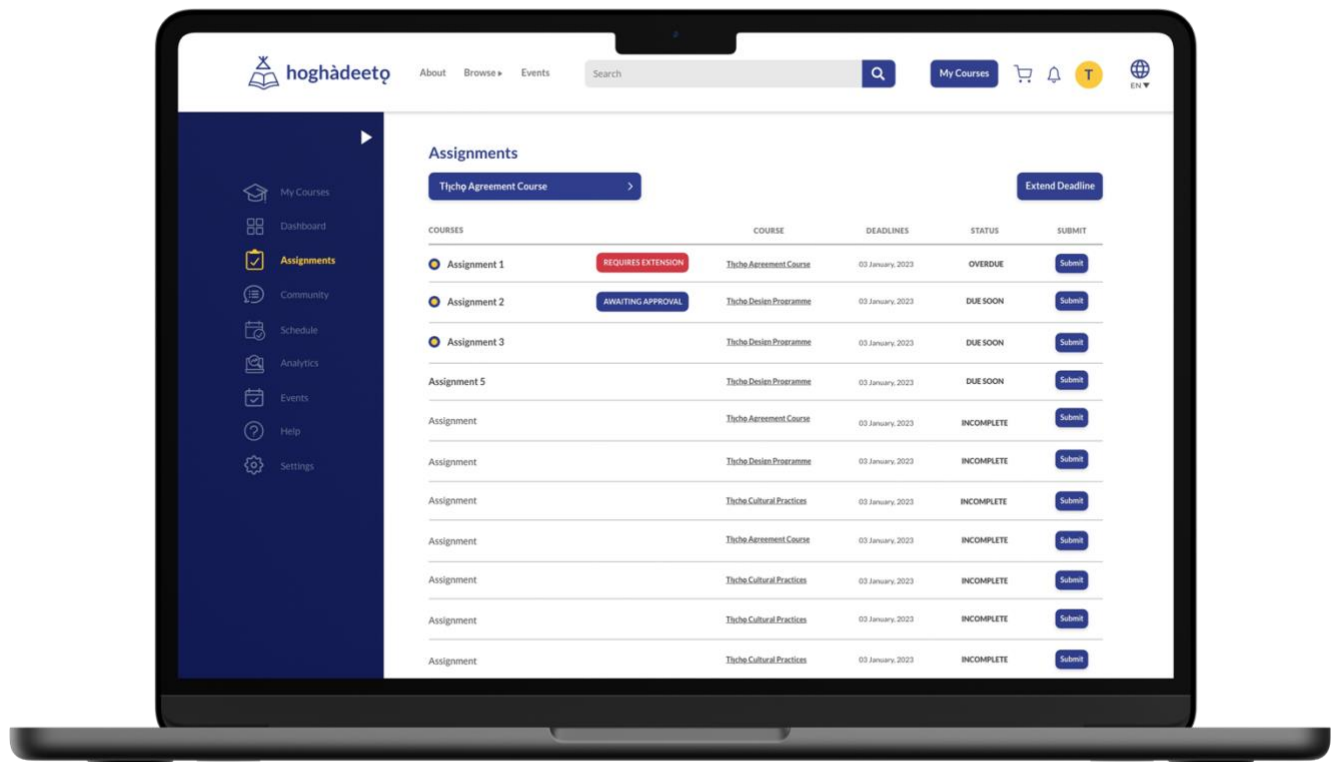
Figure 110: Assignments
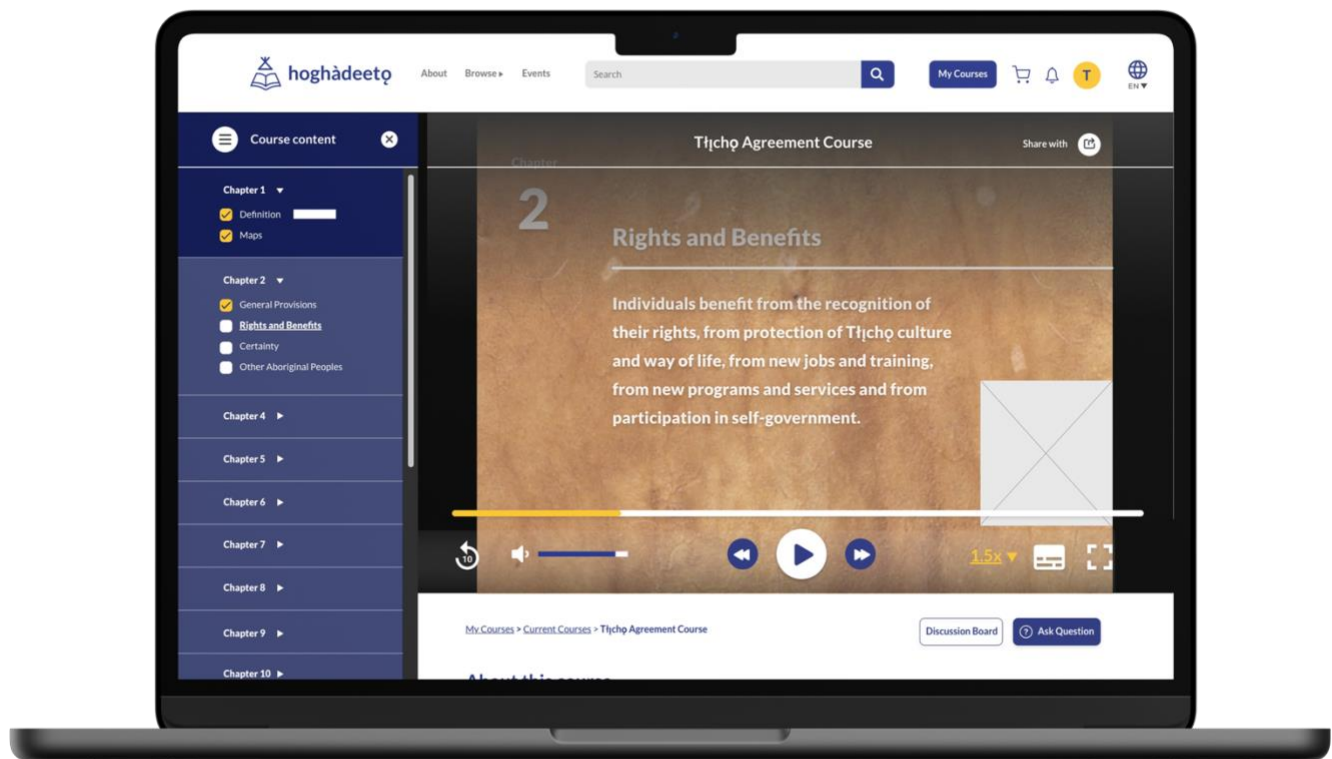
Figure 111: Course LMS
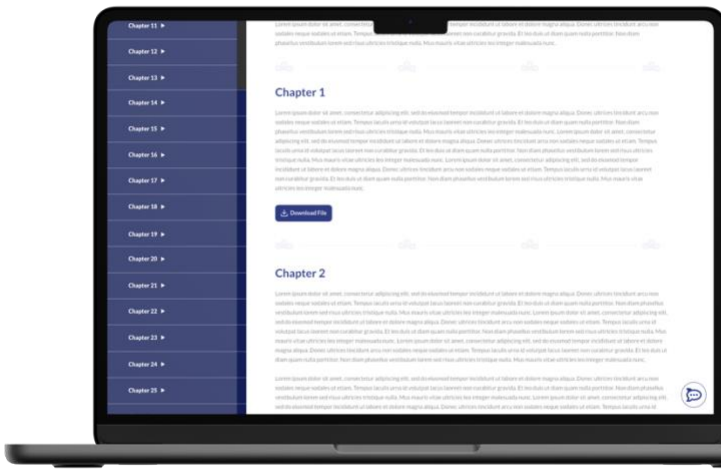
Figure 112: Course LMS (2)
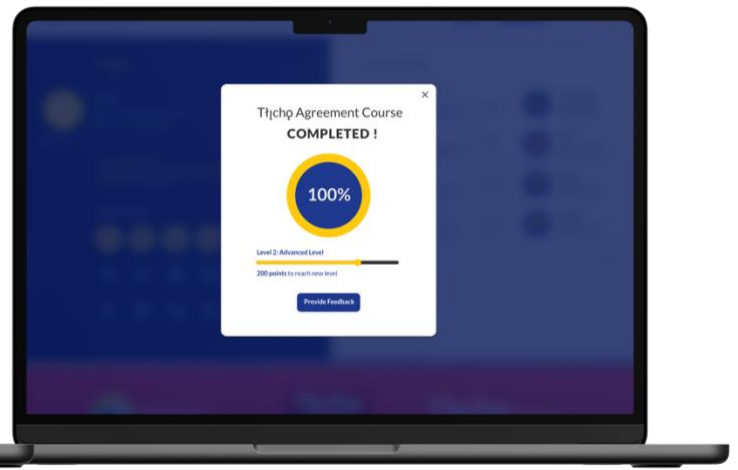
Figure 113: Completed Course

h. **Profile:** The profile page provides students overall stats on the courses completed, certifications gained, days in training and their total average GPA. The page also features achievements and points, which serve as *a gamification learning experience*. Students receive points for completing courses (points received are based on the difficulty of the course). Points help students increase their rank, which rewards them through; *discounts, free lessons or event access.* The purpose is to offer incentives for students to complete and join new courses. G Marion stated the importance of retaining students to have them continue learning.
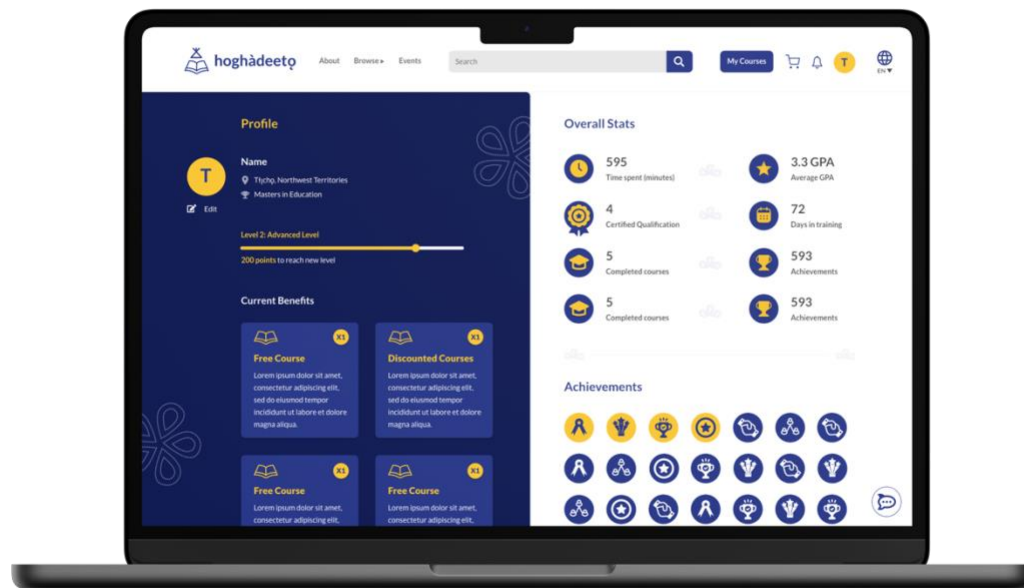
Figure 114: Profile

3.5.3   Design Phase 3: Data Analysis

The final user testing session showcases a high-fidelity prototype to three participants. They have seen the progress and evolution of the design since the start, but they were offered the first look into the design's look, feel and experience. The following are some of the primary aspects that required testing from the participants:

1. **Registration (Website and Course):** The registration page for the website and the course was a significant contention during the previous user testing session. The registration pages were changed to make the process more descriptive and thorough.

2. **Pronunciation:** I enquired with the participants about the pronunciation for *hoghàdeetǫ* and asked their opinion about including the pronunciation within the About section. Since, this website serves English and Dogrib speakers, providing the proper pronunciation would be helpful.

3. **Saved Course:** The *"Saved course"* function did not receive any complaints, but I wanted an alternate concept of using the *"star"* from the Tłįchǫ flag instead of the red plus to connect it to their community.

4. **Identity design:** The feedback and suggestions collected from the previous test helped form a brand-new look and identity for a new platform name. I needed to test if the participants could connect with the essence and identity of the logo.

5. **Interface design:** During the previous testing, we were able to come to a consensus on the typeface, colours, layout and patterns. This phase focused

on combining all those elements within the structure, and I wanted to test if the various parts came together the way they hoped.

6. **Navigation:** The participants were satisfied with the navigation previously; however, I had not included most design elements. I wanted to test whether the participants could understand and navigate the website.

7. **Final thoughts:** Towards the end of the testing, participants were asked about their thoughts for the entire website. Around 60 interfaces were shared with the participants in a 90 minute meeting.

The overall reaction from the participants was yet again highly positive and exciting. The participants were excited, encouraged and passionate about the possibility of developing a distance learning platform. A significant focus of this user testing session was on the possible next steps required for developing this distance learning platform. In addition, the participants offered critical feedback, suggestions and feedback on the entire high-fidelity prototype.

Comments by Participants	Recommendations *(Based on insights received)*
P Turner mentioned she loved the new logo. She loved the simplicity of the logo and stated how people could easily draw, replicate and remember the logo. **G Marion** loved the logo, she asked T Lim for confirmation on the spelling, meaning and pronunciation of **hoghàdeetǫ.**	**Identity Design:** The identity created was appreciated and accepted by the participants. T Lim contacted me post-testing to confirm the spelling and the meaning for **hoghàdeetǫ** to be accurate from the dictionary.

G Marion loved the idea to include pronunciation for the **hoghàdeetǫ.** *She suggested translating "strong like two people".* She mentioned the importance of ownership over the quote as a method of creating an Identity for the platform.

Comprehensive Registration for accounts:
For the registration process, I added a section that would ask users if they are Tłı̨chǫ citizens or not. The purpose for this question was to offer the possibility of offering different content and pricing based on the user. G Marion seemed to love that idea, but she would want a more compressive registration process to evaluate users.

Privacy:
Observing their comments gave me the insight that privacy was a crucial a factor.

G Marion loved idea of using the star from the flag instead of the plus for the *"saved course"* icon.

Marion suggested we should create a *"coming soon"* section for courses and a way for students to provide feedback and suggestions on the course they would want.

Saved course:
Using visual cues from their flag makes the visual experience more meaningful. The Saved icon is changed to include the star in the final prototype.

Courses coming soon:
This section will be a part of *Future recommendations (Section 4.3)* features created. Students will need to have a place within the interface that shares the new courses.

Inquiring student interest on courses:
This section will be a part of *Future Recommendations (Section 4.3)* that will be included within the platform. There needs to be a method to gather data from students on subjects and courses they would like to study.

G Marion suggested we include information such as; registration deadline, online or in person learning for the events page. She also wants to see a separate events page. The event page should appear like a conference	**Events page:** The adjustments mentioned will be made to the events page. Each event will now have an individual page with information on the event and a CTA for registration. The changes above are showcased in the final prototype.
G Marion appreciated the dividers created with the Tłı̨chǫ beaded pattern. Anything that symbolises Tłı̨chǫ works. She mentioned the interface looked inviting which is extremely important. Using symbolism while keeping the design simple is very helpful.	**Visual Design:** The participants were asked if the dividers were overused in certain sections. The interface design was appreciated, so future screens should continue the existing design approach.
G Marion mentioned she would like to see a feedback page included within the Course LMS, so instructors can receive private evaluation which would allow them to reflect and improve.	**Feedback:** A more comprehensive feedback section will be part of the *Future recommendations (Section 4.3)* for designing this platform. We need to create and establish a clear and comprehensive feedback system for students to evaluate their courses.
G Marion was very appreciative of the entire platform. She gives eight out of ten as her final grade. **T Lim** and **P Turner** loved the overall designs as well and expressed their appreciation. *G Marion mentioned she would like to see a more thorough prototype for the future with the Tłı̨chǫ agreement plan as the example. She would like to test the experience of*	**Final thoughts:** All the participants seemed very happy and excited about the project's progress. Discussions of the following steps were a primary focus during this testing. First, the participants mentioned many suggestions of features and screens they would like included, discussed above. The following steps need to include more

studying an actual course to track how user friendly the platform is. **T Lim** supported Marion's perspective. He mentioned a more thorough prototype with more screens will be required to test the navigation and the user experience more deeply. However, he was excited to see the ongoing project and feels adding more course elements as the next challenge.	interfaces and content incorporated within the prototype. The participants seemed to be able to follow the navigation. However, people use distance learning platforms independently; hence users testing them individually without support should be the next step.

Table 6: Summary of User Testing Session 3 Findings

Conclusion:

This phase concludes the design and development of over fifty high-fidelity screens for the distance learning platform (*hoghàdeeto) for the Tłı̨chǫ*. We successfully implemented the suggestions, feedback and insights gathered to create a functioning high-fidelity prototype. In addition, the final user testing provided valuable insights into various questions and concerns.

The final user testing session successfully showcased and evaluated the user interface and user experience of *hoghàdeetǫ*. The participants seemed genuinely happy and excited with the progress shared. Some of the findings collected are implemented within the distance learning prototype shared below.

View the latest High fidelity Prototype: **Click here**

4. Conclusion

In this final section, I provide a summary for the research findings, limitations and future recommendations, for this study.

4.1. Research Findings

The following are the primary findings of this research:

a. **Distance learning as a Medium to Preserve Indigenous Knowledge:** My interest in designing a distance learning platform for Indigenous people was rooted in the idea that it could help students have access to educators around the country. The case study on *Keewaytinook Internet High school (Section 2.3.3)* further reinforced this the thought that Indigenous students need access to more educators. The *KiHS* platform was created at the request of the Northern Chief Tribal Council for young students to receive high school education without requiring to leave their communities (*Keewaytinook Internet High School – Home*, n.d.).

However, through the user testing sessions with the *Tłı̨chǫ Government* representatives, it became evident that they were more interested in the distance learning platform being a primary arena to *preserve Indigenous knowledge* with future generations of Tłı̨chǫ and non-Indigenous Canadians. One of the factors that led them to select an asynchronous learning approach was the courses' *scalability*. In addition, the Tłı̨chǫ Government were firm on their intention to have an extensive library of content in their community and their willingness to share educational material with non-Indigenous people.

b. **Importance of Education within the Tłı̨chǫ:** According to Legat (2012), Education has been a primary focus of the *Dene Nation* since its establishment in 1968. The section on the *Tłı̨chǫ region (Section 2.1)* discusses the value of a high school diploma and university education since it increases the prospects for future job

opportunities. I felt the same in my experience communicating with the Tłı̨chǫ representatives from the first time I proposed my research. They were very enthusiastic since the beginning and reaffirmed the findings from the literature review concerning their interest and the value they place on Education. Additionally, I could identify the primary motivation of Tłı̨chǫ students being the prospect of growing and improving their careers. Hence, it was essential for the distance learning platform to offer a credible qualification which required better evaluation tools.

c. **Human-Centered Design Approach:** A primary challenge in designing a culturally appropriate distance learning platform for the Tłı̨chǫ was a lack of clear understanding of a design problem to fix or what exactly were the needs of the community. I researched various design processes and found the *human-centered* design (HCD) approach to be the most appropriate due to its focus on rapid iterations with participants from the Tłı̨chǫ. A HCD iterative design process involves observation, idea generation, prototyping, and testing in a constant cycle (Norman, 2013). The previous section *(Section 3)* shows a series of designs which were tested, adjusted and refined to develop the platform's final version. It was critical to have a *community-led design approach* by providing *agency to Indigenous voices* to lead the direction of the designs created. Through each iteration, feedback, insights and observations were gathered on what the participants *enjoyed, desired and required.*

d. **Creating a Sustainable Distance Learning Platform:** Tłı̨chǫ participants offered their feedback, insights and observations on the various distance learning models shared in the first user testing session *(Table 3)*. One of the primary factors in the selection of an *asynchronous learning platform* was its sustainability. The participants highlighted the necessity to create a sustainable platform regarding its energy consumption on the servers or devices, sustainable in its development by not taking

up too many resources, sustainable in its design by not being bloated and optimizing the size for all graphics.

e. **Designing for Indigenous communities:** Working with an Indigenous community is different because their needs, requirements, and contexts differ from non-Indigenous Canadians. You must be willing to *listen, observe and adapt* to the necessities of the people you are designing. I had to constantly *reflect* on my research and design processes to verify if they aligned with Indigenous values and be willing to change if they did not. I think it is not advisable to be too fixed on a particular vision while working with an Indigenous community; instead, be willing to let go of controlling the direction of the research. My background working in different countries helped my willingness to be more flexible. As a designer, it is essential to acknowledge that *culture* is a core component in the identity of Indigenous people, and it is crucial to discover and find the visuals that connects with them.

Establishing a good working relationship with the Tłıchǫ people based on trust and respect was vital. Designing *hoghàdeeto* was one of my most effortless and enjoyable experiences as a designer. Not because the website was easy to build but due to Tłıchǫ people's genuine *enthusiasm and willingness* to share input. Towards the end of the design process, they trusted me enough to instead ask for my feedback and insights on future recommendations. A significant part of establishing that trust involves *deeply listening, while letting go of any ego and need to control*.

4.2. Limitations

The following are the limitations of this research:

a. **Research method:** Conducting explorative user testing with a group of Tłıchǫ representatives was necessary to develop *Hoghàdeeto* since a group consensus was vital initially. I did not want to be in circumstances where I had to choose the

best approach in cases of differing opinions between participants. Conducting this study with representatives from the Tłı̨chǫ Government created a space where they could interact and discuss various points. Their unity in vision delivered a clear direction for the future of this project, which in turn benefitted the design process. However, this research would have benefited from having at least one round of user testing sessions with participants individually. *Hoghàdeeto is a distance learning platform which is an individual self-learning experience for most students. Ideally, we should have conducted a final user test separately, replicating a real-life example of a self-learning student for more accurate findings.*

b. **Integration of Expert Opinions within the Research Process:** Initially, I intended to include views from professionals of a variety of fields; however, after I researched *Indigenous research practices*, I felt including and involving Tłı̨chǫ voices within the design process was more valuable. I also was unsure of the questions I would need to have answered by professionals since I could not foresee the direction of the design process. By the end, the Tłı̨chǫ participants were selected by Tłı̨chǫ Government representatives from a variety of occupations to offer a holistic perspective of views which was immensely valuable.

However, I feel the inclusion of a few professionals from the field of *curriculum development, instructional design, front and back-end development, data management, user interface or user experience design* through interviews would have been beneficial for the design process. Ideally, we could have consulted them during the design process to offer additional perspective and consultation on factors I may not have considered.

c. **COVID-19 Pandemic:** The COVID-19 pandemic forced all the conversations and user testing sessions with the Tłı̨chǫ community to be conducted online (through Zoom). As stated previously, relationship-building is an essential component in fostering

trust with Tłįchǫ people, which is challenging to develop through primarily an online interaction. Ideally, I would have travelled to Tłįchǫ and conduct the user testing sessions in person. Talking and conversing with participants would have led to *deeper insights, more productive discussions and establishing a stronger bond* with the Tłįchǫ people.

4.3. Future Recommendations

The following are future design recommendations based on the study conducted.

a. **Development of more Interfaces:** While this study features numerous user interfaces *(over 50 screens),* it is essential to acknowledge that all the interfaces have not been covered. One of the first next steps should include creating the *Schedule, Analytics, Help, Settings and Accounts pages*. In addition, further development of the gamification elements of the website needs to be developed. *G Marion* mentioned *(Table 6)* that she would like to see a *Feedback* page included within the Course LMS, so teachers can receive a private evaluation allowing them to reflect and improve. Additionally, *Marion* stated the value of having a *Coming Soon* interface to promote upcoming courses on the homepage.

b. **Creating a Teacher or Admin Access:** This study focuses on creating interfaces for *guest and student access*. A distance learning platform needs to offer a good user experience for students since their interests and needs are the primary objectives. However, it is also necessary to recognize that teachers are the backbone of education. If the platform is not user-friendly for teachers' needs, they will not be able to create courses restricting the scalability of classes available.

The following steps of developing this platform must focus on creating an efficient user experience for teachers that is easy to follow and centers around their needs. Teachers should be able to build their courses from scratch, create and upload

content, manage classes and grade students. They will have deeper access than students; hence, it is essential to simplify the user experience and make it as intuitive as possible.

c. **Individualised User Testing:** As stated previously, conducting group testing was highly beneficial towards the beginning of the design process; however, the following steps need to include a series of individualized user testing *(8-10 participants).* This study has created a comprehensive range of user interfaces *(over 50 screens)* which could benefit from being tested by users individually. In addition, user testing should shift from being explorative to testing the user's ability to conduct various tasks on the prototype. *G Marion **(Table 6)*** shared a similar sentiment by mentioning we needed to gather more data on student perspectives. A more structured approach at this stage of development will help receive further feedback by identifying specific areas to improve. We will test the *Tłįchǫ Agreement Course* as suggested by Marion.

d. **Developing User Tutorials** *(Instructional Manual)* **for Hoghàdeeto:** This platform will feature numerous interfaces and experiences for guest, student, and teacher access. Each user will have various capabilities in the features they will be offered. A challenge while creating such a large and complicated website, such as a distance learning platform, includes the confusion in navigating and understanding how to use the website*. G Marion* suggested *(Table 4)* we consider creating a visual instructional manual for teachers and students, so they know how to interact and use the platform since many people may not be comfortable using a computer. In addition, creating a series of video tutorials for users on various tasks will be excellent once the platform is completely designed. The tutorials will be especially valuable for teachers who will have additional functionality and require to conduct more in-depth tasks such as; *creating courses, managing discussion boards, grading students* etc.

People living in larger cities often fail to understand the struggles and necessities of people living in remote areas. Moreover, due to their geographical location, people may have limited access to essential services like *health and education*. However, we live in a time when technology can provide high-quality education to students remotely. This study presents the development of a culturally appropriate distance learning prototype based on the needs and requirements of the Tłı̨chǫ people. Distance education can serve as a powerful tool to preserve Indigenous knowledge and stories for future generations of Tłı̨chǫ citizens and non-Indigenous Canadians.

I was aware of the hesitancy and stress that comes with studying online for people who are not comfortable working in a digital environment. Creating and using appropriate visuals can create a feeling of comfort and familiarity. Designing services for people from a different culture or context requires establishing empathy. Listening and observing what stories or narratives connect with people is essential. People often overemphasize making designs efficient and functional while ignoring the value of storytelling that speaks to your audience.

Hoghàdeeto includes visuals and symbols that connect with Tłı̨chǫ *culture and history*. The research shared proves the value of a distance learning platform seen in my conversations with the Tłı̨chǫ Government. However, *hoghàdeetǫ* is not a finished product; just like education, there is always more to learn and evolve.

"No research is ever quite complete. It is the glory of a good bit of work that it opens the way for something still better, and thus rapidly leads to its own eclipse. The object of research is the advancement, not of the investigator, but of knowledge."
- Mervyn Gordon (Gordon, 1946, as cited in **Davison**, 2007)

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6. Appendix

6.1 Ethics Application

UNIVERSITY OF ALBERTA

Date: December 12, 2022 1:22:47 PM

Print   Close

Table of Contents

ID: Pro00117652   **Pro00117652**   1.1 Study Identification
Status: Approved

1.1 Study Identification

All questions marked by a red asterisk * are required fields. However, because the mandatory fields have been kept to a minimum, answering only the required fields may not be sufficient for the REB to review your application.

Please answer <u>all relevant questions</u> that will reasonably help to describe your study or proposed research.

1.0   *** Short Study Title** *(restricted to 250 characters)*:
Designing a Culturally Appropriate Distance Learning Platform for the
Tłıchǫ territory.

2.0   *** Complete Study Title** *(can be exactly the same as short title)*:
Designing a Distance Learning Platform for future design candidates in
the Tłıchǫ region of the Northwest Territories.

3.0   *** Select the appropriate Research Ethics Board (***Detailed descriptions
are available at here***)**:
Research Ethics Board 1

4.0   *** Is the proposed research:**
Funded (Grant, subgrant, contract, internal funds, donation or some other
source of funding)

5.0   *** Name of local Principal Investigator:**
Tejas Ambarani

6.0   *** Type of research/study:**
Graduate Student

7.0   **Investigator's Supervisor***(required for applications from undergraduate
students, graduate students, post-doctoral fellows and medical residents
to REBs 1 & 2. HREB does not accept applications from student PIs)*:
Gavin Renwick

8.0   **Study Coordinators or Research Assistants:** People listed here can
edit this application and will receive all email notifications for the study:

Name   **Employer**

There are no items to display

9.0   **Co-Investigators:** People listed here can edit this application and will
receive email notifications *(Co-investigators who do not wish to receive
email, should be added to the study team below instead of here).*
*If your searched name does not come up when you type it in the box, the
user does not have the Principal Investigator role in the online system.
Click the following link for instructions on how to Request an Additional
Role.*

Name   **Employer**

There are no items to display

Primary Admin Contact *(a member of study team)*:

Section 6: Appendix

10.0

11.0 **Study Team:** *(co-investigators, supervising team, and other study team members) - People listed here cannot view or edit this application and do not receive email notifications.*

Last Name	First Name	Organization	Role/Area of Responsibility	Phone	Email

There are no items to display

ID: Pro00117652
Status: Approved

Pro00117652

1.3 Funding Information

1.3 Study Funding Information

1.0 * **Type of Funding:**
Other

If OTHER, provide details:
Prof Gavin Renwick will provide supporting funds when required from his Canada Research Chair research budget.

2.0 * **Indicate which office administers your award.** *(It is the PI's responsibility to provide ethics approval notification to any office other than the ones listed below)*
University of Alberta - Research Services Office (RSO)

To connect your ethics application with your funding: provide all identifying information about the study funding – multiple rows allowed. For Project ID, enter a Funding ID provided by RSO/PeopleSoft Project ID*(for example, RES0005638, G018903401, C19900137, etc).***Enter the corresponding title for each Project ID.**

Project ID	Title	Grant Status	Sponsor	Project Start Date	Project End Date	Purpose	Other Information

There are no items to display

3.0 * **Funding Source**

3.1 Select all sources of funding from the list below:
SSHRC - Social Sciences and Humanities Research Council   SSHRC

3.2 If your source of funding is not available in the list above, click "Add" below and write the Sponsor/Agency name(s) in the free text

Designing a Culturally Appropriate Distance Learning Platform for Tłıchǫ Students   170

box that pops up.*(Nore: You may reflect multiple sources of funding by continuing to click "Add" to add each additional source of funding).*
There are no items to display

4.0   * **Indicate if this research sponsored or monitored by any of the following:**
Not applicable

The researcher is responsible for ensuring that the study complies with the applicable US regulations. The REB must also comply with US Regulations.

ID: Pro00117652   **Pro00117652**   1.4 Conflict of Interest
Status: Approved

1.4 Conflict of Interest

1.0   * **Are any of the investigators or their immediate family receiving any personal remuneration (including investigator payments and recruitment incentives but excluding trainee remuneration or graduate student stipends) from the funding of this study that is not accounted for in the study budget?**
○ Yes ● No

2.0   * **Do any of investigators or their immediate family have any proprietary interests in the product under study or the outcome of the research including patents, trademarks, copyrights, and licensing agreements?**
○ Yes ● No

3.0   * **Is there any compensation for this study that is affected by the study outcome?**
○ Yes ● No

4.0   * **Do any of the investigators or their immediate family have equity interest in the sponsoring company? (This does not include Mutual Funds)**
○ Yes ● No

5.0   * **Do any of the investigators or their immediate family receive payments of other sorts, from this sponsor (i.e. grants, compensation in the form of equipment or supplies, retainers for ongoing consultation and honoraria)?**
○ Yes ● No

6.0   * **Are any of the investigators or their immediate family, members of the sponsor's Board of Directors, Scientific Advisory Panel or comparable body?**
○ Yes ● No

7.0   * **Do you have any other relationship, financial or non-financial, that, if not disclosed, could be construed as a conflict of interest?**

◯ Yes ● No

Please explain if the answer to any of the above questions is Yes:

Important
If you answered YES to any of the questions above, you may be asked for more information.

ID: Pro00117652   **Pro00117652**
Status: Approved   1.5 Research Locations and Other Approvals

1.5 Research Locations and Other Approvals

1.0   * **List the locations of the proposed research, including recruitment activities. Provide name of institution, facility or organization, town, or province as applicable**
User testing sessions will be conducted online (On Zoom).

2.0   * **Indicate if the study will use or access facilities, programmes, resources, staff, students, specimens, patients or their records, at any of the sites affiliated with the following** *(select all that apply):*
Not applicable

List all health care research sites/locations:

3.0

Multi-Institution Review

* **3.1 Has this study already received approval from another REB?**
◯ Yes ● No

4.0   **If this application is closely linked to research previously approved by one of the University of Alberta REBs or has already received ethics approval from an external ethics review board**(s), **provide the study number, REB name or other identifying information. Attach any external REB application and approval letter in the Documentation Section – Other Documents.**

ID: Pro00117652   **Pro00117652**
Status: Approved   2.1 Study Objectives and Design

2.1 Study Objectives and Design

1.0   * **Provide a lay summary of your proposed research which would be understandable to general public**

The research focuses on developing and delivering a culturally appropriate distance learning experience for potential design students in the Tłı̨chǫ region of the Northwest Territories. The widely available distance learning platforms are designed for a western educational

context, which excludes the Indigenous ways of knowing and learning. My research aims to create a practical distance learning experience for the needs of students seeking design education in the Tłı̨chǫ region of the Northwest Territories and will align with symbiotic research undertaken by Professor Gavin Renwick. The geographic isolation of many Indigenous communities limits education opportunities for students, requiring them to leave their communities for further education, but distance learning can offer new possibilities. The researcher will collaborate with stakeholders from the Tłı̨chǫ region to examine the needs of their students and teachers. The objective is to understand their needs and requirements, analyze the feedback provided by participants during the user testing sessions and build an appropriate distance learning experience that would enable them to obtain design education from educators around the country without leaving their homes and communities. Assisting in delivering education for isolated communities brings challenges and responsibilities that must be acknowledged. In addition, every student and community reflects their distinct qualities that must be respected and included in the learning experience. Therefore, it is vital to recognize and incorporate their individuality and cultural context into the distance education experience.

2.0   *** Provide a full description of your research proposal outlining the following:**

- **Purpose**
- **Hypothesis**
- **Justification**
- **Objectives**
- **Research Method/Procedures**
- **Plan for Data Analysis**

Purpose: The geographic isolation of many Indigenous communities limits education opportunities for students within the community. Many students in the Tlicho community are forced to decide between choosing between higher education or not leaving their community and families. Creating and designing a distance learning platform that takes into account their needs and concerns can provide those students with new possibilities for design education.

The research will revolve around the development (and delivery) of the distance learning platforms for the indigenous community, which would require an understanding of their needs and preferences. Providing an inclusive open distance learning platform would enable them to receive design education by educators around the country.

Hypothesis and Justification: There is a popular saying in the Tlicho, "Strong like two people". It means that one should be open to contemporary society, while still retaining their traditional knowledge and culture. Many young students are forced to choose between pursuing higher education or leaving their communities and families. Distance learning can be a powerful tool that enables them to get quality education through an interface designed for their needs, while still being able to live in their communities with their people. The service will acknowledge the needs of the students and the teachers, offering flexibility in the tools offered.

Objective: To create a culturally appropriate distance learning platform that enables students from the Tłı̨cho region to have access to design education by design professionals around the country. The research discusses the significance of distance learning for the community, examines case studies of various existing distance learning platforms and aims to understand the necessities of the community to create a customized experience that is suitable for their needs through user testing and feedback.

Research Method/Procedures: A series of three moderated user testing sessions will be conducted with the 3-5 community members and educators from the Tłı̨chǫ region for each of the sessions remotely. The user testing sessions will help evaluate the design of the distance learning platform, from its usability to its user interface. Therefore, it is crucial to get opinions and feedback from the community members throughout the design process. The following are the three user testing sessions that will take place.

User Testing on the Distance Learning model: I will test four low fidelity distance learning models. User Interface Testing: I will test one Distance Learning interface in detail, showcasing several screens and their features. Final User Testing and User Interface Testing: The final prototype of the Distance Learning platform will be tested in its entirety.

Plan for Data Analysis: I will transcribe all the user testing data after a session. I will create a document to organize the data from the words, phrases or sentences they use to describe an interaction or the content. I will then create categories and subcategories and group their thoughts and concerns.

Identify Patterns and Analysis: From the organized data, I will search for repeated patterns or struggles identified by the community members. Finally, I will examine their concerns and understand the interfaces they stumbled with. Identifying the patterns from their opinions would help uncover areas that may require more attention.

Summarize: The results from my analysis will be summarized and incorporated to refine my designs. This process will be repeated after every user testing session.

3.0   **Describe procedures, treatment, or activities that are above or in addition to standard practices in this study area** *(eg. extra medical or health-related procedures, curriculum enhancements, extra follow-up, etc)*:
Not applicable

4.0   **If the proposed research is above minimal risk and is not funded via a competitive peer review grant or industry-sponsored clinical trial, the REB will require evidence of scientific review. Provide information about the review process and its results if appropriate.**
Not applicable

5.0   **For clinical trials, describe any sub-studies associated with this Protocol.**
Not applicable

ID: Pro00117652   **Pro00117652**
Status: Approved   2.2 Research Methods and Procedures

2.2 Research Methods and Procedures

Some research methods prompt specific ethical issues. The methods listed below have additional questions associated with them in this application. If your research does not involve any of the methods listed below, ensure that your proposed research is adequately described in Section 2.1: Study Objectives and Design or attach documents in the Documentation Section if necessary.

1.0   * **This study will involve the following***(select all that apply)*
Internet-based Interaction with Participants (excluding internet surveys or data collection over internet without human interaction)
Research focusing on First Nations, Inuit and Metis Peoples

NOTE 1: Select this ONLY if your application SOLELY involves a review of paper charts/electronic health records/administrative health data to answer the research question. If you are enrolling people into a study and need to collect data from their health records in addition to other interventions, then you SHOULD NOT select this box.

NOTE 2: Select this option if this research ONLY involves analysis of blood/tissue/specimens originally collected for another purpose but now being used to answer your research question. If you are enrolling people into the study to prospectively collect specimens to analyze you SHOULD NOT select this box.

ID: Pro00117652 **Pro00117652**
Status: Approved

2.4 Internet-based Interaction with Human Participants

2.4 Internet-based Interaction with Human Participants

1.0 **Internet-based Research**

1.1 Will your interaction with participants occur in private internet spaces (eg. members only chat rooms, social networking sites, email discussions, etc)?
● **Yes** ○ No

1.2 Will these interactions occur in public space(s) where you will post questions initiating and/or maintaining interaction with participants?
○ Yes ● **No**

2.0 **Describe how permission to use the site(s) will be obtained, if applicable:**
I will conduct the user testing sessions through Zoom. The Zoom meetings will be password protected and sent to the participants prior to the meeting.

3.0 **If you do not plan to identify yourself and your position as a researcher to the participants, from the onset of the research study, explain why you are not doing so, at what point you will disclose that you are a researcher, provide details of debriefing procedures, if any, and if participants will be given a way to opt out, if applicable:**
Not Applicable

4.0 ***** **How will you protect the privacy and confidentiality of participants who may be identified by email addresses, IP addresses, and other identifying information that may be captured by the system during your interactions with these participants?**
A private computer only accessible by the principal investigator will be used to conduct online interviews. No participant identifier information will be shared except for the participant's name. The participant will be

allowed to be anonymous and will be informed about this in the initial letter of contact and Information letter & consent form.

ID: Pro00117652   **Pro00117652**
Status: Approved   2.8 First Nations, Inuit and Metis Peoples

2.8 First Nations, Inuit and Metis People

1.0   *** If you will be obtaining consent from Elders, leaders, or other community representatives, provide details:**
I will be seeking oral consent from all the community representatives before every User testing session. Please see the attached Oral Consent Script for details.

2.0   **If leaders of the group will be involved in the identification of potential participants, provide details:**
Not Applicable

3.0   **Provide details if:**
• property or private information belonging to the group as a whole is studied or used;
• the research is designed to analyze or describe characteristics of the group, or
• individuals are selected to speak on behalf of, or otherwise represent the group

4.0   *** Provide information regarding consent, agreements regarding access, ownership and sharing of research data with communities:**
In keeping with the AHS/University and Government of Alberta's directives put in place to support continued research while limiting exposure, interaction and transmission during the COVID-19 pandemic, we are requesting approval for waiver of written consent. Due to this, I am unable to receive a letter from the community itself.

I have provided a letter of support from my supervisor Prof Gavin Renwick, who has collaborated with the Tłı̨chǫ Government since 1996.

5.0   **Provide information about how final results of the study will be shared with the participating community** *(eg. via band office, special presentation, deposit in community school, etc)***?**
The final thesis document and the final designs will be shared with the Tłı̨chǫ Government.

6.0   **Is there a research agreement with the community?**
○ Yes ● No

ID: Pro00117652   **Pro00117652**   3.1 Risk Assessment
Status: Approved

3.1 Risk Assessment

1.0   *** Provide your assessment of the risks that may be associated with this research:**
Minimal Risk - research in which the probability and magnitude of possible

harms implied by participation is no greater than those encountered by participants in those aspects of their everyday life that relate to the research (TCPS2)

2.0   *** Select all that might apply:**

Description of Possible Physical Risks and Discomforts

No   Participants might feel physical fatigue, e.g. sleep deprivation

No   Participants might feel physical stress, e.g. cardiovascular stress tests

No   Participants might sustain injury, infection, and intervention side-effects or complications

No   The physical risks will be greater than those encountered by the participants in everyday life

Possible Psychological, Emotional, Social and Other Risks and Discomforts

No   Participants might feel psychologically or emotionally stressed, demeaned, embarrassed, worried, anxious, scared or distressed, e.g. description of painful or traumatic events

No   Participants might feel psychological or mental fatigue, e.g intense concentration required

No   Participants might experience cultural or social risk, e.g. loss of privacy or status or damage to reputation

No   Participants might be exposed to economic or legal risk, for instance non-anonymized workplace surveys

No   The risks will be greater than those encountered by the participants in everyday life

3.0   *** Provide details of all the risks and discomforts associated with the research for which you indicated YES or POSSIBLY above.**
Not Applicable.

4.0   *** Describe how you will manage and minimize risks and discomforts, as well as mitigate harm:**
It is important to base the research on relationship-building while working with the community. This would mean being flexible in the conversation throughout the user testing sessions, while being respectful, sensitive, and adhering to Tłı̨chǫ cultural values including the educational philosophy of being strong like two people. As stated, my research is building upon long-term collaborative relationships already established by my supervisor.

5.0   **Is there a possibility that your research procedures will lead to unexpected findings, adverse reactions, or similar results that may require follow-up** (i.e. individuals disclose that they are upset or distressed during an interview/questionnaire, unanticipated findings on MRI, etc.)**?**
○ Yes   ● **No**

6.0   **If you are using any tests in this study diagnostically, indicate the member(s) of the study team who will administer the measures/instruments:**

Test Name	Test Administrator	Organization	Administrator's Qualification
There are no items to display			

7.0   **If any research related procedures/tests could be interpreted diagnostically, will these be reported back to the participants and if so, how and by whom?**
Not applicable

ID: Pro00117652   **Pro00117652**   3.2 Benefits Analysis
Status: Approved

3.2 Benefits Analysis

1.0   *** Describe any potential benefits of the proposed research to the participants. If there are no benefits, state this explicitly:**
The benefits of participating include empowering the Tłıchǫ community representatives by collaborating with them throughout the design process. The study will also help increase their knowledge of the different possibilities in designing culturally appropriate distance learning, leading to better education advocacy and participation.

2.0   *** Describe the scientific and/or scholarly benefits of the proposed research:**
This work brings, what SSHRC describes as, "research-creation", together with community-based work in the Tłıchǫ region. Indigenous people don't have the same resources compared to the rest of Canada, and Distance learning can be a powerful tool for the community by providing access to educators around the country. The process of working with the community (adhering to an Indigenous research methodology) will provide an example of how involving Indigenous people in the process of design can strengthen relationships between the many people involved in this project: the researcher and community members. This data will help me design a better distance learning solution for this group of people with specific needs.

3.0   **If this research involves risk to participants explain how the benefits outweigh the risks.**
Not applicable

ID: Pro00117652   **Pro00117652**   4.1 Participant Information
Status: Approved

4.1 Participant Information

1.0   *** Will you be recruiting human participants** (*i.e. enrolling people into the study, sending people online surveys to complete*)**?**
⬤ **Yes** ◯ No

1.1 Will participants be recruited or their data be collected from Alberta Health Services or Covenant Health or data custodian as defined in the Alberta Health Information Act?
◯ Yes ⬤ **No**

ID: Pro00117652   **Pro00117652**   4.2 Additional Participant Information
Status: Approved

4.2 Additional Participant Information

1.0 **Describe the participants that will be included in this study. Outline ALL participants** *(i.e. if you are enrolling healthy controls as well):*

The three user experience sessions will involve participants from the Tłı̨chǫ Dene community of Behchokǫ̀, Northwest Territories.

2.0 * **Describe and justify the inclusion criteria for participants** *(e.g. age range, health status, gender, etc.):*

1) The participants must be a representative of the Tłı̨chǫ. They must understand and know the community's needs, which would provide better feedback in the user testing

2) 18 years of age or older (in order to provide their own consent to participate)

3) Fluent in English. (in order to understand the instructions and participate in the user testing session)

3.0 **Describe and justify the exclusion criteria for participants:**

1. Younger than 18 years old

2. Unable to fluently speak or read the English language

3. Not related to the Tłı̨chǫ community

4.0 **Participants**

4.1 How many participants do you hope to recruit *(including controls, if applicable?)*
5
4.2 Of these, how many are controls, if applicable?

4.3 If this is a multi-site study, how many participants do you anticipate will be enrolled in the entire study?

5.0 **Justification for sample size:**
This study is both indigenous and qualitative. The focus is on in-depth and non-structured user testing sessions with select individuals instead of a collection of data in large quantities. This helps with having a narrow direction in the design process.

ID: Pro00117652 **Pro00117652**
Status: Approved
4.4 Recruitment of Participants (non-Health)

4.4 Recruitment of Participants (non-Health)

1.0 **Recruitment**

1.1 How will you identify potential participants? Outline all of the means you will use to identify who may be eligible to be in the study*(i.e. response to advertising such as flyers, posters, ads in newspapers, websites, email, list serves, community organization referrals, etc.)*

Participants will be recruited through the Tłı̨chǫ Government. Suitable individuals based on my research will be selected.

1.2 Once you have identified a list of potentially eligible participants, indicate how the potential participants' names will be passed on to the researchers AND how will the potential participants be approached about the research.

Potential participants will be identified and recruited through the Tłı̨chǫ Government and the Tłı̨chǫ Friendship Center, and their contact information will be sent to the researcher. Every participant will receive a letter of initial contact through their email that will provide details of this project, information on when the meeting will take place, and any concerns they may have. The Information and consent letter will be attached, offering further information about the user testing session. I'm following an established system of conducting research with the Tlicho laid out by my supervisor Gavin and the numerous students who have worked with the community. Establishing trust with the community representatives is crucial, making it essential for participants to have a direct contact with the PI (me) from the start of the research through the end of it.

2.0   Pre-Existing Relationships

2.1 Will potential participants be recruited through pre-existing relationships with researchers*(e.g. Will an instructor recruit students from his classes, or a physician recruit patients from her practice? Other examples may be employees, acquaintances, own children or family members, etc.)*?

⬤ Yes ◯ No

2.2 If YES, identify the relationship between the researchers and participants that could compromise the freedom to decline*(e.g. clinician/patient, professor/student)*

My supervisor, Prof Gavin Renwick has had a collaborative relationship with the Tlicho Dene since 1996 when they first invited him to work with and for them. It is this established relationship with the Tłı̨chǫ Government and the Tłı̨chǫ Friendship Center that will help in the recruitment of potential participants to join the study.

2.3 How will you ensure that there is no undue pressure on the potential participants to agree to the study?

Every participant will receive a letter of initial contact and the information and consent letter before the user testing session. They are informed that they are free to decline and can ask any questions or concerns they have. They will also be asked to provide oral consent during the user testing session on zoom, where they will be reminded about their freedom decline whenever they feel.

3.0   **Will your study involve any of the following?***(select all that apply)*
None of the above

ID: Pro00117652   **Pro00117652**   4.5 Informed Consent Determination
Status: Approved

4.5 Informed Consent Determination

1.0   **Describe who will provide informed consent for this study***(i.e. the participant, parent of child participant, substitute decision maker, no one will give consent – requesting a waiver)*
All of the participants will have the capacity to give their own informed oral consent.

1.1 Waiver of Consent Requested
If you are asking for a waiver of participant consent, please justify the waiver or alteration and explain how the study meets all of the criteria for the waiver. Refer to Article 3.7 of TCPS2 **and provide justification for requesting a Waiver of Consent for ALL criteria (a-e)**

1.2 Waiver of Consent in Individual Medical Emergency
If you are asking for a waiver or alteration of participant consent in individual medical emergencies, please justify the waiver or alteration and explain how the study meets ALL of the criteria outlined in Article 3.8 of TCPS2 (a-f)**.**

2.0   **How will consent be obtained/documented? Select all that apply**
Verbal consent

If you are not using a signed consent form, explain how the study information will be provided to the participant and how consent will be obtained/documented. Provide details for EACH of the options selected above:
In order to maintain respect for community customs and codes of practice, I will not ask the participants involved in the user testing sessions to sign consent forms. Tłı̨chǫ community members will provide oral consent for their feedback to be recorded and used for this research.

The decision to request oral consent not only follows a proper code of practice but is also based on procedures described in Article 3.12 of the TCPS: In some types of research, and for some groups or individuals, written signed consent may be perceived as an attempt to legalize or formalize the consent process and therefore may be interpreted by the participant as a lack of trust on the part of the researcher. In these cases, oral consent, a verbal agreement or a handshake may be required, rather than signing a consent form.

An Information and consent letter will be sent to all the participants prior to the user testing session. The user testing will be conducted online on Zoom, where oral consent will be recorded and stored on an encrypted hard drive.

3.0   **Will every participant have the capacity to give fully informed consent on his/her own behalf?**
● **Yes** ○ No

4.0   **What assistance will be provided to participants or those consenting on their behalf, who may require additional assistance?** *(e.g. non-English speakers, visually impaired, etc.)*
Not applicable.

5.0   ***** **If at any time a PARTICIPANT wishes to withdraw from the study or from certain parts of the study, describe when and how this can be done.**
The information letter and oral consent script will explain that participants may terminate their participation or withdraw at any time. In these forms, it is indicated that participation is voluntary and that participants may withdraw their artistic contribution from the research altogether by contacting me by email. My contact information is provided on the initial letter of contact and information letter.

6.0   **Describe the circumstances and limitations of DATA withdrawal from the study, including the last point at which participant DATA can be withdrawn** *(i.e. 2 weeks after transcription of interview notes)*
The participant can withdraw their data within four weeks from the user testing session's date.

7.0   **Will this study involve any group(s) where non-participants are present? For example, classroom research might involve groups which include participants and non-participants.**
● **Yes** ○ No

ID: Pro00117652   **Pro00117652**   4.7 Group Research Documentation
Status: Approved

4.7 Group Research Documentation

1.0   ***** **How will you ensure that non-participants and/or their data are excluded in from the study?**
An initial letter of contact and an information and consent letter will be sent to all the participants involved in the user testing session. Non-participants may join the user testing due to their existing relationship with the community or the Tłı̨chǫ government. They will be allowed to offer opinions during the user testing session, but their thoughts and insights will not be used for the analysis of the design or the thesis.

2.0   **During the recruitment process, how will you guard against peer pressure influencing an individual's decision to participate or not?**
Community members participating in this research will be selected by a representative of the Tłı̨chǫ Government based on individual interest in education. Consent forms will provide the option to drop out of the research.

3.0   **Outline alternate activities for non-participants, if applicable**
Not applicable.

4.0 **How will you address discomfort or disadvantage, if any, for non-participants?**
I will ensure that all participants know that they are under no pressure to commit time or energy that goes beyond their comfort level. Participants can request to withdraw from the research at any time.

ID: Pro00117652
Status: Approved

Pro00117652

5.1 Data Collection

5.1 Data Collection

1.0 * **Will the researcher or study team be able to identify any of the participants at <u>any stage</u> of the study?**
● Yes ○ No

2.0 **Primary/raw data collected will be** *(check all that apply)*:
Directly identifying information - the information identifies a specific individual through direct identifiers (e.g. name, social insurance number, personal health number, etc.)

3.0 **If this study involves secondary use of data, list all original sources:**
Not applicable

4.0 **In research where total anonymity and confidentiality is sought but cannot be guaranteed** *(eg. where participants talk in a group)* **how will confidentiality be achieved?**
The user testing session will be conducted in a group of 3-5 individuals. All the participants involved in the user testing are provided with this information in the information and consent letter.

Indigenous research involves including Indigenous people as investigators to extend knowledge significant for Indigenous peoples and their communities. The user testing sessions are meant to be more interactive and have different community representatives sharing their thoughts and ideas instead of being more private and restrictive.

ID: Pro00117652
Status: Approved

Pro00117652

5.2 Data Identifiers

5.2 Data Identifiers

1.0 * **Personal Identifiers:** will you be collecting - at any time during the study, including recruitment - any of the following *(check all that apply)*:
Surname and First Name
Email Address
Full Face Photograph or Other Recording

2.0 **Will you be collecting - at any time of the study, including recruitment of participants - any of the following** *(check all that apply)*:
There are no items to display

3.0 * **If you are collecting any of the above, provide a comprehensive rationale to explain why it is necessary to collect this information:**

Email addresses: The participants emails will be required to get in touch with them, provide them with forms, and arrange the meetings for the user testing sessions.

Video and audio recording: Videos of participants will be recorded to show their interaction with the distance learning prototype during the usability testing session. Audio will be recorded to hear back their analysis and thoughts throughout the user testing sessions. The recordings are made locally to the researcher's computer.

Surname and first name: Participants can choose to be identified in this study through a consent form. Their feedback and perspective should be acknowledged if they would like.

4.0   **If identifying information will be removed at some point, when and how will this be done?**
Pseudonyms or arbitrary initials will be used to remove identifying information of the participants upon request.

5.0   *** Specify what <u>identifiable</u> information will be RETAINED once data collection is complete, and explain why retention is necessary. Include the retention of master lists that link participant identifiers with de-identified data:**
The first and last names of participants (who wish to be identified) will be included in the thesis. It is important to acknowledge the feedback and perspectives of the participants who contribute their time.

6.0   **If applicable, describe your plans to link the data in this study with data associated with other studies (e.g within a data repository) or with data belonging to another organization:**
Not applicable.

ID: Pro00117652   **Pro00117652**   5.3 Data Confidentiality and Privacy
Status: Approved

5.3 Data Confidentiality and Privacy

1.0   *** How will confidentiality of the data be maintained? Describe how the identity of participants will be protected both during and after research.**
All identifiable data collected from video recording, names and contact information of the participants, will be kept on a password-protected desktop and hard drive accessible by the principal investigator alone. Any identifiable elements like their face will be not be shared. All the participants who ask to be anonymous will have their names replaced with pseudonyms or arbitrary initials.

2.0   **How will the principal investigator ensure that all study personnel are aware of their responsibilities concerning participants' privacy and the confidentiality of their information?**
Not applicable

3.0   **External Data Access**

* 3.1 Will <u>identifiable</u> data be transferred or made available to persons or agencies outside the research team?
◯ Yes ● No

ID: Pro00117652   **Pro00117652**

Status: Approved

5.4 Data Storage, Retention, and Disposal

5.4 Data Storage, Retention, and Disposal

1.0   *** Describe how research data will be stored, e.g. digital files, hard copies, audio recordings, other. Specify the physical location and how it will be secured to protect confidentiality and privacy.** *(For example, study documents must be kept in a locked filing cabinet and computer files are encrypted, etc. Write N/A if not applicable to your research)*
All the Digital files collected (Recording, Designs and Notes) will be kept on an encrypted hard drive.
Hard copies will be locked in a filing cabinet in my personal residence. On my Mac, I will use Disk utility to encrypt project-related data.

2.0   *** University policy requires that you keep your data for a minimum of 5 years following completion of the study but there is no limit on data retention. Specify any plans for future use of the data. <u>If the data will become part of a data repository or if this study involves the creation of a research database or registry for future research use, please provide details.</u>** *<u>(Write N/A if not applicable to your research)</u>*
Not applicable.

3.0

If you plan to destroy your data, describe when and how this will be done? Indicate your plans for the destruction of the identifiers at the earliest opportunity consistent with the conduct of the research and/or clinical needs:
The data will be retained for five years after completion, after which all the digital files will be permanently deleted from the encrypted hard drive, and any hard copies will be shredded.

ID: Pro00117652   **Pro00117652**

Status: Approved

Documentation

Documentation

Add documents in this section according to the headers. Use Item 11.0 "Other Documents" for any material not specifically mentioned below.

Sample templates are available by clicking HERE.

1.0   **Recruitment Materials:**

Document Name	Version	Date	Description

There are no items to display

2.0   **Letter of Initial Contact:**

Document Name	Version	Date	Description
📄 Inital letter of contact_March 8th.pdf(0.02)	0.02	2022-03-08 10:56 PM	

3.0 **Informed Consent / Information Document(s):**

3.1 What is the reading level of the Informed Consent Form(s):
Grade 3 reading level

3.2 Informed Consent Form(s)/Information Document(s):

Document Name	Version	Date	Description
📄 Information and Consent letter.pdf(0.04)	0.04	2022-03-09 12:07 PM	

4.0 **Assent Forms:**

Document Name	Version	Date	Description
There are no items to display			

5.0 **Questionnaires, Cover Letters, Surveys, Tests, Interview Scripts, etc.:**

Document Name	Version	Date	Description
📄 Oral Consent Script.pdf(0.03)	0.03	2022-03-09 12:08 PM	

6.0 **Protocol/Research Proposal:**

Document Name	Version	Date	Description
There are no items to display			

7.0 **Investigator Brochures/Product Monographs:**

Document Name	Version	Date	Description
There are no items to display			

8.0 **Health Canada No Objection Letter** *(NOL)*:

Document Name	Version	Date	Description
There are no items to display			

9.0 **Confidentiality Agreement:**

Document Name	Version	Date	Description
There are no items to display			

10.0 **Conflict of Interest:**

Document Name	Version	Date	Description
There are no items to display			

11.0   **Other Documents:**
For example, Study Budget, Course Outline, or other documents not mentioned above

Document Name	Version	Date	Description
📄 Letter of Support - Gavin Renwick.pdf(0.01)	0.01	2022-02-27 10:33 PM	

ID: Pro00117652   **Pro00117652**   Final Page
Status: Approved

Final Page

You have reached the end of the ethics application.
Click 'Continue' or 'Exit' below.

To submit for ethics review, click "SUBMIT for REVIEW" on the left side of the screen.

NOTE: Only the Principal Investigator can submit an application in Pre-submission (ie: the first time it is submitted).

6.1.1 Initial Letter of Contact

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Initial letter of contact: User testing

To whom it may concern,

I am Tejas Ambarani, a graduate student at the University of Alberta pursuing a Master's in Visual Communication Design. My supervisor is Prof Gavin Renwick, has worked in your region for over 25 years. I am writing a thesis on Designing a Culturally Appropriate Distance Learning Platform for the Tłı̨chǫ region of the Northwest Territories. My research aims to create a practical distance learning experience for the needs of students seeking design education in the Tłı̨chǫ region of the Northwest Territories

The result of this research could help create a well-designed distance learning prototype for the Tłı̨chǫ, which would take into account their needs and requirements. In addition, the thesis would provide background research on the topic, provide case studies, analyze the research findings, and provide reasoning behind the design decisions taken.

I received your contact information from (Name of person from Tłı̨chǫ Government/Tłı̨chǫ Friendship Center) and I would like to invite you to participate in a user testing session. You will be asked to provide your opinions, suggestions and feedback on some user interfaces of the distance learning prototypes I have designed. All the prototypes present are a work in progress, and the user testing sessions will help provide a clear direction for the final design. Each user testing session should take approximately 60 to 90 minutes Your voice and video will be recorded during the user testing session, and relevant portions of the audio will be transcribed. You can turn off your video or leave the call whenever you want. The user testing session will be conducted online through a Zoom meeting.

If you have any questions, concerns or require further information about the study itself, you may contact me, Tejas Ambarani at **ambarani@ualberta.ca**, or my supervisor Gavin Renwick at **grenwick@ualberta.ca**

Thank you,
Tejas Ambarani

REB Project Number: Pro00117652
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6.1.2 Information and Consent Letter

UNIVERSITY OF ALBERTA

Initial letter of contact: User testing

To whom it may concern,

I am Tejas Ambarani, a graduate student at the University of Alberta pursuing a Master's in Visual Communication Design. My supervisor is Prof Gavin Renwick, has worked in your region for over 25 years. I am writing a thesis on Designing a Culturally Appropriate Distance Learning Platform for the Tłı̨chǫ region of the Northwest Territories. My research aims to create a practical distance learning experience for the needs of students seeking design education in the Tłı̨chǫ region of the Northwest Territories

The result of this research could help create a well-designed distance learning prototype for the Tłı̨chǫ, which would take into account their needs and requirements. In addition, the thesis would provide background research on the topic, provide case studies, analyze the research findings, and provide reasoning behind the design decisions taken.

I received your contact information from (Name of person from Tłı̨chǫ Government/Tłı̨chǫ Friendship Center) and I would like to invite you to participate in a user testing session. You will be asked to provide your opinions, suggestions and feedback on some user interfaces of the distance learning prototypes I have designed. All the prototypes present are a work in progress, and the user testing sessions will help provide a clear direction for the final design. Each user testing session should take approximately 60 to 90 minutes Your voice and video will be recorded during the user testing session, and relevant portions of the audio will be transcribed. You can turn off your video or leave the call whenever you want. The user testing session will be conducted online through a Zoom meeting.

If you have any questions, concerns or require further information about the study itself, you may contact me, Tejas Ambarani at **ambarani@ualberta.ca**, or my supervisor Gavin Renwick at **grenwick@ualberta.ca**

Thank you,
Tejas Ambarani

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Research procedure:

You are invited to participate in a **User Testing Session.** The user testing session will be conducted online as a group of representatives from the Tłı̨chǫ to offer insights on the needs and requirements of students. The meeting will take place on the Zoom platform, as necessary for COVID precautions.

In this session, I will present you with different distance learning prototypes. You will experience each of them and will be asked to provide feedback and your insights on the designed prototypes. The designs you see are a work in progress, and your suggestions will help dictate the direction of the final prototype. The user testing session will be video recorded. You can turn off your camera at any time if you are not comfortable providing feedback with your camera on. You can also stop attending the session whenever you would like. Your name will be mentioned to provide acknowledgment for the feedback you provide. If you would like to remain anonymous I will assign a pseudonyms or arbitrary initials to remove any identifying information upon request.

The session should take approximately 60 to 90 minutes.

Benefits:

The benefits of participating include empowering the Tłı̨chǫ community representatives by collaborating with them throughout the design process. The study will also help increase their knowledge of the different possibilities in designing culturally appropriate distance learning, leading to better education advocacy and participation.

The research will contribute to the body of existing research on designing a distance learning for indigenous communities that exists. Your contributions and insights on my designs will help me design a better distance learning solution for this group of people with specific needs.

Risks:

It is not likely that there will be any harms or discomforts associated with taking part in this study. You can decline from participating in the research at any time, The result of this research will help create a customised distance learning prototype for the needs of Tłı̨chǫ design students.

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Confidentiality and Anonymity:

The information shared will remain strictly confidential and will be used solely for this research. With an exception to your last name, all your identifiers will remain unidentified. Your last name will be used in the thesis to acknowledge your contribution to the user testing session. If you feel uncomfortable or prefer to be anonymous, your name will be replaced with pseudonyms or arbitrary initials.

The data from the user testing session will be used to support the thesis and possible future academic presentations, including podcasts, journals, and peer-reviewed articles..

Data will be kept confidential (where only you and I will have access to the data) for the four weeks after your interview. The participant can withdraw their data within those **four weeks**, after which it will be integrated into my thesis report.

Data Storage:

All the Digital files collected (recording, designs and notes) will be kept on an encrypted hard drive. Hard copies will be locked in a filing cabinet. Disk utility will be used to encrypt project-related data.

All identifiable data from video recording, names and contact information of the people participating will be kept on a password-protected desktop and hard drive. Any identifiable elements like your face, voice and emails will be not be shared. All the community representatives who ask to be anonymous will have their names replaced with pseudonyms or arbitrary initials.

The data will be retained for five years after completion, after which all the digital files will be permanently deleted from the encrypted hard drive, and any hard copies will be shredded.

Voluntary Participation:

You are under no obligation to participate in this study. If you choose to participate, you may refuse to answer questions that you do not want to answer. Your participation is entirely voluntary, and you can withdraw anytime during the user testing sessions. However, when the session is over, you have four weeks to ask to remove your data from the study by notifying me by email **ambarani@ualberta.ca**. In the event of opting out, the digital data from your consultation and user testing session will be permanently deleted, and any other digital storage location and

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paper records will be shredded and recycled. Records will be kept stating what data has been erased/destroyed, when, and how.

Contact Information:

If you have any questions, concerns or require further information about the study itself, you may contact me, Tejas Ambarani at **ambarani@ualberta.ca**, or my supervisor Gavin Renwick at **grenwick@ualberta.ca**

The plan for this study has been reviewed by a Research Ethics Board at the University of Alberta. If you have any questions regarding your rights as a research participant or how the research is being conducted you may contact the Research Ethics Office at 780-492-2615.

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6.1.3 Oral Consent Script

Oral consent was collected from participants prior to User testing 1 *(Page 199)*.

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Oral Consent Script: User testing

Study Title: Designing a Distance Learning Platform for future design candidates in the Tłıchǫ region of the Northwest Territories.

This oral script will be used to address the community representatives (participants) prior to the user testing session research.

Purpose for Oral Consent: In order to maintain respect for the community, their customs and codes of practice, I will not ask the participants involved in the user testing sessions to sign consent forms. Tłıchǫ representatives will asked oral consent prior to the user testing session.

The decision to request oral consent not only follows a proper code of practice but is also based on procedures described in Article 3.12 of the TCPS:

In some types of research, and for some groups or individuals, written signed consent may be perceived as an attempt to legalize or formalize the consent process and therefore may be interpreted by the participant as a lack of trust on the part of the researcher. In these cases, oral consent, a verbal agreement or a handshake may be required, rather than signing a consent form.

Introduction
Hello, I'm Tejas Ambarani, I am conducting a user testing session today Designing a Culturally Appropriate Distance learning platform for the Tłıchǫ region of the Northwest Territories. I'm conducting this research as part of my Master's in Visual Communication at the University of Alberta. I'm working under the supervision of Prof Gavin Renwick, who has worked and collaborated with the Tłıchǫ Dene for over 25 years. My research aims to create a culturally appropriate distance learning experience for the needs and requirements of Tłıchǫ students seeking design education and provide better access to education.

What will happen during the study?
You are invited to participate in a **User Testing Session.** The user testing session will be conducted online through the Zoom platform, as necessary for COVID precautions.

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In this session, I will present you with different distance learning prototypes which have different pros and cons. I will talk to you in detail about each of the prototypes and you will have time to experience and navigate the prototype and provide me with your feedback, insights or any suggestions you may have. The designs will see are all a work in progress, and your suggestions today will help dictate the direction of the final prototype.

The user testing session will be video recorded. You can turn off your camera at any time if you are not comfortable providing feedback with your camera on. You can also stop attending the session whenever you would like. Your name will be mentioned to provide acknowledgment for the feedback you provide. If you would like to remain anonymous I will assign a pseudonyms or arbitrary initials to remove any identifying information upon request.

This user testing session should take approximately 1-2 hours.

Potential risks and discomforts

It is not likely that there will be any harms or discomforts associated with taking part in this study. You can decline from participating in the research at any time, The result of this research will help create a customised distance learning prototype for the needs of Tłıchǫ design students.

Potential benefits to participants and/or to society

The benefits of participating include empowering the Tłıchǫ community representatives by collaborating with them throughout the design process. The study will also help increase their knowledge of the different possibilities in designing culturally appropriate distance learning, leading to better education advocacy and participation.

Confidentiality

The information shared will remain strictly confidential and will be used solely for this research. With an exception to your last name, all your identifiers will remain unidentified. The data from the user testing session will be used to support the thesis and possible future academic presentations, including podcasts, journals, and peer-reviewed articles. Data will be kept confidential where we will have access to the data for the four weeks after your interview. The participant can withdraw their data within **four weeks** from the user testing session's date, after which it will be integrated into my thesis report.

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Contact for questions or concerns about the study or about the rights of research participants

If you have any questions, concerns or require further information about the study itself, you may contact me, Tejas Ambarani at **ambarani@ualberta.ca**, or my supervisor Gavin Renwick at **grenwick@ualberta.ca**

The plan for this study has been reviewed by a Research Ethics Board at the University of Alberta. If you have any questions regarding your rights as a research participant or how the research is being conducted you may contact the Research Ethics Office at 780-492-2615.

Consent

Your participation in this study is entirely voluntary. You can decide to stop at any time, even partway through the user testing session for whatever reason. If you choose to participate, you can avoid providing feedback or answering any questions I may have, if you do not wish to answer.

If you decide not to participate in the study or choose to withdraw, please let me know at any point during our conversation, or contact me or Gavin within four weeks from today.

If you decide to stop we will ask you how you would like us to handle the data collected up to that point. This could include destroying it or using the data collected up to that point. You will be treated with respect and no questions will be asked. Do you have any questions or would like any additional details? Are you okay with your last names being used for the research?

[If yes, I will begin the interview.]
[If no, I will thank the participant for their time.]

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Signatures
The signature indicates that I have informed each participant of the nature and purpose of the research, the conditions of confidentiality, and of their right to end the interview at any time. It also indicates that I have provided each participant with an opportunity to ask, and have addressed, any questions they might have about the study.

Student's name _____ Tejas Ambarani _____

Date of user testing ___ 29-08-2022 ___ Student's signature ___ Tejas-J.A ___

Date of interview ___ 05-10-2022 ___ Student's signature ___ Tejas-J.A ___

Date of interview ___ 20-10-2022 ___ Student's signature ___ Tejas-J.A ___

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6.1.4 Letter of Support – Gavin Renwick

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Faculty of Arts

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| Edmonton, Alberta, Canada T6G 2C9 | | Fax 780.492.7870 |

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Dr Gavin T Renwick
Fellow for the Creation of the UAlberta School of Architecture, Faculty of Engineering
Associate Professor for Design Studies, Dept. of Art & Design, University of Alberta
Visiting Professor of Art & Policy, University of Dundee
Creative Director, Incubator for Northern Design & Innovation, Yellowknife, NWT
t: 780 660 8950 | e: grenwick@ualberta.ca

Re: Tejas Ambarani
Letter of support for M.Des ethics application, University of Alberta

25th February, 2022

To whom it may concern,

As Tejas Ambarani's M.Des supervisor in the Department of Art & Design I write in lieu of not being able to obtain, to date, a letter of invitation/support or oral consent from the organization his research is being undertaken for, the Tlicho Government based in Bechoko, Northwest Territories.

I would firstly like to describe my role and belief that this letter is sufficient for submission of Tejas's ethics application. I have undertaken a collaborative relationship with the Tlicho Dene since 1996 when they first invited me to work with and for them. It was this substantial body of work that helped me obtain the first Canada Research Chair for design in 2011, a position I head until December 2021. Throughout this period virtually all my research was within Tlicho and Dehcho Dene communities in the NWT. This continues to be the case post-CRC.

Throughout my CRC tenure I had multiple graduate students and classes undertake work that was related to my own northern research. Indeed, I was/am often approached by both First Nation's to identify students that I feel are appropriate and have the skill base to help in aspects of the various projects the Dene and I are committed to. Tejas is one of these students.

His work relates to and compliments the graduate research of another student I supervise, Raheel Malkan, who successfully obtained ethics clearance last year. Unlike Raheel, Tejas has been unable to visit the north due to covid restrictions (the NWT's border has been closed to non-residents throughout). This has obviously had methodological impact on how Tejas undertakes his research, as described in his application. However, the Tlicho are happy with the 'compromise' and are extremely eager for the research to be undertaken.

I would like to emphasize that pre-covid the need for this work was identified as important. I had agreement from the Tlicho regarding the commencement of this research. I had talked with community members and recommended Tejas to them, which they agreed to. Unfortunately, because of Covid restrictions and its impact on working practices in remote northern communities it's been extremely difficult to obtain a letter of support. Given Tejas's time constraints I thought it essential he submit ASAP. Please consider this letter in place of it. I can fully guarantee you that through me he has community support and after 25 years of working with and for the Tlicho there is a high degree of trust in myself and the students I choose for such collaborative research.

In addition, I feel this complies with the 'Guidelines for Oral Consent', 2nd section, Item 2 regarding problems obtaining oral consent during these times.

If you require further information or explanation of the comments, please do not hesitate to contact me.

Yours

6.2 User testing session 1 (Presentation)

The presentation was used as a medium to help communicate the various distance learning models visually during user testing session 1.

3. Potential risks and discomforts

It is not likely that there will be any harms or discomforts associated with taking part in this study. You can decline from participating in the research at any time.

4. Potential benefits to participants and/or to society

The benefits of participating include **empowering** the Tłı̨chǫ community representatives by **collaborating** with them throughout the design process. The study will also help increase their knowledge of the different possibilities in designing culturally appropriate distance learning, leading to **better education advocacy and participation.**

5. Confidentiality

The information shared will remain strictly confidential and will be used solely for this research. With an exception to your **last name,** all your identifiers will remain **unidentified**. The data from the user testing session will be used to support the thesis and possible future academic presentations, including podcasts, journals, and peer-reviewed articles. You can withdraw their data within **four weeks** from the user testing session's date, after which it will be integrated into my thesis report.

1. Introduction

My research aims to create a **culturally appropriate distance learning experience** for the needs and requirements of Tłı̨chǫ students seeking better access to education

2. What will happen during the study

- During each of the user testing session, I will share the work in progress on the design process. I will share all different options and layouts, offering the pros and cons for each approach. Your suggestions, feedback and opnions will help dictate the direction of the final prototype.

- This user testing session should take approximately **60-90 minutes**.

- The user testing session will be video recorded. You can turn off your camera at any time . You can also stop attending the session whenever you would like.

- Your **last name** will be mentioned to provide acknowledgment for the feedback yo provide. If you would like to remain anonymous I will assign a pseudonyms or arbitrary initials to remove any identifying information upon request.

6. Contact

If you have any questions, concerns or require further information about the study itself, you may contact me, **Tejas Ambarani** at **ambarani@ualberta.ca**, or my supervisor **Prof. Gavin Renwick** at **grenwick@ualberta.ca.**

The plan for this study has been reviewed by a **Research Ethics Board** at the University of Alberta. If you have any questions regarding your rights as a research participant you may contact the Research Ethics Office at **780-492-2615**.

7. Consent

Your participation in this study is entirely voluntary. You can decide to leave at any time, even partway through the user testing session for whatever reason. If you decide not to participate in the study or choose to withdraw, please let me know at any point during our conversation, or contact me or Gavin within four weeks from today.

Do you have any questions or would like any additional details? Are you okay with your last names being used for the research?

Introduction and Consent

1. Introduction

2. What will happen during the study

3. Potential risks and discomforts

4. Potential benefits to participants and/or to society

5. Confidentiality

6. Contact

7. Consent
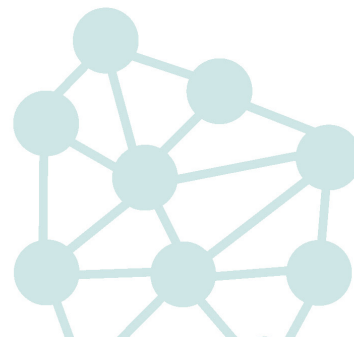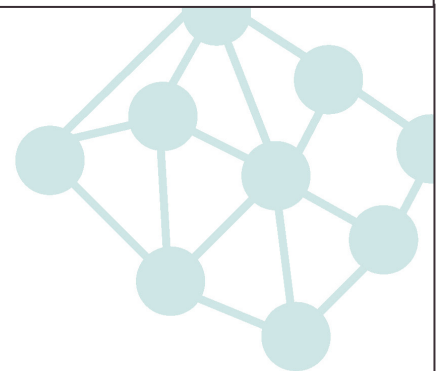
Distance Learning

Distance Learning

1. What is Distance Learning?

2. Why Distance Learning?

3. Different Types of Distance Learning

4. Thesis focus

5. Thesis limitations

6. Research method

Distance Learning Models

Distance Learning Models: Option 1

Option 1: **Self-Paced Education**
Course-based Asynchronous learning

1. About:

This distance learning model permits students to work independently from other students and teachers, allowing them to study at their own time, pace and place. The flexibility offers people with limited or ever-changing time schedules the ability to access education. Additionally, the lack of live-video conference lectures allows educators to create numerous distinct courses by pre-recording their classes.

Figure 1: Student taking notes from a recorded lecture by a teacher

Distance Learning Models: Option 1

2. Features

- Scheduling Capability
- Automated Assessment Tools
- Search/ Find Courses
- Pre-Recorded Online Lectures
- Learning Management System
- Offline Education Content
- Online Discussion Boards
- Gamification in Learning
- Tracking Progress

Distance Learning Models: Option 1

3. Pros:

- Scalable model for education (WH)
- Affordable pricing (WH)
- Flexible study scheduling
- Self-paced education
- Independent study
- Low bandwidth required (WH)
- Sustainable development
- Applicable to a wider audience (WH)

Figure 2: Opening page of a online learning website

focus
Scalable, Flexible, Affordable

Distance Learning Models: Option 1

4. Cons:

- No community learning
- No teacher-student relationship
- Lack of collaborations
- Lack of context in lectures
- No credential qualification
- Restricted teaching tools
- Restricted assessment tools
- No evaluation tools
- Shorter courses (3 months max)
- Requires high motivation (VH)

Figure 3: Example of a scalable course-based Distance learning platform.

Distance Learning Models: Option 1

5. Potential Target Audience

High school graduate

Part-time student (Tłı̨chǫ / Rest)

Figure 6: Women studying in her backyard.

Figure 5: Mother studying while playing with daughter

Parents

Figure 4: Student watching recorded lectures

Option 2: **Paced Distance Education**
Time-restricted accredited Asynchronous learning

1. About:

This distance learning model is time-restricted asynchronous learning which requires students to enroll in a course with a limited student capacity. However, like a class with deadlines, each course will have more comprehensive assignments, evaluation tools, and collaborative opportunities while still offering students the freedom to work on their own time with all lectures being pre recorded and scaleable.

Figure 7: Student taking notes from a recorded lecture by a teacher

2. Features

- Tracking Progress
- Learning Management System
- Online Discussion Boards
- Search/ Find Courses
- Pre-Recorded Online Lectures
- Credential Qualification
- Chat/ Message/ Inbox Capability
- Scheduling & Calendar Capability
- Gamification in Learning
- Evaluation Tools
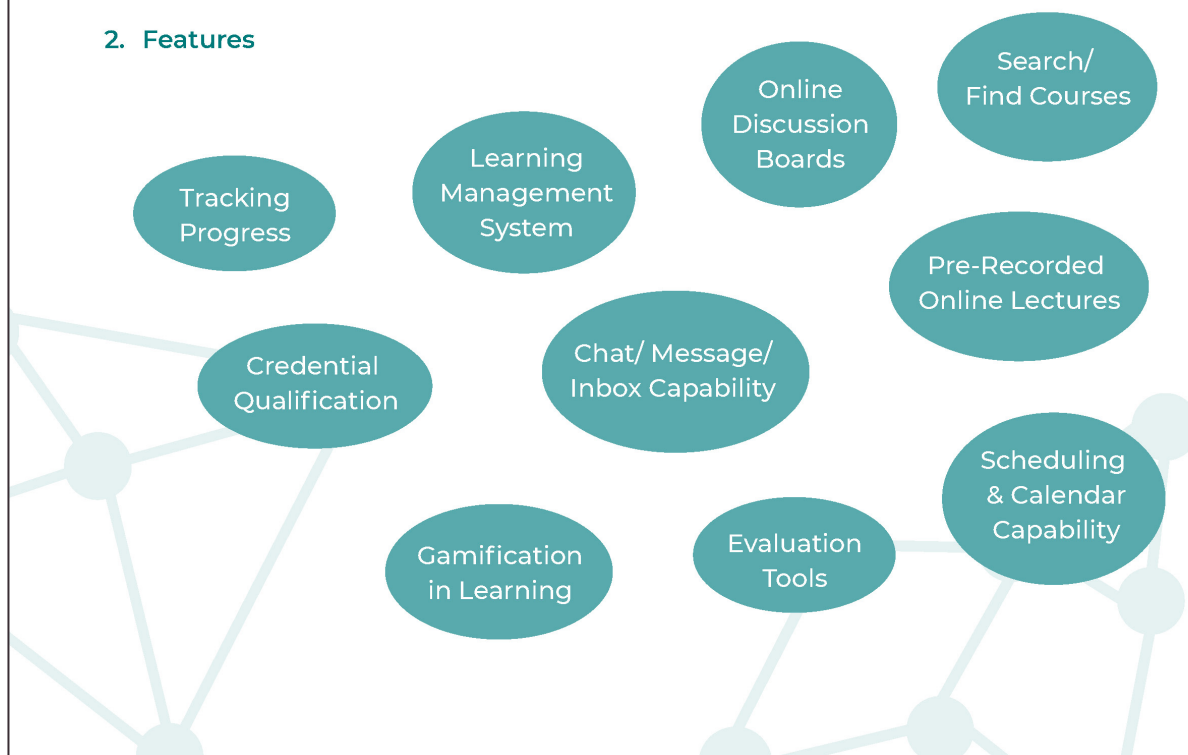
Distance Learning Models: Option 2

3. Pros:

- Scalable model for education (H)
- Affordable pricing (H)
- Flexible study scheduling
- Credential qualification
- Collaboration opportunities (M)
- Lower bandwidth required (H)
- Sustainable development
- Applicable to a wider audience (H)
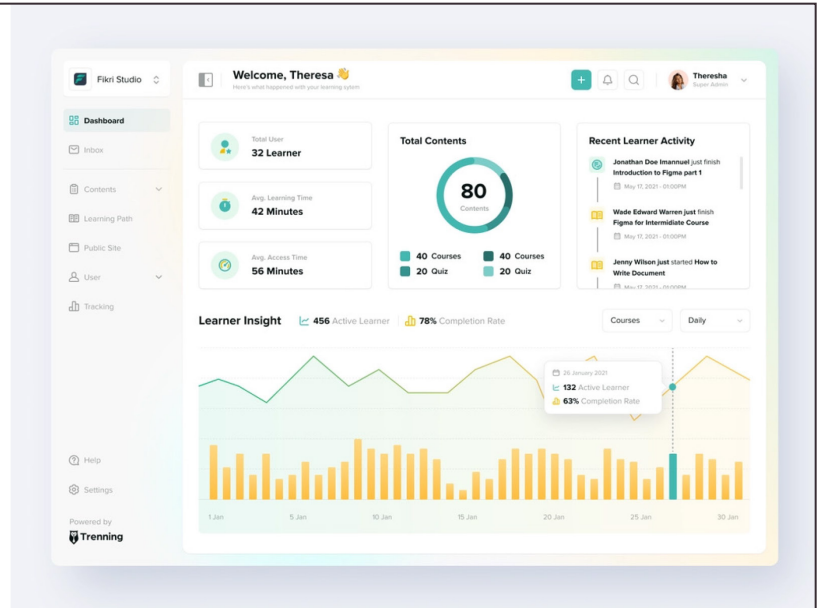
Figure 8: Example of teachers tracking progress of learners

focus
Scalable, Affordable, Balanced

Distance Learning Models: Option 2

4. Cons:

- Limited community learning
- No teacher-student relationship
- Lack of context in lectures
- Restricted teaching tools
- Primarily self learning
- Restricted teaching tools
- Shorter courses (6 months max)

Figure 9: Example of students tracking their progress.
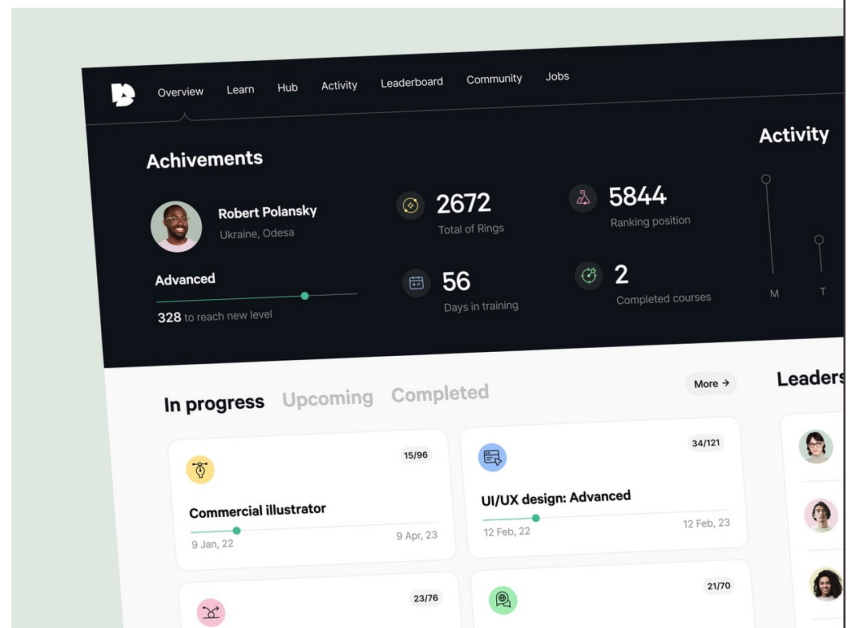
Distance Learning Models: Option 2

5. Potential Target Audience

Figure 10: Student working on assignment

Graduate student

Authorities working with Tłı̨chǫ

Professionals

Figure 11: Man working part-time to grow his career further by gaining a credential certification.

Figure 12: Man working part-time to grow his career further by gaining a credential certification.

Distance Learning Models: Option 3

Option 3: **Hybrid Distance learning**
Experiential learning
Synchronous learning

1. About:

This distance learning model offers students high-quality education while providing students with the ability to interact and collaborate with other students in-person within the Tlicho. Teachers can create collaborative assignments, have deeper discussions, debates etc. The Tlicho students will attend an in-person class within the Tlicho while interacting with any educator worldwide through a large screen.

Figure 13: Student taking notes from a recorded lecture by a teacher

Teachers

Camera to capture wide angle of classroom

Display with remote students

Device to capture whiteboard

$2 + 2 = 4$ $4 + 4 = 8$

Laptop with external camera to capture teacher and manage video software

Students

$2 + 2 = 4$ $4 + 4 = 8$
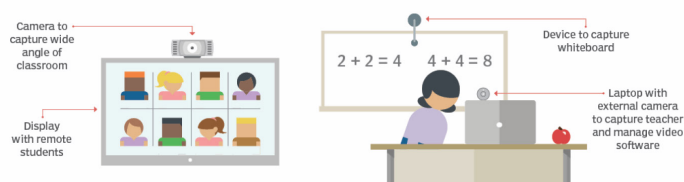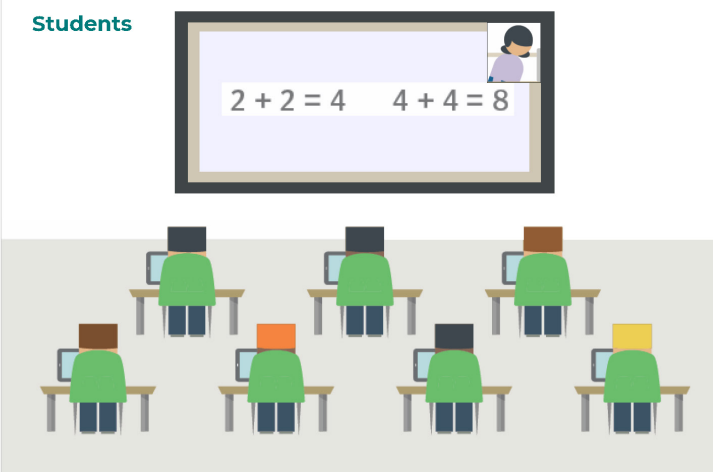
Distance Learning Models: Option 3

2. Features

Learning Management System

Online Discussion Boards

Search/ Find Courses

High-Credential Qualification

Chat/ Message/ Inbox Capability

Recorded Live Lectures

Strong Collaborative Opportunities

Comphrehensive Assessment/ Evaluation Tools

Scheduling & Calendar Capability
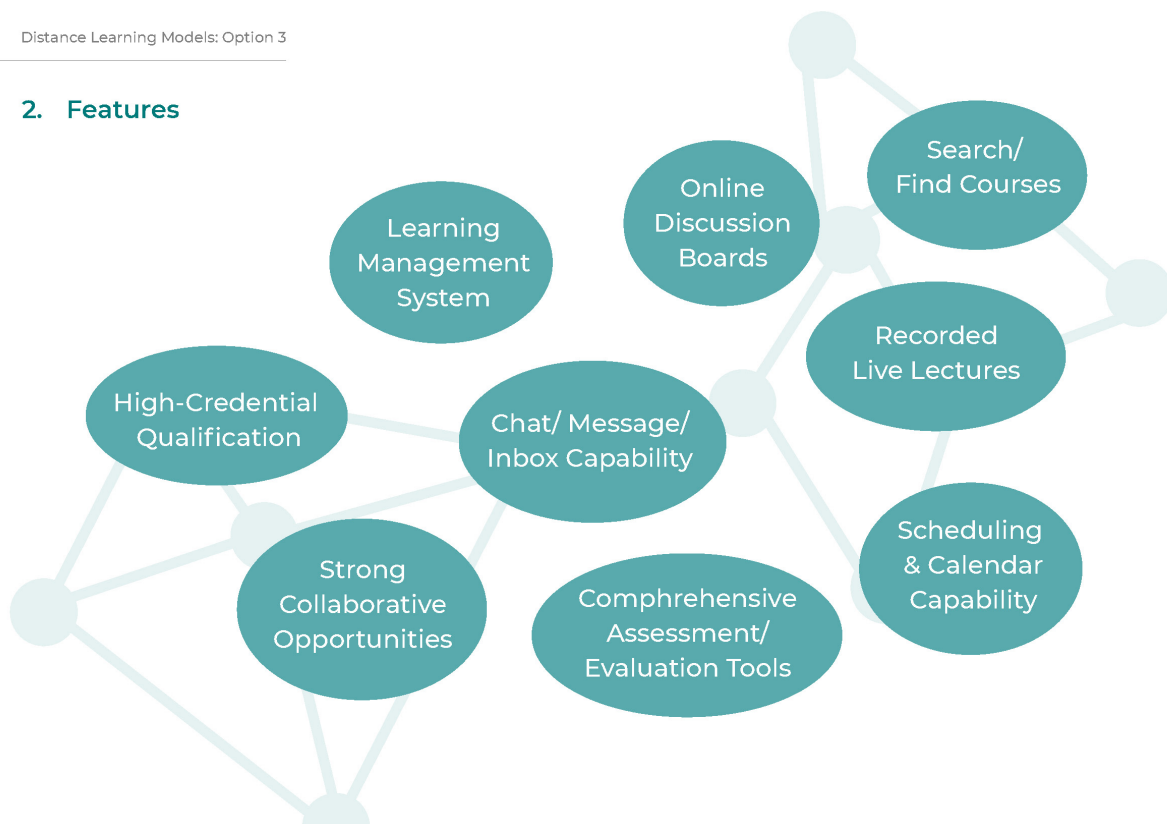
Distance Learning Models: Option 3

3. Pros

- High-credential qualification
- Offers experential learning possibilities
- Community Learning Experience
- Superior educational experience
- Collaboration opportunities (VH)
- Stronger teacher-student relationships
- Teaching students in-person and synchronously
- Wider range of teaching capabilities
- Longer courses (2-3 years)

focus
Community Learning, Credential qualification

Figure 14: Example of teaching students in-person and online

Figure 15: Example of teaching students in-person and online

Distance Learning Models: Option 3

4. Cons:

- High technology required/ dependance
- Higher teacher/student commitement
- Higher time requirements
- Geographical location
- High bandwidth required (WH)
- Higher cost (WH)
- Requires larger supporting staff
- Applicable to restricted audiences
- More intensive application process.
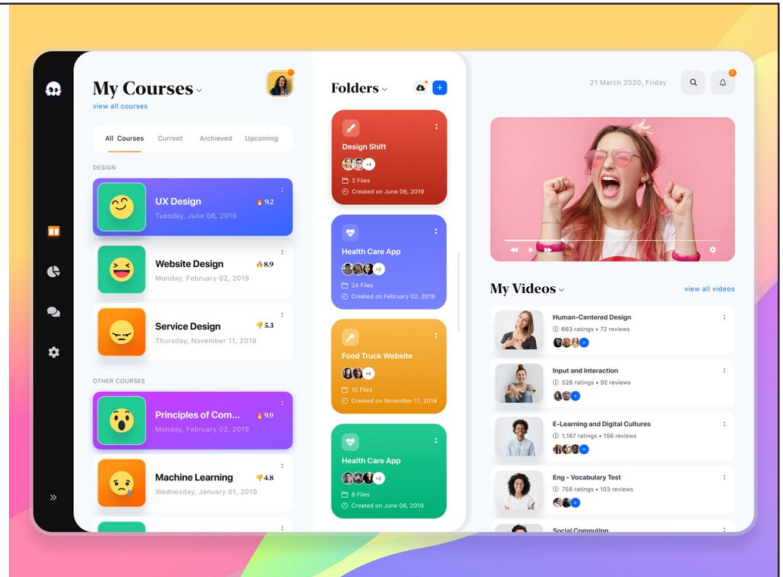
Figure 16: Example of a watching live-recorded videos of classes asynchronously.

Distance Learning Models: Option 3

5. Potential Target Audience
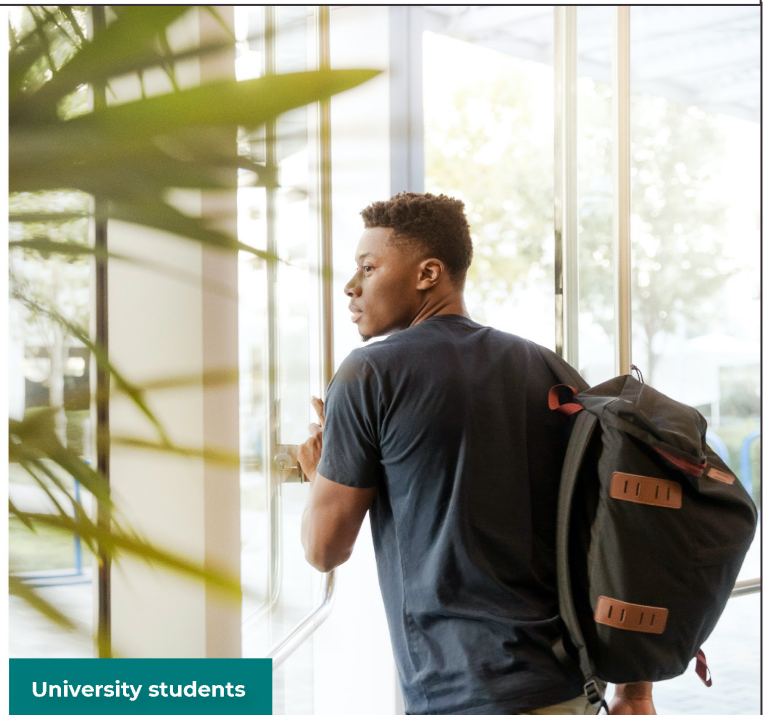
University students

Figure 17: University student going to a class.

Distance Learning Models: Option 4

Option 4: **Synchronous Distance Education**
Flexible accredited synchronous learning

Figure 18: Student participating in a synchronous learning classroom.

1. About:

This distance learning model allows students to interact with other students and teachers through a live-video conference similar to a class. As a result, teachers can have deeper discussions and debates, giving students more context on the study material. Students also have the freedom to attend class in a geographical location through a decent internet connection.

Distance Learning Models: Option 4

2. Features

- Tracking Progress
- Learning Management System
- Online Discussion Boards
- Gamification in Learning
- High-Credential Qualification
- Record Live Lectures
- Chat/ Message/ Inbox Capability
- Search/ Find Courses
- Collaborative Opportunities
- Comphrehensive Assessment/ Evaluation Tools
- Scheduling & Calendar Capability

Distance Learning Models: Option 4

3. Pros

· High-credential qualification

· Offers experential learning possibilities

· Community Learning Experience

· Better educational experience

· Collaboration opportunities (H)

· Teacher-student relationships

· Wider range of teaching capabilities

· Mid-level courses (1-2 years)

· Any geographical location
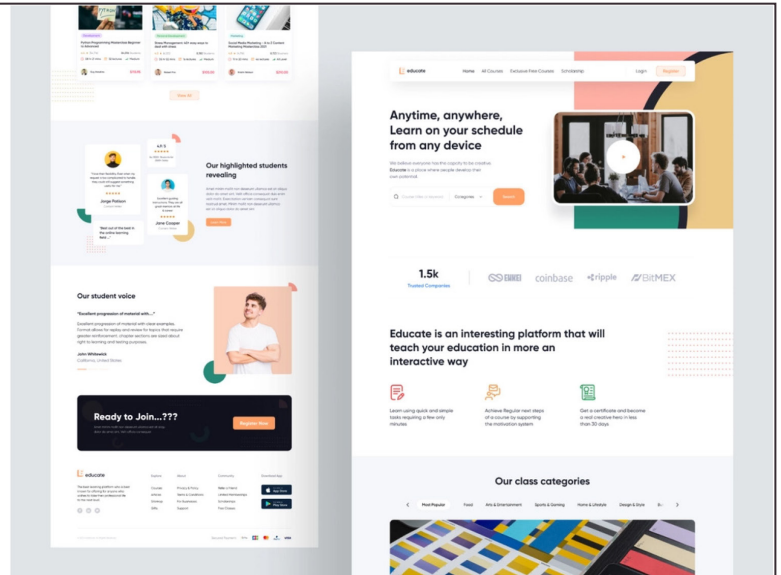
Figure 19: Example of tracking your courses, assignments and schedule.

focus
Flexible, Credential qualification

Distance Learning Models: Option 4

4. Cons:

· Higher teacher/student commitement

· Higher time requirements

· Higher bandwidth required (H)

· Higher cost (WH)

· Requires working educators.

· Applicable to restricted audiences

· More intensive application process.

· No in-person interaction.
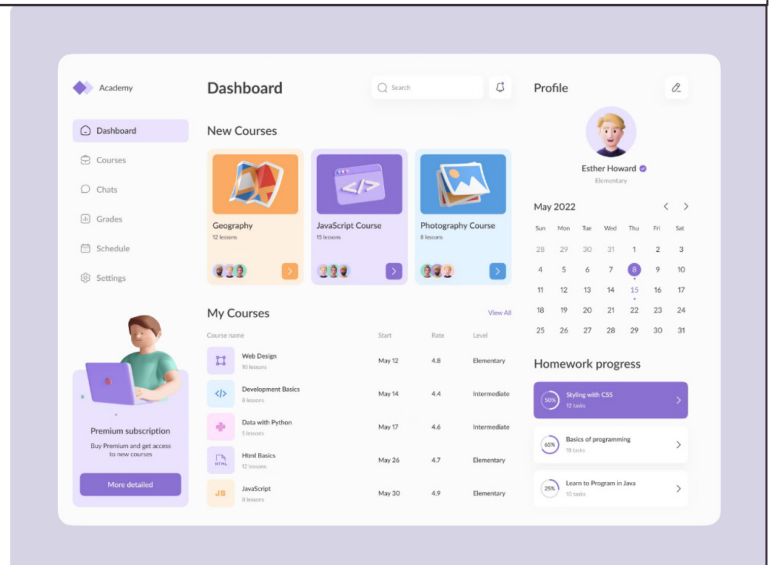
Figure 20: Example of tracking your courses, assignments and schedule.

Distance Learning Models: Option 4

5. Potential Target Audience

Figure 21: Student interacting with classmates over the internet.

University/ College students

Comparing and Finalizing

Comparing and Finalizing

FEATURES	LOW	MED	HIGH	VERY HIGH
Scalability (No of courses offered)	Option 3	Option 4	Option 2	Option 1
Pricing	Option 1	Option 2	Option 4	Option 3
Bandwidth requirement	Option 1	Option 2	Option 2	Option 3
Audience Scale	Option 3	Option 4	Option 2	Option 1
Educational qualification	Option 1	Option 2	Option 4	Option 3
Community Learning/ Collaboration	Option 1	Option 2	Option 4	Option 3
Teaching methods	Option 1	Option 2	Option 4	Option 3
Education quality	Option 1	Option 2	Option 4	Option 3

Comparing and Finalizing

1. What Distance learning model is the most applicable for the Tlicho?

2. What improvements would you like to see with the selected model?

3. Are there any specific features you would like to have?

4. Do you have any suggestions for what you would like the distance learning model to be called?

Future Development

focus
Function, Navigation, Layout

Grid

Wireframes

Low Fidelity Version

6.3 Oral Consent

Mon, Aug 29, 2022 5:25PM • 1:22:12

Speaker
T. Lim, P Turner, G. Marion, Tejas Ambarani, Renwick, T. Steinwand

Tejas Ambarani 00:11
So I'd like to start like as a settler, I would like to acknowledge that all the work I'm showing you today is conducted on treaty six territory in which I'm currently located in this land is a traditional gathering place for diverse indigenous people, including Cree, Blackfoot, Métis, Inuit, and many others whose histories, languages and cultures have continued to influence this vibrant community. I would like to again, start by introducing myself, I'm Tejas or you can call me TJ. I'm a graphic and user experience designer from Mumbai, India, I have around six, six years of work experience along with six years of education in the field of design. Before we started using session, I'll speak briefly about my research. What got me interested in the study my research methods, your rights as participants in this research. And finally, I will ask for your oral consent, and a tea if you're comfortable like, since we don't have since some participants were not able to join us, would you be willing to participate as well?

T. Lim 01:21
Sure, that's fine to do.

Tejas Ambarani 01:22
That's great. Thank you. My research aims to create a culturally appropriate distance learning prototype for the needs and requirements of future students seeking better access to education. I'm conducting this research as part of my master's in Visual Communication at the University of Alberta. I am working under the supervision of Professor Gavin Renwick, who has worked with the Tłı̨chǫ for 20 to 25 years. I started this research back in 2020. Right during the pandemic, it was unique time since I try and transition from studying my degree online to working and teaching online as well. So I had a unique perspective of identifying the challenges faced by poor students and teachers. This perspective or understanding both sides inspired me to research and design a distance learning prototype. At Additionally, during this time, my database and I were given the opportunity to actually work with the Tłı̨chǫ. Before and during the early phases of COVID, we worked to create a series of posters for the 100 year celebration of 2011. And it was an eye opening experience. Since all four of us were international students, we didn't really know much about English people to know about Canada's history as well. So we got to learn about a lot about Tłı̨chǫ and indigenous people in general. So when I ended up

proposing this research to the university, I was offered Gavin as my supervisor. We immediately came to a kind of agreement to focus on developing a distance learning platform for the Tłı̨chǫ community, due to his close ties with the community along with my interest in continuing to work with all of you. So what will happen during the study? During the study, me and Gavin want the research method to establish a client-designer relationship similar to a previous class collaboration I had with the community. It was essential for us to include members from the community in the design process where all of you can provide feedback suggestions and dictate the direction of this design. I've divided my design process into three sections. In this session, I'll present you with full distance learning models. Each model has a different focus. With pros and cons, which I will discuss in detail, once I present this presentation to you be able to have a group discussion on which model you think would be the most appropriate and most applicable. And then the future testing sessions I will work on building on them. We have Yeah, we have again, two other user testing sessions. The next unit testing session will take place on September 19. And that will focus mainly on building the architecture of the website. And I'll mention more about that towards the end of the presentation. The final user testing session will focus on developing branding elements and finalizing the entire prototype that will take place on October 5. As you all know this session is going to be video is being recorded right now. The purpose of recording this is so I can record all your opinions, your comments, your feedback and suggestions. Now that you know we might have, especially towards the end of the presentation, you can do so if you're not comfortable, and you don't feel comfortable here and you want to leave at any time, you're free to do that it's completely okay. I will be mentioning your feedback within my thesis, and you're inclined, and I intend to use your last name. To provide acknowledgement for the feedback you provide. Please feel free to let me know if you don't feel comfortable. It's not necessary, but I felt like it's really important to give credit to every opinion that's given. And if you don't feel comfortable, I will assign an arbitrary initial to remove any identifying information upon request. This session should take around 60 to 90 minutes. It is not in terms of potential risk and discomfort, it is really not likely to have any harm or it is not likely to cause any harm or discomfort associated with taking part in this research study. But again, as I mentioned, if you feel don't feel comfortable at any time, you can decline from participating in the research.

Tejas Ambarani 06:07
The potential benefits to participating to participants to benefits to participants. The benefits include increasing knowledge on all various possibilities of distance learning, or collaboration hubs to for better education, advocacy for participation. Lastly, the result of this research will create a customized learning prototype that will cost that will provide a customized experience for the needs of future students confidentiality. This information here today will remain strictly confidential and will be used solely for this research. With an exception to your last name all

your identifiers will remain anonymous. The data from this use distinct session will be used to support the thesis and possible Academy presentations including podcasts, journals, and peer reviewed articles, data will remain a non-confidential add value will be you will have access to the data for four weeks after the testing from today, you can withdraw that data within any time within the four weeks after which it will be used in my thesis account contact. Again please feel free to contact me if you if you have any questions or concerns you can contact Gavin as well. But you can contact me at ambarani@ualberta.ca or grenwick@ualberta.ca. The plan for this study has been reviewed by a Research Board at the insole PATA if you have any questions regarding your rights as a participant or how the research was conducted you make contact with each its expert at the number here if you would need this number later you can again let me know now when we are going to ask for your consent, your participation in this study is entirely voluntary. You can decide to stop at any time even partway through the testing session. If you choose to participate you can avoid and avoid providing feedback of white answering any questions you may have if you do not wish to answer if you do if you decide not to participate in the study or choose to withdraw please let me know at any point during the sock conversation again as and you can enjoy you can let me or Gavin know within the four weeks if you if you decide to stop we will ask you how you would like us to handle the data collected to great point and this could include destroying it or using the data collected up to that point you will be treated with respect and no questions will be asked Do you all have any questions or require any additional details (pause). Say yes if this works for you. Are you okay with your last names being used for this research?

T. Steinwand 09:17
Yeah, that's not a problem for me.

Tejas Ambarani 09:19
Okay, thank you.

P Turner 09:21
Yes.

T. Lim 09:30
Yeah, that's fine, too.

Tejas Ambarani 09:33
 And G Marion?

G. Marion 09:42

Here. Okay. Yes.

Tejas Ambarani 09:44

So are you okay with your last name being used in my recent in my thesis?

G. Marion 09:48

Yes, sir. Fine.

Tejas Ambarani 10:25

Finally, can I use your opinions, suggestions and feedback you provide in this research?

G. Marion 10:40

Yes.

T. Steinwand 10:42

Yes.

P Turner 10:45

Yes.

T. Lim 10:46

Yes.

Tejas Ambarani 10:48

Thank you again, for being patient. We will now begin to use presentation. Yep. So I'll start with first like speaking briefly about distance learning.

6.4 User testing session 1 (Transcript)

Mon, Aug 29, 2022 5:25PM • 1:33:00

Summary Keyword

students, people, option, model, TJ, teachers, create, questions, recorded, class, approach, courses, require, Tłı̨chǫ, distance learning, assignments, lectures, previous, Gavin, language

Speaker

T. Lim, P Turner, G. Marion, Tejas Ambarani, Renwick, T. Steinwand

Tejas Ambarani 10:59

So briefly, what is Distance Learning, distance education. It is a practice of providing education to students who are geographically distant from the instructor. This interesting has existed since the 1700s, throughout which it has been delivered through various mediums, newspapers, radio, mobile, and now mainly to the internet. And why do you and why is it important that we create a distance learning session for your community? Now I've worked in I've had experience working in numerous countries, I've worked in India, Bahrain and Canada. My experience working for the Tłı̨chǫ was entirely different from my experience working with companies from here in Canada. And part of that is because the people in Tłı̨chǫ are different. People over here in Canada are different compared to people in India or Bahrain. I had to adapt and change my design style all the time. Because different people need different solutions, which is why I think it's really important that we understand the needs and desires from the people themselves. The focus of the thesis is to create a prototype for distance learning in general is very, it's very broad term. But what I'm focusing on is creating a prototype for distance learning. I'll be creating numerous screens and show how this distance learning service might look like. I'll be developing separate screens for registration, signing in, finding a course, and what it looks like when somebody actually has joined a course. How the course are laid out, how the lectures within the course are laid out, how all the information visually looks and how grades are assigned and shown. So it's, so I've been designing different screens for all of them, along with showing how people can navigate through them. And also, I'll be designing different screens for teachers and students, because teachers will have some additional access that students will not the limitations, this prototype will focus purely on how things would look like and, and what features works. I'll be designing a model. But to develop it further, you would require a developer, possibly instructional designers or a teacher to kind of build a curriculum and not focused on the curriculum and only focused on the design.

Tejas Ambarani 14:24

This is the first distance learning model. This is a self-paced education. This model learning allows students to work independent from teachers and students, allowing them to study at their own time and pace and what I mean and it basically imagine a space where all the lectures will be pre-recorded, which offers flexibility to people who have challenging work schedules. So for example, so let's say this is a class and I'm a teacher, I'm conducting a class, instead of me presenting this presentation with all of you being here, right now, imagine I've pre-recorded this entire conversation. Now, numerous students for several years could actually see this recording and they could actually gain information and value from this conversation. So this

model offers flexibility for me as a teacher. Because after this presentation, I can work on other presentations or lectures. Also, the fact that this is recorded, students have to align their schedules to be here at the same time. But if you pre-record a lecture, you could, you could see this video at any time of your type your convenience, so you wouldn't need to align your schedules and can work at any time you want. So this offers flexibility, both for you and me, as a student and a teacher.

Tejas Ambarani 16:05
Some of the features include scheduling capability. Different students can take their own time in studying a course. So if let's say a student wants to take three months to finish a course, they can do that, or they can take six months to finish a course. There's no pressure of time. But having having a space where they can align their schedules through a calendar can be useful, since there's no deadlines, so they have to self-regulate themselves.

Tejas Ambarani 16:42
Now I will mention the pros. Because everything's pre-recorded. A system like this is extremely scalable. If Gavin is, let's say is teaching a course he can create lectures for class. And then he can move on to work on more lectures from a different class, he doesn't have to reteach the same class, every single time. So you could imagine that in a year, he could maybe build three or four classes. So if you have all teachers being able to do that, you can build a large network of courses and content all for your community. It's a really good way to scale things and you can actually build this, even for students like me, like people who are not from the Tłı̨chǫ, but might want to learn about clencher. A system like this really works well, because you can actually create a set of different lectures, you can provide additional material, like any study material in terms of reading or videos or anything, and I can read it, I can go through it in my own time. And, and I can, and it's like a really good way to learn by yourself, you don't have to depend on anybody else. So a system like this is really flexible. Again, self-paced, as I mentioned, also system like this is low bandwidth, it doesn't require very strong internet again, because right now we all are here today together. So this actually takes consumed a lot of internet, a system like that you can actually, it's possible that you could even like provide content offline. But our can keep a hold on that because you would you would have to talk to somebody from put a programmer regarding this. But I've seen examples where a model like this can really provide offline content, which is really beneficial for people who struggle with internet. And lastly, this is really article for like a wider audience. As I mentioned, like many people can use this. It's very, it's really open and flexible.

Tejas Ambarani 18:42

But yeah, so two cons, what are the what are the cons in this approach? The biggest con, I would say is that there's no since teach the teachers to teach, like just cannot record recording lectures, there is no interaction between the student and teacher. There are no interaction between different students as well. So that is a social example in the class, you definitely can learn a lot from the teacher, but you learn a lot from each other. And in the aspect in a model like this, it's very difficult to form a relation form connection. So there's no you can you can't really learn from anybody else. It's just by yourself, no teacher and student relationship. And because again, there's no relationship between other students, there's no note that there's no opportunity for collaborations. And that's mainly because you might work to finish the course in three months, someone else might finish the course in one year. It's really so open that you can't really align. You can't really get people to work together. The big issue with recorded lectures is if you have any question right now, you can ask me directly and I can answer it. But in the According to lecture, you can't get an answer quickly if you have any questions regarding any context. So people can, like misunderstand the teacher or like, it's just a slower way to the quality strategies because this and the other aspect with this, I think I would say the biggest con with this approach is that is, so because everything is prerecorded, and everyone's taking their own time, and so open to open to everybody. So you might have, let's say, Gavin has a class and I have a class, Gavin might have 100 students, well, I might have two students. So in a situation like this, it's since it's so open, there are very limited evaluation tools, we can't make people write an exam, we can't make people finish a test, because you can't control how many people are going to be in that course. And also, because it's so open, and you want to, you want people to just do work by themselves doesn't less about you don't actually know they're actually consuming the content. So, which is why it's tough to give them a credential qualification, like you're going to give them a degree, after they finish the course, you could possibly get possibly we can create like a certificate just for this website. But it might not be as credible as let's say, other models, which I plan to show the restricted teaching tools, teachers can only pre-record so they can have discussions, debates, like teachers are really great at that, like, you know, communicating in such aspects. Of the we can eliminate evaluation tools, what we could create as automated quizzes for to test if the student is able to understand the quick understand course, but it's very easy to cheat. So it's really, again, it's tough to be that credible. And of course, like this is probably most likely shot most likely should avoid having a really long course. And lastly, student motivation of it. In a situation like this when people are playing by themselves and they aren't getting a credential degree. It's very tough to motivate students to learn and approach it unless they're like, under someone like we're just interested in subject and they want to learn, it's great for them. But it's not really good in terms of if you want to get people actually to really do a course like this, there has to be a genuine interest.

Tejas Ambarani 22:19

Now, lastly, like what are the potential target audiences for this? Firstly, I'll say like high school graduates, one of the things I believe one of the most common issues most students face after their school is figuring out what path they want to take. There's so many different courses offered today, but a website can help students try out different courses, they can try design or art or philosophy, they can try out any course that they want to. And they can see if they like it, or they don't like it. And if they want, they're interested, let's say they, and they can kind of find what you're interested in. And they can kind of pursue that in the future in a different course, as well. So this is a really good situation, because first of all, is most likely very low cost as low cost because you don't like Gavin can create different courses or he can you have to keep paying him for same course all the time. Secondly, I mean, we might, if you're a deed recording, I mean lead, you might have to give them some kind of licensing fee. But again, I'm not focused on that. The cost of this model should be low and the commitment is less. Students should not require to commit a lot of time or money for this approach. Secondly, Parents with very diverse schedules, who take care of kids and are working part of working as well. So if they want to study or improve their skills, like a situation like this works, because there is no commitment. If they mess up. If they take few more hours, a few more months, it's fine. And it's again, good for part time students for the Tłįchǫ in the country and also someone like me, who is just interested in knowing or learning about cruncher. So, lastly about this model, like I think it's useful to talk to me about that she was interested in having a free distance learning platform, conducting provide education to students in a Tłįchǫ situation like this is pretty affordable. This would be the best candidate for that. But it does have a lot of cons in terms of, especially in collaboration and connection with the students and teachers. Are there are any questions regarding this approach?

G. Marion 24:36
My question is, what about seniors?

Tejas Ambarani 24:40
Yeah, this would be open to seniors as well. Now again, I would say it depends on how its taught. So this could be opened for even a wider audience as well.

G. Marion 24:54
well, the reason I brought it up TJ is two things. I want to make sure that the program we use can be bilingual. And also, our hopes is once we do English, the Tłįchǫ translation will be used. And that's where I bring seniors into it, because my hope is to do literacy, work with them. So just something

Tejas Ambarani 25:16

That's definitely something I was actually talking to Gavin about the last meeting, I felt like, it was important to have like a Tłįchǫ like you have to make the website bilingual. And also, one thing that would depend on that is, all the lectures being taught would have to be then taught in the Tłįchǫ as well. So a huge, like, the curriculum is, again, a big part of it that are not covering. But if you have a teacher who's really good and speaks in Tłįchǫ, and they're able to talk to the keep it bilingual, I think it would definitely work in a system like this would be open to everybody.

G. Marion 25:52
Okay, perfect.

Tejas Ambarani 25:57
Any other questions from anyone else? Regarding this model, speak to what is

T. Lim 26:04
Just more of a general question today, when it comes to all of these options and models? As Is it part of your consideration to think about buy in or some take up of the model? I think that there are, there are obvious challenges around just kids in classrooms for one. But secondly, engagement, I think, was found to be quite low, at least in in northern settings, during the pandemic, and attempts to move to distance learning. So I just wonder if that's yeah, that feeds into the

Tejas Ambarani 26:47
No, definitely that's what I referred to in regards to the motivation. The problem with this approach, I would say is, it's tough for students to get motivated, it's tough to get their buy in. I would say that's the biggest challenge with this. Because if you give them the freedom to work at their own time, and you don't give them a deadline, like and you're not also offering them a credential degree, I would say that's the biggest weakness with this approach is, yeah, it's very flexible, it's open to everybody. But the quality is reduced. And also, it's really tough to motivate students with this. And I have a few ideas on like, we could maybe try to have like a student's corner where students can maybe talk to each other. But a model like this in terms of education, it's so it requires students to be self-motivated. And but I have other models that focus more on that those aspects. But this is mainly focused on scalability and flexibility and ease of use.

Tejas Ambarani 27:46
Does that answer your question? Yes,

T. Lim 27:48
that's great. Thank you.

Tejas Ambarani 27:50
I'm going to go to next one.

Tejas Ambarani 27:52
So pace distance education. This is just a similar model to the previous one. But this speaks exactly to some of the cons of the previous approach, what he was mentioning. This isn't one model is time restricted, asynchronous learning, which, which requires like a limited student capacity. So that basically means that a course like this, so the previous model was you could take as much time as you want, this one is restricted, you can take six or maximum three to six months to finish a course. And so it's a bit more restricted. The people that can join a course is restricted. So you can't have 100 people to want two people joining one course, you might have a batch of 30 students for maybe three to six months. So it restricts the amount of students. However, because of the fact that you have deadlines, each course have. Now you have each course will actually have more comprehensive assignments. So now, after again, in this approach, as well, like all the lectures will be prerecorded. So if a Gavin is making a course, he can create a bunch of courses, and he can create one course. And he can move on to a different course with maybe 1015 lectures. So it offers flexibility and time for teachers. But for students, it's a bit more commitment. Now, after two lectures, they actually might have to give an assignment, which will be you know, create an object by either Gavin or maybe he might employ like many TAs or teaching assistants. So this would have more like so in this way, you can actually test if your students actually able to understand you could possibly even have like exams, or you could have like exercises or projects. And lastly, you could actually have more collaborative opportunities as well. You could you could maybe have a group project, and you could assign two people together. Because in this situation, there are only 30 Students working the same course. Together Now they can work at morning night anytime they want to, because everything's prerecorded. But in a system like this, you have a you have deadlines for assignments, you have deadlines for every single asset for an exam. So You could actually have a collaborative opportunity like you could, you could get, you could kind of have two people work together on a project and system like this, it's a bit more collaborative, you can also actually get to talk to students, because now, since everybody's working at the same time, you can have a space where students can interact with each other, they might have more questions, they might actually want to let you have a meeting with Gavin regarding an assignment or any questions that they have. So it slightly improves interactivity. So again, the features one aspect of getting over features like, the good thing with the interesting thing with distance learning is I can have like, I can track progress, you know, of students. So if let's say student finishes 60, or

80% of their class, they can actually see it. And we can try to almost gamify, like try to have like an achievement or a progress, like, that's like few ways where you, students might feel motivated, like, credit gamifying. Education is an interesting way to kind of like, oh, they feel like they're actually progressing. And then if that occur, that's a really good way to motivate students as well.

G. Marion 31:04
I have a question. Is it adaptable? So if I only had one student versus like, 10, is that okay?

Tejas Ambarani 31:14
I mean, you could do that. Yeah, you could have one student as well. The only thing is you won't, you'll miss some of the biggest benefits with this approach. Because, I mean, don't miss many benefits. There's still assignments, that you can still evaluate the students. So that's great. But they can actually collaborate with people. So that's a smart contract, it will definitely work with one student. I don't know why not. Because

G. Marion 31:37
I'm just using like the Tłįchǫ agreement as the prototype as an example so that people can picture yeah, some sort of learning. So they can tie the learning to something because I don't know if I'm pretty sure T took the feature agreement Leona did not sure about P. Turner or T.Lim. So

Tejas Ambarani 31:58
Of course like this is yeah, it can, I think works perfectly well with the Tłįchǫ agreement plan. It is also should work for people who are not from the Tłįchǫ. Let's say you want to have courses. For someone like me, this would work really well as well. You also, again, have online discussion boards. So a system like this, again, is it's there. Again, the pros are still, it's similar to the previous one, it's still scalable, but maybe it's not as scalable as the previous option. So slightly reduces the pros, because in a system like this down, if a governor is teaching a lecture, he has a course here or a you have Tłįchǫ agreement course. In this situation, you might have a teacher actually there, they might have to answer more questions because I gave assignments, so they might have to meet with the students. And since there are 30 students at the same time, they might have, they also have to grade students. So in this situation, you don't have automated evaluation, you don't actually have to do an assignment and you they would, you would actually check the assignment but a teacher, so it's like, it's more comprehensive. So teachers spend a bit more time or they can hire someone. But they still don't have to give lectures. So they still have time to create more lessons. So I would say like, Yeah, this is still scalable, but not as much as before. It's affordable, not maybe not as affordable as the previous

option. Previous options just because students have to teach again have to spend more time. It's still flexible for study, study in terms of even though they have like deadlines, they can work at any time they want during the day, but they have to finish it by a particular time. So it's still it's a bit restrictive. In a system like this, the biggest I would say benefit is it actually offers a credential degree or qualification, you could probably give them a certificate that can actually be very credible. That could be credible. collaborative opportunities. Yeah. Again, as I mentioned, it's really you can actually collaborate. It's I would still say, it's not great for collaboration, because its roots are not actually talking to each other. They could, but it's but you could ask if a teacher actually puts in more group projects, it could be it could be good. low bandwidth requirement, it still doesn't require too much internet, probably a bit more than previous, but not that much. And sustainable. hadn't mentioned previously. But sustainable development is what's the heaviness of the like, like the heaviness of the website, like sometimes like a system like this is pretty sustainable, because it doesn't require so much intent doesn't depend on internet that much. And it's, again wider, applicable to a wider audience. Now, it's not as wide as the previous option. So in the previous option of parents, let's say if we were very restricted schedules could use that in a situation like this if you have to commit some time, so it's a bit more intensive. It's not completely available to everybody. Now what are the cons? The cons are the So a lot of the cons of the previous approach are kind of removed, and some of them are reduced. So again, this is still limited company learning, it's still not as interactive because you don't actually get to teach a nodal students. There's no teacher student interaction or relationship. That could be if students are very proactive, and they cause meetings, but most of us might not really want to do a meeting like logically.

G. Marion 35:22
Well, my question is here. So this is not sustainable, affordable.

Tejas Ambarani 35:27
No, this is affordable. But I'm saying it's not as affordable as the previous option.

G. Marion 35:32
It's feels like you have I see a preference to one.

Tejas Ambarani 35:37
No, this is just an example, like I, I could choose any of these approaches, honestly. It all depends on your situation. For example, like, in the next options is going to focus is not going to be, it's going to be a lot more expensive. But that approach is, I would say, a lot of experience. So it's really up to you. And I think all the options can really work. But yes, of cons, again, there's still restricted teaching tools, because teachers essences recorded, they can't really,

some of the best thing for teachers is they actually, if you teach, they can actually see a student and they actually are able to change the way they teach. And they are able to kind of adapt and kind of if they they can kind of like re or rephrase the things they're saying. Because if they if a student is confused, but you can't do that in a recorded setting, and primarily, this is still staff learning. So they still have to have work by themselves, most likely. And, and also, this is still kind of most likely a shorter course, like you wouldn't want to have like a one year or two year course, where everything is recorded, because that's like, you can't have no introduction for that long. So it's a bit, I would say, this is probably still a shorter course, but six months, but yeah, what a potential target audiences. Now one of the biggest benefits with this approach is you actually get accredited credential degree with an approach. So like, working professional can actually do this in the part time. You can even as I mentioned, like, I'd mentioned that you will need some more time commitment, but what we could actually do is create like, some batches for three months, or some batches for six months. So we could make it more open for some, some people who want to work part time, but therefore, somebody who's working professional, they can do it in a part time, they can grow their skills, and they can kind of like, get a better job, you know, and, and this is this should again, be someone great for someone like me, authority is working with a Tłı̨chǫ any, any person any, any agency. And it's again, good for graduate students who, let's say they want to learn some additional skills, a system like this is still pretty affordable. So they can probably still do it. And they can do it on a part time, they can learn additional skills. And so this will ask about this approach. This is really, this really fixes a lot of the problems with the previous approach. But it still has some of the major problems that is still of the previous approach. And so it's like a, obviously, this is a more balanced approach than the previous approach was completely free and like, completely open. It's really great for flexibility if you but it's not great for students, let's say students are motivated, it's really tough for them to get invested in us in that model. And this model, they actually couldn't get a qualification that can improve their job skills. So it's a bit more beneficial. Any questions regarding this? Okay, I'll move on to the next. Now, this is I would say is the most ambitious model. This may not work with, let's say 20. To ensure agreement course to I'll kind of just talk about it later. I'll talk about that later. This this model offers students a high quality education while providing students with a way to interact and collaborate with each other in person. Now, this is purely for students in the Tłı̨chǫ Now, I would say imagine, like, you could actually create a space with the Tłı̨chǫ where students could actually go to a class and you could get teachers from around the country to zoom in and basically teacher actual class. So teachers can now actually interact with the students. And let's say students is, is absent, they can actually still, they can still like attend to attend the class through their computer. So it's really open for a variety of different people, like in different situations. And in this situation, the best thing is like teachers can actually interact, they can have discussions, debates with the students. And students can actually talk to each other, you know, like interact with each other, they can

actually form relationships and friendships, and they can learn from each other. This is especially really good for subjects that require a lot of collaboration like in art or even me As a car designer like that, if you want a space where you want people to interact and learn from each other a model like this was really beneficial. It's like a. Yeah, it's really

G. Marion 40:13

good question. So are you saying like, the previous model is only online only, and there's no option for hybrid, if we want to use the second option?

Tejas Ambarani 40:22

No, the previous option not is completely online. Because everything is pre recorded. So you students will just a teacher will just record a lecture, and students will get see the lecture whenever they want. So there is no interaction, no relationship with the student and teacher. The students could meet each other and the previous if they want to, like but it's, they don't need to. So most likely they want in a situation like this. They like you actually have a class so they can actually go to a place. But yeah. This is a person.

G. Marion 40:54

Yeah. Does. I just want to know, too, with this hybrid option one, if we had to go back into COVID situation, it would be okay. Going online with this option, right?

Tejas Ambarani 41:05

Yeah. Yeah, this one? I didn't think about that. But yeah, this would, because you still have the website, they could still basically, it's interesting, but this will actually become into option four, which I will talk about. But yeah, you could completely do it online. I mean, but it will miss some of the benefits, but it will work perfectly. But in case a good online, it will happen in zoom instead of in a class listing. So what are the features this offers? I mean, it's so in terms of the website, and I'm creating all these websites is slightly similar. For example, because I'm not making the video conferencing tool I'm not making, I'm not going to be building the structure of the room, and so on. So what I'm creating in terms of functions will be similar. But imagine like the previous, the first option, didn't have any assignments. So it didn't have any grades. It didn't have any evaluation tools, this approach and even the previous approach will actually have that. So with this approach is it's so it's almost futuristic. And it's I've not even been able to find an exact example that would work for I mean, an exact an exact similar situation that people have used. So we'll add kind of, I have to teach it a bit more on like different features that this website can offer just for that experience. So I'll definitely probably add more features to this. But yeah, I'm option like, this is really good, because all the students are from choice. But it's purely designed only for a Tłįchǫ, or situation like this is not designed for me. I mean, you could

create it for me if it's all online, but you'd miss the entire in person aspect in this situation. What are the pros, you could provide highly a high credential qualification with this you could provide this could be a replacement for a bachelor's degree, for example, like a student that doesn't have to leave the community. This could be like a big, strong, comprehensive course, like a two three year course. It can offer experiential learning opportunities, possibilities, it's a lot more, it's a lot more interactive. It's a it's a far better experience. You can learn a lot from each other community experience. This is also like it creates, it's a far better educational experience. I think he had mentioned that. Like, how do you motivate students a situation like this? Well, like, again, it's still I think the stress level is far more it's like a Union University experience. Whereas they don't actually have to leave the communities. They can still be with each other. And it's, it's a lot more inviting, I would say compared to a purely online course. Especially, uh, I mean, online courses are fine. I think the main issue with the previous options are sold is everything is recorded. So they're so independent in a situation like this, it's all together. So it's, it's focused on that aspect, because I've read that, you know, community is really important, especially in interviews, especially in the Tłı̨chǫ. So I could have focused on that aspect. You can have stronger teacher and student relationships, you could, a teacher can actually see what's happening right now in the class. So there's a lot more closer bond between them as well. And teachers can have different ways of teaching. As I've mentioned, they can have discussion debates, they can try so many different things that can change the way they speak, they can rephrase things, they can provide more context. So it's a lot more flexible for teachers in that regard. But again, this approach also has certain cons one of a big call one of the con i would say is it requires a lot of dependence on technology because now you actually need to have a screen you need to have a bunch of different computers for students cameras it's like there's so much technology and everything is like you could actually probably be could actually create like different like classes for different subjects for let's say like an art might require maybe didn't matter require computer they might require like a Let's face to create our like Canvas. So you can kind of customize that experience. But it still requires a lot of internet. But one rule is that, since everybody's in the same location, you could provide internet to just that location. But that location would require really good internet, which is an issue, geography location, I know that I think I believe culture has like four different communities. So for different teachings, so like that would just be located. And the problem is people actually have to commute there. So it's a bit more commitment as well. It's more time commitment. Yes, they have to be there in a location, they can still again, do it online. But a problem with let's say, students doing one semester working online substantive in person, the students in person can do like, like, participate in activities that maybe those other students might not. So a teacher might have some struggles in terms of trying to create, like a really inclusive environment, because it's going to benefit the students who are in person.

Tejas Ambarani 46:00

This is going to be higher cost, because now, not just for the technology you build in space you require, but also, now Gavin loves his teaching class, he would have to actually be like, teach the same class every single semester, you can't, a system like this not scalable, you can't have like 100 courses, you might have few courses, but they will be extremely good. And it requires a larger supporting staff, you might need somebody to an engineer to fix any technical issues, you might need somebody to maintain the place, clean the area, you might need someone to handle the internet, like you need people. Or you might also need somebody to see if the students are like behaving and just not causing a ruckus. So it's a bit you might need a few more people. So it's a bit more challenging in that regard, as well. And it's a nice article to restricted audiences. It's not because the courses are longer. It's not made for everybody. This is made for few people, few students alike. But it's really like high quality, it's focused on that. And again, it's the more intensive application process as well. It's, yeah, it's just so so if you go for course, most likely, you would have to actually apply to it. And it's a bit more intensive. What are the potential audiences? I would say mostly university students, if you want a replacement for a bachelor's degree, any master's degree could have any degree with this. You could, you would this would be the approach. But again, you would then have to hire people from outside the question, yeah.

G. Marion 47:33

Can we partner with other organizations and embed their programming into here? Yes. So where is it from scratch?

Tejas Ambarani 47:44

Do you know what I mean? So example. So we're talking in terms of in terms of the curriculum, or in terms of like, let's just

G. Marion 47:53

use Tiana's program from University of Victoria. They do language program with the University of Victoria. Let's just say like, we've had some issues with online learning over there. But we have this down pack, would they be able to send us their module and input it into this?

Tejas Ambarani 48:12

I think it depends on on how the model is set up. So then, so basically, since this is a very, like, this is going to be hybrid approach. So it's like, you'd have to slightly change in kind of like, adopt your module to fix to fit in this module. Because there are things that you could do in this module. And maybe you can't do in that module. Like I don't know how that model works. So you'd have to slightly adapt of the curriculum to work for this. So if you could do that, but you

might have to make certain adjustments I would imagine. Interesting. Yeah, but but again, like if you want to teach a language, of course, the previous courses or options are not really great for that. Because if let's say you're trying to trying to teach the language, you need to actually talk to the students, you need to see if they're able to comprehend like, if you just have a lecture recorded lecture, and they're not actually speaking, speaking the language or like communicating, you can't really learn so a system like this, you can actually learn you can actually ask students questions you can actually interact so you can actually really know if a student is comprehending. And I'll go for the final model. This is a synchronous distance learning model. This is very similar to what is that I mentioned previously, what if we have to go to COVID this is that model would basically almost become like an almost become like a dislike it almost convert into this, this model. This isn't distance learning model allows students to interact with other students and teachers to a live conference similar to class. And this is what I think most most universities kind of bend to where you would just rely on like zoom or Google teams or different video conferencing as your way to actually communicate in a class if it really works, it's highly used. It's also more flexible than the previous option. Because in the previous option, you have to actually be in person. But in this option, you can all be together and just want at any place you want, you want to travel you're going, and everyone is having the same settings as well. So this is a lot more flexible. Again, in a situation like this, since everything is live, it's a live conferencing, live video conference, you can have deeper discussions, debates, you can offer students more context and study material as well. Students can have the freedom to attend a class at any location they want, only requiring a decent internet. In the research conducted, I believe the Tłı̨chǫ government offered students access to a Turbo USB for internet and chrome books. If that was possible, this would definitely work for students here as well. If you provide them with internet, they should be good. The features again, are similar. You would again have people to upload assignments, you'd have a space where students are able to register and grow for class, track their progress model like this is you can still have collaborative opportunities as well. So it's a lot more balance, but it's still kind of like yeah, it's a really, it's a really good model as well. The pros, again, you can have a high credential qualification with this, I would say maybe you can, maybe you can replace a battery of bachelor's education like you could. But having three years or working online, I think studying online is probably not the best approach for your mental health, I think you could probably maybe offer a one or two years, it's still interaction, you're still interacting a lot more than the previous option. So it's like hiring a mid-level course a diploma or strong certificates really good. But in terms of long, like three or four year degree, I would say probably not. Again, coming to you can still learn from students you can learn from teachers, it's not as beneficial is the company learning is not as great as the previous option, because you're actually in person meeting. So you might have a situation where teacher to speaks and to students are kind of quiet, unless the teachers like creating a lot of discussions, debates, students might not interact too much. So that's again, a

big con with internet. But this approach, if a student if a teacher really tries to make the class more interactive, it could be a better experience in that regard. But yeah, I think and also, again, teachers still it still offers teachers capabilities to have discussions and debates. So they still have a lot of methods to they can change the way they teach. So it still offers some freedom for teachers in how they teach. The cons again, is, again, it's more high commitment for student teachers in this situation, students still have to give it assignments they have, it's like a proper class. So they still have to be here on time. It's more committed commitment, even for teachers, because teachers actually have to retell all the assignments. So it's not made for scalability. So you can't really scale this, you can probably still have, in a situation like this, actually, you can have more courses, because in the previous option, actually, the model which I failed to mention, you couldn't have too many classes at the same time. Like if you have one location, if you have, let's say design from three to five, you can't have any other class during a time. But in a situation like this, you can have more courses at the same time. Because they will be in different zoom rooms. They require working educators, more intensive application process is still required, it's a longer course. So most likely, students would actually have to apply and know in person interaction. And the questions and again, this is similar potential target audience would be similar in terms of use will have college students, you know, university students, but it's a lot, it's still I would say more open in comparison to the previous option.

G. Marion 54:02
Really. So this one is what um, I feel like this is similar to option two.

Tejas Ambarani 54:10
It's similar in few regard, but it's different in the sense that nothing is recorded. So everything is live.

G. Marion 54:16
Oh, I see

Tejas Ambarani 54:18
So so it's it's similar. It's similar to if option four in that in option three, if students can't meet in person, if it has COVID. They go to this option. It basically converts into this. So this would be different. It's similar in the sense that it's more balanced like the second one, but everything is happening in persons like our video conferencing. It's similar to what we're doing right now. You asked me a question I'm able to answer in, in the option to everything is recorded so you can ask questions.

G. Marion 54:46

So my question like after the presentation do have all lowercase a is kind of like a one page with all the options, all the pros and cons and is similar. Thank you. You're awesome.

Tejas Ambarani 55:00

Yeah, so I wanted to kind of create like a minute thoughts. I don't know if it's that like, option like it's a bit. You have to kind of remember each option. But

G. Marion 55:10

yeah, yeah, I kind of like this, which one would option is like the most popular? I the reason I like option two is because of the low bandwidth and I have to think about with Katyn committee.

Tejas Ambarani 55:23

Yeah, I would say see if low bandwidth is issued, I think option two is it works. It really depends on kind of courses that you want. So a second option is still scalable, you can make it for everybody. But the problem I think about is willing to try to make it more like even teachers would have to think about it's like, how do you make it more interactive. So you still want to get people's motivations interested, like T mentioned, like the biggest challenge, the main focus is always to give students a good experience that they actually want to and want to continue working here. So

G. Marion 55:56

I would like to bring it back to the group too, and think about how we intend to use this. For myself and my perspective, I'm more prefer self-learners. Right? So and then I don't know what TCLP wants on their side, or P. Turner or T.Steinwand, but I feel from my option, I've prefer self-learning as the better option, the more interactive one requires more timing, I think that one to me is more of I call them phases, like the first phase should be like trying to hone down one option and then working with that option. And then the second phase should be trying to work in a live option. When you know, we have training and people trained to do this and are comfortable using technology. And to be realistic. Looking at the skills of tg is not very high. So I'm not sure like if I had to push T and Tiana to give me timelines. Like, if we went with this and there was no restriction T or Tiana. Would option would you like? And when would it be feasible? Like let's use an example for the language classes? What option would you prefer? And how long? How long do you think it would take to get a program online? Whereas I'm looking for more immediate through the Cujo, grammar course something simple and clean.

Tejas Ambarani 57:29

So option two won't work for a language course? I don't think so. Because

G. Marion 57:36
G is about sustainability and building a bot building it upon it, right? We want to build Is that an option with option two? Are you saying like, option three would be better, and then we build in later. Because these are things I need to think about. And you talked about sustainability. And I don't, what I don't like about databases and forums, and all of that is just not sustainable. We have to always build upon it or pay more for it or pick a different database. You know, all these little things. So I'm just curious other people's opinions on the phone. T and Tiana, do you have an answer?

T. Lim 58:16
Hulu

T. Lim 58:20
I mean, um, yeah. Go ahead, T.Steinwand.

T. Steinwand 58:25
Oh, for the language courses we get, like you Vic. To do the course. And like, I haven't been on a course myself. So I don't know how I don't know what function would be good.

T. Lim 58:46
Yeah, I don't think that we can really put any kind of timeframe without the understanding yet of the types, of course even course offerings that we're considering here. I haven't been engaged on on this discussion. Till today. But, you know, it's is this exclusively sort of Tłı̨chǫ Government online learning offerings? Or are we thinking more broadly about advancing other options for post-secondary education and other types of educational

G. Marion 59:26
No, because most colleges and university have their own module programs. So I'm not really I did want it to have that option, though. In case there was a specialized module specifically for Tłı̨chǫ with the university to have it built out of this program, because it's all about data sovereignty and ownership. And that's why we're doing this one, but I'm also thinking about long term and education. And I'm using this platform to reach all Tłı̨chǫ citizens, not just the ones in the community so that people have Really greater understanding of the collegial government. So for TCLP, for just for sake of example, I thought the language classes would be a good development area for the TCLP to try to get sustainable language. So I'm not reliant on going to Victoria, because I will never go to solidity and do Victoria, but I would like to learn my

numbers. I would like to know my, you know, how to say bursts, basic language stuff, and having that on a module. As and when I want to use it would be more beneficial for me than having to wait for a zoom call? Do you know what I mean? I'm just thinking about learning experiences that I've had. So that TJ here can have a good or a better understanding about what we're looking for.

T. Lim 1:00:53

Well, I think that raises another question for TJ, or a consideration, at least for the different mod models and modules is the Yeah, the collaborative aspects like so for preexisting courses, how easily can say we want to partner with UVic? on pursuing, like a something more along the lines of what you're talking about Marion? And the established kind of like language, distance learning options that they have, how do we kind of like parse those into some of these options, potentially, or which of these suits, because I mean, any of the departments DCLP included trying to develop these courses from scratch is like, when you ask about timelines and things like that's, we're looking at a very long time, unless we can find folks who have a lot of the kind of the foundational content, as well as like developers, or others who have that ability to kind of like, apply them into the module or Yeah. Because again, there's just not that capacity right within, internally within, at least within DCLP. And I don't think within the TD to really roll out courses very much by themselves.

G. Marion 1:02:23

We're sure I don't expect this TG to be like today. This is a phased in approach. So I'm hoping TG will build into this.

Tejas Ambarani 1:02:33

Right? Yeah. So regarding the language course, in the other university, would it is it in? Is it happening through zoom isn't happening is recorded lectures? Like how does how does it happen? Does anyone know?

G. Marion 1:02:50

T or Tiana would be able to tell you do you think Tiana or T can connect TGS with the Victoria people so that they can look at the system that they're providing your team.

T. Steinwand 1:03:03

It was only online like one time I think, what's his name was doing the course. And the other times it was all in person. But Allah Steen she was doing online lessons through zoom, and you would have to, like log in at for each day. And then she'll just do the lesson. And I think she recorded a few. But we haven't done anything with those recordings.

Tejas Ambarani 1:03:35

So we could use the recordings. But I think as you mentioned, we could do something like for example, we could start with, let's say model two, where everything's pre-recorded. And then what we could do is, I think we can definitely build it up and we can create a section for live. Because I think first of all the live elements is going to be taking place in that other website anyways. So I think we can definitely do that. I think, I don't think, again, we'd have to probably involve a programmer or developer to like to see how you can actually build this up, but I really think it's possible. And we're going to force base and then we can build a lot more.

G. Marion 1:04:15

I liked that option. Because like, just for example, I use the selfie because you guys are here. So you guys can relate. I think it would be interesting because then we could register people here and then the people can take their test on here and we can follow their progress on here. Just little things like that in the back and I think is interesting to watch on their dashboard. I'm kind of leaning to option two guys, I'm not sure how you guys feel just because of the bandwidth to me is a huge thing. I kind of like all recording because again, Like T said, we're not really prepared to do I think live modules or live events. So for myself I'd rather work for like towards the Tłįchǫ agreement and just for chord and then finalize and really work with DC LP to ensure that the Tłįchǫ agreement course is what we want to present. And to me, the long term intention of that is not just for Tłįchǫ residences, and people, but also we are we do sell the course to governments and organizations wanting to learn more about our government. And right now other people are benefiting from that. So this is kind of a way to centralize and safeguard Tłįchǫ information in that sense. So thank you,

Tejas Ambarani 1:05:33

I think that that this option is the one of the big pros with this option is that, again, it's available to a wider audience. The limitation of, of the next data tool was it's designed purely for Tłįchǫ. This one is made for everybody. So I think this approach will be good if you're if you're really taking for that.

G. Marion 1:05:51

Awesome. I think that's great, too, because I'm trying to work with Uma mide from finance, which we can talk to you to see if you want to do any financial modules with us in the future. Okay, sorry to take over TJ. But do you want to go back to where you left off?

Tejas Ambarani 1:06:06

No, I'm pretty much done. I mean, it's going to ask you the questions regarding like, again, the whole point of this section is just have a discussion. So if anybody has any questions, any, like, opinions in terms of maybe they prefer some other options.

G. Marion 1:06:20

one thing I would like to know is I use my blueprint, it's called for the students in the high school and want to know whether it's, we can like push content on my blueprint through this module or this online platform? If that's possible.

Tejas Ambarani 1:06:41

I'd love to look into it. But also, most likely, we might need to talk to a developer regarding that. Because I have a problem. Yeah. Because I don't exactly know, if you want to try to use an existing thing, how would that work with this? So?

G. Marion 1:06:58

Yeah, you can let me know I put the URL in the chat. Perfect, thank you. Great.

Tejas Ambarani 1:07:08

Is there any extra example, with the previous witness, if you go back to the model two, is any improvements you'd like to see, like? A one thing I know is like be talked about? Like, we want to try to build it. So I might think about maybe starting trying to add some elements of it or think about it a bit more. But what would you like to see improved from the from this optional? Just go to previous option? Option two, this was the these are some of the cons, the teaching is any I mean, let me know if you if you have anything to any specific feature you want me to include or any specific improvement? So I can you know,

G. Marion 1:07:50

is it possible to see the live web to like to see actual examples of each model?

Tejas Ambarani 1:07:59

See the live sorry, your voice got caught? Sorry?

G. Marion 1:08:03

Are we able to see an example model on the web? To get like a better understanding, like to see the back end to see it virtually, basically, okay, how it interacts with things, because I feel like that's like a huge missing component. Because unless you're, you know, for us, like, we don't bother to really get into the nitty gritty, because we are, basically top down. But you know, for me, I really like to go in the back end and see how easy it is for our staff to see

whether staff would be able to comprehend or make changes, because it's all about capacity. And whether they have the skill and knowledge, which I don't think a lot of people do. So the easiest, I guess per program would be also favorable for me. And which one would that be? Which one is the most user friendly?

Tejas Ambarani 1:08:55
I think I ended up I probably think the first two are probably the most user friendly, I would say, but I have a website similar to this model called Udemy. I will show you how it looks like.

G. Marion 1:09:10
And is this program like? I guess tell us is lack of better word? Is it like a database where I have to pay a subscription every year? Or is this like a TV platform owned by them?

Tejas Ambarani 1:09:21
So this is so you would have to in this in this model and this website? I'll just share with this with you. Stop showing Can you see my

Tejas Ambarani 1:09:41
screen? Yes.

Tejas Ambarani 1:09:43
So in this, in this you can actually like let's say apply for court. So I have actually applied for few courses. Now you can actually have a bunch of different lectures. Like everything's recorded. You have resources here. So I'm We're going to create it exactly the same, but I'm giving an example of how it could look like. And the way you find a course, let's say here is, you just search for something. That's the UX design. You search,

Tejas Ambarani 1:10:14
you might have to pay. And I mean, you don't have to. I mean, it all depends on how that website works. But, and, yeah, and when you actually get a course, then you're able to actually have a different setting where you can actually see, again, as a user, and you and you can just study at your own time and your own pace. And but the difference in this compact to this is more like option one. The difference in this option is in the model two is the restrict to students. So are you in this anybody can you can have 200,000 people using it in our model two, it will be it's going to be restricted to 30 students, you have more assignments. So I still like to work. This is some it's more commitment. But yeah, it's still is to be a lot more sustainable.

G. Marion 1:11:06

Oh, I have another question to teach us a lot of the program, we do need to go to a database, so we can record who took what is this program, the database or platform that we're using? Is it can information be extracted and uploaded to our database automatically? So we're not double doing it for our staff?

Tejas Ambarani 1:11:26
I think so again, like that will, again depend on, I would say, again, you'd probably have to talk to profit off to a developer, but most likely, yeah, I think we got good to control the entire website. So it's not like my intention, again, dependent on a developer. But my intention is to create this from scratch. So we hold on to a database. So I don't expect we're not actually like using an existing database, I'm not creating like, I'm not trying to create a template. I'm not, I'm kind of creating this completely from scratch. So we should get that.

G. Marion 1:11:57
But we have a database, and I need to make sure things talk to it. So my staff doesn't do double entry. So I want Leona to connect you with Pat Omar, so that you can understand our database to ensure that our that information being done on here for our client, like let's say they successfully pass and it's being offloaded onto our database more easily. And they're getting that certification that we talked about.

Tejas Ambarani 1:12:25
Yeah, but so the thing is, most likely, we would need to, again, talk to a developer because I'm not going to be working on a database. Yeah. Well, no, the database is done.

G. Marion 1:12:38
I just need to know that this platform speaks to my database. Because in the end, it's about sustainability, not making things harder. I want things smarter and easier, not putting a lot of capacity on staff that doesn't need to do more work. Right. But more efficiently is what I'm looking for.

Tejas Ambarani 1:12:56
Yeah, that makes sense. That makes sense. Yeah. I can speak to weird, let me know.

G. Marion 1:13:02
I just think you need to talk to him. Leona. Do you mind connecting Pat? With TGS? Here?

T. Steinwand 1:13:13
Yep, I can do that. As a show.

Tejas Ambarani 1:13:19

Oh, yeah. So I think we are finalizing with option two. Does anybody else have any suggestions or feedback? Yeah. Sorry, go ahead. T.

T. Lim 1:13:33

I was just gonna ask, and sorry if I missed this at the outset. But in terms of your project, specifically, where what will the end product be?

T. Lim 1:13:46

Where will you take it?

Tejas Ambarani 1:13:47

So I so I'm mainly focused on creating just a prototype of how different schemes will look like. So I'll be creating, like, numerous screens from signing process to how people find the course to how it looks like when people actually using the courts to like, say, for teachers, how they grade students, so I'm creating this entire thing. I mean, I'll create a new machines, and but I'm just making how things might look like. So now let's say you want to actually develop this. I think having a prototype is a good first step. But I would definitely be willing to work beyond my thesis on, you know, like, I'm sure we will probably involve more people with a developer or somebody from somebody who is more involved with the curriculum, like he might want to make certain adjustments and I'd be willing to do as Yeah.

Renwick 1:14:40

He let me address that because we're running out of time and I really appreciate how much time you've already devoted to this. Initially, there is a time constraint because TJ needs to certain time requirements regarding submission of a thesis So the initial workers will be design work looking at the architecture of the site.

Tejas Ambarani 1:15:06

Yeah, that's the next, I was going to say that's the next topic is, um, for the next few sessions.

Renwick 1:15:14

And that's why we, like I advise TJ to bring you guys and so early as consultants as collaborators. Because the initial intention when this project was evolved with TJ would spend more time and metrical and COVID, obviously negated the last. And as with other projects, including my own, of course. So that was the only way we come up with to develop to develop the project is kind of online collaboration. So the next stage, following your advice will be for TJ to present the

initial sketch scheme for one of a better term, like, like prototype design for you guys to comment on, and critique. And one thing that TJ hasn't mentioned, which I think is quite important, is to make up for the time that you couldn't spend in the north, and stuck in Edmonton through COVID. He did an analysis, a set of case studies on international indigenous distance learning courses, which I think is quite important. And this project seems like what, what like, what are the paradigms internationally, in places like New Zealand and Australia, for example, you know, when continental Africa for indigenous justice learning, so and so he has done that work, but he just hasn't talked about it today, as well. Yeah, let's

Tejas Ambarani 1:16:55
learn more about that stuff. Yeah. Yeah.

Tejas Ambarani 1:16:57
So so a lot of tmy inspirations for the models presented were based on numerous case studies i studied, along with understanding more about a Tłı̨chǫ. So briefly, yeah, so there was a model in Africa didn't have internet, the way they learn is through their phones, through SMS. Now, that model is not required in the Tłı̨chǫ because you have access to internet. But it is important to learn of the different ways students can learn without a teacher and without internet. But yeah, I looked at a lot of different models. And I felt like these four would make the most sense for the community.

G. Marion 1:16:58
Let's just get some consensus on the second option, T Steinwand, P. Turner, T Lim, are we good with the second option? Or is there an open here? I mean, this is opportunity for us. So I mean, I don't mind hybrid, but we were not ready for hybrid, but it's still you can still do recordings with that one. Or we can just go option two and work with that the best we can and then t when we're ready to go live or hybrid. It's kind of a phased in approach later on, probably in five years or something.

T. Lim 1:18:17
Yeah, I think that option two is a great starting point. So that I can work for sure. And if two sort of case examples in terms of content that can be used here that seemed to be jumping out or certainly the Tłı̨chǫ agreement course. And if you need another sort of example, TJ, you can, you can sort of explore the language piece, but you might and might not be within your scope to go down that road. And that's also going to change probably the option that you would want to consider because we've as I've said, like, option two is difficult to work with language learning. So yeah, I think that option two is fine to as a starting point for us here.

G. Marion 1:19:08
P Turner and Steinwand

P Turner 1:19:12
Yeah, I think that option two is probably where I would land as well not really knowing where we're going to evolve to, but having the most flexibility so that looking at variety of target audiences that they would be able to do it at their own pace as well. I think that's really important with the self-learning.

G. Marion 1:19:31
And Steinwand you're okay with two?

T. Steinwand 1:19:36
Yep, I'm okay with two.

G. Marion 1:19:38
Okay, cool. Let's go with two and could you use my designer to help you with your looking design?

Tejas Ambarani 1:19:46
Sure. Yeah. She can be consulted.

Tejas Ambarani 1:19:51
No, but thank you again for your time. I think this was really helpful like and I have the approach, option two and I'll work on developing that Add a lot more further. And then yeah, I think unit testing the next testing session as Gavin had mentioned, we will I plan to create something like what you see on the screens and, and hopefully kind of walk through the infrastructure.

G. Marion 1:20:13
One more thing to please make sure you spell Tłı̨chǫ. Right. If you can't use the font directly then use don't use Tłı̨chǫ translation. We are working with our designer to create an Adobe font for the Tłı̨chǫ language. So hopefully that will help you with your coding. I'm not sure but it's still a long way off. I think we're just looking at approving the quote right now with Tiana.

Tejas Ambarani 1:20:35
Sure, Thanks for letting me know.

6.5 User testing session 2 (Transcript)

Wed, Oct 05, 2022 7:56PM • 1:15:06

Summary Keywords
courses, website, people, register, design, teacher, colors, create, deadlines, screens, section, content, students, terms, assignment, font, images, module, access, mentioned

Speakers
P Turner, G. Marion, Tejas Ambarani

Tejas Ambarani 00:04
So as a settler, I would like to acknowledge that all the work I share with you today was conducted on treaty six territory, which is that our land our country located on the land is traditional gathering place for diverse indigenous people, including Cree, Blackfoot, Métis, Inuit, many others whose histories and language, language and cultures continue to influence this community.

Tejas Ambarani 00:27
Thank you. So, so I'll share my presentation.

Tejas Ambarani 00:44
Now we'll start by talking a bit about the previous decision session. So we have four options, we ended up picking one model. So the model we selected was a self-paced distance learning education. It was time restricted, which basically means that all the videos would be recorded, that's how people would consume content, but the students would have a restriction within which they have to complete their assignments.

Tejas Ambarani 01:15
Welcome G Marion.

Tejas Ambarani 01:19
So each class would actually have a deadline, that is the model we selected. And, and because they had a deadline, we could actually provide a certified certification, we could provide good access to evaluate them well, along with the fact that we could actually provide collaborative opportunities to students. But students will have the freedom to kind of work on their own

time since everything was recorded. It wasn't it didn't require like a meeting to take place. So it was very beneficial in that regard. So that's the module we selected. Some of the features that we're interested in with like learning management systems, recorded videos, chat functions, the gamification of learning, providing a certification as a certified credential qualification. And the pros were like, it's, since everything was recorded. It, we could really scale this, and that was really a big benefit. It is also very affordable with decent pricing. Let's say Gavin is trying to teach a class, instead of paying him to teach the same class constantly, can pay him once for him to record all lecturers for a particular class. That recorded class can keep playing for future students, which reduces the overall cost. It provides flexibility for students to work at their own time. And, as I mentioned, and it's also sustainable. Since everybody can work on their own time, since it's not live. Additionally, this reduces dependence on internet which is great. It's also applicable to a wider audience, because now it's not open to specific people. But drawbacks are important to know. There is a lack of teacher student relationship since everything is recorded, and lack of context during the lectures. And these are certain problems that we must try to resolve during the development of designing a class. Some of the potential audiences include students trying to gain certifications on various subjects, people or authorities working with Tłıchǫ who require additional information about the community, and professionals who want to learn skills to improve their careers. And from your comments, some of the takeaways, for example, you like to factor of scalability, but what I will when I was thinking was scalability, like, it'd be that you'll have options, you have a really like go wide content of like, you can have many courses. And but when you have many courses, the problem is trying to find the cause is going to be tricky. So that's something I need to solve in terms of my design, we'd have a bilingual website. So it needs to be in English and clencher. Not that has some ramifications to talk about which to kind of make certain adjustments to it, then does, it also needs to be adaptable to courses from partners. And that would mean that I would have to have different models. So currently, I initially thought that I would just have one model of education where it was like three to six months, you have to record videos, you have to give assignments. But as I was exploring my website, I felt like we could actually have different kinds of courses. It doesn't have to be the same so that way, you can have courses from different partners to be included. And you also have community learning features like how do you get people to actually connect with each other talk to each other like, since we have since most courses have a deadline that we'd like to option for, for creating like chat features and like increases as well. An institute needs to be sustainable in the sense that we Don't want to keep it too heavy, we want to the website needs to be a bit, I should try to make it as light as possible in terms of how heavy yet like, it's just to make the experience more smoother as well. So this is so in terms of this unit testing session, I'll focus more on. So before I was going for wireframes and low fidelity versions. But since I have time, I created medium fidelity versions, which basically means that I have some content, I'm going to showcase features, but I'll be

showing almost around 50 of screen on security screens. So which I've designed. And the purpose of this session is mainly for function navigation. And just to check features and layout. And the importance is like, if you're not able to find value, back to go, if you're not, if you're unable to understand like how to use the website, then the website is not going to work. So this is the basis. And so I'm not focused on colors, I'm not focused on images is mainly focused on the structure. So if the structure is more than we can build a build upon this, and it was the end, I will show you some other things that it will always be a like a surprise.

Tejas Ambarani 06:18
So these are some of references I was looking at different websites for. And the purpose of these references were upfront to find out specific how they design specific areas. So but yeah, these are just like for my reference, and many more as well. And so before I started doing any of our chat, I wrote a list of features that I need to fulfill. And I designed like a sitemap where just to understand the flow of information. So I'll be sharing more of this you'll be seeing in my screens, but this is just the skews going to give you an overview of everything just like what a guest sees, the guests can sign in, and they can become a user. And the member has access to actually buying the courses, then they can also the member also will have access to actually using the course. So what are the features they can see. And this is what how the Learning Management looks like. So if you're, if you're bought a course, you see this. So basically, design has like almost like three different phases. And I'd be kind of like the first two phases are similar, but the third phase, kind of like, for example, the first two phases, kind of focus on Discovery, which is why it mentioned discovery. And the purpose of discovery is like finding the core seeing then try catalog the courts. So that's like one part of the website, but the other part is actually having the course and actually you'd like learning from it. So that's a that's probably the third part. So I'll be dividing my dividing sections into these three. And this is my prototype.

Tejas Ambarani 07:57
And that was just changed my screen can you see this? Can you all see this? Yeah, I can see it. Yeah.

Tejas Ambarani 08:31
So yeah, so this is the distance learning. Yeah. So yeah, discovery, I'll start with discovery. So when you're a guest, you spell it, you basically see, yeah, this is how you will see the website. So we have like, the big I think constraint and the first home screen is, we basically want to get people to understand what this effect is about. So that's important. Now, instead of having a lot of text, we could probably have like a good image of people in the Tłįchǫ who actually studied on a computer or something. So we can, and the size of the again, Banner is different. But the main purpose of this home screen is like a since we will since it's a scalable website where we

can have a lot of courses. The problem is trying to make it easy for people to find the course that they want. So the way we can do that is by dividing courses into different sections. So you can feature certain courses you think are really important. And you also have like some example you have a section for new courses, you have fixing for top free courses. Also. Also I felt like not all courses need to be paid. I we could have some courses for free and maybe that could be just for Tłı̨chǫ people. It's up to you but the free courses could be different from paid versions where you don't maybe have to do assignment So we are getting bigger think about that. But the idea is like in the future, we could probably have a top Live section. So if you, if there are like people teaching live workshops, you could maybe have a section for that. So the possibilities, like we can have different kinds of, of courses divided. And we also have the Browse feature as well. But yeah, so if you click the feature courses like this, this is what you see. You see, you can also filter information as well. So if you want difficulty level of you want some ratings, you can have, change that the new courses the same. And our top free courses is also the same. We have similar divisions so it's easy for people to follow and find what they want.

G. Marion 10:58
Sorry, I came in late is dissolved. I just want to make sure though, I know you say it's hard to navigate, but as long as the person in the backend can see the list of modules or courses, because my hope is that people just have access, they need to do some sort of registration and consultation, if possible with the applicant.

Tejas Ambarani 11:22
Okay. They would need to register for the website to register for the course.

G. Marion 11:28
Yes, or

G. Marion 11:29
register for their interest. And we'll follow up to consult with to verify if they can have access, right.

Tejas Ambarani 11:37
Yeah, yeah, sure, exactly. If you so we will be doing that. So what do you have mentioned is really important. So we have a registration process, we also have what I haven't created the registration for the course. So maybe we might, in some situations, we might need to do that as well. Because not all courses could should be accessible to everybody. So yeah, so that's something I think, but like just what guests are in case, somebody just joining the website, this

will basically tell if they want to register or not. So now if you press browse, over here, you have more divisions as well based on subjects. So like you can see everything is based on subject so that we again subject also is important distinction. So yeah, if your culture design, gifting, research, can search for the information you want as well. So discovery phase is just like, just so it's for people to know if they want to join. Now, if they do those, for example, let's say they click a course, they might get a breakdown of again, we could maybe hide this if we don't want people to see we're not registered, but they should at least know what the course is about. And so this is basically how we could divide courses. And this template is interesting because again, we have to have a debt we need to have a countdown of vendor courses that enable since many courses might have a time limit of like ticketing deadlines, and some might not. So for some courses, we might need to remove this column courses, we should include this you can still share the post with your friends like we want other people to join to you and share the course with we also have like again course duration how much content is here available. And in some courses for example of you maybe you have like level one and level two have a design course. Now if you if you see a level two design course you might need to finish level one. So some courses might require you to have a previous qualification so all of that information is going to be available here. And yeah and so if you now register, so if you haven't if you can't buy the course unless you're registered. So if you buy the course then you can go to here to register here and or if you already have an account you can then sign in as well over here so don't put this buttons on the top. Does that clarify your question?

G. Marion 14:21
Yes, I think so. Maybe later on we can have a one on one and I can like explore it with you manually that would help me more because I have some experience with modules and I always find them so frustrating. So I want to find more a nice simple easy way. So yeah, I like this registration and needs registration will happen there is no such thing as a free course. In the end, we want to make sure we collect the data, right So yeah, that kind of thing. So I appreciate that though.

Tejas Ambarani 14:52
So nothing registration also like everything here I'm mentioning is the template so we will modify almost everything because we will need it Lastly, production information. When it comes to registration, I was actually thinking that it needs to be more comprehensive in the sense that we could have a different register, for example, we could have interest rates and quotes, I felt like we should have like a section where we should ask if they are part of the Tłı̨chǫ, or the not part of it to ensure maybe the prices could be different. Or you could be or you could even ask them about their skill level or I was talking to men who mentioned.

G. Marion 15:26

Yeah, I think that's a great idea also to collect some initial stats. But my thinking is that even though they register, they will still need to be vetted by a person in the background. And checking that they are Tłı̨chǫ citizen, exactly. We have a special partnership with Sheena b t to register their employees. So they can take the Tłı̨chǫ agreement course and so on.

Tejas Ambarani 15:49

And you could have like an approval process. So example, they would have to sign up and then that would wait for approval, and then they could then be approved. Because what you think is gonna be right. Now, because people can people you wouldn't want some people might just like, the charter doesn't button just so they can discount. So these are small things. Yeah.

G. Marion 16:11

Can you also register people with unique numbers? Like, let's just say we vetted them, they no longer needs to be approved for that course. But let's just say we have five courses. Yeah. So and I'm saying, well, once they've been approved for the first course, then all they have to do is enter a unique number to access the next courses so we can collect the data in the backend.

Tejas Ambarani 16:39

If you approve the username of the via approved account, then they should be able to access most courses, would that not be okay?

G. Marion 16:49

It would be okay. But I want to see their skill development and keeping in touch with them. More, I feels like that's more of a hands off approach where we just rely on the student to take initiative. Yeah, and we don't we don't follow their progress. So the whole point, too, is the module program is about skill development. And so that means having connection with the career people, or the person who's in charge with this so that we see the same sort of evaluation and review of the module that they took? And will they? Are they interested in taking the other courses? And what value would it be for them to take these courses, because in the end, I'm not thinking just about the module, I'm thinking about sustainability, and eligibility and requirements and process. And also, the last one is funding, and how long we can sustain this project and program with limited funds. So knowing these kinds of things means I need data to throw in the face of the government saying this is this is how life is improving, and becoming better for us. So please continue to fund. You know what I mean? That's how. So I don't think I would like a free for all for every course, I would like some sort of registration for each course, or evaluation or something would not just free access to everything.

Tejas Ambarani 18:12

Yeah, so Exactly. So you don't want it to be like, it's not just be about public and buy the course that you want. But it should be like they need to register, they need to register understands that you see the qualified and the like, you almost want to read them before they join a course, right?

G. Marion 18:29

No, I'm fine if I want them to register, and then I want to vet them. But I don't want that free for all for all five courses just for lack of a better word. So they have to register per course, in my opinion, that's how I see it, envision it. But I see there's other people online Patty my off record there, or I'm just thinking like overall stats and data and the intention that we want to convey with this program. Plus, I also want to give it reverence and statue, and that it has clout. So yeah,

P Turner 19:06

I feel like I would do it free just I think the data is so that you can track who's doing what, and whether we, again, I think we're going to use the word free. We're not talking necessarily about money. I mean, maybe I mean, we all know cost money, but

P Turner 19:25

access and the we want to know exactly who's in and taking what and what they've completed so that there's data that can easily be collected on the back end, right?

Tejas Ambarani 19:36

Yeah. So nobody can join the join a court if they're not registered. So if they register if they try to register right now, they can see the court they can see maybe they can see what courts have labeled but and maybe they don't need to show them everything but if they try to buy they have to register. So right now they will have to register or they will have to sign in. So if they already registered that you can assignment. So that's a monster every cars, right? That's for every course. So now, when I say free, when I say free, if you're registered, then it's free, then some courses could be free. And maybe you could provide access to free courses to some people as well, if you want. So it doesn't happen.

G. Marion 20:18

I think we're just, I think for wording it would be Tłıchǫ citizen access, which is free. And as you're on the show, then it would be some sort of monetary or registration needed. Yeah, I get

Tejas Ambarani 20:32

that. Yeah. So So example, nobody can have access to any of this content without registration. That's like a, that was given. But in terms of free, what I meant was, in terms of cost, if they register, and if they're approved to be registered. And the product, just maybe some of them could be free courses, which are, which can be not as comprehensive as because I remember when Richard mentioned that, I believe control staff has a lot of like, the certifications that go through. So some of them, they don't have to, I don't believe that to pay. So if you could provide those things for free, that's basically the idea of it. It's not that anybody can access to because I think that's yeah, that's a that's a tricky, because then people can just download the content, and they can, you know, to pay so. So in terms of, so the member access is similar, but slightly different. Again, in terms of courses, they can still see all the they can still they still have the same feed, it's still pretty much the same. But what they can do is they can favorite each, so they can start actually favoriting the course as they want. So the sample that maybe courses, just similar functions done Instagram star in many in Pinterest, in Drupal, I mean that many different websites where basically the you can favorite courses that you want to post in the future, and you just have a list of things for yourself. Yeah, so that's like a way you can do it. You also have the My Courses section. So you can actually see, you have a section for that you have notification you have your profile. So it's you have a bit more access. So again, the features actually the same new courses again, filter, same, like

Tejas Ambarani 22:17
so. So you can again like this, but I was impressed history, culture, design.

Tejas Ambarani 22:28
Again, you could search the course, the only thing that's different is probably like the, again, as I mentioned, the menu bar under Favorites like this. And again, now if you click this now, this is where things change, if you actually go and click this, now you can actually buy the course. Now again, that is and again. So in terms of courses, we could keep more restrictions in the sense that some courses. So some of this stuff, the content we show, maybe you could provide different content for people from corner part of the convention, maybe they don't need to have access to everything, you know, so we can even modify by asking the question of a European citizen, you can have different courses for different people, because maybe you don't want access, you don't want people out of the country to have access to certain courses. And that's completely reasonable. And we could do that as well. And that way, it's like, we could almost like define content, depending on the people we want to see. So now if you buy the course, or if you add to cart, so Exactly, if you buy the course, this is kind of what you see. So this is what a shopping cart would look like you'd see the price. And you see the start date as well. That's important because this is not a course where you can see example, some courses, the free courses, maybe you could access it all the time, and anytime. And there's no debt. It

can be self paced, but some courses, it needs to be more restricted, where he's like for three months. So it's like started this statement that you mentioned from the end date, actually, that I should do that.

G. Marion 24:02

Okay, I'm just gonna button because I have a lot of questions. And I just want to explore. So for the user, when they sign in and register, do they have a user profile that they can go back and review all the modules that they've been looking at? Yes or no?

Tejas Ambarani 24:18

Yes. So they have a user profile? Yes. I'll be showing

G. Marion 24:21

that. Yeah.

Tejas Ambarani 24:23

So this is, again, how this would look like, but this is what it looks like.

G. Marion 24:28

Perfect. Now, is it adaptable? So let's just say the Tłıchǫ agreement course requires an assignment. Done.

Tejas Ambarani 24:38

Yes. Yeah. So that's gonna be the next section of literally like, to the first part of just discovery. But this is probably the more important section which you're talking about, which is what I've kind of created as well. So first, when you click my courses you need to have you see current courses you need to see from us, like how much of the courses are from the cemetery, you'd have to calculate the percentage almost content is still incomplete, sir. Tues assignments. So you get this like, kind of small overview of what you have, you also see a favorite section, if you pick favorite, you see the, the courses you have added, as plus. But also you have the computer section. So you This is where you see courses you've already completed. And now in terms of computer code, if you click this, you can download a certificate. So if you have a certificate, you can download them, you can send them share your certificate. So if you want to show proof to somebody else, you can share the certificate right here. And you can also enter

G. Marion 25:34

You know, I am loving this.

G. Marion 25:36

no to free, we can adjust our sense, like, I'm just going to lay out an idea, you can tell me if it's doable or not. So you know, I do training and training means I do multiple certifications, like for say, environmental there all these things, right? Yeah, would it be possible to list these activities online and have the client register to them? And then then when they have registered, I can give them approval to take the course. But just like overall, is that possible?

Tejas Ambarani 26:12

Let's just repeat usually, to jump to teaching a course you can approve somebody joining or not.

G. Marion 26:17

So what I'm trying to say is I'd like to use this platform for more than just module learning. I'd like to put in in person learning so that the person can register then go to the location itself. Is that possible?

Tejas Ambarani 26:32

Yeah. you're talking about it's like an event. So example. You want to use it so that people can register for an event, and then they can actually go to an event live?

G. Marion 26:41

Exactly. Yeah

Tejas Ambarani 26:43

We could definitely do that. We would probably have to actually have an events page. Actually, that's interesting. Because you could maybe have some live some actually in person courses I hadn't even thought about in person. But we could have been in person tab in the top flex, for example, we have about browse maybe could have, or we could have in the in person in the in the homepage, but I think about it the best place to locate it. But in terms of functions, I think, all the tools that require to do that already there in this website. So I basically

G. Marion 27:13

I love the structure and I like how visual it is. I don't know how you feel Patty, like, Could we get to like any? Is there any decision making that you want or feedback on this? Overall? I like the look and design. I feel like it's easily read. It doesn't look convoluted. Like you said, Our people are very visual. Yeah, I love infographics. So anything that's like light, and simple. And then when you get into the course, that's where the details are. So yeah, I love it. So far, so good. Yeah. And we have a Zoom account in the seminars. And also need to know whether the

information and data that is collected on this website can be transferred to our event database. So we can make sure we're not double duty double duty and entering things twice, three times. So we're just transfers easily to a database. So we can evaluate that information receive something like that.

Tejas Ambarani 28:14
Yeah, I think in regarding data, I think the project to a developer about how the data is collected, and how that would be working in the backend. In terms of I don't think it should happen. But yeah, again, it's in terms of how people develop it. And I'm not sure how that would work

G. Marion 28:31
that or we're going to require some sort of dash or gives us kind of stats, or some sort of generated report per individual, just so we can, again, follow up with anything that is needed from the client. So like, let's say client came to me, I'd be like, Okay, let me print out your individual report. I can see here, you took three modules, you're done half,

Tejas Ambarani 28:56
that should definitely be available. Yeah, for sure. That should be available. So example, you should be able to do anything is the only issue with that is like I'm like, the privacy aspect is it, we might need to ask the students if they're okay with giving us access to our data

G. Marion 29:11
without there will be a privacy one, and that's when they register, right. So we're going to have to develop the registration a bit more. That's why I asked if there was two different levels because I, for example, I'm just going to use first aid padding because that's something we work on together. So we could technically register the first aid on this module, which would be an in person module. But the people could register through this process. And then Patty, if you had criteria on a database or stats that needed to be filled, then that information should automatically be transferred to Arvin database. So that's something I'm looking at and actually connect you to the VIN database maker and see if that's possible. Yeah. That's all good. You know, we can do that later, I think when we have more content, so then that way, they can visually see what we're talking about. Because that's what they do right now. We have a database Canada, once a month uploads to Canada website, so that they can collect their data and evaluate. We have

G. Marion 30:20
not I mean, the,

Tejas Ambarani 30:22

I think, I think the thing is, what you're saying is like, we could actually customize this. So for example, right, now, you can just buy the course, in some situations we could read, we could mention register, so they would actually maybe have to fill up our application process just to register something. So maybe they would, in some situations, like a normal, let's say, an like a university, if you want to get a really, if you want to get into some courses, you got to give your CV, you got to send Dr. Jack different documents. So in some situations, we could just create a different version of this, you know, so there are two levels, one is registration to the website, and one is registration to the actual course. So we could definitely have that. And in some courses, you won't be able to buy it unless you finish the level one course as well, because some courses could be linked. And if you finish the maybe like four to five courses, or one section, you get a like a like a more like a better certificate or something. So it could be like a part of like a bigger chain.

G. Marion 31:21

You're gonna work with my National Design.

Tejas Ambarani 31:25

So I showed her example, I basically made a design I showed her and then I took her feedback as well. So she won't be seen everything. And she gave me some suggestions, I have created some additional screens based on that. But now I think it's the properties like the more important sections because So example of not, the website is pretty complicated in the sense that it's, I could make it so long, I have to share to kind of tell me that to kind of stop slightly just because for example, I could create a scene of how to get the certificate could look like, or how it could look like when you view the grade. But all of these things will just make it too complicated. I mean, we probably work on that in the future. But the purpose is to kind of like these two sections that I'm in now, I think this is probably the more important section is once you have once you buy a course. How does the course look like? How do you learn? So should this video click a dashboard? I mean, it's the first dashboard I had, but I felt like this would make more sense. But again, it's up to you. Yeah, I think that looks good. So you can see again, the percentage, you also see how many participants are part of the course. This the purpose of this dashboard, I mean, it's not committees dashboard. It's a mistake, actually. So the purpose of this section is basically to have an overview of all the courses are in. So if you have more courses and three you keep you can keep scrolling, you can see your deadlines. So if you have all assignments, you see the time redline how many days and you see home like when it's due you see all the dates, you see all the assignments, the title of the assignment in the courts, you can also extended

G. Marion 33:04

notices. This is a plate up deadlines or notices.

Tejas Ambarani 33:10

So that deadlines are basically like assignment deadlines. So when you have to submit something.

G. Marion 33:15

Well, I'm just saying like, let's just say they had a certificate, where would you see that on the dashboard?

Tejas Ambarani 33:20

So certificate seen completed course.

G. Marion 33:24

Okay, well, it wouldn't be

G. Marion 33:25

on the dashboard for the individual.

Tejas Ambarani 33:27

So no. So basically, the dashboard is for your courses, you're going to right now, say current courses? Well, we

G. Marion 33:35

talked about the injury individual file for the individual, I would assume this would be the individual file where I would see my enrollment courses, I would see the deadlines coming up my schedule, and also the certificates that I have achieved Once I've completed them. I mean,

Tejas Ambarani 33:53

we could have we could we could add to sort of get here. I added certificates in the My Courses section. Also in your profile. I don't add a section to the active courses. So the thing is, there is I mean, you could have a section where you finish courses. I mean that that's not an issue. We could do that.

G. Marion 34:09

Okay. Yeah, I just like a one stop shop like again. Yeah. Want to minimize clicks. Yep. You know, yep. Yeah. So let's, let's minimize, awesome. Okay.

Tejas Ambarani 34:21

We can do that as well. And also, yeah, we could have it in different spaces. So we could have certificates. I mean, it makes sense. You don't The reason I didn't include this here just because was like, if people aren't using the code, they want to finish the courses they're doing right now, they don't want to see the courses that they did, but maybe having a space where they can see the code like a certificate column like a like a like a rectangle box, we can see all certificates. I think that would be that would make sense. So

G. Marion 34:46

Definitely completed section.

Tejas Ambarani 34:51

So you can you can see schedule as well. And you can you're able to edit as well. But this is just the dashboard. So this is just like an overview. Now if you actually do You can add even for example, a common thing with deadlines and courses is that you need to extend them. So this is an approval process, you got to mention like, what course educators name and like will be fixed, depending on the course, home this extension applicable reason and the student, the teacher can approve or disapprove, so it's up to them. So teacher will get access to, again, get additional content which. So example, I'll just show you everything. So example like, let's see, if you click

Tejas Ambarani 35:32

one course.

Tejas Ambarani 35:34

This is basically the breakdown of how to look like. So you see all your course content over here. So everything is the one of the chapters. And then you also see, for example, in some areas, you see a, you're able to actually download content in some areas where you maybe have to have some readings or something. So you have additional content you can download over here. But you also have area where you can see all written content about the course as well. And you can if you have any questions, so a common issue with the quarter videos is that you can't know context. So let's say since everything is recorded, if you have a question, you can't really get an answer quickly. So having a having this button is important to answer the questions. But if you want to go back to the previous screen, you can always go back over here and here. So the idea is like, it should be easy to navigate, you can cross and you can see your

full screen as well if you want. So. So I use one, you sent me a PDF, I actually used an image from that and to show how the Tłįchǫ course would look, by using the entire video, you also see a video of a teacher teaching with a picture of the professor here.

G. Marion 36:45
So, could you update the font of the image?

Tejas Ambarani 36:50
Update the font

G. Marion 36:52
Yeah, the Tłįchǫ font, see how it says protection of cultural culture. So what happened here is that they probably used Dene font, which was not recognized on a computer. So it changed the text. So Tłįchǫ are, as you know, is not still at that rates to see job. So either we use the font or we don't use the font anywhere, you know what I mean?

Tejas Ambarani 37:15
Yes, this font is on made by me. So this was actually from, you

G. Marion 37:18
You can ask our designer, she can update so we can have the right content, because it's going to have to be updated anyway. The content so that you can start putting content where you saw it. So if you're gonna use this, then you need to update it. Thank you.

Tejas Ambarani 37:34
She made this. Did she make?

G. Marion 37:39
This was made? Like, like years ago? Like, okay, so back then they didn't have any foreign to printers and all that stuff. So it doesn't work

Tejas Ambarani 37:49
well. Okay. Okay. So I'll ask her to keep a note of that. That's what we talked about that on Monday. Yeah, we talked about that on Monday. But we also noticed that actually, yeah. But yeah, so this is section and this is, again, so again, if you see full screen, you won't be able, you won't be seeing this. But for the purpose of this, I've kind of shown this

G. Marion 38:21

VoiceOver on the video, like, how do you do the video on the application background? Are you just embedding

Tejas Ambarani 38:28
it show example. So right now, this is just a picture. There's no audio on this?

G. Marion 38:33
I never, like when you do a video or photo, what's the back end look like? How does that process look?

Tejas Ambarani 38:41
Or show? Yeah, so you would have to the teacher would actually have to upload a video. And that video would be available, it would be you'd have what are called pod space where like what students can see, and teachers can see, I've worked on a teacher section. I was going to do that. But I kind of put it on hold because it was like I created like the slides already. So but yeah, so I have an idea of like, how a teacher would actually upload things because that's a different process as well, you know, so because teacher would a teacher would actually have to create a web, like create discourse, so they would need to upload the website. And it's actually just a video of themselves teaching. So yeah. And but how would they create? It would be similar to a zoom where they would actually like you can present what they want and they can present so they face and stuff. So let's dive

G. Marion 39:32
Yeah, I'm just trying to think logistically so like, I like the overall application, but if we don't have a solid like manual on how to process so if there's no manual for the teacher, and that's something I would recommend.

Tejas Ambarani 39:47
Yeah, so yeah, so the thing is your manual for teacher how to approve the course. You would have probably have to work with someone from the community department. Somebody's like someone with In wobbling teaching, because if, for example, the part of it is

G. Marion 40:04
No, I am thinking a technical manual and how a teacher can upload. So you have to assume that no one is literate here. Yeah, computers, okay. I assume the worst when you deal with us is how I see it give me, you know, simple document with technical stuff. Because I'm telling you right now, we look at logistics and Paddy could correct me, but it won't fall on the teacher to actually do all this report to go to the digital specialists that when you hired are going to hire to

upload all the content for the teacher. Yeah. You know what I mean? So, yeah, that's how I see it.

Tejas Ambarani 40:46

The thing is, that's what I meant by this website, like, for example, I've created maybe like 50, you could probably make like, this group, this would be a big project, because there's so many different. So example, part of it is like for technical person to actually create it. So we need to probably create that version of how they can actually build a website, like build a course, you probably have to give a, like, create a Manual for Teachers of like, what they would need to provide. So they would need to know like, okay, like, can we produce like this many videos? I mean, it's up to them, but they will have to divide the course in certain ways. So, yeah, so there are a lot of like technicalities that probably have to be developed, but which is why like, this phase of the website just to focus on, like, the navigation and how easy it is to use a super, it's really important, because if it's complicated, people won't use it.

G. Marion 41:38

Right? Oh, sure. Yeah, exactly. You want it simple.

Tejas Ambarani 41:41

Yeah, it's really important. But yeah, so just again, you're actually able to see track, like, homeless, what courses are finished. And maybe teachers can actually have access to this data as well to see track, like the progress of the students, you know, so to see, like if students are able to keeping up or not keeping up so that information, definitely teachers should be able to track. We also have some example, let's say, if you have a question, again, you can immediately ask the teacher, so any clarification any issue, you can directly get it answered. Now, you also have the community section. So if you go back to the dashboard, in the back, over here, my courses, if you go to My Courses, you can I show how you can actually come here, but if you go to My Courses, then you can, you'll be able to go to Community section. And this is how the community section looks like. And this is the space where what I mean by committee section is, so if you, if you're part of an assignment, you will have a section for each course you're part of. So you can see the students that are part of that course. So that way, if you have, let's say, a collaboration with somebody, you can collaborate with them. I previously actually was showing email ids. But I felt like there's privacy issues like you don't want to see everyone's email ids. So that's why the chat function, keeping things private also is important, just because you don't want people don't feel comfortable, like checking the email address, you don't need to, and you don't have to show it. So if you hover over a term, you'll see this highlight. So this is the purpose, the reason why I had this gradient. But yeah, this is a discussion board. So if you have any questions by teachers, any announcements, you see them over here, students have

questions they see to it, they can add over here, they can also message the teacher as well. But a discussion board is bad, good if you want input from a lot of people. So it's beneficial for that. So yeah, so then, and also come to the comment section is also important for again, like forming connections between students. So you see if you see a chat function, you can actually chat with students. You can see the inbox you can see a group chat as well. So again, the purpose of all of this is again to form connections between students because that's really important. And since the deadlines what like each course most courses have a deadline, it's more easier to form connections because people are doing the same thing. Now to click a new topic, disordered look like you can also expand and you get more functions of like okay, if you want to attach something, you can do that as well. But this is what this would look like. And again, like settings in terms of like, you'll be able to have notifications on or notification off like you can have some a few different settings you can adjust it will be a notification stamp as well. And, yeah, so now if you want to message the student, again, this will look like similar to how you message teacher now if you click the Assignments tab lag over here. So example, if you want to hide your the bar, you can also do that. So each of them will have a different icon. So but if you click the icon for assignments, this is what you see. And I can, you can hide it if you want to as well. I'd be making a different icon for each of them. But in the Assignments column, you can either filter it for all of for particular assignments, and you basically have access to everything in one area. And you could submit as well over here. So these are things you have completed. So you can submit and you see a completed section. And this is something you was supposed to submit yesterday, but also your extended deadline. But what if you actually asked for extent that you already asked for an approval, so you're awaiting approval for extension. So this is one tap, so your teacher is not approved for the extension yet so. So this is what it would look like. And again, if you click any of these courses, you go directly to her to the course. Now, if you again, as you mentioned, as I mentioned, if you click this, you kind of see everything hidden so that we you get the access to a bit more you get educated to see the teacher's name. So you can message them if you want to. Know if you want to submit an assignment, you see this assignment, like it could be a project brief, and you could download like a PDF. And they could submit anything they want, which might look something like this.

Tejas Ambarani 46:33
So they could submit the video, they could submit audio, they could submit documents, and they could, you know, title everything to discover how they would do. And, and also, what I was thinking was that, let's say for those free courses that talked about, well, maybe you don't want to have assignments. So the thing with a course like this is a teacher would have to then see the assignment then grade them. So it requires more time for the teacher. So in some situations, if you want to keep it free, we might not have this, we might have quizzes, so people would have to solve a particular quiz. And then they will be able to go forward. So so instead of something

like this, we will probably have like a long quiz. But that's again, not it's not the focus of the website, but we could like create that as well. But now what if they actually completed a course, they see like, a great like smart pop up, when you get like a congratulations, like you complete a course, you also each person will have like a level of like how much they have competed. So that it's just a way for you to gamify. So that way they get points when they finish something so they get more like dead level increases. And you can almost like it's almost like an achievement. So that way, education kind of can feel like a game. So that that's sometimes like an interesting concept. But again, it's not completely irrelevant. But now if you click your profile in the top, this is what you do see, you will be able to see all the achievements, you will be able to see a certified qualifications, I probably have like a cert certificates column in the bottom as you've been spelling it wrong. But you will see like a stats, your entire stats over here as well. This should be your overall stats like in the previous like I showed the analytics that would show depending on court course, but this would be like overall stats. And yeah, and, and so example this is another dynamic integrated. If you have a deadline, you should get a pop up. So you see you shouldn't ignore at Code unit submitted something on time. So that way it's easy for like if somebody forgets something they can pop up kind of helps your mind. But that's basically like, all the schemes have created so far, in terms of creating future screens that are obviously the teacher section like what because teachers will be able to actually great students, we persist, even like some screens like an analytic screens. So the lot of screens that we still can create. But I've got to put a pause on that for now. What do y'all think of everything?

G. Marion 49:16
Well, I love it. I like what I'm seeing and what I'm hearing. So you know, but then in the reality it comes down to when you use it. So that part I think will be beneficial for all of us to see whether it's user friendly overall. Right?

Tejas Ambarani 49:33
So right now you should be able to like move around the website. I mean, some of some of these screens are not linked properly. The problem with this,

G. Marion 49:41
I'm just I'm just saying overall overview. But overview. I'm really happy with what I've seen. question is what's the next steps and then because I have Patti here I'm gonna pick on is that Patty, is there anything you have feedback on?

P Turner 50:00
I'm not specifically I would say the same thing like having taken, like I did my masters online. And looking at it, I think that you've created something that's very easily accessible. And I think

in my experiences, it's the simpler, the better. And like, you want to be able to navigate through with clicking a button so that you're not lost. And I think that when I watched you go through it, at least at this point, it is like that. So I think that will definitely help. When people are taking a course here, it needs to be simple and straightforward.

Tejas Ambarani 50:35
Yeah, exactly. So the thing is, that's something I was told. So the whole purpose of this section, again, right now to put images, no colors, everything's just black and white. So the next section is obviously to create the colors. But the purpose of this whole section was just to give a full good structure, you know, so the structure is solid, so be able to kind of like, and again, like, since we have created so many screens, it's easier to make new screens, because we almost have, like all the templates ready. Like we have like how to menu tab looks like we have all how all the courses look like so that everything is like, I'll just have to like take different elements and put them together. But we basically have like a structure kind of built. But yeah, so. But what I'll do is I'll try to work on definitely the section you mentioned about what is called the in person mode, like maybe I'll try to create a few screens where we can add that to part of the website. In terms of a teacher like creating manual. I think that would feel great after my thesis, just because that would you probably have to have everything ready. And then we can create that, because that would be like a more final phase. But yeah, so is that fine with you

Tejas Ambarani 51:51
on? Yes, yes.

Tejas Ambarani 51:59
So now I have created actually color options of how the website could look like. And, again, like the purpose of now, the design, the next section, I think is probably the most objective like this. One is it's not asked you like other options. But in this section, I would say again, please give me I'll give you a link to this. So you can send me any comments you have regarding this graph studio, a lot of screens. So it's going to take you time to process anything. And if you have any comments regarding something you can, you can definitely get back to me regarding them. But in terms of actual design, like it's very subjective, because you could create so many things, and I've gone for more a particular approach, but maybe you want it to be more simple. And you can tell me that, but the purpose for this is you give me a feedback regarding this. And then I can actually work on building actual colors, adding content to like kind of like some kind of emotion to all those screens you have seen. So for example, these are some colors I've used. So the idea was, I wanted to try to use the colors from the community, but also have used but in some situations, I've tried to use other colors just to show it has different links. So instead of having always the the blue and yellow, I tried blue, and purple, and red, blue, and red, and blue

and orange. And so I've read different combinations to see maybe could give a sense to be different. But also in some situations I've created one option where it's like blue, yellow, and black, but it's up to you, but I don't the thing with colors is the colors have a different meaning to different people. So blue and yellow have close ties with their community. But I don't know if you want me to use it or it's used a lot so it's really up to you to kind of like let me know what I what you think because I don't know that

Tejas Ambarani 53:55
so I prefer

G. Marion 53:56
to stay with the visual design that has been approved by the CDC with the colors so just make sure that the visual design color palette is the same color palette and then I would talk to pronounce Monash because we've already come up with overall look for TG just hasn't been approved. So we could try to incorporate some of that design already keep it really simple. Just comes down to the colors like you said we use red, blue and red. But for the sake of simplicity, I would like to see good primary colors for the primary and then secondary and so on. Yeah, it's

Tejas Ambarani 54:39
really up to again like colors is just showing the different models we could you could get skin is doing the design section I would say is easier than changing something like in the if the base is wrong then it's really hard to fix it. But if like the in terms of design we can keep adjusting. So even though it The next one is a final prototype, I imagine we'll keep making more versions because design can keep being adjusted to be improved. So it's not really a problem. But so for example, in terms of submission you for addition, you have five different website templates of how the with colors with pictures. And I'll be using two different fonts and the tree the since actually, I go back to something I mentioned, you mentioned it needs to be bilingual. And that's actually really, that makes it tricky in terms of fonts. Because not as I actually talked to manage regarding this, but not all fonts translate to ensure well, and I don't believe any foreign currency translated 100%. And but for now, like, for the meantime, I've used Montserrat and later because they both translated, I tend to have a few constructors, see they have the accents and these to translate pretty well. And they were pretty different from each other as well. So Leto is a humanist font, it's it's a bit more approachable, it's, it's not a strong body font. It's not a very aggressive font. But it's like a, it's really good for body text in terms of like smaller text is great for that of Montserrat is great for headers for like really title fonts, it's not, it's not the best for smaller forms. So I've created these two versions. And, and also, I think, like Mozart is a bit too aggressive. But I'll show you how it looks like. Again, everything here is still like, what a call, it's not nothing is fixed. So it will be changed. I took some parts man who sent me some patterns.

So that different ways also I made the patterns as well. So I create something like this. So it's a complete all the images also over here, they don't have copyright. So this image would have to be changed, but to somebody maybe working with a computer or something. But the thing is, I tried to use images from the stock free images. But the issue was, it just didn't feel like pincher if I use, like somebody who's not from the community. So I felt like it needed to have, I just took pictures from your community. So it felt like it felt more. It connected more. So all these images, again, would probably have to be recreated. We might need somebody to take pictures. But yeah, so I know the copyright system module works. But I felt like something like this would work. Also, like example, like the background and this was from a court. I would need to know if that's fine to use. But But yeah, so this is kind of like the forest option. What do you think about this, this is like purple and purple, yellow, and blue. So it's a bit of an interesting mix. I can tell you the best and you can probably have, you can compare later or you can talk about it now. What do you prefer?

G. Marion 58:01
I think it's for me, I need to reflect. So I'm happy to look at the designs. You know, I usually meet with more Nash on Mondays, but I think there's a holiday this coming Monday. So I'd like to see if we can connect with moderation yourself. You can go over it. So there is one thing that I'll be hardcore about the Keto logo needs to be prominent. Right. So instead of keto, and a little tip, I'd like to see the logo somewhere. And I think we need to redesign distance learning that kind of book when I don't know what that would look like. I don't mind the purple per se. But I kind of liked the feature of blue maybe it's too much use of the petro blue. I don't know but I'm open to opinion but overall I like the look that I got here.

Tejas Ambarani 58:53
So one thing about the logo actually, like in terms of what a website would be called, I don't actually know like Do you have any specific teams so example I saw your some of your schools and I know they are represented the are like represented by people from your community elders frequently so if you have somebody you want to pay homage to like I just for example everything the logo is extremely important but for the website I've kind of like not kept it as a focus. So this is like a very temporary logo so this is not going to be the final so but if you

G. Marion 59:27
have a hard core to your name, I think what I would like to do is once we get close to the end, we would show it to the senior directors and then maybe get some review on the name what do you think Patty

P Turner 59:49

again, without really I think it looks good. Again, I don't have anything that I'm comparing it to but I think the colors look nice like the screen that I'm seeing the purple the yellow I think It looks good. Yeah.

G. Marion 1:00:02

What about the name part? We think about that going into the senior director, and even the top one. Yeah. Like, should we develop a special name? Or just call it learning? Teacher Learning? I don't know, something simple. Teacher Education, teacher professional development. I will think about it now. I think

P Turner 1:00:26

I don't necessarily know if I have a strong opinion. But I think learning is probably better than education.

G. Marion 1:00:34

I agree. Yeah. I don't know if you know, the future word for learning. We could use that word and just call it learning. Our way of life.

Tejas Ambarani 1:00:45

So actually, I talked to somebody in depth. He gave me the Tłı̨chǫ word for learning. I don't have it right now. But if you if you

G. Marion 1:00:52

know, I know it should be on the Quito dictionary to?

Tejas Ambarani 1:00:56

Yeah, I think I've just absorbed on that. Yeah.

G. Marion 1:00:59

Okay, cool.

Tejas Ambarani 1:01:04

But yeah, that's one thing that's important to you.

G. Marion 1:01:08

Okay, cool. I think, you know, once I reflect and look at this, I'd like to see if we can set up the next meeting with Monash images, we can just look at overall visual design and colors. I'm glad

that you started the presentation with all that logistics, because it really helps me focus on the content versus looking at design. You know what I mean?

Tejas Ambarani 1:01:26
Yeah, exactly. That's the issue. Sometimes we include colors, it might look better than it is. But it might have some navigation issues that sometimes are covered up by design, because it can kind of take the focus of the website. But in terms of example, with menus, like I will be having a third user testing session, you want her to be to be a part of it.

G. Marion 1:01:51
No, I once you just do the design. Yeah, color. That's all Monash is my designer. So I always go back to the designer, making sure everything was kosher, because I've been through five websites, and it's always been painful. I want to make sure we we have a nice process this one.

Tejas Ambarani 1:02:11
Yeah, that's fine. And so basically, yeah, so the next part of the majority of second session, I'll be showing everything in color. So that's going to be my next next step. So if you think that, so we could definitely meet before the testing session, but we will have to have, we'll have one more session. And we haven't fixed on a date, because we use a third date over here. So when would you like me to? I mean, I think I'll mention that later. But we will probably have to just set up the third date, too. So for a third meeting, and then we can kind of wrap it up. And obviously I'll continue to work with you.

G. Marion 1:02:47
Okay, great.

Tejas Ambarani 1:02:51
So this is the second option. And again, the I don't know if, like for me the blue and yellow, I'm afraid because it works well. Like it's, I like the colors. But again, I have a different relationship to to those colors than you. But maybe it's too representative. But yeah, so over here also, like example Do you want? I would like to know, like, do you want me to use patterns? And what kind of patterns? So example over here, I've have these patterns? And I've almost used like the image with the colors. Maybe it's to model maybe these two?

G. Marion 1:03:25
Yeah, that's why that's why. Yeah, as my designs, she has our teacher look and feel. Yeah, we also have like, permission to use the beadwork on the websites with competition. So everything we do, like on the website should be thoughtful and thought out why we use this design, why

we use this pattern. I kind of lean towards the teacher blue because it's just dominant. That's our main primary color. So let's just work in the peach of blue for now can always be changed, I think. But in the when it comes to like the look and design. I just want to do that with Monash with you. So we're not wasting a lot of time on making beadwork to get me.

Tejas Ambarani 1:04:11
Yeah, so she even mentioned like, for example, when I talked to her, and I showed her this. Previously, I didn't really incorporate it. Like I just use images. So achievement she mentioned like, try to incorporate it. It didn't feel like a website. You could add any different images. And it's anybody else's website. Right. So it needs to feel like it's Tłıchǫ. So example, having dividers, VBIED works, I think made sense. Having the images need to be clencher the colors into between, I mean, like, everything needs to connect. So it doesn't, it feels like a part of like, for example, let's say somebody from culture is using the website. They should feel like it's their website. And that's the whole purpose of this. Of like colors and design is like you can kind of make people feel a bit more comfortable because sometimes with some approach with some venue have some modern Besides that you don't have any connection, any attachment to it because it's just generic. So the idea is to try to make it bit more. It feels like it's yours. But also, it shouldn't be, I should not make too complicated just because the focus should be on the content. So it's a tricky balance of like understanding them. But we can definitely talk to manage about this as well. This is, again, a different approach as well. So she had mentioned that you prefer like a larger image in the top 10 than a small image. So I felt like okay, this would be a day where you could have text, but maybe it's a bit too much. But yeah, so it says, this is blue, this is red, and this is the Tłıchǫ red and blue, as well as yellow as well. So it does have the same thing, but since we have red, and it's still white as well. So it feels a bit different. It's not, we don't have a blue menu in the top, but I think menus preferred. I think she liked that one. And I mentioned the other one she liked. Yeah.

P Turner 1:06:04
So I would say just in what you've been kind of clicking, I prefer the blue over the brown.

Tejas Ambarani 1:06:09
Yeah. Okay. The thing with the blue is, so this brown is actually from like, an A CT or something from the committee. But you're the bride. Like, yeah, the height? Yes.

G. Marion 1:06:21
That's the transition piece. Overall, I think I like the design for it. Yeah. Yeah.

Tejas Ambarani 1:06:28

So I guess I mean, like, not

G. Marion 1:06:29

that bad bottom header to move the height over. But I don't want to spend a lot of time at the meeting talking about design. That's why I just rather do it with Pradesh. But I think overall, we blue and yellow.

Tejas Ambarani 1:06:41

Yeah, so the the whole example, even if you see the font, which is different. So it's a bit more bolder, if you see like, even like small, like this is a bit more loud. I personally think that the other font works better. But again, it's really up to

G. Marion 1:06:57

like I would even go like if you really want to know my opinion. I would even go further and say that, see how you made the Tłı̨chǫ read? Like the more chief said, yeah, go back up. Yeah. Right there with a red? Yeah, I guess, filter. Yeah. So like, I would even go more and do color coding. So red filter means that the Tłı̨chǫ own course Tłı̨chǫ own content. Like maybe, like a light blue might be govt or something like that, or you know, and then free courses, which means they're not related to us, but they're free, and we have access to them or putting them online, certainly yellow for everyone. So that's how I do it thinking about low literacy rates and high visual content. So if you want me to break it down even further, that's how I would do it.

Tejas Ambarani 1:07:49

So the reason I put this red highlight was mainly to show how to hover over something. So when you hover over something, you could either reduce the opacity of the image to show that you're clear, because you need to have some effect when you're holding on to something. So the idea I've read was The reason I use it was because if you know who or what, when it comes to, or what you mentioned, it's actually interesting. If we have it for if we can't divide it into pieces, the only issue is, some people might not understand why the colors are break down and teaching them that is like a process as well. So maybe we can Yeah,

G. Marion 1:08:27

and that's the whole point, right? We want people to learn the process, and engage with us, as as much as we love module. And the reason we use one hole is because of the distance learning and the pandemic. But in this in the end, we are a tribe by nation. That means we want to be together we want to celebrate together. But we're using this platform to organize ourselves, but use a different way to communicate and also to expand people's skill set with learning online, and providing that opportunity that has not been able to be provided yet. And I think in

a place in the north, where the internet is really restricted. So we got to think about the bigger picture. Initially, we're starting off with the Tłı̨chǫ agreement, what our hopes is to expand that tool set so that we gain give more access to our people so that they can benefit greatly. When it comes down to everything it's about, does this benefit the Keto person on the ground level? So yeah, I like how you say filter, we could use the filter continuing on like I also think about logistics staff teaching the background, the back end of these things. So the more thought put into why we use filters for certain colors and why we do this is just a little bit more efficient and also shows people that we put time and thought into why we chose colors why we picked these certain things. That's all done differently.

Tejas Ambarani 1:10:01
We can talk about that too. With menus as well, even the tricky thing with filters, even sometimes with this filter, or not sure if putting red filter over him was, it was bad, like, even understanding like, like maybe because sometimes some colors like might have a wrong meaning or like it could mean something. So even understanding even trying to fix that also, I think it's important and it has to be done with you involved or somebody.

G. Marion 1:10:27
For sure. Yeah.

Tejas Ambarani 1:10:30
And this is I think, the option that she liked the most

Tejas Ambarani 1:10:37
of it not, I'm showing.

Tejas Ambarani 1:10:47
So example, this is more like green, it's, it's focused on growth. And she seems to like this one, a lot. This is actually incomplete. I need to extend this. But yeah, so again, I use patents from the community, I just basically use the image of button. But again, all this might probably need to be changed, because she didn't give me this, but she gave me these. So I'll even terms of patterns, I have to like get selected ones from all from you. So it kind of matches.

G. Marion 1:11:22
So yeah, just to keep it short, we're going to go with the blue, keep it simple.

G. Marion 1:11:28

Try to minimize the look and feel, just keep it really simple color filters, I think is the best way to go. And then you know, because we're working on the Tłįchǫ arts website, the tlicho.ca website, the Tłįchǫ DCLP website. You know, we need to make sure that all the websites are cohesive. Yep. So let's talk to our designer and see what she thinks about the look and feel that we're going for the website. So they all kind of have some sort of cohesiveness with all our websites. Sure, either the bottom part of the website, they all look the same. I don't know, but that's something we need to think a bit more about. Because I don't want someone to look at this and say, Oh, this is so different from the Tłįchǫ, I want to see similarities and flow,

Tejas Ambarani 1:12:16

Sure!

G. Marion 1:14:11

I really enjoyed this process. You've made it really easy. I appreciate the time you took and I really enjoyed the presentation. Thank you so much.

Tejas Ambarani 1:14:57

Thank you all for joining us.

5.4 User testing session 2 (Feedback)

G Marion mentioned, she wanted the designs shared to be evaluated by a Tłįchǫ Government designer. It is important that I received feedback from their designer on the most appropriate design elements, so we stay consistent with their existing designs. Below is the email shared.

UNIVERSITY OF ALBERTA

Tejas Ambarani <ambarani@ualberta.ca>

Fwd: Tlicho Distance learning: User interface design (Review)

Mehrnoush Zeidabadi <mehrnoush.zeidabadi@tlicho.ca>   Thu, Oct 13, 2022 at 2:50 PM
To: tejas.ambarani@ualberta.ca

Hello Tejas,

Thank you for your work on the Distance learning prototype. As discussed in our meeting with Giselle, please work on the following changes.

1. **Identity**: Please create options for different identities (logos) for the website that incorporates the Tlicho teepee with education or learning. You can also possibly use the flag along with the logo as well. Lastly, we would like you to use the Tlicho word for "learning" within the logo.

2. **Medium-Fidelity User Interface Design:** As discussed, we like the "Continue course" section that allows students enrolled in a class quick access to their courses. Having multiple navigation routes works for us, and we agree with including the chat feature throughout the website. We suggest having "Online" and "Offline" options, so students are not forced to get chat notifications.

Thumbnail size: Please maintain consistency for all images.

Course Page: Please create a section showcasing the course thumbnail's image. The course page needs an image to showcase the course rather than just text.

3. **High-Fidelity User Interface Design:**
As we talked about, we would like the following changes.

Layout: We liked the layout of the fifth design in orange. Please align the slant of the orange section with the Tlicho teepee. Additionally, we would like you to add four teepee's within that section.

Colours: We would like it to include colours from the Tlicho flag *(Blue and yellow)*. We might change those colours after the final user testing session.

Patterns: Please use the Tlicho patterns I shared with you for the layout. We like how you have incorporated them, but please give them a needed look by having them outlined as circles. You don't need to add the teepees in the *"Quote section*."

Pictures: For the opening page, we would like to include past, present and future student images showcasing different generations. We will look into our servers and share pictures we feel would work best.

4. **Footer:** Please add the "*red section"* above the footer of the website within this website; we must create a relationship between all the Tlicho websites.

5.   **Typeface:** You can use Lato throughout the website.

6.   **Content:** Please change the word "education" to "learning." Additionally, please remake the PDF image of the Tlicho agreement course and fix the spelling.

You can apply all these changes throughout the website. We look forward to seeing the final design.

Best,
Mehrnoush

6.7 User testing Session 3 (Transcript)

Thu, Oct 20, 2022 12:53PM • 1:18:10

Summary Keywords
courses, people, create, terms, important, teachers, complete, students, assignments, website, page, shown, education, click, section, confirm, learn, add, apply, easy

Speakers
P Turner, G. Marion, Tejas Ambarani, T. Lim

Tejas Ambarani 00:04
Talking to land acknowledgement. As a settler, I would like to acknowledge that all the work I'll share with you today was conducted in treaty six territory, we should also the land I'm currently located in this land of a traditional gathering place for diverse indigenous people, including and many others, because histories languages and cultures continue to influence this vibrant community. Yeah, and start by saying like, like pre since we already had our consent to in the forces that interest me testing, I won't be meeting that again. And this meeting will be similar to a previous meeting where I'll be going through the different screens, I've designed. Wedding, my insights and reasoning behind each of them. But you're free to kind of like ask me any questions during my presentation I have. Yeah, and that's something so I won't be providing as many options as the first one. But I would say this is the most objective part of the thesis. So we might, we can easily adjust things, we can make a lot of changes, because the design, like if I would, if I were to make changes from the post presentation, very challenging, but in this part of the design, like design process, like it's a lot more easier to make adjustment. Nothing here is to completely finalize it, even though it's a final user testing session. And yeah, and again, you know, please, like give me any feedback, any input that you would you feel comfortable sharing. Additionally, I would also like to say that I had a meeting with Giselle and her designers to confirm some of the colors are more direct and design process. So I'll be showcasing that as well. I'll be showcasing like, like the final version of kind of what we have kind of created.Can you see my screen?

Tejas Ambarani 02:35
 Yes. Okay.

Tejas Ambarani 02:59

Yeah, so before I sharing the website, we had to kind of confirm on certain things from the previous testing session, there were certain adjustments that need to be made in terms of especially the design elements. First was confirming, confirming the color palette. Now this is not going to be like, we might want to change it in the future. But for now, as per the advice of the Tłı̨chǫ designer, we will go with the Tłı̨chǫ flag colors of yellow, and red, blue being the primary color. As I was creating more screens, I realized is that we actually needed more colors, because while blue and yellow, are actually good colors in some situations. We needed some background supporting colors as well. Especially because we have over like 50 screens. So we needed more variety of depth of colours. We used needed a lighter grayish blue, and also a darker blue as well as to almost assess them assess the existing color. And yeah, that's kind of the color palette we chosen for a typeface we started to go out with later it's a human spawned it also a consideration in terms of choosing typeface was it had to translate well with the Tłı̨chǫ letters, which it doesn't perfectly. There's certain adjustments that I had to make. But I think I don't think that there is a currently a font that would be available that completely translated, that can translate perfectly. So I believe like the committee was working on developing that form. So in the future, most likely we should be keen to find. I would recommend that because that would be the best class acceptability. When it came to ante systems. In the previous session, I had created like a very generic pension Planning Center, like a logo for that. And one thing is recommended was using a culture word for Learner Education. And I think We had discussed that we should be able prepper changing the water learners to education as well. So we went with the Warthog, Nieto. And one thing I've slightly not sure about was, would it be an issue if you don't know, the job. But I feel like that we, it makes more sense to actually use little word for non because now people instantly forced to learn a word instantly, just by remembering the names were applied, they actually learn something by the Tłı̨chǫ. So I think we have gone forward with the term hoghàdeetǫ. And for creating like a watermark symbol, I had to have thinking of ways where we could actually combine an symbol that represents education and the Tłı̨chǫ. So we actually went with this this, like, it's a very simple way, easy to understand. And it kind of like symbolizes, like learning with Tłı̨chǫ. And that's, and this is basically how it would look like

G. Marion 06:02
how you guys feel T and Patricia, a T, we didn't go through this LP for translation. This is my formal request to tclp to look to see whether learning is the correct word to use for this module. Could you confirm that? You could look into that for us? Sure. Yep. We can do that. We just took it from the CATO dictionary. Yeah, that's it. We just want to make sure that it's still correct. And I don't know who would ask to be honest.

T. Lim 06:37

Oh, yeah, I'll pass it along to some folks.

G. Marion 06:39

Okay, cool. And that goes that ties to Patty's comment, that she didn't want education. And I kind of agree with her because we don't want to duplicate the Keto Community Services. We want to say learning. Cool, thanks. Good.

Tejas Ambarani 06:54

I see. And what I was thinking was that we should, in the adult section, which I'll be showing me is that we should actually be checking for the proper pronunciation as well, we'll have to look it up on Google, but I wasn't able to find it. I think there was so good. Once,

G. Marion 07:11

once he can confirm the spelling and the wording. I can ask someone to come here and say it, we can record it and send it to you. So we can try to make it a full file, like a sound file. So if someone touches it, it says it.

Tejas Ambarani 07:29

Yep, yep. So that's the plan. So I'm not created, I have an area where I feel like be the best to like add as well. So you'd also be able to create the inverse of how this logo would look like, in white. For example, is there any colored background plot to anything, so it just helps to look like and still works? Fine. And I think, again, this is very simple, its straightforward, but it still conveys the message that anybody from Tłįchǫ would know that it's speaking to them.

P Turner 08:02

I really liked the logo, I actually think the simplicity of it is really nice. And I think that it's one of those things that even when you look at the Tłįchǫ flag, people can draw it, people can replicate it. And I think they would have the same ability to do that with this logo. And I like the idea that they would be able to click on it and hear the word.

Tejas Ambarani 08:24

Yes, for sure. And the I will be sending you the email as well, just to your email. And then regarding the logo. Previously, I just used the Tłįchǫ teepee. And what I realized was that it like while it was fine to just to like I wasn't actually doing much with it. So I decided to actually maybe try to incorporate it with something else. And I think yeah, and still try to keep it simple. So it would be understood by it will have deeper meaning than just, Oh, I'm just using the deep blue. So yeah, I mean, while the logo like it wasn't the focus of my, of, like my project, I think, trying to confirm that. And again, we might make a few edits on it. Like it's really important

terms of branding in terms of like pressing social media in terms of like, which isn't the focus of procedures, but like in the future, if you want to be developed this, I think, like having a good logo is really important. So that's something that not to highlight of my project. But I think it's something that could be really useful like beyond my beyond this upside. Now I think next, so we had kind of designed this camera to, to structure this is similar to attend my previous setting session where there's going to be guest access. And also we're going to going to be showing user actors and in and also the learning management system. So by guests that I mean like if somebody who's not registered website, what would they see? So again, all the one thing I had mentioned was the all the images, all the text over here everything is nothing's confirmed. Like some of these images are pixelated, it won't be pixelated. We'll be using maybe different, like, we might need a photograph of traffic take images. So I have used over here different images, like I'll be showing throughout the proto is definitely

G. Marion 10:27

a good point to sorry, tease us have tea or Patty has any kind of photos like this high resolution, please share it with us. So we could put it on the web? If you have permission. That would save us a lot of time. Thank you.

T. Lim 10:44

Yeah. So I can Yeah, I can take a look at yourself, for sure.

Tejas Ambarani 10:51

That's dumb, that's something like, again, images are going to be crucial to kind of confirm, but in terms of the this homescreen, I think the purpose is people need to when people first joined the website, a challenge that I mentioned in the previous previously like, basically, since this is a scalable model, the likelihood of having a lot of you might have a lot of courses, so people can keep developing more courses, because all the content is going to be recorded. So the growth data first, the purpose of the homepage is basically to, to basically create filters for content, so people are actually able to find what they want. And what I mean by that is, you have said you have coursework. So before at featured courses actually need to suggest that courses. And this will be based on, on your on what you had mentioned during your registration, which I'll be showing. So basically, you can have content based on your preferences instead of showing you everything. So having certain filters is going to be useful. I will filter for new courses, if you don't want to be what evitable, recently, they should be able to find that you also bring that information from Tłı̨chǫ. And you then have free courses. And I've also decided in like more things like using some of these patterns divided I've taken from you from illustrations from the from Tłı̨chǫ beads, be patterns trying to use that as a divider. And also using use this as like almost like a background element. So trying to model elements from the community to try to

make things again, still look modern, but to have some education with the clencher in terms of pictures in terms of the colors in terms of illustrations, while not overly adding. That's something and they've also sent us a photo from the Tłı̨chǫ website to it had again a relationship with the Tłı̨chǫ website as well. And this should be clickable as well in the future. So you'll be able to again, go to different websites to that. Now once you click, let's say no more to one thing is like previously, I hadn't I didn't have any would have called I didn't have multiple buttons. So example. Just to have more buttons, is it easy to for people to understand button, they click a button, they have a response. So it's easy again for basically navigate. So in terms of about this is I think where we could actually have probably different Cloud Station, we can maybe have like a audio button here with the pronounciation and a good Pope. So people recently actually,

G. Marion 13:45
I think it's great to have we should probably I don't know, Patti, is there a translation for stronglight to people in Tłı̨chǫ? I've never seen it. It would be lovely if we did.

P Turner 13:56
I think there is and I actually just was looking at a document reading one this morning. with it. So let me see if I can find it.

G. Marion 14:06
Then, um, so TGS Do you need help with this about section? Because I guess my wording would be this platform is building upon the words of Chief Jimmy Bruno strongly believe strongly to people by providing a modern or I don't know if we want to say modern platform for Tłı̨chǫ citizens to learn and also for Tłı̨chǫ citizens to teach our, our people and other people about our culture and language, eventually, I hope and also induce training. So we could work on the About section but did you have something started for this already? So we can start doing a draft

Tejas Ambarani 14:51
in terms of so in total content. I'm not focused on that. So example what you mentioned, I think usually add over here and it'll actually be really good. But in terms of content, I've provided lines of what we could add here in terms of what we would I think we should be, it would be

G. Marion 15:12
Fine. You need to get Kelly then to help with this.

Tejas Ambarani 15:15

Yeah. Because in terms of, for example, maybe I might mentioned certain things that maybe you don't want, maybe you want to add something else, it's all really up to you. This is just going to be like a very, it's a rough portrait because, yeah, and have to be done with two people, you could have a different port. Something else?

G. Marion 15:32

Yeah, I want to I want to start having ownership over a strong like to people I'm starting to see it's creep up on social media, with other organizations. And I, for me, it's more about a copyright issue and trying to ensure that we are I say, owning that, these words, and that they know it comes from Tłı̨chǫ people. So that's why I'm looking at this as a branding thing. In addition,

Tejas Ambarani 16:02

yeah, and I think that makes complete sense in terms of, and what I mentioned about the pronunciation, I felt like it would be above Holger theta, but we can also move to another thing, it's perfectly, it could be we also have like the reconstructed entire website. So one thing I'll mention later is that translations will, might be an important aspect, even for education, not of course, so providing maybe if it's possible to provide subtitles, like in some situations, like it needs to be basically the goal is that this effect can be completely used without knowing English at all. And if you can translate the entire website in Tłı̨chǫ, that would be I think, the best way to go about it. So English is, yeah, it's an option, but it doesn't have to be English, you know, could be influential. And that would be preferable in the club. For about action, and again, what we'll learn and some skills, and you could fill this up more, and we'll speak about the story of the website or about clinch as well. So it could be could really like expand on this as well. So but this is kind of the purpose of the out page.

G. Marion 17:15

Go back. Okay.

Tejas Ambarani 17:19

Um, so yeah, so that's, that's about pay. Again, you can click it here as well. But again, one thing I tried to do is, I had different ways to go to a similar situation. So you can go to about paste using this or this. And, and the reason for that is people, like people need to know different ways to navigate. And I'll be showing more of that later on as well. So if they want to click, let's say View, all of us view all they can see all suggested code. And it created a different filter filter system as well. So now they can filter from price from ratings from difficulty of the level of course, and subject as well. And a similar thing for new courses, or free courses. Now, for free courses, like few things will be changed. Free courses don't have to have a time limit. Previously

most courses had a duration, because it's required students to be enrolled to classes, with limited spots since each course offered assignments and credential qualifications that needed teacher supervision. However, we decided to have different kinds of courses now. So not all courses need to be the same. So that would help if you want to incorporate different courses from other platforms, so many of them don't have assignments, you know, we could have that course we could have different models of education and in the future, you could easily have a live section as well. Like just pre courses, you could also have a live courses. So if you want to, let's say have something that's happening live, they can find it over here as well. So, having again like additional model instead of just having one kind of model I think that would be a goal. So it can incorporate more courses and more flexibility for teachers. Then we also have the browse section so this is basically previously at basically only divided into subject or whatever you might realize that some people might want more configuration more filter. So they can choose if they want to choose between subjects. For example over here they can do it by default it will show Featured courses over here. The featured courses are basically courses that we would as a website would like to feature and but if you stood by subject to support look like so is the all the courses in history all courses on culture and, and kind of the reason why the filter system is so important because it might not be useful, let's say the first two, first two years, but in like 10, or five or 10 years, having a strong filter system and developing that from the start will be really crucial. Because if people aren't able to find what they want, and it takes time to get what they want, they might just lose interest. Here, they can search for the course over here. This, click the search button over here. Actually, the search question needs to be applied to left to right. This is what it looked like.

Tejas Ambarani 20:43
And now if they let's say, they click, let's click this course, click on any course they basically see the inside, of course, they get to see some of the data. So we might maybe restrict actually, like maybe users don't need to know the timeline, maybe we basically, the reason I had countdown is some like you have to enroll for the course. So since the model we chose would have limited spots, you will actually need to enroll or apply for a course. And now add the word apply. So you can instantly just buy whatever you want. But you would actually need to apply in many in most courses, you would have to basically provide like information about your maybe you need education in terms of in regards to getting into a course. So there's like instantly, you can't, nobody can get access to everything. And some courses we can give free access, we can give more easy access, which some that would be it'd be more challenging. But for everybody to put anyone to get a course they have to. If you apply for course you need to that would have to register, not able to actually get a cause unless you have an account. And also an account would have to be verified from people from the Tłı̨chǫ. So there are many levels of steps to actually getting to get a course. So it's not accessible to everybody. And that's important for privacy as

well. In terms of registration, we could probably extend this we could have more information, but that's going to vote more on this in terms of so we still have the option where we can provide access to congestion or we could provide access to if you're like you might have different courses, if you're a classical digital, and if you're conservative, then you might get a discount. And but the issue is you would then need someone to actually confirm with your recommender system. So that's something that would have to take place as well. You can provide your occupation, your education, that would help in terms of the suggested option like so, if you pick particular let's say you're a designer, or let's say you have a bachelor's degree education, then you get courses based on your current skill level.

T. Lim 23:06
It doesn't limit them.

Tejas Ambarani 23:09
That doesn't limit them. So they still get access to everything. But they basically the website is able to basically help wrap like, Okay, you might want to see that it will be a very big return. I think in the future, we could actually talked about it, that we could maybe develop a better algorithm. And that's something that it has certain drawbacks like algorithm sometimes can. Like sometimes it maybe can hide certain information and doesn't show everything. And we can kind of decide how we go about it. But at least for the meantime, if they had a simple algorithm, where they basically base your basic content into suggested options based on your current interest, I think, I think that should be good. Okay. That's basically the root access. So whenever many a user you can see all the you can see some of the courses you can see. Like some details, but you earn a pie, you know, able to actually access the website properly and have some features. Now when you actually read and sign up to the website. You will have access to these screens. They are basically the same. But the difference is, in the header you see the My Courses section, you have profile, notification, cart, but everything else is basically the same. Additionally, you can see the plus button that would help you save courses you like in the future. And what I was thinking maybe like instead of a plus icon, we could use a star. We could actually take the Tłįchǫ star and we could actually use it here.

G. Marion 24:53
that's a great idea. Yeah, that's something else so it could be like you know courses coming soon. or we could put up courses that we would want to know if people have interest in something. Yeah.

Tejas Ambarani 25:07

Yeah, I mean, we could do those things, the ghosting makes sense. And also, sort of, I think the benefit is like, for example, if you fail the course, you'll get a notification when a course is going to be started. So if people want to buy it, they might get notification on that, like, hey, of course you'd like it's going to start soon. So that's important, because people need to, like, be aware where people are able to know when a course is going to start. Because if they don't, that they might just keep a deadline, they might not know what courses are available. So like, and also, we could maybe use this section to maybe mention coming soon as well. And again, those are possibilities that we could do. Yeah, but definitely social media obviously is an option, but they can, I can promote a course as well. Okay. This is basically almost the theme. Slightly repeated so. So that two parts of the video created two versions of lambda access to one is for a completely new user, this will be out they would see. But they won't see a chat box. So this would actually be removed. Because they don't, they might not turn baby apply to a court, so they won't have a chat box. But if you apply for a course, and you will see an actual student, then you can actually have continuous calls to action, you also have a chat box as well, because now you can actually communicate with members of like participants of the course. So that's important as well. And yeah, so it slightly changes to now instead of, again, one thing I mentioned was that it can be different ways to go to something. So the way you can find in your audit courses previously was just through my courses, but decided that we should have it in the homepage, because now instead of clicking like two, three buttons, people can click one button, they can instantly get to the post they want. So that's going to be that's going to be a lot more useful, a lot more confident, it's going to be a lot more easy for them. Then these are screens, again, it's similar to the previous screen, I think I'm sure the screen, the homepage, I mean, the this the header is different. Now, one thing I hadn't shown was that the events page. So one thing was talked about in the previous meeting was you wanted to have a space where two students are like people could actually apply for events, you could have events about different courses, live events, and that need to be a place where they can apply for them. So they can actually register for it. So if they let's say they click this, maybe it goes to let's say Google form, and then they have to fill out maybe some information for education, and then they can register. Or they can you can have it through the website as well. But it's really up to you, you know, like or assume that they would want a link with, let's say an event would want to know, from their side who's registering. So a Google form would make sense. Over here, you will be able to see, like registered events. So you're able to see what events you have actually registered for your upcoming event, the what is upcoming and also able to see past events as well. So maybe two of them are recorded, maybe you could actually place them over here. Or maybe you don't want to maybe we should. Maybe we only short live and we don't need to record it. But it's an option. So in terms of this screen, I thought of different ways that we can maybe do this. So I create the option of something like this. I think this makes more sense. Maybe we don't even need to have the slot and maybe keep it straight. So because the problem

with keeping a slanted is it doesn't work for all images. Like some images don't fit perfectly in this website, because the slanted so we might have wanted restriction can be good.

G. Marion 29:17

For me, like for my perspective, like the first front page should have this slant anything after that I don't mind. Like for me, it's all about knowing the difference between a front page and the rest of the pages. So I liked that distinction. So you should really have a different look or angle for someone who is registered and has internal access.

Tejas Ambarani 29:39

Yeah, because so the reason I had this lamp was just because it was like it was almost consistency. I think that's an important aspect but share in terms of logic, like in terms of just like, I'm just thinking like how to actually work. If you have an image. I tried different images over here. At the moment. It didn't fit well. This image would be that well We're here. So I was like, maybe just having a straight option would make sense, especially over here, about sectional fine. What

G. Marion 30:10

do you think is right? Because it can always be changed later by a designer, right?

Tejas Ambarani 30:14

Yeah, exactly. So I might just keep it straight. Sounds that's just more logical. So. But yeah, so we could maybe speak a name is not the right word. Maybe you might have multiple speakers. So you could maybe have, you could change this thing. Again, but again, it's important

G. Marion 30:30

to actually put like registration deadline or something in there. Your name and then registration deadline to apply.

Tejas Ambarani 30:38

That's a mistake. Yeah. I don't know why you don't. But

G. Marion 30:43

then your little location one, I'd be like, is it your online or in person learning? That kind of thing?

Tejas Ambarani 30:50

Yeah. Okay. So we can have any option look like in person or light, and then no actual location? Yeah, we could do that as well. are assuming all of them online, in person, but some of them could be. Could be online as well. They could work perfectly. Good. Today, but you're having dates and stuff over here is extremely important.

G. Marion 31:13

So this is the event page now.

Tejas Ambarani 31:15

Yeah. So these two were even page options. But yeah, I might just send it to straight and

G. Marion 31:22

Sure. But if you go, what's the bottom part of the page? Was there anything on the bottom part of the page?

Tejas Ambarani 31:28

Oh, yeah, sure. Look like so you have the minstrel event. So you're able to see what you actually registered your table upcoming events. You also see past events. So like to

G. Marion 31:40

go into the event page, though, can we see in?

Tejas Ambarani 31:43

I don't stress it there. But that would be a clearing layer. So it would also depend because some courses might be could be a part of the website, some could be out of the site as well. They could maybe take you to a

G. Marion 31:59

TGS it out. I want ownership within this. So great to own page as well. Yeah, because what I want to see is when I go on to the event page, I kind of want to see the same thing, three days certification, all those little links, because remember, what we said people are people are very highly resolute. visual. So how are we implementing that sensitivity into this for our people?

Tejas Ambarani 32:26

Sure. So I can work on developing that Russia, their website would be similar to it will be different. But it will be similar to the like the inner core set of apps. So basically, when we click records, we saw like how the posts would actually look like. So this would have a bigger image would have more details, you'll be able to have like, you'd be able to have descriptions about

the event. So because right now over here, you know what the description is on this one event, but you will also be able to see more details. So we can even have a learn more often. So that will take them to the inner page of the supplier as well. So this event as well. Yeah. I let me clear that that's not the main issue. Is are you looking for anything else within that course, within that page?

G. Marion 33:13
Once I see the second layer, I think it'd be helpful plus to put in the notes, if you can see this PDF, so then people can make notes for you. I think it'd be a lot easier. Yeah, so let's look on the next page.

Tejas Ambarani 33:28
Yeah. This is not the spirit of the show. This is a game. So just courses similar to what's shown. Actually the mistakes triple B suggested courses not featured. But a new courses again, it is still again, like I said, you can still add things to less. So that's the level of law here. The free courses, browse. Subject, I can basically dissection slightly repetitious. I'm not going through it completely, cleverly showed this to you. Culture design. And yet, now the search feature would look like. And now Yeah, so this is the inner page out thinking that maybe the Events page could look similar to this, and uncompleted same because you might need to have larger images. You might probably change the layout slightly because you want to like that.

G. Marion 34:38
Yeah, I like this page like, like, conference. Yep. That's something I like to do a little bit more of but also, you know, every time they talk to me about conference, they're saying, Oh, it's like 100 grand, it's going to be expensive. So, you know, I look at this kind of page to try to create sustainability and Do new comes to doing registration for conferences and events for Tłı̨chǫ government, in addition to doing some online learning? Right. So I'd like to see it be multifaceted because we I always look for consistency, and also sustainability. And how can we sustain this over a long term? Goal? Yeah, I agree with you,

Tejas Ambarani 35:25
that you get the benefit of creating something like you like, like a structured template like this is now like, you'd, let's say, this is a page for all conference, like, you know, that you would need to have this text description over here, you know, you need to have a venue or like, educated like, people speaking, you know, like, like, everything is kind of pick so people can have like, the first one, once post one is done, you can kind of create a repetition. So even like the users would know back to register for the website, and they would know the creation all the time. So that creates consistency, or the more familiar to the thing. So instead of having to create

completely different conferences, or different kind of models all the time, having consistency between everything would make things the entire process easier, I think, unsustainable for a long time.

Tejas Ambarani 36:22

So in terms of the inner course, now, you can actually add to cart, which you couldn't before, now, you can actually apply for a course. And now you're actually allowed to, but the application will not automatically accept that you would actually have someone to, in the back end to actually agree to accept or decline your application. Also, we could have like, for example, depending on the difficulty, of course, the application will be different. So for example, with that some high level courses could require, like some proof of your education level, because not every post the article for everybody. So that's also important. And the grocery store different courses, let's say, there could be some courses, you want to sort of forklift show people that you wouldn't want to show to people out to the Tłįchǫ, we could have that as well. That's also important to note. And we could almost also create admission over here, knowledge requirements. So you could create like, almost like relationships between certain courses. So for example, that could be a design level, level one, level two, level three to level five ports. And once you're able to complete the entire course, you get an additional certification, because now you have complete lack of that. So in terms of like just the curriculum and how we want to structure it, that's something that again, we can really develop that as well. I'm not focused on that. But that's, again, like that can be really developed deeply as well. And now, once you actually let's say, try to add it, of course to cart, then you're able to see it, then if you click your let's say, a shopping cart, or if you click apply and apply now, and you actually get accepted, you then I ever see a shopping cart. And if you want to buy this is kind of how to look like we're here to just remove this to be removed or to do something here. But let's say you have three courses, you can select the courses you want, you're able to see the car, here, we'll see when the course starts, you're able to see the educators name so you know who's teaching it. So there's still some basic description in terms of even like the thumbnail as well. But you still can, you can add, you can remove course easy to do. And you could buy now that again, you'd have to give you a card and stuff. So I've not shown that screen. But that's another process as well. Now, when you actually buy a course, if you go to my course section, you can see your current courses. This would be like I told you similar situation in your first page. But this is what it would look like in detail. So you're able to see what's incomplete, you're able to see how much I've completed that way. Especially online courses, you can see like a percentage, and that's really good because people can see numbers and they can see like, Okay, how much it will do. So providing simple data like that. I think overview is really useful. You can still see STF courses, so the ones maybe you blocked or maybe the future are beginning to start. This is what look like ever see your same courses. And this is important because maybe

you might want to apply for something in the future. So having saved mine, you can over here you can buy the course as well. If you click here and you go to the intersection, like the course it's entitled to course then you can buy the course you're also able to see completed courses. Now this is important because you need to be able to track the courses you have completed. So that way you can actually if you'd like take the option use buttons, you can actually download a certificate, you can share or send your certificate and you can view your grades. And doing this, again is important, because let's say people want to show proof of the Tech Computer something, do you have the proof over here, if they click this, they can basically get of how the course would like to have the completion. So they can have proof that they have completed something. And, and the reason why we had so good that like jewelry, or like Asian would have to apply for this is important, because as we do the model where all four lectures are recorded, but students will actually have complete assignments. And because they are percent complete assignments, now teachers can actually evaluate the performance, they can actually give them grades. And by giving them great value actually giving them like, certifying that they are actually like almost evaluating the, their understanding of the course. So that's the big benefit of this model is like the certification aspect, because now they can actually use that to grow and their careers. This is a mistake, or mistake.

Tejas Ambarani 41:18
So this would be again, a profile section, this is not I haven't worked on this before. And maybe it's a bit too much yellow and blue. But what I was thinking it was based where people are able to record the overall stats. And this again, maybe you should not do this. But I was thinking that, you know, like, based on, let's say somebody's finished, got a five to eight courses, or like three, four courses, after completing east coast, they should be able to see the points that they received for each course, they're able to almost see like, it's like a gamification of the course, gamification of this learning. And maybe, let's say somebody complete as bought and competed maybe like eight courses, maybe they can get one post free after nine courses and a 10th. One is free, like we could, we could give them like a reason for them to like maybe like one learn or one on like, when to complete something like, kind of like give them like the feedback that they're improving, they could see, or they're getting these certain benefits, because they finished certain courses. So that would be a good way for them to like kind of incentivize and kind of gamify the learning. There are things that we could do additionally, like we could have like leaderboards, but I would say that's not great, because you don't want to create competition, but you want to create like, useful people to maybe like, like feel like they're kind of growing and kind of completing a task or feel that they're kind of improving. So that's kind of like the purpose of this, they get achievements after finishing certain things. So let's say they finish something before time in like a quarter that six months, they finished in three months, maybe you get certificate together look smarter than even for that, it's I'm going to do much, it

might improve your points slightly, but that's just like a reward like a, it kind of like helps you kind of like improve, you could have the small achievements or different things. That could be like an interesting thing, also able to see how many courts have completed how many certificates you have, how many days have been and don't go through it just interesting way to make it a bit more fun.

G. Marion 43:23

I think it looks it does look fun. I was just going to say that.

Tejas Ambarani 43:27

That's the focus of this section. Now if you click here, let's say like in over here, you see this bar. The purpose for this is this is what takes you to kind of like the learning management side now. What I've shown you is basically focused on is like, what happens when you are just a new user. But what happens when you actually have bought a course. Or if you see a dashboard, this is what you see when you can see again, more details on the course you're in able to see our spent table see participants are able to see how much percentage of the course have completed, they will see a current grades. But few things I change I think from the previous meeting to complete the previous meeting kind of focused on layout, which I would like to follow. But one thing I realized was that pretty early on was that with designing this, it got too dark, like how you do too many balloons, so adequate bit more light, so I had to have like, more whitespace and that kind of became the focus in the future. Because while dark looks good, sometimes it's not great back for accessibility like people, it's a bit straining to your eyes sometimes. So they have again, they have a section where you can see upcoming deadlines are really important because if you're in numerous courses you need to see there needs to be a space where they can see all your deadlines. Were able to almost like schedule and track and kind of like construct here how you're going to plan how you plan to finish your work. Do you also have a section where you can extend your deadline? So let's say you're late for something, you need to ask approval like No, like you want to request you can ask, you can send a message to your teacher like, Hey, can I extend something? You also have you can also schedule things you can see overall schedule here. urgent deadlines. The other deadlines here should also be allowed to modify over here the Schedule section as well. So that again, but yeah, the purpose of dashboard is kind of see what all you have everything in detail.

Tejas Ambarani 45:37

Was it right? Okay, I don't know if something's wrong with this, but it created a, I created a screen for students to extend deadline as well. If you click this button, you're basically need to provide a reason for why you need a deadline and for how many days to actually prove that. So you'd not automatically get an extension just because you pressed this button, but teachers

need to approve that. So that's the purpose of this screen I document issue with just checked the data. Now once you actually click, let's say, to pull for a court, then you are actually able to see the inside of the course. And what of course would look like you see the actual you see that maybe, for example, right now I just created my own kind of video thing, maybe you will want to collaborate with the existing video platform. So it might not be completely customizable. But what I think should be important is that we should have a subtitle section. So I think it'll be I'd mentioned that previously. But I think it's important to subtitle everything with a screenshot, of course, we can show of course in English so people can actually understand. Now, that could be an issue, let's say for courses, like let's say, all this text in English, translating this in subtitle would be difficult. So you can only title things people are saying, but I think we might need to consider and think about how we can do that. But in terms of the code, the code should look like be able to see your course content, be able to see the areas of the course have completed, you're also able to see the entire all the chapters as well. Or teachers can additionally also add content over here. So examiner, they can add content on each chapter. And you can even download additional files over here. So let's say you want to, you want students to see an attachment or see a presentation. Or as he recalls a video, you can actually attach the file over here. So students can easily have access to this. And the whole purpose of this is again, to students can kind of study by themselves at their own time. But as we've mentioned, that is the big problem with this model when everything's pre-recorded is that it leaves a problem IP students can economists context, for example, question regarding something they need, they might not need to demand and be able to answer those questions. So there's also ask question button. So students can instantly send a message to a teacher so they can ask for clarification. Previously, I'd used that all in one location. But as I was like thinking more about it efficiently students starting something, they can actually talk to the students and ask other students about any questions that they have as well. So chatbot could be useful here as well. So essentially, like, learn together with a friend as well, so that's good. Then you also have a discussion boards. So let's say they want to discuss about a particular topic or have certain ideas about something, they still have the button over here. Previously, you had to go like three to four steps to find it. So again, keeping multiple ways to go to location makes it easy to navigate. Additionally, and if people want to go back, they can always use that. Use the breadcrumbs to go back as well. So it's again keeping navigation easy, but providing kind of flexibility why is that? An issue? I'm just depressed. So loading? No, why Yeah. Okay, this is fine. This work. So strong. My link is this intimate? What when you actually click let's say you click the hamburger, it feeds into what it looks like. Now you see again, you can still share the screen, but you also see a bigger, a lot of like a screen you're able to see like that's a tool. A teacher could have we have image later as well. They could be actually speaking over this. And yeah, just to explain but basically by removing that section, it kind of gives you a bit more full because you wouldn't have that you will Need to see the entire course list all the time? Yeah. And again, you still have the small

elements. Maybe it's a bit too much. But I think like, I felt like it was just, it was just a nice doc just to have like, some, like dividers just to have too much. That's great. Yeah.

G. Marion 50:19

That's great. It's Tłı̨chǫ, its not too much. You are catering for us.

Tejas Ambarani 50:22

Yeah, cuz I had created a different version of this where I had used far too much. And then I realized that there was maybe some issues, but I took that to keep some of it. Yeah,

G. Marion 50:32

yeah. I think it looks really inviting. So that to me is like really important. And we don't want it to make it feel difficult for the person. So the easier like they say, like you said, the more easier you can make it, and the more visual you can make it, I think the better. So using symbolisms, you did in the back end is very helpful.

Tejas Ambarani 50:55

Yeah, and I think an important aspect again, which hadn't met, maybe I spoke about, but it's like, the navigation and like, finding things need to be simple, because if things are difficult, it's people will lose interest. So keeping people don't want to spend time thinking through how to find something, you should be able to find it. So if the tip, let's see the discussion board over here, they will go to the community section where they can see the discussion board, the committee section has discussion boards will have student list, to be able to see the students that are in the course, this will be good, because now you can actually have assignments, well, you could have group assignments in an asynchronous system, which is done may not generally cannot, like shall. But since you have, let's say, like you have 30 students in a class at a particular time, you could actually have different students work together. And students can communicate with each other through chat, as shown here, like how, what happens when you actually get a, let's say, a message. So you get like a notification, it changes from blue to yellow. So now you know, you have a message. And this is an easy way for you to know like this message as well. And you're able to see discussion boards were able to actually answer and have discussions over here. So this is how the chat loop would look like if you get a message and how it looks like open view. I've also shown how let's say, this is like the, the big liquid long dashboard, maybe you want to hide it, if you want to hide this, this is what to look like. So you don't have to see the entire thing all the time. So you can just see the icon. So that will be enough. So that way you can see a larger screen. So these are small things that you know, like adjustments that students can make, they don't need to but they can. And this is how it will look like. So let's say they have a message with the professor, they can answer it here. This way.

Previously, I have like an email feature that will be students collect an email with students, so you could actually email the students. But what I realized was that that would be an issue because for privacy, the private schools will have a chat or inbox feature within the website would be good. Now maybe we want to use a existing chat, we could do that as well existing. So we don't have to create a whole chat feature. But that's something we can discuss. But since we have the chat, which also be able to go offline to appearance don't have to always receive messages, because that will be frustrating. So we also show how to look like when it's offline as well. And, and this is how it looks like when you let's say you want to create a new topic of discussion. You can see this now to look like so you're able to give a subject you have a man and you can expand your view. So you can have more options as well, but basically to look like this. And if you go to let's say two assignments column. Again, this is what look like you're now able to see all your assignments, you're able to see now the potential of course, you're able to choose whether you must see all assignments are able to see potential course assignments, or you can adjust depending on the subject so that when you get you get to select Make Selection. Over here, you're able to see like, maybe you offer extension, you're able to see awaiting approval enabled see the overview on something so it requires attention that we be able to see like what incomplete was completed. So you don't need to submit them. They're able to see what's due soon so they're able to see like three like different tiers of entertainment. Now logically like me assignments for one course they should supposed to be all but yeah, this is how the assignments would look like. Now once you actually click Login route, when it's extended, you're able to see login stood The teacher names able to see like, Yeah, you get some more detail. But now if you click an extended deadline, you should be able to extend the deadline. But also, if you, let's say want to submit an assignment, so what the submitting an assignment would look like labeled see not complete, you're able to see the status of each assignment, you're able to download a brief of like, what, maybe teachers want to want students to actually download a PDF, they can do that were here, able to see the project, again, written over here, the place what they need to do. And they can actually submit an assignment. Maybe some assignments can be audio recorded or audio submitted, that could be done through an attachment, they submit a video, they can submit PDFs, they can write content over here. So providing infectivity of what kind of work you want to submit.

Tejas Ambarani 55:55
And again, they can always go back to assignments. So there's always a way to go back. So they don't have to go all the way from the start to go here. So. And this is what it looked like how it's completed. So this could be maybe made, like, just in the future. But as I've mentioned, like the those points system, so maybe actually mentioned the amount of points in a level here again, but so that would be like, again, competing something you also see a feedback over here. So I will say maybe this will be mandatory where people can leave ratings are completely on

evaluation. Yeah. So there shouldn't be any back from building reports as well. But even after the course for sure,

G. Marion 56:39
yeah. Are you going to provide like a sample one?

Tejas Ambarani 56:44
So for now, in terms of what a feedback form would look like, I thought maybe it wouldn't be a full time like, I don't know, I wouldn't be have it within the website.

G. Marion 56:54
I would want it within the website, because then I want the instructor to see the evaluation that was given so that they can reflect and make adjustments.

Tejas Ambarani 57:04
Yeah, so I was thinking we could do it. The reason I thought we could do it through the website, the only issue was like, for example, in the course inner page, as shown that you can actually see the rating the Peace Corps. And you can see seven comments. And but I was thinking was that some sometimes students can maybe leave, like, so people can maybe like, see something wrong, like so that needs to be like people not in marketing needs to be seen by everybody. That's what I meant, like. So comments, maybe some comments can be shown some common doesn't need to be shown to everybody. It could be shown to teacher but doesn't need to be shown to everybody. No, no, that's something that could be.

G. Marion 57:43
Yeah, feedback is private, though it should be. We want we want safe spaces.

Tejas Ambarani 57:49
Exactly. Yeah, that definitely I was thinking so. Yeah. So then yeah, this is like how, like, management mentioned that we shouldn't actually be aware, people could get notifications in case let's say they are urged debit urgent. And basically, they're interested, they see something like that. So that's basically what I've kind of created so far. And think that's a lot. It's a very big website. And there's still a lot to be done. I think of a few ideas. But what's your timeline? I think for now, for the purpose of this heat, I think it's a kind of I think this is the end. But I think for the if you want to develop this course further, I think there are a lot of things I have, I think we could develop ideas that we can maybe talk about, but for now, what do you think about the website so far?

G. Marion 58:43

I'm happy I give you if I had to give you a grade, I'd say eight out of 10. Okay, now when it gets a 10 out of me. Nine is when you're done? Yeah.

T. Lim 58:57

Yeah, it looks excellent. Well done.

P Turner 59:01

I agree. I think it looks great.

Tejas Ambarani 59:04

Are there any preachers? Do you think I'm missing, like certain things that you think we should be adding to kind of improve on?

G. Marion 59:10

I think once you're completed, like, I'd like to use the Tłįchǫ agreement as an example. And then allow me to like register to sign in so I can get that user application going. So I can really see how friendly it is. Yeah,

T. Lim 59:27

yeah. Yeah, I think those will start to come out and like user testing, and as you finish building it out, TJ and have the ability to really get in there and navigate around that it'll become apparent if there's anything missing, but it's, you know, it's an ongoing project that I'm seeing and very exciting and one of the things will the perhaps the challenge will be starting to fill it up with courses and stuff.

Tejas Ambarani 59:58

Yeah, I think one of the screens Some of the things that haven't shown, which I think is extremely important to our teachers, like work teachers access for, I'd mentioned guest access private, it's shown like, like what teachers can do, they should be able to actually take the course don't have to, you can have like me admin to ask me that other questions, I could create a website, but create the course. But teacher would have additional access to let's say, they should be able to have other analytics, you know, they should be able to track if their students are doing well, if students is not doing well. So, yeah, that's a completely different system. But that's going to be I think, a crucial part of the website, which is kind of missing,

G. Marion 1:00:40

I think we're gonna see that part.

Tejas Ambarani 1:00:43

I think, I mean, I'm not, I'm not focused on my thesis, but I think that's something that will be it'll be similar to the student actor, but it'll be slight adjustment, for example, when discussing courses, teachers would be able to pin posts, they should be able to delete the posts. So if a student wrote something that they don't want to share, teachers or admin should be able to remove everything.

G. Marion 1:01:09

For me, my perspective, when I hear this is like, we have a huge, I would say, issue with timelines and capacity. So having the instructor to be able to log in and the back end at their own time, that they can complete their module, you know, with ease would be so wonderful for us, instead of like being like, I'll use example, a be like T, can you go in there and fix your managers module? Be like, no, that module has full access to complete, and then we can review. But it's so easy for them to use that all t would have to do is maybe do like, like a grammar review, something like that. I'm just using you as an example.

Tejas Ambarani 1:01:57

Yeah, yeah, I think the you also would have to do is that needs to be different levels of accent, for example, of course, some teachers might want to create their own course. And teachers might want somebody else to help them to create a course, that may be situation where a teacher, for example, in this situation, you have assignments, so some teachers would want to hire other TAs to grade the students. They need to have access to be able to read but they should not be able to really report will not be able to delete both like so having like different level access and different levels of like, capabilities will be the tricky thing.

G. Marion 1:02:37

Yeah, for sure. I agree with you, you have to have that instructor level. And then you have to have the overall arching level where I'm like, This is not a public course, I'm leaving it private. And till I get approval from tea, I'm leaving it private, you know, yeah, kind of level. Yeah, for sure.

Tejas Ambarani 1:02:54

In terms of even like the curriculum, so this is not part of design. But in terms, there needs to be something curriculum or education where they basically doesn't mean one person who basically accept like, we need cost for this, this and this, we, and they need to be able to approve to maybe that needs to be space where teachers can apply. It can be like, Hey, I would like to create a course or here, or that could be a speech, well, that person will actually have to

ask other people, Hey, would you make a course for this? And then to be somebody who would actually accept and like, not all courses are going to be accepted? Like, not everybody is able to create a course over here, that would be probably a for the registration or certification to for people to get into creating a course here.

G. Marion 1:03:37
When I think about it, though, we have one manager on top, right? Yep, who's like the public, private, and then you have the instructor level, where they build the course, it's not a matter of who to notify, it's going to be one person in the end to notify. And they will be the team that builds the module. So as long as the Instructure instructor can have a team process, and then there's a final review, I think that's really how I see it envisioned, I could be wrong.

Tejas Ambarani 1:04:08
No, I think that's what I was thinking as well, I think. Yeah. So I think there'll be one person who would overarching kind of like the curriculums like what's going to be taught here, what education is going to be accepted, the what systems you want to have, that breakdown is really up to them. And that might change the layout slightly, we might want to change that. We might want to include some information, remove some information, but that's really up to them. But yeah, I don't know there is. In terms of the design, I think there's also like, I wrote a list of things like, for example, notification settings that like small things like account page, like to chat would need to be developed further. Then even terms of like, wanting that's really important is once everything is developed, we'd actually need to create a tutorial for teachers and students because the example tutorials, I mean, like, we should create, like a user manual, where, how to use the website. You know, I think we spoken about that last time. And also, some of them could be just by word, but some of them could be videos, you know, we could create, like, simple short videos like they do, if you like how to do this stuff, you know, like this, you're here, you're able to find it, you know? So people with this long list

G. Marion 1:05:21
TGS, what's your timeline, so I have some sort of expectation here.

Tejas Ambarani 1:05:27
So, I mean, I don't, I mean, I'm willing to work on this beyond my thesis. But for my T shirts, I'm kind of a different kind of, like, I'm focused on this to the end on done for now. But I think after I'm done on what he said, I'm able to work on this, like, it should take me a month or two to work on all of them depends on like, what we want to work on. So when it comes to, let's say, the user guide of we would need to complete everything. First, before we get to that, because we also need to have a conversation with the curriculum department. Also, in terms of like the

development team, the person coding this because making things look making these things, integral design is obviously a challenge. But creating by core is going to be like a completely different path, but you're going to be like 5200 pages.

G. Marion 1:06:23

From my perspective, I think the easiest thing we can do is to Tłı̨chǫ agreement course. And I'm not I'm not saying it's easy, people, it's not. But at least we can start on one thing and focus on one thing. And the good thing about DLP is that they've already done a lot of the recording of these talks. And so to me, I don't know who to connect with. But I wanted to make sure that we had like, all the speaker recordings to put on here, because I want the entire video of the speakers for the Keto agreement course on here. So because to me, this allows you to learn at your own pace. And I'm not restricted by hours that you can sit and take this course, to get me. So that's the way I'm looking at it in my perspective. And then later on, like it's not, it's also not meant to take the in place course, but we can afford 30,000 Every time we want to do this course. Right?

Tejas Ambarani 1:07:26

Yeah. And I think in terms of let's see videos, I'll see if I can, right now I showed an image of what it would look like. So let's see.

G. Marion 1:07:36

Yeah, cause I think what is there for speakers, James washy, John B and I think you had Eddie. That would be like this, it would be like a chapter four, or five and six. People would get that history and knowledge from them.

Tejas Ambarani 1:08:02

Number, I think, yeah, so I can play over here, I might be able to actually add a video, I'll see it as possible. But in terms of, you could actually add the actual content, that would be good in terms of you can actually show example, right now, everything is still placeholder text, you can actually have content you could maybe have, if you want download something, you could actually have the file here. So we could actually create a prototype, well, it looks pretty realistic, where people can actually like maybe, basically kind of use it, but it's not going to be I mean, you can't come it will have complete functionality that because not a developer site. But in terms of how it would look like it definitely create more elements of how this course would look like so instead of having like over here, I've just created some of this stuff based on the PDF, but maybe you want to create you have recordings, maybe you want to actually divide that into different subtitles and create like, yeah, and or maybe have like, different chapters will

be different videos. I'm not sure how that would look here as well. So even that can be adjusted over here. You know?

G. Marion 1:09:09
Yeah. Awesome. I think that's fantastic. I think in the meantime, though, I know you say you can work out this after your thesis and stuff, but I will need some sort of budget and timeline and maybe you can work with international on that because I need to think about my budget and timeline for next for next fiscal plus. I also need to think about how we can integrate this with the website development.

Tejas Ambarani 1:09:36
Okay, I'm in terms of budget, would you just talk about budget in terms of design or budget in terms of the entire thing? The entire thing? Okay, okay, that's only a limited I'm not sure about I'll talk to manage about it because I don't know about the deed like Trouty that you would need somebody from the curriculum. You probably need somebody from the pic taking picture like a photograph or you'd need development team. So, yeah, might

G. Marion 1:10:04
think of it think of a phased in approach to because it's just more feasible for us. And again, we're going to focus on one course still a tie us down, and then we go through that experience together. So we know what the pains and growing pains are around that. And then hopefully, we can start to focus on each department as to what one module they would like to focus on, to get on here to teach Tłı̨chǫ citizens. Yep, that's all keep it simple. Okay. Thank you, guys, any feedback from tea and Patty, going forward? Was in comments. I

P Turner 1:10:45
I think it's great. And I all my mind, again, goes a million miles an hour, because I think the potential of this is huge. And I think starting with a Tłı̨chǫ agreement, of course, and I was going to say there's more of a Giselle comment is that this would be I would think, something that you would want, we would want all staff to have access to, because I know like, I have experience with the Tłı̨chǫ agreement course in a high school setting. But I've never been offered or the ability to take the Tłı̨chǫ agreement course for myself, not as an actual teacher and instructor, but to take it as a teacher, government employee, I think would be great. But also, I think the opportunity across all departments for all Tłı̨chǫ Government staff to take the Tłı̨chǫ agreement course, would be a huge thing. And maybe it's something that HR, you know, might want to use, you know, simply for, you know, the onboarding of new Tłı̨chǫ government staff as they join Tłı̨chǫ government team, you know, like, it has a lot of potential there, not just not just I think for Tłı̨chǫ, people who want to take the course, which is great. But I think as a

Tłįchǫ government as an organization, which is, I think, a good starting point. And I think it's really great to start with it. And I also think, because it's an allows for a little bit more independent learning. Like, for in only my context, like, I could set aside some time in my week, so I could work on the course, at my own pace when I'm able to do it. But and I think that flexibility would be great. And I think, again, there's a ton of potential.

G. Marion 1:12:19
Yeah, thanks. Yeah, I appreciate that.

Tejas Ambarani 1:12:23
I think like, initially, I kept like, all the courses were going to be like, duration based, but I think the more I worked on this, we, it's important that we provide different kinds of courses, some modules are going to be some might not have to have assignments, or to like, do long assignments. You may be just go through the lectures, you go through completing things.

G. Marion 1:12:43
yeah, that's pretty different. I know the Tłįchǫ agreement course just has little quizzes. And it's really just quizzes to remind you of what you've learned. So it's not meant to be onerous. And it's optional, too. But yeah, I'd like to expand this to HR for onboarding, I think it's really important that people know, on learn about future government, and I'll leave T for closing comments.

T. Lim 1:13:10
I am not very familiar at all with this systems, Analysis Program sap that I think it's corporate services are leading. But yeah, echoing P.Turner comments. There's a number of training modules that HR seems to encourage Tłįchǫ Government staff to undertake, and I can't imagine that there's very good uptake of those. So yeah, that just huge potential with this in you know, thanks. Well done, again, TJ and team on advancing this. And yeah, just looking forward to seeing what we get to do with it. Moving forward. Yeah, must say, awesome.

G. Marion 1:13:55
I think from my perspective for DCLP. I think it's another way to inform the public on certain high profiles, especially if we're trying to educate them in environment in mining, and land use planning. So I'd love to see land use planning module up here to explain the Tłįchǫ land, and all that good stuff. Awesome.

T. Lim 1:14:18

Yeah, the potential users are so diverse. You know, we could eventually have a module for outside researchers wanting to do work and hopefully and so on to be able to Yes, it kind of like work through these courses this in this way. So awesome.

G. Marion 1:14:38
Cool, guys. Today's what are the next step, so we should be aware of it before we close out?

Tejas Ambarani 1:14:44
So next up, again, in terms of design was what are called the Accounts page. You'd mentioned quizzes, which will actually maybe create a page book base or quiz would look like so that a quiz let's say is not going to be useful in In some courses because it doesn't, it's not enough. You can't get a proper certificate just by doing a quiz. But in some cases, we both like decorated, like let's say you want to, you want some brief information or something. Going to a quiz is perfect for that. So we could create that and tutorials. In the future, I think we should have more individualized unit testing. So what I mean by that is, right now we are in a group. And that was really important, I think all because I needed all of you to come together and tell me one direction, because if all of you had different ideas would be hard for me to like pick and choose whose idea should follow. So having like consensus on a path was really important. But in, in the future, like most in most situations, people will be studying or caught by themselves. So being able to connect like individualized user thing in the future, when it's more developed. I think that's important. Again, social media promotion is important. Maybe you could possibly create a merchandise, like pencils, and pens and stuff, but that's not important. When it comes to again, like, that's some of the design stuff. When it comes to other areas of thinking like, there needs to be someone who even like with a post teachers to actually think make things courses online, or even like, does it for them, but then you should be somebody who would actually help them to record the video. So maybe the teachers are given like a webcam and a microphone. And that way, you're able to actually kind of see like the like, if, if the quality is decent, like you're able to kind of check that thing. So two small details that need to be kind of adjusted. Yeah, so I think that someone tried not to have an arbitrary content team, you would need someone to take pictures and create content for the right. Like, basically, the copy for the entire website. So that like okay, the language again is important, but that's basically it.

G. Marion 1:17:04
Alright, so how about this, the next meeting will be between me you and Kelly will keep T and Patti in the loop when we get to that level of user friendliness when we can get them signed up to use it and give us feedback. So do it that way, I think in that we free up their time with us. And then we'll move on to Kelly and the comms team. Thanks, guys. But in a in the meantime, T

or Patricia, if you have anything you think that we can add to the Tłı̨chǫ agreement course, please feel free to send to TGS for us.

Tejas Ambarani 1:17:40

I'll send you all the PDF as well. So if you want to, if you don't prefer the link, I'll send you a pdf so you can send comments as well. So

G. Marion 1:17:47

that'd be awesome. Yeah. Thank you. Thank you. We'll set up a meeting separately. Thanks, TJ. Okay. Bye, everyone.

P Turner 1:17:55

Take care.

6.8 Exhibition Documentation

Four large foam core panels *(29.4 x 55 inch)* were displayed at the *1st floor, Fine Arts Building, University of Alberta.* Additionally, I created a video which showcases high fidelity mockups of Hoghadeeto.

Human-Centered design (HCD)

According to Norman (2013), sound design starts with understanding the psychology of people and technology. A HCD philosophy first prioritizes human's needs, capabilities and behaviour, then creates designs to accommodate those factors. It follows an iterative design process which begins through observations, idea generations, prototyping and testing. Specifying and defining a problem is avoided in preference to constant refinement by constant iterations.

Figure 1: The Tlicho region of the Northwest Territories. ("Tlicho", n.d.)

The Tlicho region

The Tlicho is a First Nation Indigenous people of the *Athapaskan-speaking* family from the Northwest Territories in Canada. The Tlicho land (*Figure 1*) exists east of the Mackenzie River between the Great Slave Lake and Great Bear Lake in the Northwest Territories. The Tlicho people reside in four communities: Behchokò, Gamèti, Wekweèti, and Whati (Andrews, 2011). According to the NWT Bureau of Statistics (2022), 3,027 live within the Tlicho region as of July 2022.

Tlicho Student Engagement

Creating a flourishing educational platform requires creating an engaging learning environment for students. Davison (2007) conducted a study of school engagement among Tlicho students from the **Chief Jimmy Bruneau School** in Behchokò. He identified the following contextual factors hat affected Tlicho student engagement and behaviours.

a. Employment opportunities post education
b. Educational resources for students
c. Geographical location barriers
d. Language barriers

Figure 6: Identity design for Hoghadeeto (in white)

Figure 7: Identity design for Hoghadeeto (in blue)

Figure 2: Human-centered design process

Observation
Testing — **Idea generation**
Prototyping

hoghàdeetǫ: learn, teach oneself
hoghàetǫ kò: classroom
hoghàgoetǫ: education
hoghàyeehtǫ: teach

Figure 3: Tlicho word for 'learn' in dictionary (Dogrib Dictionary, 1996).

Figure 4: Teepee Icon   Figure 5: Beaded pattern

Identity Design

The name *hoghadeeto*, was suggested by a participant since it is the Tlicho word for "*learn*." Hoghadeeto represents this platform's purpose and instantly lets its users know a Tlicho word. The identity required a basic letterform to familiarize users with the name *hoghadeeto* and a pictogram icon to communicate the platform's function visually. Symbolism was identified as a powerful tool to communicate within the Tlicho. A teepee (*Figure 9*) was used to represent the Tlicho, taken from the Tlicho flag in combination with a book to express learning. Additionally, symbolism is shown through the interface with illustrated beaded patterns (*Figure 11*) taken from popular Tlicho art.

Colour Palette

The colour palette selected was inspired by the Tlicho flag to embody the strength and unity of their people. The primary colour navy blue represents *calmness, trust and stability*. The secondary colour yellow represents positive feelings such as; *joy, happiness and hope.*

PRIMARY COLOUR	PRIMARY COLOUR	BODY COPY (ACTIVE)
#25317B	#08134E	#3C3C3C
SECONDARY COLOUR	SUPPORTING COLOUR	BODY COLOUR (PASSIVE)
#FCC52E	#E2E5F2	#707070
SECONDARY COLOUR		
#D12A37		

Figure 8: Hoghadeeto colour palette

Typeface

The colour palette selected was inspired by the Tlicho flag to embody the strength and unity of their people. The primary colour navy blue represents calmness, trust and stability. The secondary colour yellow represents positive feelings such as; joy, happiness and hope.

ABCDEFGH IJKLNOPQR STUVWXYZ abcdefghijk lmnopqrstu vwxyz

ABCDEFGH IJKLNOPQR STUVWXYZ abcdefghijk lmnopqrstu vwxyz

Figure 9: Lato Typeface

Site Map

Sitemaps represent the websites functionality and relationship of numerous interfaces visually.
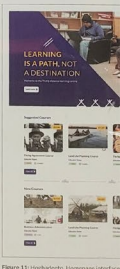

Figure 10: Sitemap, Discovery Phase (Member Access)
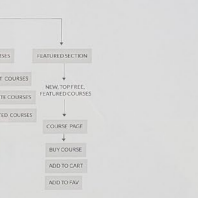
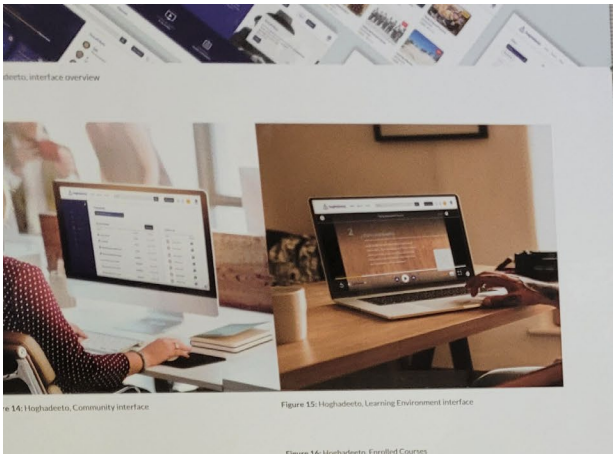Figure 11: Hoghadeeto, Homepage Interface   Figure 12: Hoghadeeto, Dashboard Interface

Figure 14: Hoghadeeto, Community interface   Figure 15: Hoghadeeto, Learning Environment interface

Figure 16: Hoghadeeto, Enrolled Courses

Research Findings

a. Distance learning as a medium to Preserve Indigenous Knowledge
b. Importance of Education within the Tlicho
c. Human-Centered Design Approach
d. Creating a Sustainable Distance Learning Platform
e. Designing for Indigenous communities

Limitations

a. Research method: Integration of Expert Opinions within the Research Process
c. COVID-19 Pandemic

hoghàdeetǫ

LEARNING IS A PATH, NOT A DESTINATION

Welcome to the Tlicho distance learning centre.

Thesis Panel 1:

Introduction, Background, Research statement, Objectives, Research Method and Analysis

Designing a Culturally Appropriate **Distance Learning Platform** for students in the Tlicho region of the Northwest Territories.

Tejas Ambarani, M.Des candidate

The isolation and distance created during the COVID-19 pandemic have increased the use of distance learning services worldwide. According to The United Nations Educational, Scientific and Cultural Organization (UNESCO, 2020), in 2020, the education system found over **1.37 billion** children and nearly **60.2 million** teachers globally were out of their classrooms. Despite the initial struggle, institutions adopted distance learning, eLearning, virtual classrooms, or online learning services to continue providing education to their students.

What is Distance Education?

Distance education is a form of education that involves the physical separation of teachers and students during the entirety of instruction and learning (Allen, 2017). Post-pandemic, these services remain highly important, particularly in remote communities that lack education resources and funding (First Nations Schools are chronically underfunded, n.d.). The rapid technological improvement in distance learning recently offers an opportunity to design customized experiences for Indigenous

communities' needs and requirements, providing them access to educators around the country and the capability to preserve Indigenous knowledge.

Background

Indigenous people have had a contentious history with education in Canada due to oppression and control through colonialism. The focus of the imposed colonial-based education for Indigenous people centred on segregation and cultural assimilation from their communities and worldviews. This resulted in adopting an education system that forced individuals into adopting western values by evaluating them through structured and categorized western educational procedures, while ignoring any tradition or Indigenous knowledge. In part, this belief by western scholars made them proclaim their intellectual superiority over Indigenous scholars (elders and spiritual leaders). As a result, the role of traditional education was suppressed, further victimizing Indigenous people and their education.

Research Statement

This research study aims to design the delivery of a culturally appropriate distance learning prototype for the needs and requirements of Tlicho students of the Northwest Territories.

Objective

The objective of this thesis is to build and document the development of a culturally appropriate distance learning prototype *(delivery)* through a series of user testing sessions in collaboration with Tlicho Government representatives to create a suitable prototype based on their needs.

Research Method and Analysis

- **Secondary research** on distance learning, Tlicho history, Tlicho students, Indigenous research, user interface design, human-centered design (HCI) and instructional design.
- **Case studies** on various distance learning models used in remote communities worldwide.
- **Qualitative research involves a Human-Centered design (HCD) and ADDIE framework.** It involves a series of three user testing sessions conducted remotely with four Tlicho Government representatives during the design process.

Thesis Panel 2:

Tlicho Region, Tlicho student Engagement, Human-Centered Design (HCD) and Identity Design

Figure 1: The Tlicho region of the Northwest Territories. ("Tlicho", n.d.)

The Tlicho region

The Tlicho is a First Nation Indigenous people of the *Athapaskan-speaking* family from the Northwest Territories in Canada. The Tlicho land *(Figure 1)* exists east of the Mackenzie River between the Great Slave Lake and Great Bear Lake in the Northwest Territories. The Tlicho people reside in four communities: Behchokò, Gamèti, Wekweètì, and Whatì (Andrews, 2011). According to the NWT Bureau of Statistics (2022), **3,027** live within the Tlicho region as of July 2022.

Tlıcho Student Engagement

Creating a flourishing educational platform requires creating an engaging learning environment for students. Davison (2007) conducted a study of school engagement among Tlicho students from the **Chief Jimmy Bruneau** School in Behchokò. He identified the following contexual factors hat affected Tlicho student engangement and behaviours.

a. **Employment opportunities post education**
b. **Educational resources for students**
c. **Geographical location barriers**
d. **Language barriers**

Figure 6: Identity design for Hoghadeeto *(In white)*

Figure 7: Identity design for Hoghadeeto *(In blue)*

Human-Centered design (HCD)

According to Norman (2013), sound design starts with understanding the psychology of people and technology. A HCD philosophy first prioritizes human's needs, capabilities and behaviour, then creates designs to accommodate those factors. It follows an iterative design process which begins through observations, idea generations, prototyping and testing. Specifying and defining a problem is avoided in preference to constant refinement by constant iterations.

Figure 2: Human-centered design process

hoghàdeetǫ: learn, teach oneself
hoghàetǫǫ kò: classroom
hoghàgoetǫǫ: education
hoghàyeehtǫ: teach

Figure 3: Tlicho word for "learn" in dictionary (Dogrib Dictionary, 1996).

Figure 4: Teepee Icon

Figure 5: Beaded pattern

Identity Design

The name *hoghadeeto*, was suggested by a participant since it is the Tlicho word for *"learn."* Hoghadeeto represents this platform's purpose and instantly lets its users know a Tlicho word. The identity required a basic letterform to familiarize users with the name *hoghadeeto* and a pictogram icon to communicate the platform's function visually. Symbolism was identified as a powerful tool to communicate within the Tlicho. A teepee *(Figure 9)* was used to represent the Tlicho, taken from the Tlicho flag in combination with a book to express learning. Additionally, symbolism is shown through the interface with illustrated beaded patterns *(Figure 11)* taken from popular Tlicho art.

Thesis Panel 3:

Colour Palette, Typeface, Site Map and showcasing the Homepage and Dashboard interface.

Colour Palette

The colour palette selected was inspired by the Tlicho flag to embody the strength and unity of their people. The primary colour navy blue represents *calmness, trust and stability*. The secondary colour yellow represents positive feelings such as; *joy, happiness and hope*.

Typeface

The colour palette selected was inspired by the Tlicho flag to embody the strength and unity of their people. The primary colour navy blue represents calmness, trust and stability. The secondary colour yellow represents positive feelings such as; joy, happiness and hope.

Site Map

Sitemaps represent the websites functionality and relationship of numerous interfaces visually.

PRIMARY COLOUR	PRIMARY COLOUR	BODY COPY (ACTIVE)
#25317B	#08134E	#3C3C3C

SECONDARY COLOUR	SUPPORTING COLOUR	BODY COLOUR (PASSIVE)
#FCC52E	#E2E5F2	#707070

SECONDARY COLOUR
#D12A37

Figure 8: Hoghadeeto colour palette

ABCDEFGH IJKLNOPQR STUVWXYZ abcdefghijk lmnopqrstu vwxyz

ABCDEFGH IJKLNOPQR STUVWXYZ abcdefghijk lmnopqrstu vwxyz

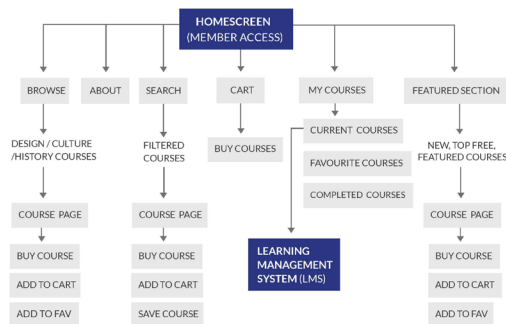**Figure 9:** Lato Typeface

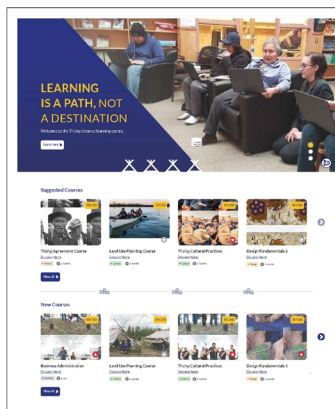**Figure 10:** Sitemap, Discovery Phase *(Member Access)*

Figure 11: Hoghadeeto, Homepage interface   **Figure 12:** Hoghadeeto, Dashboard interface

Thesis Panel 4:

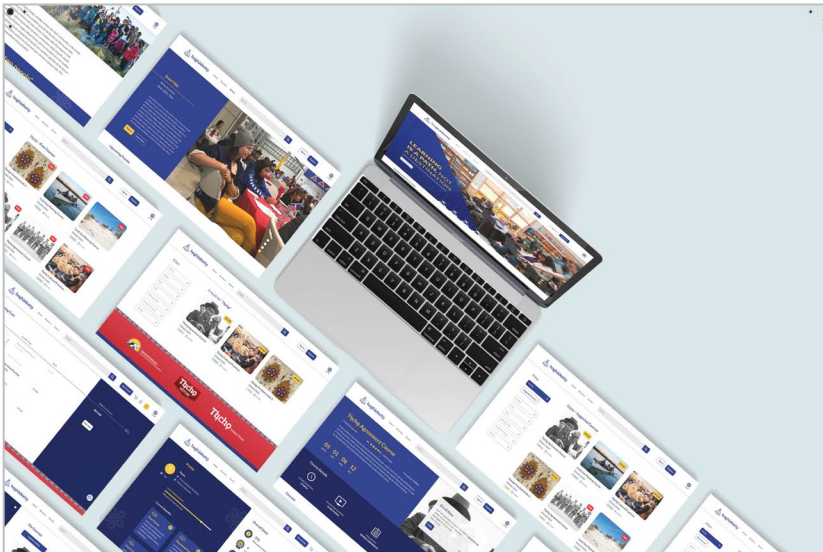Research Findings, Limitations and Overview of a variety of Hoghadeeto interfaces.

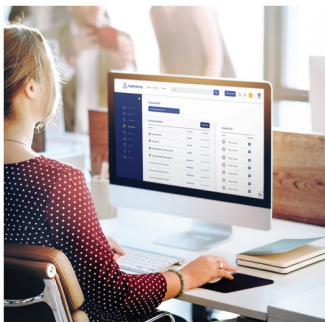**Figure 13:** Hoghadeeto, interface overview
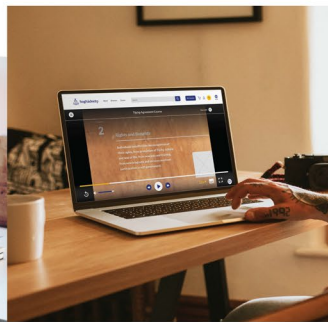

Figure 14: Hoghadeeto, Community interface

**Figure 15:** Hoghadeeto, Learning Environment interface

Figure 16: Hoghadeeto, Enrolled Courses

Research Findings

a. Distance learning as a medium to Preserve Indigenous Knowledge
b. Importance of Education within the Tlicho
c. Human-Centered Design Approach
d. Creating a Sustainable Distance Learning Platform
e. Designing for Indigenous communities

Limitations

a. Research method:
b. Integration of Expert Opinions within the Research Process
c. COVID-19 Pandemic
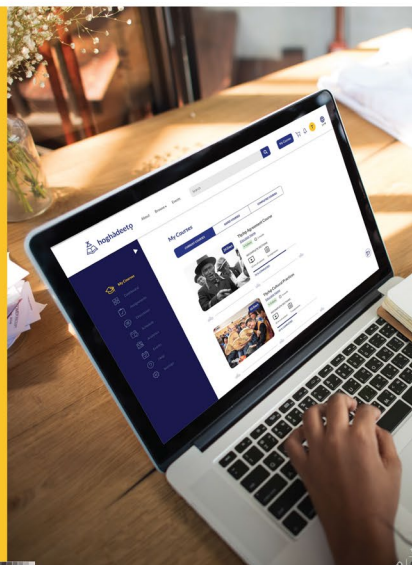
Video File:

The video below showcases the final High Fidelity prototype of *Hoghadeeto.*