Design Project Proposal

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Design of Technology- Supported Learning Environments

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Key Frameworks

Despite the arrival of many newcomers to Canada, information about this new country is often left for them to find and learn on their own. Those applying for Canadian citizenship are required to pass the Canadian citizenship test. Although the official study guide for this test is available for free on the government website, its lengthy written documents can pose a barrier for newcomers whose first language is not English. Currently, the resources provided by the Canadian government adopt an instructionist approach, focusing primarily on content delivery. This approach is effective for efficiently transmitting knowledge and is particularly beneficial for introducing new learners to new concepts.(Spikes & Rapp, 2022)

However, as Kalantzis and Cope (2010) indicate, society has shifted towards a "knowledge society" where more value is placed on human capacities, including relationships, identities, and social networks. With this shift, it is crucial for learners to have a sense of autonomy and self-control. Instead of being mere consumers of knowledge, they need to become producers of knowledge. Our design project will focus on a constructionist approach, giving learners the opportunity to construct relationships with the process (Kafai, 2006).In addition to the constructivist approach, we will also provide opportunities for learners to share their own creations. Sharing creations with other learners will allow users to connect with others and discuss their creative processes, as suggested by Brennan & Resnick (2013).

Additionally, considering our learners come from diverse cultural backgrounds, it is important to incorporate inclusive pedagogy into the learning design process. Inclusive pedagogy is designed not just to support students with specific needs but to benefit all learners. This represents a shift from traditional pedagogy, where programs for special needs were separate, to a model that includes them (Florian, 2015).

Our design project will include the following activities for our learning module:

Multimedia Content: The modules will include a diverse array of multimedia materials, such as images, videos, quizzes, and interactive elements, to ensure that the content is clear and engaging for learners who speak English as a second language. According to Mayer et al. (2014), incorporating multimedia into learning materials can enhance comprehension and performance, especially for non-native English speakers, by reducing cognitive load and aiding in the processing of information. In addition, we will also make sure all multimedia materials are accessible, so that we do not exclude anyone who has disabilities.

The modules will include multiple assignments that allow learners to create their own personal work. These will involve learners creating quizzes and videos based on the citizenship guide, sharing information about the Indigenous territories they reside in within Canada, and sharing stories they have learned about Canadian history and geography.

Connecting with Other Learners: The modules will include a space that gives opportunities for learners to connect with each other. This includes a Q and A forum.

Promote inclusive environment: We will ensure that the content of the modules is culturally sensitive and considerate of learners from diverse backgrounds.Additionally, we will create an inclusive learning environment that makes everyone feel safe to participate in discussions or share their work. We will monitor activity in the space to protect learners from racist and xenophobic comments, as well as from spam and trolling.

For our design project, we will be using Genially, which allows the addition of multimedia materials like images, videos, quizzes, and various interactive components to engage learners. Besides incorporating multimedia content, we will also provide a space for learners to share their creations using Padlet. Padlet is an interactive platform that allows learners to post their work, comment on others' posts, and collaborate in real-time. This will encourage learners to showcase their creativity and receive feedback from peers, further enhancing their learning experience.

Intentions and Positions

Newcomers to Canada struggle with multiple barriers in navigating through everyday life in Canadian culture. In addition to barriers such as language, culture shock, and feelings of isolation, they have the additional hardship of studying to pass the citizenship test. The *Discover Canada* study guide is a free resource for newcomers to use when studying for the citizenship test. However, it is far from being a learner friendly, student-centred resource as it is heavy in text and void of engaging activities to promote knowledge retention. This project is designed to allow an engaging and interactive learning experience for newcomers to Canada seeking to undertake the citizenship test. The project addresses a need for a learner-friendly information source that breaks down information from the *Discover Canada* study guide into digestible, interactive portions allowing newcomers to experience more effective knowledge retention and enjoyment in learning about Canada.

The three-module course will focus on specific topics and include many opportunities for active learning otherwise not possible by solely reading the *Discover Canada* study guide. Interactive questions, prompts, and assessments in each module will allow newcomers to reflect on the material and get a sense of their learning progress. In addition, the modules will allow newcomers to "learn by creating" by designing their own quizzes and videos based on information from the *Discover Canada* study guide. The course will give learners the sense of a real learning environment with its inclusion of a Q&A forum, allowing learners to exchange ideas with one another. The forum rules of decorum will aid in giving newcomers a sense of safety. All of the aforementioned considerations will allow newcomers to engage in meaningful and empowering learning experiences.

Scholarly studies point to the importance of adapting pedagogy to fit the culture in which we live in. We are living in an era in which technology plays a large part in how we communicate, receive our information, and engage in dialogues concerning issues affecting us. Newcomers to Canada, such as refugees and Ukrainian temporary residents, often arrive in Canada with little financial means to be able to afford educational support, such as private tutors or paid classes for studying IELTS. In their article, "City youth and the pedagogy of participatory culture," Garcia and Morrell (2013) claim, "technology is being called upon as an antidote to education inequity globally." (p. 124) The project intends to provide newcomers to Canada with access to a free educational resource that offers scaffolding in the form of imagery, interactive games, and regular opportunities for knowledge checks. It also adapts pedagogy to fit the times as it provides students with a text-based platform to exchange thoughts and ideas, similar to a social media platform. This project will take on both instructionist and constructionist approaches to learning. More studies are showing the great potential for student learning through constructionist games and activities. The instructionist approach "embeds" lessons into games while the constructionist approach "provides students with opportunities to construct their own games - and to construct new relationships with knowledge in the process." (Kafai, 2006, p. 36) This project will provide students opportunities in each module to construct their own learning by creating their own engaging activities.

A counter argument to the constructionist approach in our project might be that students are given too much freedom over their own learning. An instructionist approach to learning through games sees information embedded into games, however a constructionist approach in our project will allow the learner to create an activity based on information about Canada that they find in the *Discover Canada* study guide. This process could be viewed as needing involvement of an instructor to check the accuracy of the information presented in the activity. Learners will be provided with knowledge-checks throughout the modules, however, following completion of each module, "final" projects will be created independently. Learners will be able to seek feedback from their fellow peers as they test out their creations on one another. This process might be seen by some as needing some level of teacher involvement as subject matter expert, particularly in the form of feedback.

The goals of our design project align well with the overall goals of globalization. By helping individuals claim citizenship in a new country, we are directly supporting the integration and interconnectedness of different countries and cultures around the world. While this can be a positive development, it is also important to consider the potential challenges globalization brings, such as the need to navigate diverse cultural norms and societal expectations. Many newcomers to Canada may struggle with language barriers in addition to the already stressful change of life in a new country, especially if they don't have strong support networks in place. Our design project not only aids newcomers in passing the citizenship test but also fosters a deeper understanding and appreciation of Canadian culture, thereby promoting cultural exchange and mutual respect. By equipping new Canadians with the knowledge and skills needed to integrate into Canadian society,

we contribute to an inclusive and globally connected community. Moreover, our emphasis on interactive and participatory learning reflects educational trends that emphasize collaboration and critical thinking, skills essential to succeeding in a globalized world. Through these efforts, our project endeavors to contribute positively to the broader goals of globalization by facilitating smoother transitions and fostering a sense of belonging among newcomers in Canada.

Key Concepts and Contexts

Our design project will provide learners with both conceptual and procedural knowledge to succeed as well-informed citizens with a strong understanding of Canada's history, symbols, regions and values.

Within the topic of Canadian history, learners should gain conceptual knowledge of key periods and events in Canadian history, including but not limited to the history of Indigenous people in Canada, the war of 1812, abolition of slavery, and Confederation. Learners should also retain basic conceptual knowledge of important Canadian symbols, such as the maple leaf, the beaver, and the coat of arms. Lastly, learners will obtain conceptual knowledge on Canada's regions, including Canada's national capital, provinces and territories, and population. We will adapt the learning material provided on the Government of Canada website (2024) to create interactive modules containing conceptual knowledge. Although the resources on the Government of Canada website are very text heavy, they contain important concepts that need to be learned in order to pass the citizenship test. Our goal is to capture this valuable knowledge and reframe it in a way that is more engaging, innovative, and understandable.

Additionally, our design project will provide learners with opportunities to build procedural knowledge within the context of constructionism. After gaining conceptual knowledge, learners will apply the concepts they have learned by creating quizzes and videos. Learners will develop technological fluency and digital literacy while showcasing conceptual knowledge and engaging with others. It is important for educators to provide learners with opportunities to make meaning through learning and take control of their own learning experiences. As learners actively build learning practices through student-centred, discovery based learning, they will gain a greater understanding of Canada's history and culture. The greatest learning benefit remains reserved for those actively involved in the design process (Kafai, 2006).

For newcomers to Canada preparing to take the Citizenship test, the process of adapting to life in a new country can be stressful, and at times alienating. A (2022) study that surveyed immigrants from the Philippines arriving in Manitoba found that the sheer volume of new information was overwhelming to participants. This included information in the natural environment, built environment, and interactions with friends and families (Allard, 2022). Additionally, a (2012) study conducted showcases the challenges faced by immigrant parents when their children are

diagnosed with cancer. The challenges include learning complex medical terminology, unfamiliarity with the healthcare system, and low level of health literacy. (Klassen et al., 2012).

Understanding that immigrants will face these challenges and many others upon their arrival to Canada, we want to create an accessible, engaging, and barrier free platform for newcomers to learn about Canada's history and prepare for the citizenship test. Through our interactive forum, learners can also connect with those who speak their native language to create supportive and meaningful connections with those navigating similar situations. With innovative design and inclusive pedagogical approaches, our project will empower newcomers to thrive in their new home and contribute meaningfully to Canadian society.

Form and Content

In this design project, we aim to create an interactive and engaging online learning space for new Canadians. Specifically, our target audience is new immigrants and refugees who are preparing to take the Canadian Citizenship test. To pass the test, all eligible applicants must correctly answer at least 15 out of 20 questions. While the official study guide, titled *Discover Canada*, is available for free to all learners, its lengthy and text-heavy content poses an additional barrier for learners with varying language skills and background knowledge. Understanding this unique need of our target audience, we propose to create an online learning space that integrates interactive and engaging content and resources to close this gap. In this design project, we aim to create an effective and enhanced learning experience for new Canadians, ensuring actual learning and engagement beyond merely passing the test. Our pedagogical goals are as follows:

- To remove language barriers through interactive and engaging learning content
- To provide practical, relevant, and up-to-date information and resources
- To create an inclusive and collaborative learning space

Platform

Our designed learning environment is a website accessible to all learners at any time. The website functions as an online learning platform with a list of modules for easy exploration. Each module includes learning resources that have been updated, revised, and re-created based on the official study guide. To enhance learner engagement, various educational technologies can be incorporated into the learning content, such as presentations, infographics, animated videos, quizzes, and prompts. For instance, the topic of Canada's regions can be vividly described by integrating recent videos and images posted on social media. The national anthem can be best learned through played audio or video from the Olympics, rather than just from the written lyrics.

At the end of each module, an interactive activity will follow to review and strengthen learning outcomes. For instance, learners could be invited to a visual and interactive prompt to draw the

Canadian flag as a representation of Canada, based on the symbols they learned throughout the module. Furthermore, our designed learning platform offers a collaborative space to connect with other learners on specific topics or questions, through features like a whiteboard and a Q&A forum.

Content

As the official study guide covers a wide variety of topics and information, we propose to focus on the following three modules in this design project considering the timeline and feasibility for development. The topics were chosen based on their relevance, significance, and priority for our target audience in understanding Canada as a community of diversity and inclusion. Additionally, these topics are suitable for incorporating interactive multimedia and educational technologies to enhance the learning experience.

- 'Who We Are' - This module covers diversity, language, and Indigenous peoples.
- 'Canadian Symbols' – This module involves important symbols, national public holidays, sports, and the national anthem.
- 'Canada's Regions' – This module is designed to integrate interactive tools such as animated maps and social media content.

While we focus on the prioritized topics for this project, the possibilities for our designed learning platform are limitless. As the website will be built on WordPress, more modules and content can be easily added on an ongoing basis. Ultimately, the website can serve as a platform filled with interactive learning content, assessments and surveys, newsletters, and useful resources for new Canadians. Furthermore, additional services such as webinars, networking opportunities, and language learning can be hosted on this platform to meet the dynamic needs of our target audience.

Verifications

Assessments

There will be two assessments to measure learning outcomes in our designed learning platform: module assessments and the final assessment. The module assessments will evaluate how effectively learners have understood the content covered in each module. The final assessment, similar in format to the citizenship test, will measure learners' overall understanding of all three modules and gauge their readiness to pass the real test. These two assessments will provide insight into whether our designed learning platform and content are functioning as intended, serving as a verification tool for our design.

Survey

We will create a survey on the platform for learners to participate in on a voluntary basis. The survey will capture learners' experiences, specifically regarding usability, confidence levels after learning, and willingness to recommend the platform to others. The survey responses will be

collected through beta testing with immigrant-serving organizations or programs, providing us with insights into the effectiveness of the designed learning experience.

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