



A Community-Led Approach to Contextualizing Gamification

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Climate Change, Health & The Digital Divide



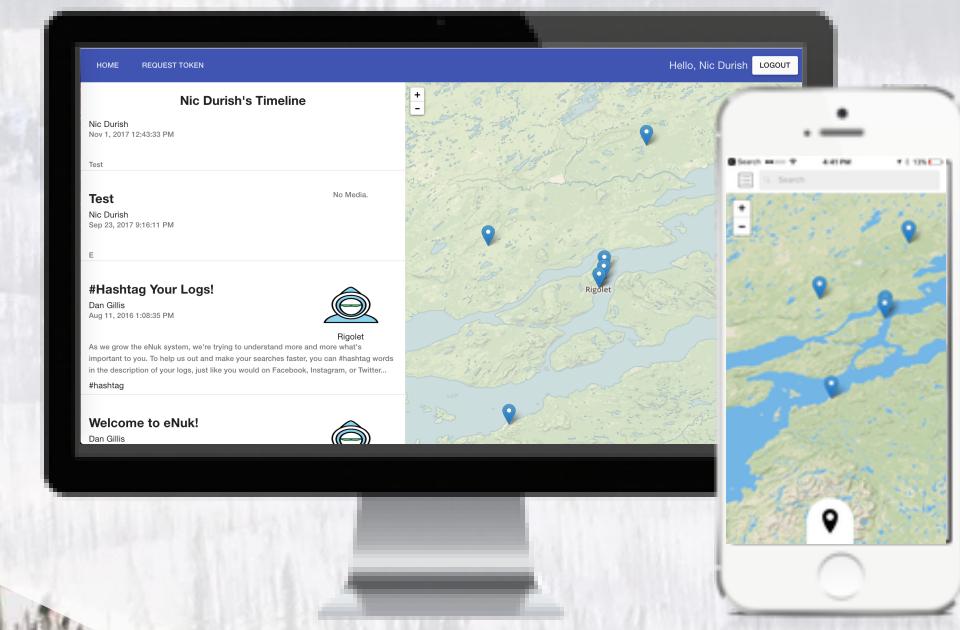
Climatic changes are having negative impacts on the physical, mental, and spiritual health of communities across the Circumpolar North. Some researchers have even asserted that climate change "is the biggest global health threat of the 21st Century" [1]. These impacts are amplified in Northern Canada where communities are traditionally reliant on the Land for their livelihoods. Decision-makers and members of communities in Northern Canada are calling for the development of tools to collect and share data relating to climate change and resulting impacts.

Unfortunately, efficient collection and sharing of data is reliant on digital systems and although the Canadian Government identified broadband access a fundamental right, the current reality is that many remote communities in Canada do not have equitable access [2].

eNuk

eNuk is a community-led project being designed in partnership with the Rigolet Inuit Community Government, the Nunatsiavut Department of Health and Social Development, and a team of Inuit and non-Inuit researchers, with a focus on participatory design.

The eNuk mobile and web applications allow users to track and share changes in weather, climate, environment, wildlife, and plants, as well as the resulting cultural, physical, and mental health impacts without relying on internet connectivity.



Engagement & Gamification



The long-term success of eNuk is reliant on its ability to remain relevant and engaging to community members, or as community-members might say, it cannot be just "another app, it has to be part of our community".

User engagement has become an increasingly popular field of study, with gamification, the use of game elements in a non-game context, being a significant tool in cultivating user interest and participation [3].

The generalized framework for gamification often includes the use of mastery, community, and autonomy with common techniques being: point scoring, badge acquisition trees, and competitions.

Contextualizing Gamification

While gamification is a powerful tool for engagement, to harness its full potential, strategies need to be appropriately tailored to a given context. Below we explore how eNuk has used participatory methods to contextualize general gamification strategies.

General Strategy

Subcategory

Contextualized Strategy

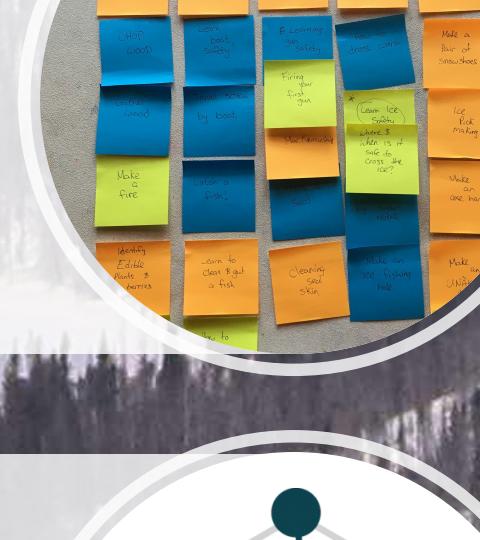

Some users are interested in self-competition, gaining achievements, and overcoming challenges that are appropriate for their skill-level.

Mastery


Open-houses and focus groups within Rigolet have identified a tailored badging system that appropriately reflects local skills and knowledge. This contextualized system reflects community interests instead of system goals.


Some users are interested in interacting and relating to others. They are often in search of social connection and competition.

Community


Through a partnership with RightMesh, eNuk is introducing accessible wireless communication to Rigolet. This also allows individuals to communicate and share information with one another in real-time.


Many users are looking for an outlet for innovation and creativity, and do not want to feel stifled by a system. These users often wish to customize their playing or learning styles.

Autonomy


Each feature offered within eNuk has been designed with autonomy in mind. Not only are all the features direct recommendations from the end-user, but each feature is being built in such a way that avoids restricting individuals to specific use-cases.

References

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[2] Smith, R. et al. (2011) Digital Divides and the First Mile: Framing First Nations Broadband Development in Canada. *The International Indigenous Policy Journal*, 2(2).

[3] Deterding, S. et al. (2011). Gamification, using game-design elements in non-gaming contexts. *Proceedings of the 2011 annual conference extended abstracts on Human factors in computing systems - CHI EA 11*. doi:10.1145/1979742.1979575

