

## Chapter 28

# Mobile Learning as a Tool for Indigenous Language Revitalization and Sustainability in Canada: Framing the Challenge

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### **ABSTRACT**

*In this article, the authors explore how mobile learning can complement the Certificate of Indigenous Languages program at the University of Saskatchewan in Western Canada. Through the FRAME model analysis, the authors extract salient cultural, pedagogical, environmental, and technological characteristics that should be considered in the development of mobile learning tools and approaches for Cree language teachers. It is hoped that this article will stimulate a dialogue amongst designers and Indigenous groups regarding language sustainability through mobile learning. The article concludes with key findings: the need to follow protocols, to establish good relationships, and to design for areas of low/no bandwidth. Finally, the examination of current Indigenous language learning methods provides ideas for the development of much needed “apps” appropriate for Cree learners and teachers.*

### **INTRODUCTION**

In this paper, we view sustainability as the management of knowledge and resources so as to preserve natural and cultural ecosystems thereby ensuring quality of life for future generations. In the case of the Cree and other Indigenous groups in Canada, linguistic revitalization is a key to cultural sustainability.

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## ***Mobile Learning as a Tool for Indigenous Language Revitalization and Sustainability***

The development of mobile learning technologies aimed at language revitalization is a challenging task as there is currently little research on the use of mobile learning in Indigenous education - and even less on mobile learning targeted at Indigenous *language* learning (Pulla, 2015), yet there is strong potential (Pulla, 2017). In examining research literature from around the world, Pulla (2015) argues that “the data from the global context indicates that, when used innovatively, mobile learning can be integrated successfully into a context of existing practices, beliefs, experiences, and values related to Indigenous epistemologies and pedagogies” (p. 4). Yet, in the Canadian context, one cannot overgeneralize amongst cultural groups. Within a single Canadian province such as Saskatchewan, communities might have very different practices even though they might only be 50 to 100 kilometers away from each other. Within Saskatchewan alone, there are three main Cree dialects: Plains, Woodlands, and Swampy. Pronunciation, vocabulary, and accents vary across the dialects. The ceremonies also differ from community to community. In this way, learning resources, technological applications, or pedagogical solutions that work for one Indigenous group will not necessarily appeal to or achieve the goals of another group. So, before embarking upon development of mobile language tools for specific Indigenous communities, it is important to consider how to design pedagogical activities and tools in ways that are respectful of the people’s needs, worldviews, protocols, and physical environments.

Patterns of relations within any culture shape and are shaped by epistemologies and ontologies. Much of the mobile technology available has been developed primarily from Western, European scientific traditions. Western traditions often privilege knowledge derived from reason and individualism over knowledge derived from tradition and community (Pegrum 2014). Furthermore, technology can allow people to reconfigure their relationships to each other and the world. Reconfigurations of relationships can both empower and endanger cultural practices. As Deer and Hakansson (2005) note, “Indigenous Peoples have their own concepts of knowledge, information and communication and have developed their own forms of information communication” (p. 237). Such knowledge should be integral to the development of mobile learning applications. While acknowledging the uniqueness of a particular group’s worldview and practices, Western technological knowledge and tools - particularly mobile technologies - can still be useful.

In 2015, the Certificate in Indigenous Languages (CIL) program at the University of Saskatchewan was introduced in support of Indigenous-language revitalization and sustainability. In this paper, we use the Framework for the Rational Analysis of Mobile Learning (FRAME) model (Koole, 2009) as a needs analysis tool to explore how mobile tools can be designed to complement this particular program within the context of Saskatchewan Cree Nations.

### **FRAME ANALYSIS**

The FRAME model is depicted as a Venn diagram comprising three intersecting circles representing social, device, and learner aspects (Figure 1).

Although the FRAME model was originally designed from a social constructivist perspective (and more recently is being considered from a socio-material perspective), we hope that it can also complement the Indigenous ways of thinking. Kovach (2009) suggests that “even with their inherent bias, Western research frameworks can be adapted as structural forms that are helpful to the Indigenous researcher for allowing the entrance of visual, symbolic, and metaphorical representations of a research design that

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