

Chapter 3

Indigenous Languages Learning Through Serious Games Based on Second Language Acquisition Theories

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ABSTRACT

When new educational games are developed for teaching languages, a set of ideas or intuitions about how students can gain more knowledge are used; however, few of them are based on a solid theory or substantiated with linguistic research. This chapter presents a brief review about second language acquisition theories; describes the importance of recovering, maintaining, and transmitting indigenous languages; and analyzes efforts made for enhancing bilingual education. Serious games are presented as an alternative for learning indigenous languages, and guidelines to develop serious games implementing second language acquisition theories are proposed. Finally, a discussion about challenges and future trends in recovering, maintaining, and transmitting indigenous languages is presented.

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INTRODUCTION

When educational games are developed for teaching languages, ideas or intuitions about how students can gain more knowledge are used, but only few are substantiated with linguistic research or based on a solid theory. Several studies have demonstrated that learning a second language doesn't consist only of phonetic and grammar; there are factors involved such as cognitivism, psycholinguistics, culture and sociology (Song, 2018). Acculturation, behaviorism, connectionism, comprehension hypothesis, interaction hypothesis, output hypothesis, sociocultural theory, and universal grammar hypothesis are found among the most relevant theories for second language acquisition (Menezes, 2013). Those theories provide the basis to increase the knowledge acquired by learners of a second language. There is a gap among theories and learning practice. Serious games are an approach that can close this gap. Indigenous languages have an opportunity of being recovered, maintained and transmitted through serious games.

The UNESCO (2015) has reported that around 199 languages in the world have less than ten speakers; estimations predict that a half of the languages spoken today will be lost in 2050. The disuse of indigenous languages generates a loss of cultural value since various customs, maintained by indigenous groups, are transmitted through their native language. This situation has attracted the interest of the scientific community for recovering, maintaining, and transmitting indigenous languages. When education is introduced in indigenous groups through the adoption of an official language, the use of native language is reduced (Furniss, 2014). Bilingual education has been adopted as strategy for transmitting knowledge without reducing the use of native language (Correa Ferreira et al., 2018). It is important to strength bilingual education through educative technology to avoid the reduction on the use of indigenous languages while enhancing the acquisition of a second language.

Nowadays, children are living in a technological world, where almost at all schools they have access at least to a cellphone or a computer at the classroom. A software which is present in those computing devices are games. The development of the first video game is remounted to 1962 at the MIT, where Steve Russell created the game Space War, which ran in a vacuum tube computer (Rabin, 2010). Due to the fast evolution of technology, video games were widespread over the world; according to a report published in Statista (2018), in 2016 there were 2515 million of video game players in the world. Considering that majority of children can access a computer, tablet or smart phone where a video game can be played, an opportunity of inducing learning through video games arises. Serious games are the approach for developing video games directed to enhance learning over a wide variety of topics.

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