

## Chapter 12

# ARGuing for Multilingual Motivation in Web 2.0: An Evaluation of a Large- Scale European Pilot

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### **ABSTRACT**

*While there are some teachers who are dubious about the benefits of gaming in education, language teachers make great use of simulation/gaming methodologies, and there are many supporting textbooks. While many of the simulations/games used are non-computer based, during recent years, the computer game has become an important development in popular culture. During the same period, there has been an appreciation that computer games can play a significant role in education. This chapter explores the use of one particular type of computer game called an Alternate Reality Game (ARG), a form of interactive narrative, often involving multiple media and game elements. The chapter has developed an ARG to motivate secondary school students to learn a modern foreign language and has piloted this game across Europe in 2009. This chapter will review the empirical literature associated with the utilisation of ARGs for educational purposes and will focus on language learning. The chapter will then present a quantitative and qualitative analysis of student motivation in the pilot study using a developed evaluation framework for games-based learning. The evaluation will focus on learner motivations, aspects of the ARG, player perceptions, skills acquired, attitudes and qualitative data. The chapter will reflect on this analysis and provide directions for future research.*

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## INTRODUCTION

As noted by Crookall (2007), language teachers make great use of simulation/gaming methodologies and there are many supporting textbooks and research papers that present various forms of role-play, games, simulations, and other exercises. (e.g. Gaudart, 1999; Garcia-Carbonell, Rising, Montero, & Watts, 2001; Halleck, 2007).

Over the last 40 years computer games have become an increasingly popular form of entertainment and have replaced some traditional leisure activities (Connolly, Stansfield & Hainey, 2007). Games-based learning has captured the interest of educationalists as it is considered to be a potentially motivational approach for learning even at a supplementary level. Games-based learning has been applied in a wide variety of different fields including medicine (Beale, Kato, Marin-Bowling, Guthrie & Cole, 2007; Lennon, 2006; Roubidoux, 2005), business and knowledge management (Christoph, 2007; Virtual University Website, 2010; Virtual Leader Website, 2010), military training (America's Army Website, 2010), science and mathematics (Squire, Barnett, Grant, and Higginbotham, 2004; Young and Upitis, 1999; Habgood, 2007; Nelson, 2007; Barab, Warren & Ingram-Goble, 2006) promotion of language education (Johnson and Wu, 2007; Rankin, Gold and Gooch, 2006), software engineering, computer science and information systems (Waraich, 2004; Oh Navarro & Van der Hoek, 2005; Shaw & Dermoudy, 2005; Ford & Minsker, 2003; Jain & Boehm, 2006; Zhu, Wang & Tan, 2007). However, two of the current issues with games-based learning are the dearth of empirical evidence to support the approach and the lack of frameworks to use for evaluating games-based learning applications. We were very conscious of these problems at the outset of the project and carried out research to ensure that we had an appropriate framework for evaluation. In this chapter, we explore the use of one particular type of computer game called an Alternate Reality Game (ARG), a form of inter-

active narrative, often involving multiple media and game elements, to tell a story that may be affected by participants' ideas or actions (Connolly *et al*, 2008). We have developed an ARG to motivate secondary school students to learn a modern foreign language and have piloted this game across Europe in 2009.

This chapter presents the developed evaluation framework used to evaluate the ARG, some of the problems teaching modern foreign languages (MFLs), and some examples of the use of games in language education. We then discuss ARGs and the use of ARGs within an educational context. We then describe the evaluation study of the *Tower of Babel* ARG that was piloted from 22 April to 30 April 2009 involving 328 students and 95 teachers from 28 schools across 17 countries and provide both a quantitative and qualitative analysis of student motivation in the pilot. We complete the chapter with a discussion of the findings and directions for future research.

## PREVIOUS RESEARCH

In this section, we briefly discuss the utilised evaluation framework to evaluate the ARG, intrinsic motivation, the problems and importance of teaching modern foreign languages before discussing previous use of computer games in teaching second languages.

### Utilised Evaluation Framework

Connolly, Stansfield and Hainey (2009) reviewed the literature and formulated a new evaluation framework for GBL (Figure 1). The purpose of the framework is to identify the main potential evaluation categories of games-based learning available in the scientific literature. The categories do not necessarily have to be viewed in isolation but as a collective whole depending on what is to be evaluated. The framework can be used in both a developmental sense to inform design during the

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