

Contents lists available at [ScienceDirect](http://www.sciencedirect.com)

Computers & Education

journal homepage: www.elsevier.com/locate/compedu

Can educational video games increase high school students' interest in theatre?



Borja Manero ^{a,*}, Javier Torrente ^b, Ángel Serrano ^a, Iván Martínez-Ortiz ^a, Baltasar Fernández-Manjón ^a

^a Department of Software Engineering and Artificial Intelligence, Complutense University of Madrid, Madrid, Spain

^b Department of Computer Science, University College London, London, United Kingdom

ARTICLE INFO

Article history:

Received 29 January 2015

Received in revised form 18 June 2015

Accepted 22 June 2015

Available online 30 June 2015

Keywords:

Serious games

Theatre learning

Media in education

Educational games

Digital humanities

ABSTRACT

The value of educational video games in education is undeniable and the benefits of using video games in classroom instruction have been proved by many researchers. Nevertheless, these benefits have not been proved sufficiently for some domains, such as artistic disciplines. In this paper we explore the effects of an educational video game on high school students' interest towards classical theatre. The game covers the story of "The Foolish Lady" (*La Dama Boba*) based on the homonymous classic theatre play by Spanish playwright Lope de Vega. A mixed experimental design was followed, whereby researchers conducted pre-tests and post-tests to estimate the effect of playing the video game on student interest (within-subjects factor) towards theatre. We also measured changes in linguistic knowledge and knowledge about the play. The experiment was carried out with 754 students from 8 different schools in the Madrid region in Spain, divided into experimental group and two control groups. With the objective of improving the comparative power of the study, two control groups were used: (1) traditional teaching with the usual teacher and, (2) as the best educative case we could implement, teaching with a professional actor who had played the male protagonist of the theatre play. The experimental group played the video game. Results show that the video game was more effective in incrementing students' interest in theatre than the traditional class, but slightly less effective than the class with the actor. On the other hand, game and teacher approaches obtained similar results in the improvement of students' knowledge about the play's plot and some linguistic concepts. These results open up a new horizon in using video games as motivators in different artistic domains.

© 2015 Elsevier Ltd. All rights reserved.

1. Introduction

Theatre is less and less interesting to young people. According to a study at Palermo University (Argentina), 81% of young men and woman (aged from 10 to 24 years old) declare that they never attend the theatre (Palermo, 2009). In Chile, 81.4% of the population states that they did not attend the theatre during the previous year (Consorcio de las Artes, 2011). In the US,

* Corresponding author. Department of Software Engineering and Artificial Intelligence, Complutense University of Madrid, Facultad de Informática, Calle Profesor Jose Garcia Santesmases, s/n., 28040 Madrid, Spain.

E-mail address: bmanero@ucm.es (B. Manero).

the national conference of the Theatre Communications Group, whose membership includes more than 500 theatres across the country, agreed that the lack of young people in theatres has been a persistent problem for years, and the American theatre needs to find a concrete solution quickly (Aucoin, 2012).

In Spain, the gap between the theatre and young people (aged less than 20) is one of the problems that jeopardize the future of this literary genre in the medium term. If we fail to attract new generations to the theatre, and that lack of interest sets a trend, theatre might become a recreation for elites (Sociedad General de autores y editores, 2012). For classic theatre it is even worse, as the few young people attending classical plays are, normally, forced to attend by their school (Quero, 2002).

One of the key factors that may explain the low consumption of scenic arts in Spain is the lack of appropriate policies addressed to catch young people's interest. 75.4% of the population declares that they almost never go to the theatre, whereas only 3.0% consider it a good leisure alternative that they frequently attend. People who attended the theatre at an early age present a higher current consumption rate (69.1% of the theatregoers) (Quero, 2002). Therefore, the high interest in theatre detected among regular theatregoers leads us to think that it is possible to increase theatre attendance by engaging new generations with theatre. In order to reverse the actual downward tendency, the theatre sector needs to increase its influence in other sectors— especially in education. A priority for the theatre sector in Spain is to increase the attractiveness of the theatre through educational programs, motivating young people towards attending the theatre.

Young people's lack of interest in classical theatre contrasts with their notorious intrinsic motivation towards video games (Gee, 2003). Video games have become widely adopted by new generations of users, the so-called digital natives, who have grown up immersed in new communication technologies (Connolly, Boyle, MacArthur, Hainey, & Boyle, 2012). For example, a study on 7–16 year-old students in the UK showed that most of them were regular domestic game players (McFarlane, Sparrowhawk, & Heald, 2002).

Many researchers have indicated the potential of employing educational computer games to help students improve their learning performance (Brom, Preuss, & Klement, 2011; Hwang, Wu, & Chen, 2012). Different studies have indicated that educational computer games could be an effective way of providing a more interesting learning environment for acquiring knowledge (Moreno-Ger, Burgos, Martínez-Ortiz, Sierra, & Fernández-Manjón, 2008; Papastergiou, 2009; Sung & Hwang, 2013). Some researchers have also reported that educational computer games can enhance the learning interest of students (Ebner & Holzinger, 2007; Malone, 1981), and further increase their learning motivation (Dickey, 2011; Hwang et al., 2012; Van Eck, 2007). Some argued that a well-designed educational computer game could provide a rich-resource learning environment with challenging learning missions to foster students' skills and higher order knowledge. Wang and Chen, (2010) have further pointed out that: "... via properly integrating learning content and strategies into the game-based learning environment, students' learning performance could be improved while maintaining the enjoyable nature of the games".

In the past decade, many studies have also been conducted to investigate the effectiveness of educational video games especially in STEM (Science, Technology, Engineering and Mathematics) disciplines, such as mathematics (Bos & Shami, 2006; Lowrie & Jorgensen, 2011), computer science (Papastergiou, 2009), visuospatial reasoning (Gueven & Kosa, 2008), civil engineering (Ebner & Holzinger, 2007) or business (Guillén-Nieto & Aleson-Carbonell, 2012). Comparatively, the potential benefits of applying educational video games in humanities have been less explored. There have been some experiences in social science (Cuenca López & Martín Cáceres, 2010), geography (Tuzun, Yilmazsoylu, Karakus, Inal, & Kizilkaya, 2009), language (Ravenscroft, 2007) or history, but other humanities disciplines have not received the same level of attention (Chou & Tsai, 2007). This is the case in literature and classical theatre.

Summarizing, the effectiveness and benefits of educational video games has already been proven in many different fields. However, surprisingly, video games have not been widely used in arts, and they have not been used before to teach (or in this case to motivate) an artistic subject such as theatre. Their effectiveness in the fields of arts remains to be proven. This study intends to clarify whether educational video games could also promote the interest towards theatre by analysing the impact of an educational video game on teenagers.

This discussion can help us to learn whether educational video games may be effective (within real school settings) in promoting the acquisition of domain knowledge in the arts and in engaging students in the learning process.

2. Purpose of the study and research questions

In this study, the main goal was to test the effectiveness of an educational video game as a motivating device to increase young people's interest in going to the theatre. To explore this issue, we created *La Dama Boba* ("The Foolish Lady" in English), a video game based on the homonymous classical play by Spanish playwright Lope de Vega (1613). A tool designed to motivate high school students to attend classical theatre plays and to learn more about the story, language and versification of that specific play (Manero, Fernández-Vara, & Fernández-Manjón, 2013a). Thus, the main research question is:

RQ1.1. Can the game *La Dama Boba* improve students' interest (I, from now on) in classical theatre?

A second goal for the study was to explore the educational properties of the game (learning performance). First, we believe the game can reveal the plot and the characters of the classical play *La Dama Boba* more clearly to students. From now on, we will refer to this subject as *plot knowledge*, hereafter abbreviated to PK. Second, the game can be useful to learn new linguistic concepts, which are frequently used in the theatre like the literary figure of the metaphor or the *redondilla* (a type of Spanish

Download English Version:

<https://daneshyari.com/en/article/6835037>

Download Persian Version:

<https://daneshyari.com/article/6835037>

[Daneshyari.com](https://daneshyari.com)