

## Chapter 4

# Enriching the Experience in Video Games Based on Playability Development Techniques

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### ABSTRACT

*Video games are the most economically profitable entertainment industry. The nature of their design means that user experience is enriched by emotional, cultural, and other subjective factors that make design and / or evaluation difficult using traditional methods commonly used in interactive systems. It is therefore necessary to know how to apply Playability in order to design, analyze, optimize, and adapt it to a player's preferences. In this chapter, the authors present a way to perform UX based on Playability techniques by adding hedonic factors that enrich the development of video games. The aim is to easily and cost-effectively analyze the different degrees of Playability within a game and determine how player experience is affected by different game elements. These results can be applied in the educational field where the experience of the pupils with educational video games is a crucial factor for the success of the learning process.*

### INTRODUCTION

Video games are highly interactive systems whose main goal is to entertain users (players) that interact with them in order to have fun. Nowadays, video games are the most economically profitable

entertainment industry. The use of new technology and teaching methods that help improve the learning process has resulted in the inclusion of videogames as active elements in the classroom. Videogames are ideal learning tools since they provide training skills, promote independence,

DOI: 10.4018/978-1-4666-1987-6.ch004

increase and improve students' concentration and attention and increase social connections. However, their use in education generally involves significant problems. Firstly, most existing educational videogames are basically multimedia didactic units, which have lost the essence and attributes of videogames. Secondly, the devices on which these didactic games run are simple PCs, which generally do not spark children's interest like other devices. The result is that educational games offer players a less positive experience than other kinds of videogames. However, we cannot forget the experiences of the pupils who play the games are crucial factors that affect the success of the video game as didactic tool. In the educational field is very difficult to evaluate the positive motivation or the degree of satisfaction for players. To analyze and design better experiences based on playability techniques in this type of games is a must.

User Experience (UX) is understood as a set of sensations, feelings, or emotional responses that occur when users interact with the system. UX focuses more on the subjective aspect of the interaction process, and goes beyond the traditional study of skills and cognitive processes of users and their rational behaviour when interacting with computers (ISO 9241, 2010). Due to the nature and design of videogames, user experience should be enriched by recreational, emotional, cultural, and other subjective factors that make analysis and evaluation difficult using traditional methods commonly used in interactive systems.

Player eXperience (PX or User Experience in Video Games) depends not only on the product itself, but also on the user and the situation in which he or she uses the product. Players cannot be designed. Players are different. Some are able to easily use a game to perform a challenge while others simply cannot. The stimulation that a video game provides depends on the individual user's experience with similar products. Users compare games and have different expectations. Furthermore, they have different goals, and so they use a game in different ways. Furthermore, PX evolves

over time. The first time users try a game they may find it confusing and have a rather negative experience. When they later become accustomed to the game, discover the wealth of features and potential it has to offer, and learn how to handle it, they may become emotionally attached to it, and thus the PX would become more positive.

User Experience (UX) should be taken into account throughout product development (hardware or software), so as to achieve the optimum experience for the player. The current importance of video games in society justifies the need for models that characterize the overall experience, and mechanisms for designing and analyzing the Experience throughout the video game development process become a must. The purpose of this chapter is to present a Playability Model for the design and evaluation of user experience in videogames, with the following objectives:

- To analyze how the game experience presents characteristics that are not explicit in the quality standards models and why the usability or quality in use is not sufficient in video games context without the inclusion of cross-cultural features or emotional factors.
- To analyze the hedonic properties that characterize the experience with video games.
- To be able to measure the degree of 'quality of the game experience' within an electronic entertainment system: Playability.
- To present a Playability Model for entertainment systems, including different attributes, facets and metrics to characterize the player experience with videogames.
- To show how to use the Playability Model and Playability Techniques in a User Centred Video Game Development Process.
- To apply this model for evaluating and improving playability in the video game development process, in order to improve the user experience.

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