Manual for the use of Videogames and Apps in education
Videogames for teachers: From research to action

Chapter 6 - Educational Videogames: An overview

Analysis of the main typologies, approaches and technical solutions of those videogames that have a direct educational objective

Abstract:
In recent years much attention has been drawn to the design and development of educational videogames, that is digital games designed to have a direct learning objective on a specific subject.

Many field researchers conclude that well-designed educational videogames could enhance the learning process in a more interactive, attractive and engaging way for students. Therefore, educational videogames and their well-planned inclusion in the educational content, could potentially become a valuable learning tool, both for students and teachers. However, the inclusion of educational videogames in the teaching process is still very limited in many countries, for many reasons.

The most prominent reason is that the majority of teachers lack of awareness and knowledge on which educational videogames could be effective for specific subjects and how these games should be implemented in class.

Aiming to reinforce the systematic implementation of educational videogames in classroom, this Chapter begins with a review of educational videogames in terms of technology, learning theories as well as domains of application and paradigms of use.

The second part of the Chapter focuses on game design approaches and elements which can promote learning and therefore should be taken under consideration during the production of an educational videogame. The third part refers to the state-of-the art technologies, such as Augmented Reality (AR) and Virtual Reality (VR), and how these could influence the educational effect of an educational videogame. In this context, a real case scenario of using VR for educational purpose is presented.

The Chapter concludes with insights about the future of educational videogames as well as good practices in order for teachers to fully exploit the potentials of an educational game as additional learning tool to the class curriculum.