Educational Games and IT Professionals: Perspectives from the Field

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ABSTRACT

In this paper the authors will give a perspective on educational games application in the field of IT. Main topic of this research will be capacity for applying modern information technologies for developing game-based learning platform. During analysis, they found that more research is needed in order to improve application of games in education of IT professionals. At first place, researches should cover listed problems: how to design educative games in order to achieve better learning effects; how to develop software tools to automate educative game development process; and establish methods and techniques for knowledge and skills assessment utilizing educative games.

Keywords: Applications of Games, Education, Game-Based Learning, Games, Information Technology Professionals

INTRODUCTION

The first computer games appeared in the fifties of the 20th century - since then, their development has proceeded at a vertiginous speed. It was almost impossible to assume that they will become one of the dominant social phenomena, and that, in the last decade of the 20th century, the industry of computer games generate more revenue from the film industry.

The popularity of computer games led to thinking about their application in education. Games became an integral part of modern society. They are the ideal platform for presenting new content and new technology - a lot of people play computer games and accept them as a normal form of entertainment. Research shows that not only youth who play games - big part of the playing population are adults (De Aguilera & Mendiz, 2003). According to the report of the American Association for entertainment software (ESA - Entertainment

DOI: 10.4018/jhcitp.2012100103
Software Association) in 2006. The 69 percent of the U.S. population plays video or computer games. The average age of players is 33, and 25 percent are older than 50. Men make up 62% of the population (Clark & Mayer, 2008).

Electronic games are a new mass medium, with its characteristics, as compared to the now traditional media such as books, television, film or music. In contrast to all existing media, games have the opportunity to interact, allowing the user to actively participate, not just passively receive information. That is why the last few years we can see more and more use of computer games for education. Educational games are social, card, or computer games that are specifically designed to teach people about a certain subject, expand concepts, reinforce development, understand an historical event or culture, or assist in the development of certain skills.

**GAMES**

Game as a concept is not easy to define. There is a field called game theory and is principally engaged in the strategy of playing moves between players based on mathematical rules. It deals with the choice of optimal moves, and its greatest application is in economics and politics. However, it has almost nothing to do with the development of video games. We certainly can say that what unites all forms of games is fun. It is the main reason for the success of the games. The aim is to exclude us from reality and bring in another reality that is governed by other rules, and other forms of behavior. It is a unique form of real-world simulation that comes as abstraction of the important elements for the functioning of game logic. The human brain must constantly process large amounts of information in the real world, while in the games, the level is much lower because they use only the information relevant to the game scenario. This leaves to the brain a lot of room to entertain while playing game, and also the possibility to acquire certain knowledge during the play.

First of all, the games are looking for a challenge (Rouse, 2001). From the simplest games like Rubik’s Cube to the most complex computer 3D simulation the player expects a challenge. In every game there must be obstacles that the player will invest time and effort to overcome and that will bring to him emotional satisfaction. The player expect to earn the respect of other players with achievement of certain success in the game. Another important factor in games is imagination. It is expected from the game to enable an opportunity to develop imagination, and that through narration player gets involved into the game world. Due to the specifics of educational games, it is reasonable to conclude that it is crucial to find a good balance between fun and some seriousness that educational content carries. With respect to this principle, we can expect the maximum impact of this form of knowledge transfer.

Games became a very important tool for knowledge transfer because of its ability to actively hold the attention of participants and because the fact that they are creating an impression of fun in learning. In particular, computer games gain the significant role in education. The development of information technology makes it possible to create more interesting games that have more and more power to actively engage the players and to introduce him into the story. This leaves ample room for the application of educational games. Also development of the Internet opens up many possibilities of distance education, and inclusion of more physically remote users in the educational game.

**E-LEARNING**

Changes caused by the development of computer networks and information technology were such that they have an impact on all aspects of society, including education. There was a justified need for the introduction of computers and the Internet in education systems. E-learning (electronic learning) is a comprehensive term, generally used to describe a computer-assisted learning. Often include other devices such as
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