Work in Progress - Learning Through Role Play Games

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Abstract - It is commonly accepted that the educational environment has been undergoing considerable change due to the use of the Information and Communication tools. But learning depends upon actions such as experimenting, visualizing and demonstrating through which the learner succeeds in constructing his own knowledge. Although it is not easy to achieve these actions through current ICT supported learning approaches, Role Playing Games (RPG) may well develop such capacities. The creation of an interactive computer game with RPG characteristics, about the 500th anniversary of the city of Funchal, the capital of Madeira Island, is invested with compelling educational/pedagogical implications, aiming clearly at teaching history and social relations through playing. Players interpret different characters in different settings/scenarios, experiencing adventures, meeting challenges and trying to reach multiple and simultaneous goals in the areas of education, entertainment and social integration along the first 150 years of the history of Funchal. Through this process they will live and understand all the social and historical factors of that epoch.

Index Terms – Historical Environment, Interactive Game, Learning, Role Play Game

INTRODUCTION

Currently, any reflection on education and training systems should be based on an analysis of the changes imposed by the use of the computer without forgetting the influence of all technologies related to cyberspace and virtual environments [1]. These technologies have various types of influences on human cognitive functions, such as memory, imagination, perception and reasoning. However there is still the need to prepare formal education for the use of these new generations of learning tools, but also to develop them for learner autonomy, cooperation, creativity and critical analysis. Learning with these tools should emphasize visualizing, hearing, feeling, experimenting and interpreting so that there is an effective construction of knowledge [2].

COMPUTER GAMES AND LEARNING

The definition of computer game combines the more comprehensive concept of “game” with the use of computers and related technology. The “game” concept represents a structured or semi-structured activity with goals that players try to achieve and a set of rules governing its operation [3]. The associated concept of "play" relates to the interaction with the game itself. A game can be instantiated for learning, entertainment or recreation as it involves mental (and sometimes physical) stimulation and develop practical skills – a games forces the user, much more than books, movies or music, to decide, to choose and to define priorities. In games, the rewards are a major part of the universe, whether they are translated in game entities (more life power, access to new levels, obtains spells and equipment, etc.) or even as neurological rewards comparable to the ones obtained through the activation of the neurological pleasure centers. Comparatively, in real life, humans do not achieve so easily the rewards obtained in the complex world of games. Another important aspect in the game concept is the notion of the conceptual space where the action takes place. This means that any of the various actions in the game have a meaning that may have no logic outside that context [4].

Computer games that began to be based on solely on text description, without any image, have steadily developed evolving aesthetics and environment design that come ever closer to real or pseudo-real contexts. Furthermore, the computer game today is mostly supported by networked operations [5].

The use of computers games for learning requires that stakeholders have the creativity, autonomy, responsibility, and ability to deal with virtuality and new technologies but also to develop skills related to the game context and play. Role Play Games (RPG) are characterized by strategical thinking, action and specific contexts of representation where each player takes on a role according to rules set by the master.

The example of a RPG presented in [2] contextualizes three major components: the environment (context where the story unfolds), the history (the set of predefined or open actions) and the systems of rules. This interaction between the player and the game, frequently open and defined only during the game, presents the RPG as a cultural interaction mean,
where actions and decisions happen through the environmental and cultural assimilation and the players’ interaction is based on a spirit of discovery/learning.

**Funchal - 1508 by RPG**

We’ve created a computer game, with RPG features, representing the 500 years of the setup of the city of Funchal, the capital of Madeira Island. This game took a strong educational aspect searching for a reinforcement of thinking and creativity on learners-players. Players interpret different characters in that historical scenario, living adventures, overcoming challenges and achieving multiple and simultaneous objectives. Players achieve progress by applying their knowledge (and acquiring new one) crossing several topics, such as History, Geography and Economics. This multidisciplinarity is embedded in the scenario and challenges as players must relate with other actors, understand the logic of social and hierarchical relationships, explore natural and imported resources, develop trading skills (according to the time of the play) and become aware of dangers (pirates, for instance) and rewards (festivities, for instance) of the epoch.

This RPG game, as a socio-cultural and knowledge tool, can be potentially explored by school communities (students and teachers) of various levels of education. But it is also being driven and supported by a technology platform (www.500anos.com) that was setup as part of the celebration of the fifth century of the setup of the city. Therefore, any interested person can explore the reality of that epoch.

Furthermore there is the possibility of providing further development to the RPG through thematic forums and blogs (commenting incorrect historic statements, for instance) and uploading files and photos relating to the city development over time. These collaborations are moderated and validated by a group of teachers that was formed and that led to the creation of a school club called APEL 500 years.

In the short term, the development of this technological project envisages the construction of a prototype of the history of Funchal referring to the first 150 years of existence, successively extending the period of history in the following years.

Technologically, the RPG is based on the TorqueX engine games. This is a 2D game engine, modeled in 3D, including a complete light, physical and collision detection engine. The choice of engine took into account the fact that is free and uses the language C# which is to the working environment (IDE) the XNA Game Studio Express, also free.

**CONCLUSIONS**

The use of computers games, and especially, Role Play Games, can promote the development of users’ creativity, autonomy, responsibility and other decision related skills. The use of these games for learning is an immediate consequence of the need to put learners in a context where they must develop their knowledge in an effective way, that is, through visualization, interaction with the environment and other game characters (avatars or not) and decision making.

The RPG “Funchal 500 years” is an example: Players interpret different characters in the historical scenario of the setup of the city of Funchal, 500 year ago. Players must understand the logic of social and hierarchical relationships at the time, explore natural resources, develop trading skills, etc. Players will become aware of the social, cultural and historical development of the city through its initial years.

For the moment, the game has been tested, successfully, on school environments, where students upon playing the game are faced with questions concerning the historical time they’ve “lived” in: What kind of natural resources did pioneers had available? What kinds of items were traded with merchant ships? What was the social organization? What were the biggest challenges and dangers faced by the inhabitants? Etc.

But the RPG will also be used as part of the celebrations of the 500 years of the Madeira Island to let anyone understand and “feel” what was like being a Funchal citizen 500 years ago.

**REFERENCES**

Use the following as the guide for references:


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