Bringing School Psychology to the sandbox: designing an educational video game

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Abstract: This paper presents the gameplay concept for the development of a computer game to be used in undergraduate courses related to School Psychology, as an additional tool to engage professors and students at teaching and learning about school phenomena.

Introduction

School Psychology is a field aimed at promoting psychological health at school settings. In Brazil, it has been widely stated by many researchers (Antunes, 2008; Andrada, 2005; Martinez, 2009) that there are no models to follow when it comes to teach and characterize the work of a school psychologist. This is mostly because of the institutional complexity one might find at a school environment while trying to understand phenomena such as learning difficulties, troublesome student-teacher relationships, bullying and violence, to name a few.

As a branch of Social Psychology, School Psychology is supposed to avoid clinical methods to analyze and intervene in educational institutions. This, in general, implies that a school psychologist should not do psychotherapy while dealing with school problems. The focus of her work is then placed on understanding how a psychosocial problem arises and is maintained in the interrelated everyday routine of teachers, children and their families, and uses this knowledge for intervention programs.

In order to meet the educational requirements for a game-based learning experience of School Psychology, a computer game should allow the apprentice to learn how a school works and the role of a psychologist in it. Designing a game with such goals in mind is not a trivial accomplishment and demands a thorough prior study of this academic field so that its concepts, techniques and theoretical foundations can be translated into a reasonable interesting educational game.

We must stress the adjective “interesting” while referring to this educational game as we expect it to incorporate specific game design principles as opposed to instructional design approaches. By that, we mean to gather necessary resources to provide a sufficiently entertaining learning environment. In order to achieve this, we review some of both game-based education and game design literature for insights. Additionally, we draw inspiration from commercial games such as Gears of War 3 and Assassin’s Creed in an attempt to understand how their gameplay could offer relevant examples of how to engage and teach a player.

Gameplay

The game involves coping with a major problem: help prevent a school from losing its license due to its poor evaluations. The game’s main character is a school psychologist who seeks to satisfy the daily demands of the students and staff of a school in trouble. The basic mechanics of the game consists of elaborating diagnoses and proposing interventions. The player talks to other characters and gets demands that become more complex at every stage.

The game quests take place in a school and will be structured based on case studies in School Psychology. However, professors will be able to set the way a player is evaluated along a playtime. Professors will have a control panel where they can set up a gaming session, customizing problems as well as the possibilities for diagnostic interventions related to each case. The settings made by a professor will be available in the form of suggestions for other ones, creating a richer database for learning and teaching School Psychology.

We expect the player to experience our game like a hero. For this reason, he will find a problematic environment compatible with the presence of a psychologist with exceptional abilities, which is the way we present the backstory of the main character.

We expect the player to experience the role of a psychologist prior to officially being a competent licensed professional, which tends to be a common learning principle found in good video games (Gee, 2003, 2009). This could be a good strategy to foster player's autonomy as opposed to the apprentice position. As can be noticed in the gameplay of commercial video games, the player does not need to learn to be a soldier before playing, he or she is immediately placed in the role of a soldier and develops new skills as he or she needs to deal with this condition in specific challenging contexts.

In our preliminary investigations, we have found interesting methods still exploratory to development of games for education. According to Clark (2012), it's possible to distinguish two types of educational games: those in which the concepts of interest for learning are embedded in its mechanics and those in which the concepts are presented in an implicit way during the experience of the game. The first type would lead the player to adopt postures such as that of a scientist by requiring him or her to go around an environment, and collect data for resolving dilemmas. In the second type, the mechanics of the game is directly related to the operation of the phenomenon to be understood. The function of the player is to perform operations in the space of possibilities of a system while acting directly on a set of variables. In a study of the movement of objects according to the laws of physics, for example, a game of this type would allow the player to control values such as speed, acceleration and weight of objects, simulating movements of objects to the sake of formation of concepts. However, as Clark pointed out (2012), a conceptual formalization is more easily developed with the first type of game. We therefore expect to feed off the value of descriptive and explicit formation of concepts by including an intern to be supervised by player/psychologist in the school setting. We refer to a non playing character whose role will be to ask the player questions on the concepts and techniques common to School Psychology.

Figure 1: A psychologist (center) walking around the school.

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