

Abstract

Objective: Recently the role of information technology and computer based systems in improving education efficiency has been under attention and virtual education systems have been among the most effective and widely used ways to improve the quality of education in higher education institutions.

Game based learning is attracting considerable interest due to student performance, engagement and learning motivation. Challenging areas in the field of pharmacy education include inadequate physical space of educational pharmacies and limitation of students' time to get qualified for being community pharmacists. Considering these issues we tried to provide a virtual environment to improve the level of education for pharmacy students. This paper is an overview of designing and production of a game-simulation named "Pharmacy Unlocked", which can be used not only for educational purposes, but also for evaluating students' academic level. Moreover, students' feedback after trying Pharmacy Unlocked is reported.

Material and Method: After the introductory training courses, the game development document was expanded and the flowchart completed, then the design and modeling of medications and other objects needed for the interior layout of the pharmacy were paid. After completing the modeling process, the textures and materials were designed and executed, and after these steps, scene design and level design, lighting and color correction were carried out, respectively. Then, design of the different characters and clothes were done and the case scenario was written and the scoring system was defined. After the scenarios were completed, proprietary methods were developed to implement Rig and animation and the UI and 2D sections were designed. The next step involved programming, debugging, and finalizing Compile and Export. Finally, an evaluation form was designed and surveyed for job evaluation.

Results: This game made the players more interested in learning; it has the potential to increase learning efficiency and long-term content retention.

Conclusion: It is suggested that the game (Pharmacy Unlocked) can be used for educational purposes as well as students' academic level evaluation. It has the potential to be used as an evaluation tool in the universities & medical centers.

Keywords: computer game, simulator, urban pharmacy