عنوان مقاله:

Enhancement of educational games based on personality type indicators

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خلاصه مقاله:

Previous studies indicate that the use of adaptive learning and game techniques enhances learning process; nevertheless, the adaptation based on learner's personality has not been well researched in serious-game's literature. There are plenty of game-elements which can be used in an educational game, but the effect of them may vary due to differences in personality types of learners. The purpose of this paper is to investigate the impact of various game-elements on learning outcomes. With the aim of improving learning process we have focused on designing a game-based learning where the game-elements have been personalized based on learner's personality types. The developed game contains a non-adaptive mode and also an in-game adaptive mode that assigns game-elements due to learner's personality type. The results represented significant difference between engagement levels of two modes; in addition, learning outcomes were better for the adaptive mode. Besides, in this paper the sensitivity analysis of various personality dimensions relative to the game-elements has been determined and presented in a corresponding table. The results of this paper indicates that a well-designed game environment can improve the learning process. This paper presents the prominent and influential elements for each of personality types. Results of this paper can be used to improve effect of using game-elements in designing learning environments.

کلمات کلیدی:

Game-based learning, Game design, Game-element, Adaptive learning, Personalization, MBTI, Personality