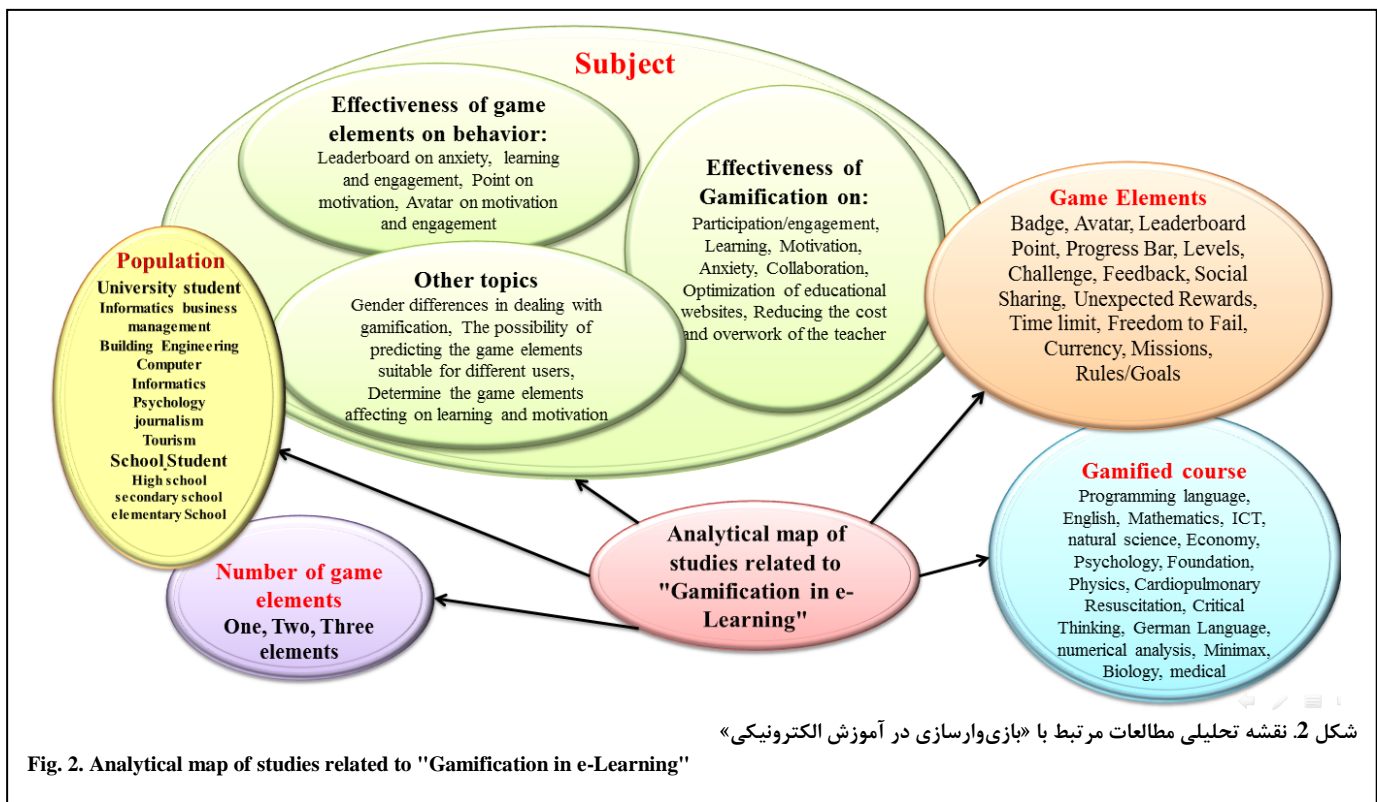


Gamification in E-learning in higher education: A systematic review of the literature

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Abstract

Despite the emergence and advancement of new technologies and, consequently, the change in lifestyle in recent decades, education systems have maintained the same traditional method of education and have not changed according to the characteristics of the digital generation. Meanwhile, digital generation features have been effective on their learning-teaching methods. One of the most important and recent developments in the field of modern technologies is gamified learning environments. Purpose of this paper is to review of articles in the field of "Gamification in e-Learning", provide content analysis of this field and its effectiveness in education. After searching the databases with related keywords and based on input criteria, 60 relevant articles were selected in this study. The selected articles were analyzed in terms of the game elements, gamified e-learning courses and the purpose of the articles. The effectiveness of the gamification on participation, learning, motivation, anxiety, peer assessment, collaboration, website optimization, cost reduction and faculty load were among the subject areas of these articles. The programming languages and English language were the most gamified educational courses. The game element point, leaderboard, badge, levels, challenge and feedback were used more than other elements. The results indicate the effectiveness of gamified e-learning environments to increase learning, participation and motivation of learners.



Conclusions

The results confirm the usefulness of the gamified e-learning environments to increase learning, participation and motivation of learners in higher education. The present study seeks to provide a comprehensive overview of articles in the field of "Gamification in e-learning". Undoubtedly, in order to succeed in projects related to the "Gamification in e-learning", looking at its different dimensions and planning in these areas will be very fruitful, and research such as this study can provide a comprehensive view for long-term planning for designing gamified e-learning environments in higher education.