Editorial

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This issue features five research papers, that are briefly outlined here below.

"The Effects of Surprising Events on Promoting Social Change in Unwinnable Persuasive Games", by Isnanda et al. [1], aims to gain insight into the effects of surprising events in games. They conducted a 2 x 2 factorial between-subject experiment with an additional no-treatment control group. The results suggest that delaying the revelation to create a surprising event can promote the same level of donation from players, regardless of their playing time. On the other hand, longer playtime is important if players know the context from the beginning.

"Improved Reinforcement Learning in Asymmetric Real-time Strategy Games via Strategy Diversity", by Dasgupta and Kliem [2], investigate the use of artificial intelligence (AI)-based techniques in learning to play a 2-player, real-time strategy (RTS) game called Hunting-of-the-Plark. The authors analyze the performance of different deep reinforcement learning algorithms to train software agents that can play the game. Existing reinforcement learning techniques for RTS games enable players to converge towards an equilibrium outcome of the game but usually do not facilitate further exploration of techniques to exploit and defeat the opponent. To address this shortcoming, they investigate techniques including self-play and strategy diversity. The authors show that strategy diversity could be used as an effective means to alleviate the performance of the disadvantaged player caused by the asymmetric nature of the game.

"Framework for Using Professional Engineering Tools to Develop Games in Post-Secondary Education", by Kornevs et al. [3], to assess the feasibility of creating digital educational games by shaping professional tools themselves as games for post-secondary education, and to develop a framework for such a process. Their article demonstrates a case for applying the proposed framework to develop a game for a communication network course using a computer network simulator. The findings of this work highlight the importance of creating such games in higher education based on professional tools.

"Children's Rights Education via Game-based Activities: An Intervention in Kindergarten", by Theonia and Gouscos [4], presents an educational intervention that was designed and developed for the introduction of preschoolers to issues of survival, development, non-discrimination and protection rights through digital games. Results showed that, following the intervention, individual rights occupied a more central place in the children's self-awareness.

"How can a foundation be outlined for a successful serious game to increase reading engagement", by Bjørner et al. [5], investigates the support of a mandatory reading of a novella for high school students by a serious game. The assessment relies on a questionnaire and in-depth interviews with teachers and students. The findings positively affected students' engagement in the experimental group. Primarily focused attention and reward are higher in the experimental group. However, there was no difference in the narrative engagement between the treatment and control groups, indicating that the story (digital or not) is well explained. The qualitative findings revealed positive comments, especially for the

reading engagement and the story world. For the game design, the authors outlined how to transform the principles from Sweetser and Wyeth to applied design implementations.

References

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