Editorial

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This issue of the International Journal of Serious Games (second number of the ninth year) features seven papers, that I briefly present in this editorial.

June is the month for submitting manuscripts to the 11th edition of GaLA Conf (https://conf.seriousgamessociety.org). The conference, organized by Kristian Kiili, of Tampere University, will be held in Tampere (Finland). I am happy that the conference will give the opportunity to gather together in person and continue our talks and analysis face by face. The selected best papers from the conference will be invited to participate to a special issue of our journal.

And here is a short introduction to the seven papers of the current issue.

"*Effect of Game-based Learning using Live Streaming on Learners' Interest, Immersion, Satisfaction, and Instructors' Perception*", by W.-H. Lee et al. [1], aims to approach improving the perception of game-based learning (GBL) as an advantage of "watching games" beyond "playing games" by using live streaming for game-based learning. This study conducted GBL and game streaming learning for 210 third-year middle school students, compared the effects of GBL on learning interest, immersion, and satisfaction with the results of previous studies to verify the design and prove the combined effect of live streaming and GBL. In addition, in-depth interviews with instructors who conducted GBL confirmed that awareness of the introduction, value, and finance of GBL improved.

"*Empirical Study of Adaptive Serious Games in Enhancing Learning Outcome*", by Gaurav et al. [2], presents an experimental comparison of the user experience (UX) of two cybersecurity serious games, each one implemented in two versions: adaptive and non adaptive. The analysis of the results in terms of objective evaluation of learning outcomes and subjective feedback from players for UX tend to show a marginal improvement by introductionof adaptive behaviour in both games.

"*TAECon, a web-based platform to promote STEM*", by Boada et al. [3], presents TAECon, a web-based platform designed to support STEM promotion sessions. The platform combines gamification, serious games, content editors, and automatic correction strategies in a single framework. To study usability, more than 250 students answered a questionnaire and 17 secondary school teachers were interviewed. As reported by the information collected, the platform was appreciated by both students and teachers.

"*Virtual Reality versus Desktop Experience in a Dangerous Goods Simulator* ", by Chover et al. [4], analyzes the differences between playing serious first-person games on a desktop computer versus playing in Virtual Reality. The authors compared two versions of a dangerous goods unloading simulator: one for desktops, with keyboard and mouse-based interaction, one for Virtual Reality devices. The study shows that the Virtual Reality experience produces a better overall game experience for most analyzed items. Nevertheless, the results highlight a significant dependence between the application type and the game experience induced on the player.

"*Design Principles for Integrating Gamification into Distance Learning Programs in Higher Education: A Mixed Method Study*", by Sümer and Aydın [5], aims to address the

issue of low completion and high dropout rates in online and distance learning through play and gamification. Findings indicate that integrating gamification into the online and distance learning programs has a significant impact on increasing students' visits to the learning environment. The authors report a statistically significant difference regarding to academic performances for gamified situations.

"Games to support disruptive technology adoption: the MUST Game use case", by De Rosa and Strode [6], presents the use case of the Maritime Unmanned Systems Trust (MUST) Game, which goal is to capture beliefs, attitude and perspectives of the participants with respect to the employment of maritime unmanned systems (MUS). The paper describes the game and an analysis of the outcomes of its deployment. The results show how the MUST Game design has been effective in eliciting constructive discussion around the use of MUS in maritime missions, as well as in the collection of assessments and decisions, which are currently being used in algorithmic development.

"Serious Games in Spatial Planning: Strengths, Limitations and Support Frameworks", by Sousa et al. [7], presents an overview of the main strengths and limitations of applying serious games in spatial planning and discusses available support frameworks. It proposes some guidelines for researchers and practitioners that want to profit from game usage. The authors stress that Serious Games can be powerful tools but can easily lead to failure processes, which demand previous systematic analysis of what planners may do and expect from games.

References

[1] W.-H. Lee, H.-M. Shim, H.-G. Kim, "*Effect of Game-based Learning using Live Streaming on Learners' Interest, Immersion, Satisfaction, and Instructors' Perception,*" International Journal of Serious Games, 9(2), 3-26, 2022. https://doi.org/10.17083/ijsg.v9i2.457

[2] D. Gaurav, Y. Kaushik, S. Supraja, M. Yadav, M. P. Gupta, M. Chaturvedi, "*Empirical Study of Adaptive Serious Games in Enhancing Learning Outcome,*" International Journal of Serious Games, 9(2), 27-42, 2022. https://doi.org/10.17083/ijsg.v9i2.486

[3] I. Boada, A. Rodríguez, B. Llenas, P. Xiberta, "*TAECon, a web-based platform to promote STEM,*" International Journal of Serious Games, 9(2), 43-42, 2022. https://doi.org/10.17083/ijsg.v9i2.488

[4] M. Chover, J. M. Sotoca, C. Marín-Lora, "*Virtual Reality versus Desktop Experience in a Dangerous Goods Simulator,*" International Journal of Serious Games, 9(2), 63-78, 2022. https://doi.org/10.17083/ijsg.v9i2.493

[5] M. Sümer, C. H. Aydın, *"Design Framework for Social Interaction with Location-based Games,"* International Journal of Serious Games, 9(2), 79-91, 2022. https://doi.org/10.17083/ijsg.v9i2.494

[6] F. De Rosa, C. Strode, *"Games to support disruptive technology adoption: the MUST Game use case,"* International Journal of Serious Games, 9(2), 93-114, 2022. https://doi.org/10.17083/ijsg.v9i2.492

[7] M. Sousa, A. Pais Antunes, N. Pinto, N. Zagalo, *"Serious Games in Spatial Planning: Strengths, Limitations and Support Frameworks,"* International Journal of Serious Games, 9(2), 79-91, 2022. https://doi.org/10.17083/ijsg.v9i2.510