Evaluating students' perception of Scrum through a learning game [1]

Guillermo Rodríguez[1], Santiago Vidal[1], Claudia Marcos[1,2] and Ana M. Saucedo[3]

[1]*ISISTAN Research Institute (CONICET-UNICEN), Tandil, Buenos Aires, Argentina.*
[2]*ISISTAN Research Institute (CIC-UNICEN), Tandil, Buenos Aires, Argentina*
[3]*Universidad Argentina de la Empresa (UADE), Instituto de Tecnología (INTEC), Buenos Aires, Argentina*

Abstract. Games for learning help students and professionals to incorporate new knowledge through a playful experience. With the popularization of virtual education (partially due to COVID-19), there is a need for new tools that complement virtual educational environments. To deal with this need, we present Scrum Game, a mobile application game that aims to support the Scrum software methodology teaching and training. Scrum Game offers 42 activities grouped in levels with specific learning goals. This paper reports on a controlled experiment that evaluates Scrum Game in a course with more than 160 students. We assessed Scrum Game's effectiveness in terms of (i) user performance (i.e., students' marks and number of levels/activities completed) and (ii) user experience (i.e., usability). We found that students who used Scrum Game outperformed those

---

[1] Rodriguez, G., Vidal, S., Marcos, C., & Martínez Saucedo, A. C. Evaluating students' perception of Scrum through a learning game. Computer Applications in Engineering Education.

who did not use it. We also found that students think that Scrum Game exhibits an enjoyable user experience.