

## Evaluating students' perception of Scrum through a learning game <sup>1</sup>

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**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

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

**Keywords:** Scrum, Learning experience, Learning assessment, Gamification, Game for learning.