Can Scrum function as an educational scaffold to improve students' self-regulation and attitude towards uncertainties in challenge based learning?

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Abstract:

TU/e aims to make a transition from teaching to learning by implementing Challenged-Based Learning (CBL). CBL is a blended learning approach in which students, in multidisciplinary teams, acquire and apply knowledge in real-life, open-ended challenges. CBL matches what students encounter in their professional lives; however increases the cognitive load students experience during the course. The aim of this project is to explore if a Scrum-like blended course organization might be a useful scaffold to structure the learning process in an one-year honor bachelor course at the Mechanical Engineering faculty for students from all faculties of TU/e while being engaged in CBL. Fifteen students (who were unfamiliar to each other) and two teachers participated, and three sprints were examined. During each sprint, weekly screenshots of the scrum boards were made and teachers filled in a logbook; after the sprint the student teams were interviewed and a short questionnaire on academic self-efficacy and cognitive load was conducted.The project will contribute to knowledge about under which circumstances a Scrum-like course organization is an effective educational scaffold to promote self-regulated learning and improve students' attitude towards uncertainties.