

## **An Ontology Framework to Apply Gamification in CSCL Scenarios as Persuasive Technology**

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### **Abstract**

The use of Computer-Support Collaborative Learning (CSCL) scripts is an effective approach to support meaningful interactions and better learning. Unfortunately, in some situations, scripted collaboration decreases the motivation and engagement of students, which makes more difficult to use it over time. To deal with this problem, we propose to apply gamification as Persuasive Technology (PT) to induce the students to follow the scripts in the proper way without the sensation of obligation, avoiding in this way the motivation problems. To achieve this goal, it is necessary an exhaustive knowledge on gamification and its impact on Collaborative Learning (CL). Thus, we are developing an ontology to provide a formal systematization of the knowledge on gamification and its proper application in CL scenarios. In this paper, we focus in the formalization of basic concepts related to gamification as a PT in CL scenarios. Furthermore, to demonstrate the applicability of our approach, we present a case study, where we built and apply a personalized gamification model based on the ontological structures defined here.