Gamification in programming language learning: a review and pathway

ABSTRACT

For the past several years, many gamification applications have been introduced and implemented for programming language learning. However, existing gamification applications are still lacking in terms of gamification specialization in learning specific programming languages. This concept paper presents a gamification literature review in programming language learning. Findings suggest that more gamification applications should be developed in the future especially for learning specific website development programming languages as gamification has proven to be one of the creative approaches in enhancing student's motivation and learning engagement. This concept paper review classifies existing gamification application and offers valuable insight and pathways of programming language learning gamified solutions. Our future research direction is to work on a case study of integrated gamification application in digital learning platform based on Microsoft Teams, and how those gamification elements could improve student's engagement and enjoyment in learning.

Keyword: Programming; Gamification; Learning; Website