A theoretical framework to study conceptual understanding and earthquake readiness among school students at Ranau, Sabah

ABSTRACT

School students are a group that is very vulnerable to the risk of earthquake disasters in schools. Hence, a clearer understanding of the concept of earthquakes and readiness for earthquakes is a key element that needs to be given special attention by teachers in educating students. This scenario has prompted various studies to be conducted to evaluate and identify methods and strategies to improve understanding of concepts and earthquake preparedness to students. This is to help reduce risk and build disaster resilience among students. Therefore, the integration of the use of robots in the game learning module is able to help students in understanding the important concepts of earthquakes and the readiness that need to be taken when facing this disaster. This is due to the potential of the inclusion of robots in the teaching and learning process of games to boost student intrinsic motivation, enhance their critical thinking, problem-solving, and metacognition skills, and make it simpler for them to understand difficult concepts. To ensure that the teaching and learning process of the robot game module is perfectly implemented and meets the learning objectives, it is crucial to choose the appropriate theory. This article suggests a theoretical framework based on inclusive review of literatures to explore conceptual understanding of earthquake and earthquake preparedness among school students at Ranau, Sabah.