

Utilizing Minecraft Java Edition for the Application of Fire Disaster Procedures to Establish Fire Disaster Readiness for Grade 12 STEM students of DLSU-IS

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Abstract : This study focuses on analyzing the performance of Grade 12 STEM students of De La Salle University - Integrated School that has completed the Disaster Readiness and Risk Reduction course in handling fire hazards through Minecraft Java Edition. This platform is suitable because fire DRRR is challenging to learn in a practical setting as well as questionable with regard to supplementing the successful implementation of textbook knowledge into actual practice. The purpose of this study is to acknowledge whether Minecraft can be a suitable environment to familiarize oneself to fire DRRR. The objectives are achieved through utilizing Minecraft in simulating fire scenarios which allows the participants to freely act upon and practice fire DRRR. The experiment was divided into the grounding and validation phase, where researchers observed the performance of the participants in the simulation. A pre-simulation and post-simulation survey was given to acknowledge the change in participants' perception of being able to utilize fire DRRR procedures and their vulnerabilities. The paired t-test was utilized, showing significant differences in the pre-simulation and post-simulation survey scores, thus, insinuating improved judgment of DRRR, lessening their vulnerabilities in the possibility of encountering a fire hazard. This research poses a model for future research which can gather more participants and dwell on more complex codes outside just command blocks and into the code lines of Minecraft itself.

Keywords : minecraft, DRRR, fire, disaster, simulation

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