

# **The Model of Developing Students' Preparedness Character toward Earthquake Through Science Learning Containing Pedagogy of Disaster Risk Reduction**

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## **ABSTRACT**

*Schools play a role in educating students and other school members to have preparedness in facing disasters through the Disaster Risk Reduction (DRR) program. Science is a very potential subject to be integrated with DRR. To realize science learning that integrates DRR and is able to develop preparedness, pedagogy of disaster risk reduction is needed. The objectives of this study are to (1) produce a pattern (model) for developing earthquake preparedness in the form of a science learning planning design that contains pedagogy of disaster risk reduction using interactive learning model; (2) find the feasibility of the science learning design; (3) know the effectiveness of the science learning design in developing preparedness. The research method used was the adaptation of the Research and Development model according to Borg & Gall. For testing the effectiveness of learning design, the quasi experiment method was used with a nonequivalent pretest posttest control group design. Data collection techniques used includes the assessment of learning design products, questionnaires and observations to measure the attainment of preparedness. The feasibility of the learning design data will be analyzed qualitative and quantitative descriptively, while to determine its effectiveness, statistic inferential was used. The independent t test was implemented to see the significant difference in the effect of using the pedagogy of disaster risk reduction learning design. Furthermore, to find out the level of its effectiveness, effect size analysis was used. The results show that: (1) a pattern (model) of developing earthquake preparedness in the form of a science learning planning design containing pedagogy of disaster risk reduction using interactive learning model has been produced; (2) the science learning design developed is declared to be feasible and categorized as "very good"; and (3) the science learning design developed is effective in developing earthquake preparedness.*

*Kata Kunci: disaster preparedness, earthquake, science learning, pedagogy of disaster risk reduction*