



## Disaster Education Based on Legitimate Peripheral Participation theory

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### **Abstract**

It is often suggested that disaster education should not be a one-way knowledge transfer from disaster experts to non-experts, but a bilateral interaction between the two sides. However, in reality, it is more likely to be in the former style, resulting in less satisfaction on both sides. In this study, the authors propose a new framework for disaster education, based on legitimate peripheral participation theory, in which disaster experts and non-experts can interact very closely even to remove the barriers between the two sides. Specifically, the present study introduces two practical researches in disaster education. The first one is an attempt to convert a seismological observatory into a disaster science museum with collaboration among seismologists(experts) and volunteer staff(non-experts). The second one is an attempt to get elementary school children involved into a cutting-edge seismological research by placing a mini-size seismometer at a school. As a result, volunteer staff at a museum has got a new identity in a joint practice, i.e., semi-experts, who mediate between experts and non-experts. Through class on hypocenter determination using materials made from real earthquake waveforms, students understand fault, transmission route, and ground response information in an integrated manner. At the same time, they realized that they had inherited the experience of past historic earthquakes. The results are discussed from a view point of legitimate peripheral participation theory.

*Keywords: disaster education, legitimate peripheral participation, science communication, seismology*

