

GSU011-05

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## Do the earthquakes bring us benefit ?

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In the science education, the disaster which human society receives is often described when dealing with natural phenomena, e.g., earthquakes, volcanoes and typhoons. However, the view that the benefit those natural phenomena bring to human society should also be emphasized has been proposed in recent years. In the volcanic field of earth science education, the benefit of volcanoes, e.g., a hot spring, a geothermal energy, a topography and a landscape is important as well as disaster of volcanoes. And students are learning that human society has been run while receiving both disaster and benefit by the volcanic activity.

On the other hand, how is the current state of the earthquake field in the scuence education? Many textbooks surely mention it about a disaster caused by seismic activity with photographs. However, there are few things describing a benefit of the seismic activity. I developed the teaching program that includes the benefit of the earthquake about the origin of Lake Biwa and relations of the seismic activity, and I practiced the program for students and citizens, but the evaluation was divided into two: "we understand that human beings receive a benefit of earthquake well", and "it is outrageous that an earthquakes bring a benefit though much life is lost by an earthquake disaster"

However, it will not lead to understanding an earthquake definitely even if I emphasize only the menace of the disaster. About the double-facedness called troublesome and thankful of natural phenomena, based on a questionnaire result, it is considered what kind of contents in the disaster prevention education should be constructed and be unfolded in.

Keywords: disaster prevention education, natural disaster, double-facedness, troublesome and thankful