

## Preliminary survey about understanding of the volcanic rock texture in students of faculty of education and related discussion in the earth science instruction

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In Japan, every students entered into faculty of education had learned the common curriculum through elementary and middle schools. Preliminary inspection using closed questionnaire was executed to measure the degree of understanding about earth science. 48 students from 4 of 26 student grouping in some lecture were surveyed through 8 questions. About 13 % in those students could correctly designate the groundmass in the porphyritic texture drawing. It is slightly decreased in comparison with the result of Tojo (2006) reported about 20%. This questionnaire shows the drawing of thin section image with the caption of “This is a image of andesite section. Paint all the area of groundmass in this image” . The groundmass looks like hyalopilitic texture, and about 21.7% painted only the fine mineral grains (groundmass minerals), and it seems more analyses must be needed. “Porphyritic texture” is described as “relatively large crystals (phenocrysts) set in a finer-grained or glassy matrix” in Tomkeieff (1983), which refers Rosenbusch (1887), and almost same description was given in every science textbooks of middle school in Japan. At decline of the 19th century, petrologists already utilized polarized microscope and noticed fine grains in the groundmass texture. No data may available that how many middle schools in the present day equip the polarized microscope, or how many science teachers are good at using those microscopes. As a result, we should support increasingly the middle schools for the better practical education in petrological teaching unit.

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