

- ▶ Mizoguchi, T. (2003). An epistemological obstacle related to the equal symbol and to the notion of equality. *Tottori University Journal of the Faculty of Education and Regional Sciences/Educational Science and the Humanities*, 5(1), 25-34. (in Japanese)

## Summary

This research focuses on students' conceptions of the equal symbol and on their notion of equality which evaluates the equal symbol, especially in the field of geometric figures rather than the field of arithmetic or algebra. The purpose of this paper is solving a research subject: "what conceptions do students have of the equal symbol used in the field of geometric figures, and what are their peculiar difficulties?" For this, in this research, the survey carries out for the sixth, the seventh, and the eighth graders, in which students chose suitable sets of triangles from the proposed figures, make the expressions using the equal symbol, and describe the reasons why their expressions are valid. Analysis is made from the viewpoint of language to clarify students' conceptions and their difficulties based on their descriptions. As a conclusion, the notion of "同じ *onaji*" (it means same, equal, identical, etc.) is identified as an epistemological obstacle related to the equal symbol and the notion of equality.