

EPISTEMOLOGI MATEMATIKA DI SD DAN IMPLIKASINYA DALAM PEMBELAJARAN

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ABSTRACT

For the design of this study, epistemology led researchers to ask questions such as: (1) What are the sources of mathematical knowledge in elementary school? (Is it empirical or rational?), (2) How is the source of knowledge used by students, (3) What is the variety of mathematics in elementary school and how students learn it ?, and (4) How can the answers to the three questions be used to design and do math learning at elementary school?

Quantitative descriptive was used as research method where it comprises an observation study with 10 elementary school students and teacher subjects in the city of Yogyakarta and Sleman Regency. The results of the study show the source of mathematical knowledge of elementary students is from the five senses and logical reasonings. The source of knowledge based on the senses is called empirical, while the source of knowledge obtained from the process of thinking using mind reason is called rational. Elementary students can study Mathematics using their senses and logical reasoning. In general, elementary Mathematics variations studied by students consist of numbers, number operations, measurements, units of length, weight, temperature and time, geometry, and statistics (data presentation). The way elementary students learn mathematics is generally by being invited to see various problems that arise in everyday life. The sources and variations of mathematical implications for learning mathematics in elementary school are that teachers can sort out the sources of knowledge with existing mathematical variations by selecting sources, learning techniques, and activities or mathematical problems.

Kata Kunci: *elementary school mathematics, epistemology*