#### Universität zu Köln Mathematisch-Naturwissenschaftliche Fakultät

Institut für Mathematikdidaktik

# Kolloquiumsvortrag

TEACHERS' BELIEFS AND EXPECTATIONS ABOUT STUDENTS' THINKING WHEN TEACHING NUMBERS IN PRIMARY SCHOOLS

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#### ABSTRACT

Teaching mathematics in Indonesian primary schools is often characterized by knowledge transfer: the teachers provides information or demonstrates mathematical procedures and, in succession, expects students to practice the new skills and to apply the new knowledge. The teaching and learning process often resembles a monologue. These conditions are influenced by teachers' beliefs and expectations on teaching mathematics. We have conducted an exploratory pilot study to look at teachers' beliefs and expectations about students' thinking when teaching the safe handling of numbers and sound proficiency of the basic arithmetic functions in Indonesian primary schools. The study involved 6 primary school teachers. This paper will present a sample of the teachers' works when solving problems about numbers that reflect their beliefs, some results from classroom observations to show teachers' beliefs and expectations about students' thinking, and the impact on students' reasoning about numbers. Furthermore, a design for a future research collaboration will be presented.