

## MATHEMATICS-RELATED BELIEFS AND TECHNOLOGY: A STUDY AMONG SENIOR HIGH SCHOOL STUDENTS IN AN INDONESIAN CONTEXT

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Although much has been written about beliefs in mathematics, little attention has been paid to specific student beliefs about mathematics in the 21<sup>st</sup> century including students' use of technology as well as their beliefs concerning the role of technology in mathematics learning. The purpose of this study is to describe the findings of empirical studies among senior high school students (N=350) that aimed to explore students' daily activities dealing with technology, their beliefs about mathematics, and their beliefs about the role of technology in mathematics in an Indonesian context. Several questions dealing with daily life activity were asked. The Mathematics-related beliefs questionnaire (MRBQ) developed by Op't Eynde and De Corte (2003) and a questionnaire exploring students' beliefs about the role of technology were administered. Results showed that 42% of the students used digital technology for 6-10 hours per day, 17% of the students spent 1-5 hours per day on the internet. 80% of them used social media on a daily basis, and only 8% of them accessed learning resources every day. When asked about the most helpful resource to establish understanding in mathematics, 5% of the students chose books, 70% said it was the teacher, 5% selected peers, 2% the parents as resources, and 18% of the students opted for digital technology. 44% of the students believed that digital technology had the potential to change the role of teachers. As regards a mathematics-related belief system, exploratory factor analysis identified the following five factors: beliefs about the role and function of the teacher, beliefs about mathematics learning, beliefs about the self as a mathematics learner, beliefs about mathematics as a domain, and beliefs about technology in mathematics learning. The results provide valuable information for teachers to improve the quality of education in Indonesia. Teachers were found to play the most important role in helping students understand mathematics. Therefore, they should encourage students to actively use technology for learning purposes.