

# THE EFFECT OF NUMERATION-BASED DIGITAL FLIPBOOKS ON IMPROVING STUDENTS' MATHEMATICS QUALITY OF INSTRUCTION (MQI) COMPETENCY

by Dr. Lia Yuliana, S.Pd., M.Pd.Prof. Dr. Lantip Diat Prasajo, S.T., M.Pd. Dr. H.Fery Muhamad Firdaus, S.Pd., M.Pd. Awanis Akalili, S.I.P., M.A..

## ABSTRACT

This research aims to investigate the impact of using numeracy-based digital flipbooks in improving students' Mathematics Quality of Instruction (MQI) in Mathematics subjects. The background of the problem highlights the challenges in improving students' mathematical understanding and competence. The use of digital technology was identified as a potential solution to improve mathematics learning. The research method used involves the application of digital flipbooks in the context of mathematics teaching and data collection to measure improvements in MQI. The research method used was a quasi-experiment with a non-randomized Pretest-Pstest Control Group design. The data collection techniques used were Mathematics Quality of Instruction (MQI) Competency practice tests, observation and interviews. Based on the results of research that has been carried out, numeracy-based digital flipbooks have a significant influence on the Mathematics Quality of Instruction (MQI) of PGSD students in their mathematics teaching. This is shown by the 2-tailed significance value from the paired t test producing a score of  $0.000 < 0.05$ , so it can be concluded that numeracy-based digital flipbooks have a significant effect on MQI. Furthermore, the effect size from the Cohen-d test shows a score of 4.95, which means that the numeracy-based digital flipbook has a very high positive influence on MQI. Another finding from the research is that digital flipbooks make learning more interactive, facilitate the evaluation process and make students more active. The digital flipbook also increases creativity and ICT mastery skills for prospective teacher students

Kata Kunci: *digital flipbook, mathematics quality of instruction, numeration, primary school*