

# WORKSHOP ON DEVELOPING MATHEMATICS TASKS FOR MEASURING HIGHER ORDER THINKING SKILLS: A COLLABORATIVE WORK WITH TEACHERS FROM SCHOOL PARTNERS

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## ABSTRACT

*The workshop was aimed to improve junior high mathematics teachers' ability in developing instruments for measuring higher order thinking skills (HOTS). The ability to develop such instrument could support the process of learning mathematics as intended by the Curriculum 2013.*

*The workshop was conducted in the Department of Mathematics Education Universitas Negeri Yogyakarta. The participants of the workshop were 24 mathematics teachers from 19 junior high schools, i.e. SMP/MTs, in the Province of DI Yogyakarta. The workshop was held thorough classroom discussion, individual work, and presentation.*

*The results of the workshop show teachers' ability to comprehend the students' cognitive levels and the construct of mathematics problems that could be used to measure students' higher order thinking skills. The workshop yielded a total of 50 mathematics tasks comprising 30 open-response items and 20 multiple-choices items. The validity of the items was seen from three aspects, i.e. content, construct, and language. The mean value of the item validity are 3.81 and 3.84, respectively for the open-response and multiple-choices items. These values reflect that the items have a good qualification. **Among the three aspects, the lowest value of the item validity is found for the content aspect, i.e. 3.44 and 3.48 for the open-response and multiple-choices items.** In spite of their good validity, the items were not yet tried out so that there was no empirical data about how the items could measure students' HOTS. For further workshop it is important to train teachers not only how to develop instruments but also how to analyze the quality of their instruments.*

Kata Kunci: HOTS; mathematics teachers; school partners