

# How Could We Measure the Pedagogical and Professional Competences of Prospective Mathematics Teachers?

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## ABSTRACT

**Abstract.** Teacher is an important component determining the success of education. In order to improve the quality of teachers, the Indonesian government has established a number of policies such as the Teacher and Lecturer Act of 2005 (*UU Guru dan Dosen*) and the Government Regulation No. 74/2008 that sets the academic qualification for teacher. Nevertheless, the results of Competence Test for Teacher (*Uji Kompetensi Guru*) indicate the low competences of Indonesian teachers. Considering these facts, this study is aimed to develop instruments to measure the competences of prospective mathematics teachers participating in the Teacher Professional Education program (PPG). These instruments could provide early indication for improving the quality of teachers. This study employed a research and development approach; in particular the ADDIE model. The phases of this study comprised: (1) analysis phase for identifying the needs and content material; (2) design phase which dealt with constructing the indicators of the instrument; (3) development phase at which the indicators were elaborated into test items; (4) implementation of the prototype of instrument; and (5) evaluation that was aimed to evaluate the quality of the instrument. The subjects of this study were 70 students at Program PPG.

Kata Kunci: *instruments, pedagogical competence, professional competence, prospective mathematics teachers*