

## ABSTRAK

**R. Widi Lestari (NIM : 131414041). 2017. Profil Metakognisi Siswa Kelas XI IPA SMA Pius Bakti Utama Dalam Menyelesaikan Masalah Matematika Tentang Peluang. Skripsi. Program Studi Pendidikan Matematika, Jurusan Pendidikan Matematika dan Ilmu Pengetahuan Alam, Fakultas Keguruan dan Ilmu Pendidikan, Universitas Sanata Dharma Yogyakarta.**

Penelitian ini bertujuan untuk mendeskripsikan profil metakognisi siswa dalam memecahkan masalah matematika berdasarkan pada langkah pemecahan masalah Polya. Profil metakognisi yang dimaksud adalah tahap metakognisi : *planning, monitoring, evaluating*; aspek metakognisi dalam matematika: pengetahuan metakognitif, *belief and intuitions*, serta *self-regulation*; level metakognisi : *tacit use, aware use, strategic use, reflective use*.

Penelitian ini merupakan penelitian deskriptif kualitatif. Subjek penelitian ini adalah 3 siswi kelas XI IPA di SMA Pius Bakti Utama Bayan yang memiliki kemampuan berbeda yakni tinggi, sedang dan rendah. Data yang diperoleh dari penelitian ini adalah data hasil wawancara dan deskripsi kegiatan yang dilakukan siswi selama mengerjakan soal.

Instrumen utama dalam penelitian ini adalah peneliti sendiri dibantu dengan lembar soal esai dan panduan wawancara. Penyelesaian soal esai akan di kelompokan berdasarkan langkah pemecahan masalah Polya. Tahap analisis data yang dilakukan yakni reduksi data, kategorisasi data dan penarikan kesimpulan. Hasil analisis data yang telah dilakukan mendapatkan kesimpulan sebagai berikut.

Pada tahap *understanding the problem*, semua subjek berhasil melakukan tahap dan aspek metakognisi secara lengkap dan berada pada level *strategic use*. Pada tahap *devising the plan*, subjek berkemampuan tinggi berhasil melakukan tahap dan aspek metakognisi secara lengkap dan berada pada level *reflective use*. Sedangkan subjek berkemampuan sedang dan rendah melakukan tahap metakognisi: *planning, monitoring* dan aspek metakognisi: *self regulation*. Keduanya berada pada level *strategic use*. Pada tahap *carrying out the plan*, semua subjek melakukan tahap metakognisi: *monitoring, evaluating*. Aspek metakognisi: pengetahuan metakognitif, hanya nampak pada subjek berkemampuan tinggi saja. Subjek berkemampuan tinggi berada pada level *strategic use* dan kedua subjek lain berada pada level *tacit use*. Pada tahap *looking back*, semua subjek melakukan tahap metakognisi: *monitoring, evaluating*. Aspek metakognisi: pengetahuan metakognitif, nampak pada subjek berkemampuan sedang dan rendah sedangkan *self-regulation* nampak pada subjek berkemampuan tinggi. Pada tahap ini, semua subjek berada pada level *aware use*.

**Kata kunci:** aspek metakognisi, langkah pemecahan masalah Polya, level metakognisi, peluang, tahap metakognisi.

## ABSTRACT

**R. Widi Lestari (NIM : 131414041).** 2017. *The Profile of Metacognition of Students of Class XI IPA Pius Bakti Utama Senior High School in Solving Mathematical Problems on Probability.* Undergraduate Thesis. Mathematics Education Study Program. Department of Mathematics and Science Education, Faculty of Teacher Training and Education, Sanata Dharma University, Yogyakarta.

This study aimed to describe the profile of students' metacognition in solving mathematical problems based on the Polya problem solving steps. Metacognition profile in question involved metacognition stages: planning, monitoring, evaluating; aspects of metacognition in mathematics: metacognitive knowledge, belief and intuitions, and self-regulation; levels of metacognition: tacit use, aware use, strategic use, reflective use.

This study was a qualitative descriptive study. The subjects of this research were 3 female students of XI IPA grade at Pius Bakti Utama Bayan Senior High School which had different capability in mathematics that is high, medium and low. Data obtained from this research were data of interview results and description of activity done by student during doing problem.

The main instrument in this study was the researcher herself assisted by a sheet of essay questions and interview guides. The completion of the essay would be grouped based on Polya's problem-solving steps. Stages of data analysis performed were data reduction, data categorization and drawing conclusions. The results of data analysis which had been done gave the following conclusions. In understanding the problem solving steps, all subjects successfully performed the phases and aspects of metacognition completely and they were at the level of strategic use. In the devising plan step, the highly capable subject successfully performed the stage and metacognition aspects completely and was at the level of reflective use. The subjects of medium and low ability performed metacognition stages: planning and monitoring and metacognition aspect: self regulation. Both were at the strategic use level. In the carrying out of the plan, all subjects performed the metacognition stages: monitoring and evaluating. The metacognition aspect: metacognitive knowledge, appeared only in the highly capable subject. Highly capable subject was at the strategic use level and both subjects were at the tacit use level. At the looking back step, all subjects performed the metacognition stages: monitoring and evaluating. The metacognition aspect: metacognitive knowledge, appeared in the medium and low-ability subjects, while self-regulation appeared in the the highly capable subject. At this stage, all subjects were at the aware level.

**Keywords:** metacognition aspect, Polya problem solving steps, metacognition level, probability, metacognition stage.