

ABSTRAK

Lisnawati, Nining. 2017. Analisis Kesalahan dalam Kemampuan Pemecahan Masalah Matematika Siswa Pokok Bahasan Operasi Aljabar Berdasarkan Prosedur Newman. Skripsi, Pendidikan Matematika. Universitas Islam Sultan Agung. Pembimbing I. Imam Kusmaryono, S.Pd., M.Pd., Pembimbing II. Nila Ubaidah, S.Pd., M.Pd.

Kata Kunci : Analisis Kesalahan, Kemampuan Pemecahan Masalah, Masalah Matematika, Operasi Aljabar, dan Prosedur Newman.

Penelitian dilatarbelakangi oleh kesulitan belajar matematika mengakibatkan kesalahan matematika, sehingga mempengaruhi prestasi matematika siswa. Prestasi matematika siswa Indonesia masih rendah dilihat dari hasil survei Pusat Statistik Internasional untuk Pendidikan terhadap 41 negara dalam pembelajaran matematika, dimana Indonesia mendapatkan peringkat ke 39 di bawah Thailand dan Uruguay. Kesalahan matematika siswa dikenali dengan pembelajaran matematika berdasarkan kemampuan pemecahan masalah, diharapkan siswa bebas membangun ide-ide belajarnya sendiri. Upaya guru mengenali kesalahan siswa yaitu mendiagnosis kesulitan belajar yang mengarah pada kesalahan siswa berdasarkan prosedur Newman, kemudian guru akan melakukan pembelajaran remedial diharapkan meningkatkan kemampuan pemecahan masalah siswa.

Penelitian ini merupakan penelitian deskriptif kualitatif. Subjek penelitian ini adalah seluruh siswa kelas VIII A2 di SMP Islam Sultan Agung 4 Semarang yang berjumlah 34 siswa. Teknik pengumpulan data melalui tes diagnosis dan wawancara. Tes diagnosis disusun berdasarkan pengukuran kemampuan pemecahan masalah matematika siswa yang mengacu pada tahap-tahap pemecahan masalah menurut Polya, dimana mendiagnosis dilakukan analisis kesalahan menggunakan prosedur Newman.

Hasil penelitian ini yaitu untuk mengetahui jenis kesalahan, peneliti menandai dan melokalisasikan letak kesulitan, sehingga diperoleh siswa yang kesalahan membaca, kesalahan memaknai, kesalahan transformasi, kesalahan proses, kesalahan menghitung, kesalahan menuliskan jawaban akhir, dan kesalahan karena tidak menjawab. Untuk mengetahui faktor intelektual penyebab kesalahan berdasarkan analisis hasil tes diagnosis dan wawancara diperoleh siswa tidak memahami soal yang diberikan, tidak teliti dalam membaca dan mengerjakan soal, lupa dan tidak memahami konsep soal cerita operasi aljabar, kesalahan karena ceroboh atau kurang cermat, binggung dan tergesah-gesah menyelesaikan soal, waktu untuk mengerjakan telah habis. Solusi untuk mengatasi kesalahan matematika adalah pembelajaran remedial.

ABSTRACT

Lisnawati, Nining. 2017. Error Analysis in Mathematical Problem Solving Ability Students Subject Operations Algebra Based Newman Procedure. Thesis, Mathematics Education. Sultan Agung Islamic University. Supervisor I. Imam Kusmaryono, S.Pd., M.Pd., Supervisor II. Nila Ubaidah, S.Pd., M.Pd.

Keywords: Error Analysis, Problem Solving Ability, Mathematical Problems, Algebra Operations and Procedures Newman.

The research of distributed by mathematical learning difficulties resulted in a mathematical error, thus affecting the achievement of math students. Math achievement students Indonesia is still low as seen from the results of a survey of International Statistics Centre for education against 41 countries in mathematical learning, where Indonesia ranks to 39 below Thailand and Uruguay. Math error students identified with learning ability based on mathematical problem solving, non students are expected to build their own education ideas. The efforts of teachers to recognize the students' errors i.e. diagnose learning difficulties that lead to mistakes the students based on the procedure of Newman, then the teacher will conduct a remedial learning is expected to enhance problem-solving capabilities of students.

This research is a descriptive qualitative research. The subject of this research is the whole grade VIII A2 in Sultan Agung Islamic Junior High School 4 Semarang that add up to 34 students. The technique of data collection through the diagnostic tests and interviews. Diagnostic tests are arranged based on the measurement of the ability of the mathematical problem solving of students based on the stages of problem solving Polya, where according to diagnose the error analysis is conducted using procedures Newman.

The results of this research is to know what kind of mistakes, researchers mark and melokalisasi layout trouble, so the retrieved error students read, interpret the error, error, error transformation process, error counts, error renders the final answer, and the error because it does not respond. To find out the intellectual factors causes error based on analysis of the results of diagnostic tests and interviews obtained students did not understand the question given, not thorough in reading and working on the problem, forget and do not understand the concept of operation algebra story problem, error due to careless or less closely, and was puzzled as tergesah-gesah completed the problem, time to work on have been exhausted. A solution to overcome the errors of the learning of mathematics is remedial.