

**ANALISIS *SPONTANEOUS PROBLEM SOLVING* SISWA SMP PADA  
PENYELESAIAN TES ABSTRAKSI MATEMATIS**

**TESIS**

Diajukan untuk memenuhi sebagian syarat untuk memperoleh gelar  
Magister Pendidikan Matematika



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**ANALISIS *SPONTANEOUS PROBLEM SOLVING* PADA SISWA SMP  
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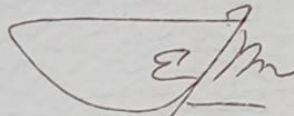
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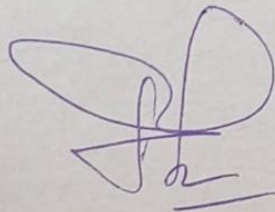
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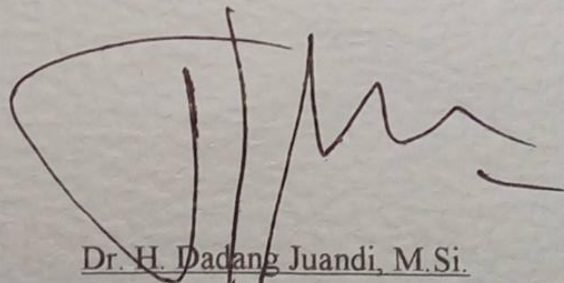
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## ABSTRAK

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Analisis *Spontaneous Problem Solving* Siswa SMP pada Penyelesaian Tes Abstraksi Matematis

Penelitian ini bertujuan untuk mengkaji bagaimana *spontaneous problem solving* terjadi pada siswa SMP selama penyelesaian tes abstraksi matematis dan tes olimpiade matematika. Meski mulai menjadi trend dan menunjukkan banyak manfaat untuk pengembangan kemampuan anak, olimpiade matematika adalah ajang yang sulit untuk ditaklukan. Tiga aktivitas mental yaitu analisis, sintesis, dan evaluasi adalah proses dasar yang dibutuhkan siswa agar terjadi secara spontan saat menyelesaikan masalah tidak familiar seperti olimpiade matematika. Namun spontanitas ketiganya tidak bisa dimunculkan melalui pengajaran. Abstraksi matematis membutuhkan *spontaneous problem solving* dalam prosesnya. Membiasakan anak menyelesaikan masalah-masalah abstraksi matematis mendorong mereka menemukan sendiri SPS versi mereka. Penelitian kualitatif ini memberikan 4 tes abstraksi matematis dan 1 tes olimpiade matematika kepada 6 siswa SMP dari 3 kelompok motivasi belajar berbeda. Hasilnya menunjukkan bahwa Tes abstraksi matematis memunculkan SPS pada siswa dari kelompok tinggi dan sedang namun tidak pada kelompok rendah. Meski disajikan dalam tes, proses rekonstruksi pengetahuan terjadi pada kelompok atas dan sedang. Pengetahuan yang mereka dapat dari tes bisa digunakan untuk menyelesaikan tes olimpiade matematika meski tidak sempurna. Ini menunjukkan bahwa *Spontaneous problem solving* bisa dilatih dengan membiasakan soal-soal abstraksi matematis pada siswa.

**Kata Kunci:** *Spontaneous Problem Solving*, Abstraksi Matematis, Olimpiade Matematika

## ABSTRACT

This research aimed to explore how spontaneous problem solving occurs on middle school students during mathematical abstraction test. Mathematics Olympiad, despite its luxury and achievement, is still a difficult task students can conquer. Three mental activities such as analysis, synthesis, and evaluation, are basic things that're spontaneously needed when solving unfamiliar situation like Olympiad task. Meanwhile, their spontaneity couldn't be transferred through teaching activities. Mathematical abstraction need those 3 mental activities to be completed. This qualitative research give 6 students from 3 different motivational group 3-packaged of mathematical abstraction test and 1 Mathematical Olympiad test. The result showed that students from high and middle group of motivation can gain a new knowledge structure and use it to solve problems in mathematics Olympiad test meanwhile the test is too difficult for students from low motivation score to gain a new knowledge and adapt spontaneous problem solving. It concludes that letting students adapt to mathematical abstraction enable them to create their version of spontaneous problem solving needed not only for general learning but also mathematics Olympiad.

**Kata Kunci:** *Spontaneous Problem Solving*, Mathematical Abstraction, Mathematics Olympiad

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