

LEMBAR PENGESAHAN

SKRIPSI

**Analisis Kesalahan Siswa Menurut Tahapan Kastolan Dan *Scaffoldingnya*
Dalam Menyelesaikan Soal Matematika Pada Materi Lingkaran Di Kelas IX
Smpn 08 Satu Atap Paguyaman**

Oleh:
Idris Abdullah
411417054

Telah Diuji dan Dipertahankan Didepan Dewan Penguji

Hari/ tanggal : Rabu, 17 Mei 2023
Waktu : 13.00 – 14.30 WITA
Tempat : - Offline Ruang Sidang Matematika,
- Online Via Google Meet

A. Dewan Penguji :

1. **Novianita Achmad, S.Si, M.Si** (.....)
NIP. 197411171999032003
2. **Nancy Katili, S.Pd, M.Pd** (.....)
NIP. 197909302003122001
3. **Khardiyawan A. Y. Pauweni, M.Pd** (.....)
NIP. 198611062008121005

B. Dewan Pembimbing :

1. **Prof. Dr. Syamsu Qamar Badu, M.Pd** (.....)
NIP. 196006031986031003
2. **Dr. Abdul Djabar Mohidin, M.Pd** (.....)
NIP. 196107171987031002

Gorontalo, Mei 2023

Mengetahui :

Dekan Fakultas Matematika dan Ilmu Pengetahuan Alam



Prof. Dr. Asfin Lukum, M. Si
NIP. 196303271988032002

ABSTRAK

Idris Abdullah, 2023. *Analisis Kesalahan Siswa Menurut Tahapan Kastolan Dan Scaffoldingnya Dalam Menyelesaikan Soal Matematika Pada Materi Lingkaran Di Kelas IX Smpn 08 Satu Atap Paguyaman.* **Skripsi.** Gorontalo. Program Studi Pendidikan Matematika. Jurusan Matematika. Fakultas Matematika dan Ilmu Pengetahuan Alam. Universitas Negeri Gorontalo.

Pembimbing : (1) **Prof. Dr. Syamsu Qamar Badu, M.Pd**, (2) **Dr. Abdul Djabar Mohidin, M.Pd**

Tujuan dari penelitian ini untuk mengetahui sumber dan penyebab siswa melakukan kesalahan menurut tahapan kastolan dalam menyelesaikan soal matematika pada materi lingkaran di kelas IX SMPN 08 Satu Atap Paguyaman serta untuk melihat Scaffolding seperti apa yang dapat diberikan kepada siswa yang mengalami kesalahan dalam menyelesaikan soal matematika. Penelitian ini merupakan jenis penelitian kuantitatif dengan pendekatan deskriptif. Pengumpulan data dilakukan dengan tes kesalahan penyelesaian soal matematika siswa dan wawancara. Subjek penelitian berjumlah 19 orang. Hasil penelitian didapatkan kesalahan konsep siswa dengan skor yang diperoleh sebesar 34 dari total skor 76 atau sebesar 44,74%, kesalahan prosedur siswa dengan skor 7 dari total skor sebesar 114 atau sebesar 6,1% kesalahan perhitungan siswa dengan skor 21 dari total skor sebesar 76 atau sebesar 27,63%. Scaffolding terhadap kesalahan konsep yaitu: 1) explaining, 2) looking touch and verbalishing, 3) prompting and probing, 4) paraller modeling, 5) student explaining and justifying, 6) providing meaningfull contexts, 7) simplfying the problem, 8) negotiating meanings, 9) developing conceptual thinking. Scaffolding terhadap kesalahan prosedur : 1) explaining, 2) looking touch and verbalishing, 3) prompting and probing, 4) paraller modeling, 5) student explaining and justifying, 6) negotiating meanings, 7) developing conceptual thinking. Scaffolding terhadap kesalahan perhitungan siswa: 1) looking touch and verbalishing, 2) student explaining and justifying, 3) developing conceptual thinking.

Kata Kunci : analisis, kesalahan penyelesaian soal, scaffolding, kastolan

ABSTRACT

Idris Abdullah, 2023. *Analysis of Student Errors According to Kastolan and Scaffolding Stages in Solving Math Problems on Circle Material in Class IX of SMPN 08 One-Roof, Paguyaman.* **Undergraduate Thesis.** Gorontalo. Study Program of Mathematics Education, Department of Mathematics, Faculty of Mathematics and Natural Sciences, Universitas Negeri Gorontalo.

The principal supervisor is **Prof. Dr. Syamsu Qamar Badu, M.Pd.**, and the Co-supervisor is **Dr. Abdul Djabar Mohidin, M.Pd.**

This study aims to determine the factors-cause of students' errors based on the Kastolan stages in solving math problems on circle material in class IX of SMPN 08 One-Roof Paguyaman, and to determine what kind of scaffolding to handle it. This research is a type of quantitative study with a descriptive approach. Data collection was carried out by testing the completion of students' math problems and interviews. The research subjects totaled 19 people. The results of the study obtained students' conceptual errors 34 out of a total score of 76 or 44.74%, student procedural errors 7 out of a total score of 114 or 6.1%, and student calculation errors 21 out of a total score of 76 or 27.63%. Therefore, the type of scaffolding for conceptual errors are: 1) explaining, 2) looking touch and verbalishing, 3) prompting and probing, 4) parallel modeling, 5) student explaining and justifying, 6) providing meaningful contexts, 7) simplifying the problem, 8) negotiating meanings, and 9) developing conceptual thinking. The type of scaffolding for procedural errors: 1) explaining, 2) looking touch and verbalishing, 3) prompting and probing, 4) parallel modeling, 5) student explaining and justifying, 6) negotiating meanings, and 7) developing conceptual thinking. The last is scaffolding for calculation errors, namely: 1) looking touch and verbalising, 2) student explaining and justifying, and 3) developing conceptual thinking.

Keywords: Analysis, problem-solving errors, scaffolding, Kastolan

