

ABSTRAK

Nur Halifah Rahmawati. 2026. *Profil Berpikir Siswa Berkebutuhan Khusus dalam Menyelesaikan Soal Matematika pada Materi Operasi Bilangan*. Skripsi, Program Studi Pendidikan Matematika, FKIP, Universitas PGRI Madiun. Pembimbing (I) Dr. Darmadi, S.Si., M.Pd., (II) Dr. Wasilatul Murtafiah, M.Pd.

Penelitian ini bertujuan mendeskripsikan profil berpikir siswa berkebutuhan khusus dalam menyelesaikan soal matematika pada materi operasi bilangan berdasarkan tahapan pemrosesan informasi. Penelitian menggunakan pendekatan kualitatif deskriptif dengan desain studi kasus multikasus. Subjek penelitian adalah satu siswa tunagrahita ringan (TG) dan satu siswa tunarungu (TR) di SLB PSM Takeran, Kabupaten Magetan, dipilih secara purposive. Data dikumpulkan melalui tes soal matematika, wawancara, dan dokumentasi, dengan validitas data diperiksa menggunakan triangulasi waktu. Analisis data menggunakan model interaktif Miles, Huberman, dan Saldaña, meliputi transkripsi, pengkodean, kategorisasi, dan penyajian data, serta penarikan dan verifikasi kesimpulan, dilanjutkan analisis lintas kasus. Hasil penelitian menunjukkan siswa (TG) mampu melalui seluruh tahap pemrosesan informasi secara konsisten pada operasi penjumlahan dan pengurangan, baik bentuk bergambar maupun angka, dengan bantuan jari, tetapi konsisten gagal menyelesaikan perkalian dan pembagian karena mengasimilasikan operasi baru ke dalam skema penjumlahan tanpa membentuk konsep baru. Siswa (TR) mampu menyelesaikan seluruh operasi bilangan, termasuk perkalian dan pembagian, dengan tepat pada soal bergambar melalui bantuan visual dan gestur, tetapi mengalami kesalahan pada soal berbentuk angka tanpa ilustrasi, khususnya memaknai pembagian sebagai penjumlahan. Analisis lintas kasus menunjukkan hambatan siswa (TG) bersifat menyeluruh dan tidak bergantung pada bentuk representasi soal, sedangkan hambatan siswa (TR) bersifat lokal dan hanya muncul pada representasi simbolik-abstrak. Dengan demikian, jenis kebutuhan khusus memengaruhi letak hambatan kognitif dalam berpikir matematis, sehingga pendekatan pembelajaran perlu disesuaikan dengan karakteristik hambatan masing-masing siswa.

Kata Kunci: Profil Berpikir, Pemrosesan Informasi, Tunagrahita Ringan, Tunarungu, Operasi Bilangan

ABSTRACT

Nur Halifah Rahmawati. 2026. *Thinking Profile of Students with Special Needs in Solving Mathematics Problems on Number Operations Material*. Thesis, Mathematics Education Study Program, Faculty of Teacher Training and Education, PGRI Madiun University. Advisors: (I) Dr. Darmadi, S.Si., M.Pd., (II) Dr. Wasilatul Murtafiah, M.Pd.

This study aims to describe the thinking profile of students with special needs in solving mathematics problems on number operations based on the stages of information processing. This study employed a descriptive qualitative approach with a multi-case study design. The research subjects consisted of one student with mild intellectual disability and one deaf student at SLB PSM Takeran, Magetan Regency, selected through purposive sampling. Data were collected through mathematics tests, interviews, and documentation, with data validity examined using time triangulation. Data analysis used the interactive model of Miles, Huberman, and Saldaña, comprising data transcription, coding, categorization, data display, and conclusion drawing and verification, followed by cross-case analysis. The results showed that the student with mild intellectual disability was able to consistently pass through all stages of information processing in addition and subtraction operations, both in pictorial and numerical forms, with the aid of finger counting, but consistently failed to solve multiplication and division because the new operations were assimilated into the previously mastered addition scheme without forming a new concept. The deaf student was able to understand and correctly solve all number operations, including multiplication and division, when the problems were presented pictorially with the aid of visual cues and gestures, but made errors when the problems were presented numerically without illustration, particularly interpreting division consistently as addition. The cross-case analysis revealed that the barriers experienced by the student with intellectual disability were global and independent of the problem's representation form, whereas the barriers experienced by the deaf student were local and only emerged in symbolic-abstract representations. Thus, the type of special need influences the location of cognitive barriers in mathematical thinking, indicating that instructional approaches need to be adapted to each student's specific barrier characteristics.

Keywords: Thinking Profile, Information Processing, Mild Intellectual Disability, Deaf, Number Operations