

Ulfatul Layyinah, 2024. *Analisis Kesalahan Siswa dalam Menyelesaikan Soal Cahaya dan Alat Optik Berdasarkan Teori Nolting Ditinjau dari Gaya Belajar*. Skripsi, Program Studi Pendidikan IPA, Fakultas Ilmu Pendidikan, Universitas Trunojoyo Madura. Pembimbing: Rahmad Fajar Sidik.

ABSTRAK

Tujuan penelitian ini adalah untuk mengetahui gaya belajar siswa serta rata-rata dan jenis kesalahan berdasarkan teori Nolting menyelesaikan soal cahaya dan alat optik ditinjau dari gaya belajar. Penelitian ini menggunakan metode deskriptif kuantitatif. Populasi dan sampel yaitu semua siswa kelas VIII Tahun Ajaran 2023/2024 yang berjumlah 26 orang. Pengambilan sampel menggunakan teknik *nonprobability sampling* dengan jenis *saturation sampling*. Pengumpulan data menggunakan tes, angket, dan dokumentasi. Hasil penelitian menunjukkan bahwa: 1). 5 jenis gaya belajar yang digunakan oleh siswa; visual, auditorial, kinestetik, visual auditorial, dan auditorial kinestetik. Gaya belajar visual dominan digunakan dalam kelas. 2) Rata-rata kesalahan jenis gaya belajar yaitu; a) Gaya belajar visual rata-rata sebesar 8, jenis kesalahan yang paling banyak dilakukan yaitu *Careless Errors* sebanyak 26 kesalahan (31%). b) Gaya belajar auditorial rata-rata sebesar 8, jenis kesalahan yang paling banyak dilakukan yaitu *Careless Errors* sebanyak 17 kesalahan (28%). c) Gaya belajar kinestetik rata-rata sebesar 10, jenis kesalahan yang paling banyak dilakukan yaitu *Careless Errors* sebanyak 15 kesalahan (38%). d) Gaya belajar visual auditorial rata-rata sebesar 5, jenis kesalahan yang paling banyak dilakukan yaitu *Concept errors* sebanyak 3 kesalahan (60%). e) Gaya belajar auditorial kinestetik rata-rata sebesar 6, jenis kesalahan yang paling banyak dilakukan yaitu *Concept errors* sebanyak 6 kesalahan (50%).

Kata kunci: cahaya dan alat optik, kesalahan mengerjakan soal, teori Nolting, gaya belajar.

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ABSTRACT

The aim of this research is to determine students' learning styles as well as the average and types of errors based on Nolting's theory in solving light and optical instrument problems in terms of learning styles. This research uses quantitative descriptive methods. The population and sample are all class VIII students for the 2023/2024 academic year, totaling 26 people. Sampling used nonprobability sampling technique with saturation sampling type. Data collection uses tests, questionnaires and documentation. The research results show that: 1). 5 types of learning styles used by students; visual, auditory, kinesthetic, visual auditory, and auditory kinesthetic. The visual learning style is dominantly used in the classroom. 2) Average errors for types of learning styles, namely; a) The average visual learning style is 8, the type of error that is most often made is Careless Errors with 26 errors (31%). b) The average auditory learning style is 8, the type of error that is most often made is Careless Errors with 17 errors (28%). c) The average kinesthetic learning style is 10, the type of error that is most often made is Careless Errors with 15 errors (38%). d) The average visual auditory learning style is 5, the type of error that is most often made is Concept errors with 3 errors (60%). e) The average auditory kinesthetic learning style is 6, the type of error that is most often made is Concept errors with 6 errors (50%).

Key word: light and optical devices, problem solving errors, Nolting theory, learning style.