

ABSTRAK

Agustina. 2024. Berpikir Kritis Siswa dalam Pemecahan Masalah Aljabar Ditinjau dari Gaya Belajar Berdasarkan Sistem Pemrosesan Informasi. Tesis. Program Studi Magister Pendidikan Matematika, Universitas Jambi. Pembimbing (I) Dr. Dra. Nizlel Huda, M.Kes. Pembimbing (II) Prof. Drs. Maison, M.Si., Ph.D.

Kata Kunci: Berpikir Kritis, Pemecahan Masalah, Gaya Belajar, Sistem Pemrosesan Informasi

Kurangnya kemampuan berpikir kritis siswa dalam pemecahan masalah aljabar di sekolah, tercermin dari siswa sering mengandalkan rumus dan algoritma tanpa pemahaman yang mendalam tentang konsep dasar aljabar. Pemahaman mendalam tentang proses berpikir kritis dalam pemecahan masalah aljabar, terutama dalam preferensi gaya belajar siswa berdasarkan sistem pemrosesan informasi, masih terbilang minim. Penelitian ini bertujuan mengetahui proses berpikir kritis dalam pemecahan masalah aljabar ditinjau dari gaya belajar siswa berdasarkan sistem pemrosesan informasi. Subjek penelitian adalah siswa kelas XI IPA MAN 2 Kota Jambi yang dipilih menggunakan teknik *purposive sampling*. Berdasarkan hasil angket gaya belajar yang diberikan, diambil 6 orang subjek penelitian yang sesuai dengan kriteria dan mewakili masing-masing gaya belajar. Teknik pengumpulan data menggunakan satu soal tes berpikir kritis dan wawancara untuk mengungkapkan kemampuan berpikir kritis dan pemrosesan informasi subjek dalam memecahkan masalah aljabar. Instrumen yang digunakan adalah tes berpikir kritis yang dikerjakan secara *think aloud*, angket gaya belajar dan pedoman wawancara. Data yang diperoleh, dianalisis dengan kriteria indikator berpikir kritis FRISCO (*Focus, Reason, Inference, Situation, Clarity, Overview*) dan teori pemrosesan informasi (*sensory register, short term memory, long term memory*). Hasil penelitian menunjukkan siswa bergaya belajar visual memenuhi indikator berpikir kritis FRISCO (*Focus, Reason, Inference, Situation, Clarity, Overview*) dan melakukan semua pemrosesan informasi hingga *long term memory*. Siswa bergaya belajar auditori memenuhi indikator kriteria berpikir kritis FRI (*Focus, Reason, Inference*) dan mengalami *forgotten lost* pada *long term memory*. Siswa bergaya belajar kinestetik memenuhi indikator berpikir kritis FRISC (*Focus, Reason, Inference, Situation, Clarity*) dan melakukan semua pemrosesan informasi hingga *long term memory*.

ABSTRACT

Agustina. 2024. Students' Critical Thinking in Solving Algebra Problems Reviewed Through Learning Styles Based on Information Processing Systems. Tesis. Program Studi Magister Pendidikan Matematika, Universitas Jambi. Pembimbing (I) Dr. Dra. Nizlel Huda, M.Kes. Pembimbing (II) Prof. Drs. Maison, M.Si., Ph.D.

Keywords: Critical Thinking, Problem Solving, Learning Styles, Information Processing Systems

The lack of critical thinking abilities among students in solving algebra problems in schools is reflected in students often relying on formulas and algorithms without a deep understanding of the basic concepts of algebra. A profound understanding of critical thinking processes in solving algebra problems, especially in students' learning style preferences based on information processing systems, is still relatively scarce. This study aims to explore the critical thinking processes in solving algebra problems based on students' learning styles according to the information processing system. The research subjects were eleventh-grade students of IPA MAN 2 Kota Jambi selected using purposive sampling technique. Based on the learning style questionnaire provided, 6 research subjects were selected who met the criteria and represented each learning style. Data collection techniques utilized a critical thinking test question and interviews to reveal the subjects' critical thinking abilities and information processing in solving algebra problems. Instruments used were a critical thinking test conducted via think-aloud, a learning style questionnaire, and interview guidelines. The data obtained were analyzed using the critical thinking indicator criteria FRISCO (*Focus, Reason, Inference, Situation, Clarity, Overview*) and information processing theory (*sensory register, short-term memory, long-term memory*). The results showed that visual learners met the FRISCO critical thinking indicators (*Focus, Reason, Inference, Situation, Clarity, Overview*) and completed all information processing up to long-term memory. Auditory learners met the FRI critical thinking indicator criteria (*Focus, Reason, Inference*) and experienced forgotten lost in long-term memory. Kinesthetic learners met the FRISC critical thinking indicator criteria (*Focus, Reason, Inference, Situation, Clarity*) and completed all information processing up to long-term memory.