

**ANALISIS BEBAN KOGNITIF SISWA SMA SESUAI GAYA BELAJAR VARK
PADA PEMBELAJARAN DUNIA TUMBUHAN MENGGUNAKAN
METACOGNITIVE SELF-REGULATION TERINTEGRASI GUIDED INQUIRY**

ABSTRAK

Beban kognitif terdiri dari tiga komponen yaitu *Intrinsic Cognitive Load* terbentuk akibat kompleksitas materi ajar yang tinggi, *Extraneous Cognitive Load* merupakan beban yang didapatkan selama kegiatan pembelajaran yang menyebabkan suatu informasi menjadi sulit untuk dipahami, dan komponen *Germane Cognitive Load* merupakan beban dalam pembentukan skema kognitif, beban ini berkaitan erat dengan *Intrinsic Cognitive Load* dan *Extraneous Cognitive Load*. Penelitian ini bertujuan untuk menganalisis beban kognitif siswa sesuai gaya belajar VARK pada pembelajaran dunia tumbuhan dengan menggunakan *Metacognitive Self-Regulation* terintegrasi *Guided Inquiry*. Metode penelitian yang digunakan adalah *Descriptive*. Subjek pada penelitian ini adalah siswa MIPA di SMA Negeri 8 Bandung kelas X MIPA 3 (N=36). Data gaya belajar siswa dijamin menggunakan *The VARK Questionnaire-The Younger Version 7.1* yang telah dimodifikasi. Data beban kognitif diperoleh melalui instrumen *task complexity worksheet* yang menggambarkan *Intrinsic Cognitive Load*, instrumen angket *subjective rating scale* menggambarkan *Extraneous Cognitive Load*, dan instrumen *test* hasil belajar yang akan menggambarkan *Germane Cognitive Load*. Hasil penelitian menunjukkan bahwa terdapat sembilan pola preferensi gaya belajar. Beban kognitif pada kelas yang menggunakan *Metacognitive Self-Regulation* terintegrasi *Guided Inquiry* cenderung lebih rendah, tetapi penurunan komponen *Extraneous Cognitive Load* tidak dapat meningkatkan hasil belajar atau pembentukan skema kognitif. Siswa dengan gaya belajar dominan visual memiliki beban kognitif paling rendah dibandingkan dengan gaya belajar lainnya.

Kata kunci: beban kognitif, gaya belajar VARK, *metacognitive self-regulation*, *guided inquiry*, dunia tumbuhan

**ANALYSIS OF COGNITIVE LOAD OF SENIOR HIGH SCHOOL STUDENTS
ACCORDING TO THE VARK LEARNING STYLES ON PLANT WORLD
LEARNING USING METACOGNITIVE SELF-REGULATION INTEGRATED
GUIDED INQUIRY**

ABSTRACT

The cognitive load consists of three components: Intrinsic Cognitive Load is formed by the complexity of high teaching material, Extraneous Cognitive Load is a load that is made during the studying activity which causes the information to be difficult to understand, and the Germane Cognitive Load is a load in the formation of cognitive schemes, this load is closely related to Intrinsic Cognitive Load and Extraneous Cognitive Load. This study aims to analyze students' cognitive loads according to the VARK learning style in the learning of the plant using Metacognitive Self-Regulation integrated Guided Inquiry. The research method used is Descriptive. Subjects in this study were students in SMAN 8 Bandung of class X MIPA 3 (N=36). Student learning style data was collected using The VARK Questionnaire-The Younger Version 7.1 that has been modified. The cognitive load data obtained through the task complexity worksheet instrument depicting the Intrinsic Cognitive Load instrument, a subjective rating scale instrument describing Extraneous Cognitive Load, and a learning outcome test instrument that would describe Germane Cognitive Load. The results show that there are nine preference patterns that represent the VARK learning style type. Classroom cognitive loads that use Metacognitive Self-Regulation integrated Guided Inquiry tend to be lower, but the decrease in the Extraneous Cognitive Load component can not improve learning outcomes or the formation of cognitive schemes. Students with dominant visual learning styles have the lowest cognitive load compared to other learning styles.

Keywords: cognitive load, VARK learning style, metacognitive self-regulation, guided inquiry, plant learning