

# **THE EFFECTS OF STUDENT-CENTERED SCIENCE FLASH MEDIA TO STUDENTS' CONCEPT MASTERY AND MOTIVATION IN LEARNING ECOSYSTEM**

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## **ABSTRACT**

This research was investigated the effects of student-centered science flash media towards concept mastery and motivation of students in learning ecosystem. The method which used in this research was experimental research method with one group pre-test post-test design. The sample was taken in high achiever students of Secondary I (n=23) at one of International School of Secondary High in Padalarang, Bandung. The quantitative data of this research was obtained through an objective test, while the supportive qualitative data gathered through John Keller ARCS motivational questionnaire. The conceptual mastery of the class is determined based on Bloom's taxonomy cognitive level through objective test. Data processing was done by the non-parametric statistics throughout the Wilcoxon test of two related variables in the same researched group. The result of this research presents that there are significant improvement of students concept mastery before and after the treatment implementation of student-centered science flash media as an interactive multimedia based Computer Assisted Instruction. This research was revealed that the student-centered science flash media has a positive role in developing students' motivation in learning ecosystem seen by their rate of Attention, Relevance, Confidence and Satisfaction.

**Key words:** Computer Assisted Instruction, interactive multimedia, student-centered science flash media, concept mastery, ecosystem, Keller ARCS motivational model

# **PENGARUH PEMBELAJARAN *STUDENT-CENTERED SCIENCE FLASH MEDIA* TERHADAP PEMAHAMAN KOGNITIF DAN MOTIVASI SISWA DALAM BELAJAR EKOSISTEM**

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## **ABSTRAK**

Penelitian ini mengungkap pengaruh pembelajaran menggunakan *student-centered science flash media* terhadap pemahaman konsep dan motivasi siswa dalam mempelajari ekosistem. Metode penelitian yang digunakan adalah metode penelitian eksperimen dengan *one group pre-test and post-test design*. Penelitian ini melibatkan 23 siswa SMP dari salah satu *International Islamic School* di Padalarang, Bandung. Data kuantitatif dari penelitian ini diukur menggunakan tes kognitif dari taksonomi Bloom, sedangkan data kualitatif pendukung dengan menggunakan kuesioner mengenai *ARCS Motivational Method* yang diadaptasi dari John Keller mengenai *Attention, Relevance, Confidence, dan Satisfaction*. Proses pengolahan data dilakukan dengan statistik non-parametris melalui uji Wilcoxon yaitu uji dua variable saling berhubungan pada satu kelas penelitian. Hasil penelitian menunjukkan bahwa adanya peningkatan yang signifikan pada pemahaman siswa sebelum dan sesudah pembelajaran menggunakan *student-centered science flash media* sebagai multimedia interaktif yang termasuk dalam Pembelajaran Berbasis Komputer. Penelitian ini juga menunjukkan adanya peran positif dalam mengembangkan motivasi siswa dalam mempelajari ekosistem, yang dilihat dari kategori *Attention, Relevance, Confidence* dan *Satisfaction* menunjukkan 39% siswa cukup termotivasi, 56% siswa termotivasi, dan 1% siswa sangat termotivasi.

**Key words:** Pembelajaran Berbasis Komputer, multimedia interaktif, *student-centered science flash media*, pemahaman kognitif siswa, ekosistem, *Keller ARCS motivational model*

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