

ABSTRAK

RAFI AZZAM MURTADHO, 1192060078. Pengaruh Model Pembelajaran *Self-Directed Learning* untuk Meningkatkan Penguasaan Konsep pada Materi Sistem Peredaran Darah (Penelitian di MAN 1 Kabupaten Bekasi).

Penelitian ini dilatarbelakangi oleh pentingnya penguasaan konsep dalam pembelajaran biologi pada materi sistem peredaran darah yang bersifat abstrak dan kompleks. Penerapan model *Self-Directed Learning* (SDL) diharapkan dapat mendorong kemandirian dan keterlibatan aktif siswa dalam memahami materi. Penelitian ini bertujuan untuk (1) mengetahui keterlaksanaan model SDL, (2) menganalisis perbedaan penguasaan konsep siswa, dan (3) mendeskripsikan peningkatan penguasaan konsep siswa pada materi sistem peredaran darah di MAN 1 Kabupaten Bekasi.

Kerangka berpikir penelitian ini menempatkan model pembelajaran *Self-Directed Learning* sebagai variabel *X* dan penguasaan konsep siswa sebagai variabel *Y*. Penguasaan konsep diukur berdasarkan revisi Taksonomi Bloom pada tingkat C2 (memahami), C3 (menerapkan), dan C4 (menganalisis). Model SDL dilaksanakan melalui tahapan pemberian masalah, perumusan hipotesis, pengumpulan data mandiri, dan penarikan kesimpulan.

Penelitian ini menggunakan pendekatan kuantitatif dengan metode *quasi-experiment* dan desain *Nonequivalent Control Group Design*. Sampel penelitian terdiri dari kelas XI.9 sebagai kelas eksperimen ($n = 30$) dan kelas XI.10 sebagai kelas kontrol ($n = 30$) yang dipilih secara *purposive sampling*. Data diperoleh melalui tes pilihan ganda sebanyak 20 butir soal dan lembar observasi, kemudian dianalisis menggunakan uji-*t*, *N-Gain*, serta *effect size*.

Hasil penelitian menunjukkan bahwa keterlaksanaan model pembelajaran *Self-Directed Learning* ber kriteria Baik dengan rata-rata persentase sebesar 77,4%. Terdapat perbedaan penguasaan konsep yang signifikan antara kedua kelas, di mana kelas eksperimen memperoleh rata-rata skor posttest yang lebih tinggi (92,50) dibandingkan kelas kontrol (88,17). Hasil analisis uji hipotesis menunjukkan nilai signifikansi sebesar $0,000 < 0,05$ ($t_{hitung} = 4,421 > t_{tabel} = 2,021$). Peningkatan penguasaan konsep pada kelas eksperimen termasuk dalam kriteria Tinggi dengan nilai rata-rata *N-Gain* sebesar 0,7716, sedangkan kelas kontrol berada pada kriteria Sedang dengan *N-Gain* sebesar 0,3598. Pengujian *effect size* menghasilkan nilai *Cohen's d* sebesar 1,141 yang termasuk dalam kategori *Large Effect* (Efek Sangat Besar). Berdasarkan hasil tersebut, dapat disimpulkan bahwa penerapan model pembelajaran *Self-Directed Learning* memberikan pengaruh positif yang signifikan dan berarti secara praktis dalam meningkatkan penguasaan konsep peserta didik pada materi Sistem Peredaran Darah.

Kata Kunci: *Self-Directed Learning*, Penguasaan Konsep, Sistem Peredaran Darah.

ABSTRACT

RAFI AZZAM MURTADHO, 1192060078. *The Effect of Self Directed Learning Model to Improve Conceptual Mastery on the Circulatory System (A Study at MAN 1 Bekasi Regency).*

This research is motivated by the importance of conceptual mastery in biology learning, particularly regarding the circulatory system, which is abstract and complex. The implementation of the Self Directed Learning (SDL) model is expected to encourage students' independence and active involvement in understanding the learning material. This study aims to (1) determine the implementation of the SDL model, (2) analyze the difference in students' conceptual mastery, and (3) describe the improvement in students' conceptual mastery of the circulatory system at MAN 1 Bekasi Regency.

The conceptual framework of this research places the Self Directed Learning model as variable X and students' conceptual mastery as variable Y. Conceptual mastery was measured based on the revised Bloom's Taxonomy at cognitive levels C2 (understanding), C3 (applying), and C4 (analyzing). The SDL model was carried out through several stages: presenting problems, formulating hypotheses, collecting data independently, and drawing conclusions.

This study used a quantitative approach with a quasi-experimental method and a Nonequivalent Control Group Design. The research sample consisted of class XI.9 as the experimental class ($n = 30$) and class XI.10 as the control class ($n = 30$), selected through purposive sampling. Data were collected using a 20-item multiple-choice test and observation sheets, then analyzed using the t-test, N-Gain, and effect size.

*The results showed that the implementation of the Self Directed Learning model was categorized as **"Good"** with an average percentage of 77.4%. There was a significant difference in conceptual mastery between the two classes, where the experimental class achieved a higher average posttest score (**92.50**) than the control class (**88.17**). Hypothesis testing yielded a significance value of $p = 0.000 < 0.05$ ($t = 4.421 > t_{table} = 2.021$). The improvement in conceptual mastery in the experimental class was in the **"High"** category with an average N-Gain score of **0.7716**, while the control class fell into the **"Moderate"** category with an N-Gain score of **0.3598**. The effect size test yielded a Cohen's d value of **1.141**, categorized as a **"Large Effect"**. Based on these results, it can be concluded that the implementation of the Self Directed Learning model has a significant and practically meaningful positive effect to improve students' conceptual mastery of the circulatory system.*

Keywords: Self-Directed Learning, Concept Mastery, Circulatory System.