

ABSTRAK

Dosma Yesi Yulanda Lumbanbatu, NIM 4213341033 (2021). Perbandingan model *Problem Based Learning* (PBL) dengan *Direct Instruction* (DI) terhadap kemampuan Literasi Sains Siswa pada materi Virus siswa kelas X SMA Negeri 17 Medan.

Penelitian ini bertujuan untuk mengetahui Perbandingan Kemampuan Literasi Sains Siswa Menggunakan Model *Problem Based Learning* (PBL) dengan *Direct Instruction* (DI) Kelas X Pada Materi Virus SMA Negeri 17 Medan. Penelitian ini menggunakan quasi eksperimen dengan desain *Pre-test and Post-test Control*. Pengambilan sampel dilakukan dengan teknik *Purposive Sampling*. Sampel pada penelitian ini terdiri dari 2 kelas, yakni kelas X MIPA 1 dengan model PBL dan X MIPA 2 dengan model DI. Pengumpulan data dengan tes, angket dan wawancara. Data rata-rata *pre-test* dan *post-test* hasil belajar pada kelas yang diajar dengan model PBL masing masing adalah 64,39 dan 84,31 dan pada kelas yang diajar dengan model DI 62,14, dan 82,86. Data dianalisis dengan menggunakan *Independent Sample t-test* menggunakan SPSS Versi 25. Berdasarkan uji hipotesis, diperoleh bahwa model pembelajaran PBL efektif terhadap kemampuan literasi sains pada materi virus kelas X SMA Negeri 17 Medan. Pada hasil data angket disimpulkan faktor faktor yang mempengaruhi kemampuan literasi sains antara lain adalah pembelajaran sains 42,85%, sikap terhadap sains 38,75%, dan suasana sekolah 35,71%. Berdasarkan hasil penelitian dapat disimpulkan bahwa model pembelajaran PBL dapat meningkatkan kemampuan literasi sains pada materi virus kelas X SMA N 17 Medan.

Kata kunci: Literasi Sains, Problem Based Learning (PBL), Direct Instruction (DI).



ABSTRACT

Dosma Yesi Yulanda Lumbanbatu, NIM 4213341033 (2021). A Comparison of the Problem-Based Learning (PBL) Model and Direct Instruction (DI) on Grade X Students' Scientific Literacy in Virus Topics at State Senior High School 17 Medan.

This study aimed to compare students' scientific literacy skills using the Problem-Based Learning (PBL) model and Direct Instruction (DI) in Grade X virus material at SMA Negeri 17 Medan. The study employed a quasi-experimental design with a pre-test-post-test control group. Sampling was conducted using a purposive sampling technique. The sample consisted of two classes: Class X MIPA 1, which was taught using the PBL model, and Class X MIPA 2, which was taught using the DI model. Data were collected through tests, questionnaires, and interviews. The average pre-test and post-test scores of students taught using the PBL model were 64.39 and 84.31, respectively, while those taught using the DI model were 62.14 and 82.86. Data were analyzed using an independent samples t-test with SPSS version 25. The results of the hypothesis testing indicated that the PBL model was more effective in improving students' scientific literacy skills on virus material in Grade X at SMA Negeri 17 Medan. Questionnaire results revealed that factors influencing scientific literacy skills included science learning (42.85%), attitudes toward science (38.75%), and the school atmosphere (35.71%). In conclusion, the Problem-Based Learning model effectively improves scientific literacy skills in virus learning among Grade X students at SMA Negeri 17 Medan.

Keywords: Scientific literacy, *Problem Based Learning (PBL)*, *Direct Instruction (DI)*.

