

ABSTRAK

JUANDI MANULLANG. Pengaruh Model *Problem Based Learning* Berbantuan Modul Ajar Terhadap Literasi Membaca dan Numerasi. Tesis. Medan: Program Pascasarjana Universitas Negeri Medan, Juli 2024.

Penelitian ini bertujuan untuk mengetahui pengaruh model *problem based learning* berbantuan modul ajar terhadap literasi membaca dan numerasi siswa pada materi gelombang bunyi. Jenis penelitian ini *quasi experiment* dengan *two group pretest-posttest design*. Populasi penelitian adalah seluruh siswa kelas XI MIA SMA Negeri 11 Medan T.P. 2023/2024 yang terdiri dari 7 kelas. Teknik pengambilan sampel dilakukan dengan cara *simple random sampling* terpilih 2 kelas, XI MIA-6 sebagai kelas eksperimen dan XI MIA-7 sebagai kelas kontrol. Instrumen yang digunakan berbentuk pilihan ganda, pilihan ganda kompleks, dan isian singkat. Instrumen tes dalam penelitian ini berupa instrumen kognitif untuk menguji literasi membaca dan numerasi siswa. Tes literasi membaca dan numerasi masing-masing 20 soal. Hasil penelitian diperoleh nilai rata-rata *pretest* literasi membaca pada kelas eksperimen dan kelas kontrol masing-masing 35,00 dan 33,17 dan nilai rata-rata *pretest* numerasi pada kelas eksperimen dan kelas kontrol masing-masing 34,67 dan 32,00. Hasil pengujian hipotesis untuk *pretest* melalui uji manova (*multivariate analysis of variance*) diperoleh nilai signifikansi lebih besar dari 0,05 yaitu 0,216 sehingga disimpulkan bahwa kelas kontrol dan kelas eksperimen memiliki kemampuan yang sama dalam literasi membaca dan numerasi. Diberi perlakuan, diperoleh nilai rata-rata *posttest* literasi membaca pada kelas eksperimen dan kelas kontrol masing-masing 78,00 dan 72,83 dan nilai rata-rata *posttest* numerasi pada kelas eksperimen dan kelas kontrol masing-masing 75,33 dan 70,83. Hasil pengujian hipotesis diperoleh koefisien korelasi antara literasi membaca dan numerasi sebesar 0,785 yang menyatakan tingkat hubungan keduanya positif dalam kategori kuat. Uji N-Gain untuk literasi membaca siswa pada kelas eksperimen sebesar 66,90% dan kelas kontrol sebesar 59,83%. Pada kelas eksperimen, N-Gain numerasi siswa sebesar 62,40% dan kelas kontrol sebesar 57,71%. Hasil pengujian hipotesis melalui uji manova diperoleh $F_{hitung} = 3,730$ nilai signifikansi lebih kecil dari 0,05 yaitu 0,03 yang berarti terdapat pengaruh yang signifikan terhadap literasi membaca dan numerasi siswa setelah diberikan perlakuan model PBL berbantuan modul ajar pada materi gelombang bunyi di SMA Negeri 11 Medan.

Kata Kunci: *problem based learning*, modul ajar, literasi membaca, numerasi

ABSTRACT

JUANDI MANULLANG. The Effect of Problem-Based Learning Model Assisted by Teaching Modules on Reading Literacy and Numeracy. Thesis. Medan: Postgraduate Program, State University of Medan, July 2024.

This study aims to determine the effect of problem-based learning model assisted by teaching modules on students' reading literacy and numeracy on sound wave material. This type of research is a quasi-experimental study with a two-group pretest-posttest design. The study population was all students of class XI MIA SMA Negeri 11 Medan in the 2023/2024 academic year consisting of 7 classes. The sampling technique was carried out by simple random sampling, selecting 2 classes, namely XI MIA-6 as the experimental class and XI MIA-7 as the control class. The instruments used were multiple choice, complex multiple choice, and short answers. The test instrument in this study was a cognitive instrument to test students' reading and arithmetic literacy. The reading literacy and numeracy tests each consisted of 20 questions. The results of the study obtained the average value of the reading literacy pretest of the experimental class and the control class were 35.00 and 33.17 respectively and the average value of the numeracy pretest of the experimental class and the control class were 34.67 and 32.00 respectively. The results of the pretest hypothesis testing through the MANOVA (multivariate analysis of variance) test obtained a significance value greater than 0.05, namely 0.216, so it was concluded that the control class and the experimental class had the same ability in reading literacy and numeracy. With the treatment given, the average value of the reading literacy posttest of the experimental class and the control class were 78.00 and 72.83 respectively and the average value of the numeracy posttest of the experimental class and the control class were 75.33 and 70.83 respectively. The results of the hypothesis testing obtained a correlation coefficient between reading literacy and numeracy of 0.785 which stated that the level of the relationship between the two was positive in the strong category. The N-Gain test of students' reading literacy in the experimental class was 66.90% and the control class was 59.83%. In the experimental class, the N-Gain of students' numeracy was 62.40% and the control class was 57.71%. The results of the hypothesis testing through the manova test obtained $F_{count} = 3.730$, the significance value is less than 0.05, which is 0.03, which means that there is a significant influence on students' reading and numeracy literacy after being given the PBL model treatment assisted by teaching modules on sound wave material at SMA Negeri 11 Medan.

Keywords: problem-based learning, teaching Modules, reading literacy, numeracy