ABSTRAK

Nurul Fazira, NIM 4201111026 (2024). Pengembangan *E-Modul* Berbasis *Problem Based Learning* Menggunakan *Flip PDF Professional* Terhadap Kemampuan Literasi Matematis Siswa SMA Negeri 16 Medan.

Penelitian ini bertujuan untuk menemukan *e-modul* berbasis *problem based learning* menggunakan *Flip PDF Professional* yang valid, praktis, dan efektif sehingga dapat meningkatkan kemampuan literasi matematis siswa SMA Negeri 16 Medan pada pokok bahasan Analisis Regresi dan Analisis Korelasi. Instrumen penelitian yang digunakan yaitu lembar validasi *e-modul*, lembar Modul Ajar, tes kemampuan literasi matematis (*pretest* dan *posttest*), dan angket respon. Setelah *e-modul* dan instrumen dinyatakan valid oleh dosen validator ahli media dan ahli materi, dilanjutkan dengan uji keterbacaan dan uji lapangan. Hasil penelitian menunjukkan bahwa: (1) *e-modul* berbasis *problem based learning* yang dikembangkan telah memenuhi kriteria valid dengan persentase dari ahli materi sebesar 87,5% dan dari ahli media sebesar 85%% dengan kategori sangat valid, (2) *e-modul* berbasis *problem based learning* yang dikembangkan telah memenuhi kriteria praktis dengan persentase dari angket kepraktisan untuk guru sebesar 93% dan angket respon siswa sebesar 85,5%, (3) *e-modul* berbasis *problem based learning* yang dikembangkan telah memenuhi kriteria efektif yang ditentukan dari (a) ketercapaian ketuntasan belajar siswa secara klasikal sebesar 87,09%; (b) ketercapaian ketuntasan indikator yang dirumuskan yaitu merumuskan matematika sebesar 96,70%, menerapkan matematika sebesar 93,50%, dan menafsirkan matematika sebesar 77,40%; (c) respon positif siswa terhadap kegiatan pembelajaran sebesar 97,98%; dan (d) peningkatan kemampuan literasi matematis siswa setelah belajar menggunakan *e-modul* mengalami peningkatan ditinjau dari nilai n-gain meningkatan berada pada kategori sedang dengan rata-rata 0,64.

Kata Kunci: *e-modul*, *Problem Based Learning*, *Flip PDF Professional*, Kemampuan Literasi Matematis

ABSTRACT

Nurul Fazira, NIM 4201111026 (2024). Development of an E-Module Based on Problem Based Learning Using Flip PDF Professional on the Mathematical Literacy Ability of Students at SMA Negeri 16 Medan.

This research aims to find an e-module based on problem based learning using Flip PDF Professional that is valid, practical and effective so that it can improve the mathematical literacy skills of students at SMA Negeri 16 Medan on the subject of Regression Analysis and Correlation Analysis. The research instruments used were e-module validation sheets, Teaching Module sheets, mathematical literacy ability tests (pretest and posttest), and response questionnaires. After the e-module and instrument are declared valid by validator lecturers, media experts and material experts, it continues with readability tests and field tests. The results of the research show that: (1) the problem based learning based e-module that was developed has met the valid criteria with a percentage of material experts of 87.5% and of media experts of 85% with a very valid category, (2) the e-module The problem based learning that was developed has met the practical criteria with a percentage of the practicality questionnaire for teachers of 93% and the student response questionnaire of 85.5%, (3) the problem based learning based e-module that was developed has met the effective criteria determined by (a) the achievement of classical student learning completeness was 87.09%; (b) achievement of completeness of the indicators formulated, namely formulating mathematics at 96.70%, applying mathematics at 93.50%, and interpreting mathematics at 77.40%; (c) students' positive response to learning activities was 97.98%; and (d) the increase in students' mathematical literacy skills after learning using e-modules has increased in terms of the n-gain value, the increase is in the medium category with an average of 0.64.

Keywords: e-module, Problem Based Learning, Flip PDF Professional, Mathematical Literacy Ability