PENGEMBANGAN E-MODUL BERORIENTASI *PROBLEM BASED LEARNING* DAN PhET *SIMULATION* UNTUK MENINGKATKAN MINAT BELAJAR PADA TEMA 9 SUBTEMA 1 KELAS IV SEKOLAH DASAR

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ABSTRAK

Penelitian ini bertujuan untuk menghasilkan e-modul berorientasi PBL dan PhET *Simulation* untuk meningkatkan minat belajar siswa kelas IV SD yang teruji validitas, kepraktisan, dan efektivitasnya. Jenis penelitian ini adalah penelitian pengembangan yang menggunakan model ADDIE, yang memiliki tahapan penelitan berupa 1) *analyze* (analisis) *2) design* (perancangan) 3) *development* (pengembanagan) 4) *implementation* (implementasi) 5) *evaluation* (evaluasi). Subjek pada penelitian pengembangan ini adalah e-modul berorientasi PBL dan PhET *simulation*. Sedangkan objek pada penelitian ini yaitu validitas isi, kepraktisan dan keefektifan produk. Subjek uji coba pada penelitian ini adalah siswa kelas IV SD Negeri 1 Gumbrih, sedangkan objek uji coba pada penelitian ini adalah minat belajar siswa. Instrumen yang digunakan mengukur validitas bahan ajar adalah *rating scale* yang telah teruji oleh judges. Metode analisis data yang digunakan adalah analisis deskriptif kualitatif dan analisis deskriptif kuantitatif. Setelah dilakukan analisis dan perhitungan. Setelah dilakukan analisis dan perhitungan, validitas isi e-modul berorientasi *problem based learning* dan PhET *simulation* memperoleh skor sebesar 0,9 sehingga dikategorikan sangat valid. Kepraktisan e-modul berorientasi *problem based learning* dan PhET *simulation* ditinjau berdasarkan respon guru/praktisi mendapat hasil sebesar 4,83 sehingga dikategorikan sangat praktis. Kepraktisan e-modul berorientasi *problem based learning* dan PhET *simulation* ditinjau berdasarkan respon siswa mendapat hasil sebesar 4,93 sehingga dikategorikan sangat praktis. Efektivitas e-modul mendapat hasil signifikansi (2-tailed) sebesar 0,001 dengan kesimpulan e-modul berorientasi PBL dan PhET *Simulation* efektif digunakan dalam proses pembelajaran.

Kata Kunci: E-modul, *Problem Based Learning,* PhET *Simulation,* Minat belajar

ABSTRACT

This study aims to produce e-modules oriented to PBL and PhET Simulation to increase the learning interest of fourth grade elementary school students which have been tested for validity, practicality, and effectiveness. This type of research is development research that uses the ADDIE model, which has research stages in the form of 1) analyze 2) design 3) development 4) implementation 5) evaluation. The subjects of this development research are PBL-oriented e-modules and PhET simulation. While the object of this research is content validity, practicality and product effectiveness. The test subjects in this study were fourth grade students of SD Negeri 1 Gumbrih, while the object of the experiment in this study was students' interest in learning. The instrument used to measure the validity of teaching materials is a rating scale that has been tested by judges. The data analysis method used is descriptive qualitative analysis and descriptive quantitative analysis. After doing the analysis and calculations. After analyzing and calculating, the content validity of the problem-based learning-oriented e-module and PhET simulation got a score of 0.9 so it was categorized as very valid. The practicality of problem-based learning-oriented e-modules and PhET simulation were reviewed based on the teacher/practitioner's response, getting a result of 4.83 so it was categorized as very practical. The practicality of the problem-based learning-oriented e-module and the PhET simulation were reviewed based on the student's response and the result was 4.93 so it was categorized as very practical. The effectiveness of the e-module got a significance result (2-tailed) of 0.001 with the conclusion that the PBL-oriented e-module and PhET Simulation were effectively used in the learning process.

***Keywords**: E-module, Problem Based Learning, PhET Simulation, Interest in learning*