

ABSTRAK

INDRI FITRIYANINGSIH. 2021. **PENGEMBANGAN *MOODLE* BERBASIS *FLIPPED CLASSROOM* UNTUK MENINGKATKAN LITERASI MATEMATIK PADA MATERI TRIGONOMETRI.** Program Studi Pendidikan Matematika. Program Pascasarjana. Universitas Siliwangi.

Penelitian ini bertujuan untuk menghasilkan *Moodle* berbasis *Flipped Classroom*, untuk mengetahui peningkatan literasi matematik peserta didik pada materi Trigonometri setelah menggunakan *Moodle* berbasis *Flipped Classroom*, dan mengetahui kualitas efektivitas *Moodle* berbasis *Flipped Classroom*. Penelitian ini merupakan jenis penelitian campuran (*Mix Methods*) dengan desain penelitian *concurrent embedded* dengan penelitian pengembangan dari Thiagarajan sebagai metode primer dan metode kuantitatif sebagai metode sekundernya. Subjek dari penelitian ini adalah satu orang ahli media, satu orang ahli materi, dan sebanyak 32 peserta didik di SMK Ma'arif NU Ciamis menjadi sampel dalam penelitian ini. Teknik pengumpulan data pada penelitian ini yaitu wawancara, validasi media dan materi, memberikan angket respon kepada peserta didik, dan tes kemampuan literasi matematik. Instrumen yang digunakan dalam penelitian ini adalah pedoman wawancara, lembar angket, lembar validasi oleh ahli media dan ahli materi, lembar angket respon peserta didik, dan lembar soal tes kemampuan peserta didik. Semua instrumen yang digunakan dalam penelitian ini sudah dinyatakan layak. Berdasarkan hasil penelitian, (a) tahap pendefinisian melalui studi literatur materi, literasi matematik, dan studi lapangan yang dilakukan berupa observasi mengenai media pembelajaran, sikap peserta didik dan wawancara terhadap pendidik; (b) tahap perancangan yang menghasilkan *flowchart*, *storyboard*, sintaks pengaplikasian *Moodle*, penyusunan materi, lembar validasi, soal literasi matematik, dan angket respon peserta didik; (c) tahap pengembangan yang menghasilkan produk pengembangan yang selanjutnya dilakukan evaluasi oleh ahli. Hasil validasi dari ahli media dan materi dinyatakan "valid". Selain itu dilakukan tes terhadap literasi matematik kepada 32 peserta didik setelah menggunakan produk pengembangan. Respon diberikan dan sebanyak 80,33% peserta didik memberikan penilaian baik; dan (d) tahap penyebaran yaitu disebarkannya media pembelajaran *Moodle* berbasis *Flipped Classroom* yang terbatas pada penyebarluasan produk di lingkungan tempat penelitian dilakukan. Kualitas efektivitas dari penggunaan *Moodle* berbasis *Flipped Classroom* untuk meningkatkan literasi matematik pada materi Trigonometri mengacu pada hasil perhitungan *effect size* sebesar 1,98 yang menunjukkan interpretasi efektivitas yang besar. Peningkatan literasi matematik peserta didik mengacu pada hasil perhitungan N-Gain yang diperoleh hasil presentase sebanyak 56,25% menunjukkan interpretasi peningkatan yang "Tinggi".

Kata kunci: *Moodle*, *Flipped Classroom*, Literasi Matematik, Trigonometri.

ABSTRACT

INDRI FITRIYANINGSIH. 2021. *DEVELOPMENT OF MOODLE-BASED FLIPPED CLASSROOM FOR IMPROVING MATH LITERATURE ON TRIGONOMETRIC MATERIALS*. Mathematics Education Study Program. Graduate Program. Siliwangi University.

This study aims to produce Moodle based on Flipped Classroom, to determine the increase in students' mathematical literacy in Trigonometry material after using Moodle based on Flipped Classroom, and to determine the quality of effectiveness of Moodle based on Flipped Classroom. This research is a mixed type of research (Mix Methods) with a concurrent research design embedded with development research from Thiagarajan as the main method and quantitative methods as a secondary method. The subjects of this study were one media expert, one material expert, and the sample in this study was 32 students at SMK Ma'arif NU Ciamis. Data collection techniques in this study were interviews, validation of media and materials, giving response questionnaires to students, and tests of mathematical literacy skills. The instruments used in this study were interview guidelines, questionnaire sheets, validation sheets for media experts and material experts, student response questionnaire sheets, and student ability test question sheets. All instruments used in this study have been declared feasible. Based on the results of the research, (a) the definition stage is through a study of material literature, mathematical literacy, and field studies conducted in the form of observations of learning media, student attitudes and interviews with educators; (b) the design stage which produces flowcharts, storyboards, Moodle application syntax, preparation of materials, validation sheets, mathematical literacy questions, and student response questionnaires; (c) the development stage which produces a development product which will then be evaluated by an expert. The validation results from media and material experts are declared "valid". In addition, a mathematical literacy test was conducted on 32 students after using the development product. Responses were given and as many as 80.33% of students gave a good rating; and (d) the dissemination stage, namely the distribution of Moodle learning media based on Flipped Classroom which is limited to product dissemination in the environment where the research is conducted. The quality of the effectiveness of using Moodle based on Flipped Classroom to improve mathematical literacy in Trigonometry material refers to the results of the calculation of effect size 1.98 which shows a large interpretation of effectiveness. The increase in students' mathematical literacy refers to the results of the N-Gain calculation which results in a percentage of 56.25% indicating the "High" interpretation of the increase.

Kata kunci: Moodle, Flipped Classroom, Mathematical Literacy, Trigonometry.