ABSTRAK

PENGEMBANGAN MEDIA PEMBELAJARAN BERBASIS ANIMASI UNTUK MEMBANTU PEMAHAMAN KONSEP PERBANDINGAN TRIGONOMETRI SISWA KELAS X SMK N 2 DEPOK

Oleh:
Bimo Widiatmoko
211414045

Penelitian ini bertujuan untuk mengembangkan video animasi untuk membantu pemahaman konsep perbandingan trigonometri, serta mengetahui hasil uji coba pemakaian video tersebut terhadap pemahaman konsep peserta didik. Jenis penelitian yang digunakan adalah penelitian pengembangan model 3D *(Define, Design, Develop*) yang merupakan modifikasi dari model 4D. Subjek penelitian ini adalah peserta didik kelas XI SIJA B SMK Negeri 2 Depok tahun ajaran 2025/2026. Dengan objek penelitian berupa pengembangan media pembelajaran berbasis video animasi untuk membantu pemahaman konsep perbandingan trigonometri. Data yang dikumpulkan meliputi data kebutuhan dan pemahaman siswa, nilai pretest dan posttest, data keterlaksanaan pembelajaran, serta hasil evaluasi penggunaan video animasi. Pengumpulan data dilakukan melalui pembagian angket, pelaksanaan tes uraian, dan observasi selama pembelajaran. Instrumen yang digunakan terdiri atas angket skala Likert, isian singkat, pilihan ganda, tes uraian perbandingan trigonometri. Secara umum media video animasi yang dikembangkan dinilai efektif dalam membantu pemahaman konsep peserta didik, terutama pada siswa dengan kemampuan awal menengah ke bawah, serta memperoleh respon positif terhadap pembelajaran. Pada tahap Define diperoleh bahwa siswa memiliki minat terhadap media pembelajaran berbasis animasi; tahap Design menghasilkan rancangan storyboard dan struktur materi; dan tahap Develop menghasilkan media pembelajaran berbasis animasi yang sesuai dengan rancangan. Uji coba terbatas yang dilaksanakan pada 36 peserta didik menunjukkan adanya peningkatan pemahaman konsep pada 12 siswa, sementara penurunan nilai pada 22 siswa disebabkan oleh miskonsepsi terhadap konsep sudut depresi yang belum sepenuhnya terantisipasi dalam media.

Kata kunci: pengembangan media, video animasi, perbandingan trigonometri, model 3D.

ABSTRACT

DEVELOPMENT OF ANIMATION-BASED LEARNING MEDIA TO ENHANCE STUDENTS' UNDERSTANDING OF TRIGONOMETRIC RATIO CONCEPTS IN GRADE X AT SMK N 2 DEPOK

By:
Bimo Widiatmoko
211414045

This study aims to develop an animated video to support students' understanding of trigonometric comparison concepts and to examine the results of its implementation on students' conceptual comprehension. The research employs a 3D development model (Define, Design, Develop), which is a modification of the 4D model. The research subjects were 36 students of Class XI SIJA B at SMK Negeri 2 Depok in the 2025/2026 academic year. The object of the study is the development of an animation-based learning video designed to enhance students' understanding of trigonometric comparison concepts. The data collected include students' needs and conceptual understanding, pretest and posttest scores, learning implementation data, and the results of the video evaluation questionnaire. Data were obtained through questionnaires, essay-type tests, and classroom observation. The instruments used consisted of a Likert-scale questionnaire, short-answer items, multiple-choice items, and an essay test on trigonometric comparison. In general, the developed animated video learning media was considered effective in supporting students' conceptual understanding, particularly among students with lower to middle initial abilities, and received positive responses during the learning process. In the Define stage, it was found that students showed interest in animation-based learning media; the Design stage resulted in the development of storyboards and structured learning materials; and the Develop stage produced animation-based learning media in accordance with the designed plan. A limited trial involving 36 students showed an improvement in conceptual understanding in 12 students, while the decrease in scores observed in 22 students was attributed to misconceptions regarding the concept of angle of depression that had not been fully anticipated in the media.

Keywords: media development, animated video, trigonometric comparison, 3D model.