# ABSTRAK

**Margaretha Ivana Angeline, 2022. Pengembangan Media Pembelajaran *Desmos Classroom Activities* yang Memfasilitasi Peserta Didik Kelas X dalam Pemahaman Konsep Perbandingan Trigonometri pada Segitiga Siku-Siku. Program Studi Pendidikan Matematika, Jurusan Pendidikan Matematika dan Ilmu Pengetahuan Alam, Fakultas Keguruan dan Ilmu Pendidikan, Universitas Sanata Dharma.**

Peserta didik masih banyak mengalami kesulitan dalam memahami konsep perbandingan trigonometri pada segitiga siku-siku, sehingga dibutuhkan media pembelajaran yang dapat membantu peserta didik dalam memahami konsep perbandingan trigonometri pada segitiga siku-siku. Salah satu media yang dapat membantu adalah *Desmos Classroom Activities*. Sehingga, tujuan dari penelitian ini adalah 1) mendeskripsikan aktivitas media pembelajaran *Desmos Classroom Activities* yang memfasilitasi peserta didik dalam pemahaman konsep perbandingan trigonometri pada segitiga siku-siku dan 2) mendeskripsikan kualitas media pembelajaran *Desmos Classroom Activities* yang memfasilitasi peserta didik dalam pemahaman konsep perbandingan trigonometri pada segitiga siku-siku.

Metode yang digunakan dalam penelitian ini adalah penelitian pengembangan model ADDIE (*Analyze, Design, Development, Implementation, Evaluation*). Subjek penelitian ini adalah seorang guru matematika dan 20 peserta didik kelas X. Teknik pengumpulan data adalah wawancara, validasi media pembelajaran, penyebaran kuesioner, dan tes hasil belajar. Hasil wawancara dan komentar,kritik, saran pada pernyataan terbuka kuesioner validasi dan kuesioner pendidik dan peserta didik dianalisis dengan reduksi data, penyajian data, dan verifikasi data. Pernyataan tertutup pada kuesioner validasi dan kuesioner pendidik dan peserta didik diukur dengan skala Likert dan dianalisis dengan persentase skor. Tes hasil belajar dianalisis dengan kriteria pedoman penilaian soal tes.

Terdapat dua hasil penelitian. Pertama terdapat enam aktivitas pada *Desmos Classroom Activities* yang disusun menggunakan *fitur-fitur Desmos Classroom Activities* untuk mendukung indikator-indikator pemahaman konsep. Kedua, kualitas media pembelajaran telah memenuhi kriteria kevalidam kepraktisan, keefektifan. Validasi oleh ahli materi dinilai valid dan validasi oleh ahli media dinilai sangat valid. Media pembelajaran memenuhi kriteria praktis berdasarkan kuesioner pendidik dan peserta didik. Media pembelajaran juga dinilai efektif pada kusioner pendidik dan peserta didik dan memperoleh nilai 80% diatas KKM dalam tes hasil belajar. Hal ini menunjukkan bahwa media pembelajaran telah memfasilitasi peserta didik dalam pemahaman konsep perbandingan trigonometri pada segitiga siku-siku.

**Kata Kunci:** media pembelajaran, pemahaman konsep, penelitian dan pengembangan, perbandingan trigonometri pada segitiga siku-siku.

# *ABSTRACT*

**Margaretha Ivana Angeline, 2022. *Development of Desmos Classroom Activities Learning Media that Facilitates Students of X Grade in Understanding the Concepts of Trigonometric Comparisons in Right Triangles. Mathematics Education Study Program, Department of Mathematics and Natural Sciences Education, Faculty of Teacher Training and Education, Sanata Dharma University.***

*Students still have many difficulties in understanding the concept of trigonometric comparisons in right triangles, so that learning media is needed that can help students understand the concepts of trigonometric comparisons in right triangles. One of the learning media that can help is Desmos Classroom Activities. Thus, the objectives of this study are 1) to describe Desmos Classroom Activities learning media activities that facilitate students in understanding the concept of trigonometric comparisons in right triangles and 2) describe the quality of Desmos Classroom Activities learning media that facilitate students in understanding the concept of trigonometric comparisons in right triangle.*

*The method used in this research is ADDIE model development research (Analyze, Design, Development, Implementation, Evaluation). The subject of this study was a mathematics teacher and 20 students of class X. The data collection techniques were interviews, validation of learning media, distributing questionnaires, and learning outcomes tests. The results of interviews and comments, criticisms, suggestions on the open statement of the validation questionnaire and the questionnaires for educators and students were analyzed by data reduction, data presentation, and data verification. Closed statements on the validation questionnaire and the educator and student questionnaires were measured using a Likert scale and analyzed by percentage scores. The learning outcome test was analyzed with the criteria for the assessment of the test questions.*

*There are two research results. First, there are six activities in Desmos Classroom Activities which are arranged using the features of Desmos Classroom Activities to support indicators of concept understanding. Second, the quality of learning media has met the criteria of validity, practicality, effectiveness. Validation by material experts is considered valid and validation by media experts is considered very valid. The learning media fulfills the practical criteria based on the teacher and student questionnaires. The learning media was also considered effective on the questionnaires for educators and students and scored 80% above the KKM in the learning outcomes test. This shows that the learning media has facilitated students in understanding the concept of trigonometric comparisons in right triangles.*

***Keywords**: learning media, understanding concepts, research and development, trigonometric comparisons in right triangles.*