

ABSTRAK

**“PENGEMBANGAN MEDIA PEMBELAJARAN *GAME* DENGAN
PENDEKATAN DESIGN THINKING MENGGUNAKAN GDEVELOP 5”**

Pembelajaran trigonometri di kelas X SMAN 1 Jogonalan Klaten masih didominasi metode ceramah sehingga keterlibatan peserta didik rendah dan pemahaman konsep trigonometri belum optimal. Hasil observasi, wawancara, dan tes awal menunjukkan bahwa peserta didik mengalami kesulitan memahami konsep perbandingan trigonometri, menentukan nilai fungsi trigonometri, serta menerapkan tanda fungsi trigonometri pada setiap kuadran. Penelitian ini bertujuan mendeskripsikan proses pengembangan media pembelajaran digital interaktif berbentuk *game* menggunakan pendekatan *Design Thinking* serta mengetahui bagaimana media yang dikembangkan membantu mengatasi kesulitan peserta didik dalam memahami trigonometri.

Penelitian ini merupakan penelitian dan pengembangan menggunakan model ADDIE yang diintegrasikan dengan pendekatan *Design Thinking*. Subjek penelitian adalah 36 peserta didik kelas XB SMAN 1 Jogonalan Klaten. Pengumpulan data dilakukan melalui observasi, wawancara, validasi ahli, tes *pretest-posttest*, serta angket respons peserta didik. Data dianalisis secara deskriptif kualitatif dan kuantitatif menggunakan persentase kelayakan, analisis indikator pemahaman, dan uji N-Gain.

Hasil penelitian menghasilkan media pembelajaran *game* TrigoQuest yang dikembangkan melalui tahapan *Empathize*, *Define*, *Ideate*, *Prototype*, dan *Test*. Media memperoleh rata-rata validasi ahli sebesar 94% dengan kategori sangat layak. Hasil implementasi menunjukkan rata-rata nilai peserta didik meningkat dari 60,3 pada *pretest* menjadi 79,0 pada *posttest* dengan nilai N-Gain 0,47 (kategori cukup efektif) serta respons peserta didik sebesar 78% (kategori baik). Analisis indikator pemahaman menunjukkan sebagian besar peserta didik telah mencapai kategori pemahaman utuh pada aspek konsep, prinsip, dan prosedur, meskipun masih terdapat beberapa peserta didik yang belum menuliskan penjelasan konsep dan langkah penyelesaian secara lengkap. Hasil tersebut menunjukkan bahwa media TrigoQuest membantu peserta didik memahami materi perbandingan trigonometri dan trigonometri pada kuadran melalui penyajian materi yang interaktif, visual, dan kontekstual.

Kata kunci: *Design Thinking*, GDevelop 5, Media Pembelajaran Digital, Pemahaman Trigonometri

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ABSTRACT***Development Of Game Learning Media with A Design Thinking Approach
Using Gdevelop 5***

Trigonometry instruction in Grade X at SMAN 1 Jogonalan Klaten was still predominantly lecture-based, resulting in low student engagement and suboptimal conceptual understanding of trigonometry. Observations, interviews, and preliminary tests indicated that students experienced difficulties in understanding trigonometric ratios, determining the values of trigonometric functions, and applying the signs of trigonometric functions in different quadrants. This study aimed to describe the development process of an interactive game-based digital learning media using the Design Thinking approach and to investigate how the developed media helps students overcome their difficulties in understanding trigonometry.

This study employed a Research and Development method using the ADDIE model integrated with the Design Thinking approach. The participants were 36 students of Class XB at SMAN 1 Jogonalan Klaten. Data were collected through observations, interviews, expert validation, pretest-posttest assessments, and student response questionnaires. The data were analyzed using descriptive qualitative and quantitative methods, including feasibility percentage analysis, conceptual understanding indicator analysis, and the N-Gain test.

The study produced a game-based digital learning media called TrigonoQuest, developed through the Empathize, Define, Ideate, Prototype, and Test stages. The media obtained an average expert validation score of 94%, indicating that it was highly feasible for use in learning. The implementation results showed that the students' average score increased from 60.3 on the pretest to 79.0 on the posttest, with an N-Gain score of 0.47, categorized as moderately effective, while student responses reached 78%, categorized as good. The analysis of conceptual understanding indicators revealed that most students achieved a complete understanding of concepts, principles, and procedures, although some still provided incomplete conceptual explanations and solution steps. These findings indicate that TrigonoQuest helps students understand trigonometric ratios and trigonometric functions in different quadrants through interactive, visual, and contextual learning experiences.

Keywords: *Design Thinking, GDevelop 5, Digital Learning Media, Trigonometric Understanding*

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