

ABSTRAK

Media pembelajaran merupakan salah satu unsur yang penting dalam pembelajaran matematika. Penelitian ini bertujuan untuk (1) mengembangkan media pembelajaran digital Desmos *Classroom* pada materi Sistem Pertidaksamaan Linear Dua Variabel SPtLDV untuk memfasilitasi pemahaman konsep SPtLDV peserta didik, dan (2) mengetahui hasil belajar peserta didik pada pemahaman konsep SPtLDV dengan menggunakan Desmos *classsroom*.

Jenis penelitian yang digunakan pada penelitian ini adalah penelitian pengembangan yang mengikuti langkah-langkah Analisis, Desain, Pengembangan (*Development*), Implementasi, dan Evaluasi (ADDIE). Subyek penelitian adalah peserta didik SMA YPPK Adhi Luhur kelas X-2 dan X-3. Instrumen penelitian yang digunakan untuk mengumpulkan data adalah tes hasil belajar, lembar observasi, dan pedoman wawancara. Pengambilan data dilaksanakan pada tahap Analisis dan Implementasi.

Modul ajar dikembangkan menurut model ADDIE. Pada tahap Analisis, ditemukan bahwa peserta didik kelas X SMA YPPK Adhi Luhur memperoleh rerata hasil belajar yang rendah. Maka diperlukan media pembelajaran yang dapat membantu kesulitan tersebut. Penelitian ini mengembangkan media pembelajaran menggunakan *platform* Desmos *Classroom*. Media memuat bagian pembuka berupa sapaan pada peserta didik dan tujuan pembelajaran. Bagian isi mencakup apersepsi dan materi inti. Bagian penutup meminta peserta didik untuk melakukan refleksi. Media ini didesain untuk satu kali tatap muka. Validasi dilakukan sebelum tahap implementasi. Pada tahap implementasi masih ditemukan beberapa peserta didik kurang aktif dalam berdiskusi karena tidak menguasai materi prasyarat. Setelah implementasi, peserta didik diminta untuk mengisi angket refleksi dan evaluasi. Berdasarkan hasil angket, media pembelajaran Desmos *Classroom* membantu peserta didik memahami konsep SPtLDV. Tes hasil belajar peserta didik dipergunakan sebagai salah satu bahan evaluasi media pembelajaran.

Hasil tes belajar baik dari kelas eksperimen maupun kelas kontrol menunjukkan bahwa peserta didik sudah memahami konsep SPtLDV, dengan rerata nilai masing-masing 68,38 dan 62,73. Hasil tes belajar memperlihatkan tidak ada perbedaan yang signifikan pada kedua kelas, kecuali pada indikator 4 yaitu kemampuan merepresentasikan solusi PtLDV secara visual.

Kata kunci: Desmos *Classroom*, SPtLDV, penelitian pengembangan

ABSTRACT

Learning media is an important element in mathematics learning. This study aims to (1) develop Desmos Classroom digital learning media for the topic on System of Two-Variable Linear Inequality to facilitate students' understanding of the concept, and (2) determine students learning outcomes in understanding the concept using Desmos Classroom.

This is a research and development, which follows the steps of Analysis, Design, Development, Implementation, and Evaluation (ADDIE). The subjects of the study were students of SMA YPPK Adhi Luhur in grade 10. The research instruments used to collect data were quiz, observation sheets, and interview guidelines. Data collection was collected during the Analysis and Implementation stages of the developed learning media.

The teaching module was developed according to the ADDIE model. During the Analysis stage, it was found that grade 10 students of SMA YPPK Adhi Luhur had difficulty understanding the concept of mathematical representation and solving the System of Two Variable Linear Inequality. Therefore, learning media can be developed to address these difficulties. The media was developed using the Desmos Classroom platform. The media includes an opening section that greets students and provides learning objectives. The content section includes apperception and core material. The closing section asks students to make a reflection. This media is designed for one class session. Validation was conducted before the implementation phase. During the implementation phase, it was found that several students were still less active in discussions due to not mastering the prerequisite material. After implementation, students were asked to complete a reflection and evaluation questionnaire. Based on the questionnaire results, the Desmos Classroom learning media helped students understand the topic. Student learning achievement tests were used as one of the evaluation materials for the learning media.

The result of the quiz from both the experimental and control classes showed that students understood the system of two variables linear inequalities, with average scores of 68.38 and 62.73, respectively. The test results showed no significant difference between the two classes, except for Indicator 4, namely the ability to represent linear inequalities in two variables solutions visually.

Keywords: *Desmos Classroom, system of linear inequalities in two variables, ADDIE.*

