

PENGEMBANGAN APPLLET GEOGEBRA PERSAMAAN DAN FUNGSI KUADRAT UNTUK SISWA SMP KELAS IX

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ABSTRAK

Penelitian ini membuat media applet GeoGebra pada pokok bahasan persamaan dan fungsi kuadrat. Tujuan yang dapat disasar dalam penelitian ini yakni, mengetahui karakteristik, kepraktisan serta keefektifan media applet GeoGebra. Penelitian yang dilaksanakan menggunakan model pengembangan 4-D. Tahapan pengembangan model 4-D yang digunakan meliputi tahap pendefinisian, tahap desain, dan tahap pengembangan. Media applet GeoGebra yang terdiri dari 3 media applet yang sudah diuji kelayakannya dengan 3 orang ahli materi dan 3 orang ahli media, di dapat rata-rata sebesar 4,62 dalam kriteria sangat layak. Terdapat beberapa karakteristik media yang dikembangkan seperti terdapat fitur interaktivitas, berorientasi pada pemahaman konsep siswa, terdapat game dan media applet GeoGebra dapat diakses secara daring dan luring. Media pembelajaran yang dihasilkan telah teruji kepraktisannya dengan 4 orang guru matematika dan 32 siswa didapat hasil rata-rata penilaian angket respon guru yakni 4,85 serta rata-rata skor angket respon siswa yakni 4,5 dikategorikan memiliki tingkat kepraktisan yang sangat baik. Keefektifan media applet GeoGebra dilihat melalui ketuntasan klasikal dari 32 siswa dengan persentase ketuntasan klasikal 84,37% yang dikategorikan sangat baik. Kesimpulannya bahwa media pembelajaran applet GeoGebra praktis dan efektif untuk melatih pemahaman konsep siswa SMP kelas IX pada materi persamaan dan fungsi kuadrat.

Kata kunci: applet GeoGebra, model pengembangan 4-D.

DEVELOPMENT OF GEOGEBRA APPLETS OF EQUATION AND SQUARE FUNCTIONS FOR CLASS IX STUDENTS OF JUNIOR HIGH SCHOOL

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ABSTRACT

This research makes GeoGebra applet media on the subject of quadratic equations and functions. The objectives that can be targeted in this study are to determine the characteristics, practicality and effectiveness of the GeoGebra applet media. The research was carried out using a 4-D development model. The stages of developing the 4-D model used include the definition stage, the design stage, and the development stage. The GeoGebra media applet which consists of 3 media applets that have been tested for feasibility with 3 material experts and 3 media experts, was obtained an average of 4.62 in very feasible criteria. There are several characteristics of the media developed, such as interactivity features, oriented towards understanding student concepts, there are games and GeoGebra applet media that can be accessed online and offline. The resulting learning media has been tested for practicality with 4 mathematics teachers and 32 students, the average result of the teacher response questionnaire assessment is 4.85 and the average student response questionnaire score is 4.5 categorized as having a very good level of practicality. The effectiveness of the GeoGebra applet media is seen through the classical completeness of 32 students with a classical mastery percentage of 84.37% which is categorized as very good. The conclusion is that the GeoGebra applet learning media is practical and effective for training the understanding of concepts for class IX junior high school students on the material of equations and quadratic functions

Keywords: GeoGebra applet, 4-D development model.