

**PENGEMBANGAN MEDIA PEMBELAJARAN E-KOMIK BERORIENTASI  
*PROBLEM BASED LEARNING* UNTUK MENINGKATKAN PEMAHAMAN  
KONSEP ARITMATIKA SOSIAL**

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**ABSTRAK**

Penelitian pengembangan ini bertujuan untuk (1) mendeskripsikan rancang bangun media e-komik matematika berorientasi *problem based learning* dalam meningkatkan pemahaman konsep aritmatika sosial; (2) mengetahui karakteristik media e-komik matematika berorientasi *problem based learning* dalam meningkatkan pemahaman konsep aritmatika sosial; dan (3) menginventaris karakteristik media tersebut yang secara empirik telah diuji valid, praktis, dan efektif. Prosedur pengembangan e-komik ini menerapkan sebagian langkah- langkah dari model *four-D*, yaitu tahap pendefinisian (*define*), perancangan (*design*), dan pengembangan (*development*). Validitas media pembelajaran diperoleh berdasarkan angket media pembelajaran serta angket materi dan pembelajaran, yang dilakukan oleh 2 orang ahli materi dan pembelajaran yang dilakukan oleh dosen di Jurusan Matematika Undiksha dan guru di SMP Negeri 4 Denpasar, serta 2 orang ahli media dilakukan oleh dosen di Jurusan Teknik Informatika Undiksha dan seorang ilustrator dan desainer grafis. Kepraktisan diperoleh berdasarkan analisis angket respon siswa dan guru, serta keefektifan diperoleh dari hasil ketuntasan belajar siswa yang didapat melalui tes yang diberikan setelah siswa mencoba media yang dikembangkan. Uji coba terbatas dilakukan kepada 37 siswa kelas VII di SMP Negeri 4 Denpasar. Hasil uji coba validitas memperoleh skor 4,57 dengan kriteria valid, rata-rata hasil uji coba kepraktisan memperoleh skor 4,38 dengan kriteria layak, serta memenuhi kriteria efektif karena ketuntasan klasikal siswa mencapai 78,38% dan lebih dari ketuntasan minimal yang telah ditetapkan yaitu 75%. Dari hasil tersebut, dapat ditarik kesimpulan bahwa media pembelajaran e-komik memenuhi kriteria sebagai media pembelajaran yang baik.

**Kata kunci:** media belajar, e-komik, *problem based learning*, aritmatika sosial

## Abstract

This development research aims to (1) describe the design of problem based learning-oriented mathematical e-comic media in improving understanding of social arithmetic concepts; (2) to know the characteristics of problem based learning oriented mathematical e-comic media in improving understanding of social arithmetic concepts; and (3) the study aims to invent the characteristics of such media that have empirically been tested valid, practical, and effective. This e-comic development procedure applies some of the steps of the four-D model, namely the define, design, and development stages. The validity of learning media was obtained based on the learning media questionnaire as well as the material and learning questionnaire, which was conducted by material and learning experts from the Department of Mathematics Undiksha and SMP Negeri 4 Denpasar, as well as 2 media experts from the Department of Informatics Engineering Undiksha and an illustrator and graphic designer. Practical conclusion is obtained based on the analysis of student and teacher response questionnaires, and effectiveness is obtained from the results of student learning completion obtained through tests given after students applied firstly the developed media. The limited trial was conducted to 37 students of class VII at SMP Negeri 4 Denpasar. The results of the valid test obtained a score of 4.57 with valid criteria, the results of practical trials obtained a score of 4.38 with appropriate criteria, and meet the effective criteria because the classical completion of students reaches 78.38% and more than the minimum completion that has been set at 75%. From these results, it can be concluded that e-comic learning media meets the criteria as a good learning media.

**Keywords:** learning media, e-comic, problem based learning, social arithmetic

