

**KAJIAN ANALISIS KEBUTUHAN MEDIA INSTRUKSIONAL PADA
MATERI HIMPUNAN BAGI SISWA KELAS VII SMP NEGERI 3
SINGARAJA BERDASARKAN FASE ANALISIS PARADIGMA ADDIE
DAN PRINSIP TEORI GAGNE**

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ABSTRAK

Penelitian deskriptif dengan metode campuran ini bertujuan menganalisis kebutuhan media instruksional materi himpunan terhadap siswa kelas VII SMP Negeri 3 Singaraja serta merancang spesifikasi kebutuhan media interaktif berbasis 9 Prinsip Teori Gagne. Studi pendahuluan ini mengadopsi lima tugas inti Fase Analisis paradigma ADDIE menurut Robert Maribe Branch. Data dihimpun melalui studi dokumentasi laporan nilai sumatif, wawancara mendalam dengan guru matematika, angket kebutuhan terhadap 32 siswa kelas VII K, serta observasi sarana prasarana sekolah. Hasil penelitian mengungkap kesenjangan kinerja kognitif yang signifikan: hanya 37,5% siswa mencapai KKTP (≥ 75) dengan rerata kelas 64,2, akibat keabstrakan materi, hambatan notasi simbolik, dan kesulitan visual-spasial pada diagram Venn (90,63%). Pembelajaran konvensional satu arah berbasis media statis memicu kejenuhan pada 84,38% siswa. Meski kepemilikan gawai Android siswa mencapai 100%, fluktuasi jaringan internet sekolah menuntut solusi sistem penyampaian berupa Aplikasi Pembelajaran Interaktif Berbasis Android secara Luring. Integrasi sembilan prinsip instruksional Gagne diwujudkan melalui transformasi sembilan fitur aplikasi: Modul Animasi Apersepsi, Tampilan Misi Belajar, Kuis Kilat Prasyarat Interaktif, Simulasi Venn Interaktif, *Pop-up Mnemonic & Hint*, *Venn Drag-and-Drop Arena*, *Immediate Diagnostic Feedback*, Modul Evaluasi Mandiri, dan Tantangan Detektif Himpunan. Dokumen *Analysis Summary* ini menjadi cetak biru valid bagi pengembangan media pembelajaran matematika digital yang presisi di masa depan.

Kata Kunci: *Analisis Kebutuhan, Media Instruksional, Himpunan, Paradigma ADDIE, Teori Gagne.*

***AN ANALYSIS OF INSTRUCTIONAL MEDIA NEEDS IN THE TOPIC OF
SETS FOR SEVENTH-GRADE STUDENTS AT SMP NEGERI 3
SINGARAJA BASED ON THE ADDIE PARADIGM ANALYSIS PHASE
AND GAGNE'S THEORETICAL PRINCIPLES***

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ABSTRACT

This descriptive mixed-methods study aims to analyze the instructional media needs for the topic of Sets among 7th-grade students at SMP Negeri 3 Singaraja and design interactive media requirement specifications based on Gagne's 9 Principles of Instruction. This preliminary study adopts the five core tasks of the Analysis Phase in the ADDIE paradigm according to Robert Maribe Branch. Data were collected through a documentation study of summative assessment reports, in-depth interviews with the mathematics teacher, a needs analysis questionnaire administered to 32 students in Class VII K, and observations of school infrastructure. The results revealed a significant cognitive performance gap: only 37.5% of students achieved the Learning Objectives Mastery Criteria/KKTP (≥ 75) with a class average of 64.2, caused by the abstract nature of the material, symbolic notation barriers, and visual-spatial difficulties with Venn diagrams (90.63%). Oneway conventional learning using static media triggered boredom in 84.38% of students. Although student Android device ownership reached 100%, school internet network fluctuations necessitated a delivery system solution in the form of an Offline Interactive Android-Based Learning Application. The integration of Gagne's nine instructional principles was realized through the transformation of nine application features: Apperception Animation Module, Learning Mission View, Interactive Prerequisite Flashcard Quiz, Interactive Venn Simulation, Pop-up Mnemonic & Hint, Venn Drag-and-Drop Arena, Immediate Diagnostic Feedback, Self-Evaluation Module, and Set Detective Challenge. This Analysis Summary document serves as a valid blueprint for the future development of precise digital mathematics learning media.

Keywords: Needs Analysis, Instructional Media, Sets, ADDIE Paradigm, Gagne's Theory.