

ABSTRAK

Selamet, Nengah Kadek (2025). *Pengembangan Komik Bermuatan STEAM dan Tri Hita Karana untuk Meningkatkan Literasi Sains Siswa Kelas V Sekolah Dasar*. Tesis, Pendidikan Dasar, Pascasarjana, Universitas Pendidikan Ganesha.

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Kata Kunci: Komik, STEAM, *Tri Hita Karana*, Literasi Sains, Harmoni Ekosistem

Penelitian ini bertujuan untuk menghasilkan komik bermuatan STEAM dan *Tri Hita Karana* yang teruji validitas, kepraktisan dan efektifitasnya terhadap peningkatan literasi sains siswa kelas V Sekolah Dasar. Pengembangan media dilakukan menggunakan model ADDIE yang meliputi tahap analisis, desain, pengembangan, implementasi dan evaluasi. Komik yang berjudul “Sahabat Alam” ini memiliki ilustrasi visual yang dibuat dengan memanfaatkan teknologi *generative AI* dilengkapi dengan *Augmented Reality* (AR) serta kuis interaktif untuk meningkatkan keterlibatan dan pemahaman siswa dalam pembelajaran. Penelitian dilaksanakan di SD Negeri 6 Penatih dengan instrumen pengumpulan data berupa kuesioner validitas (materi, media, desain, Bahasa), angket kepraktisan guru dan siswa serta tes literasi sains untuk mengukur efektivitas media. Hasil analisis data menunjukkan bahwa komik “*Sahabat Alam*” memenuhi kriteria sangat layak. Validasi ahli materi memperoleh persentase 96%, ahli media 98%, ahli desain 96%, dan ahli bahasa 97%, yang seluruhnya berada pada kategori sangat layak. Uji kepraktisan oleh guru menunjukkan persentase 98%, sedangkan kepraktisan oleh siswa mencapai 94,51%, menandakan media sangat praktis dan diterima dengan baik. Uji efektivitas melalui *pretest* dan *posttest* menunjukkan peningkatan literasi sains siswa yang signifikan ($p < 0,001$) dengan ukuran dampak tinggi (Cohen’s $d = 3,208$). Berdasarkan hasil tersebut, dapat disimpulkan bahwa komik bermuatan STEAM dan *Tri Hita Karana* efektif meningkatkan literasi sains siswa kelas V Sekolah Dasar serta layak digunakan sebagai media pembelajaran inovatif yang mengintegrasikan penguatan karakter berbasis budaya lokal dan pemanfaatan teknologi.

ABSTRACT

Selamet, Nengah Kadek (2025). Development of STEAM and Tri Hita Karana-Infused Comics to Improve Scientific Literacy of Fifth-Grade Elementary School Students. Thesis, Basic Education, Postgraduate Program, Universitas Pendidikan Ganesha.

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Keywords: Comic, STEAM, Tri Hita Karana, Scientific Literacy, Ecosystem Harmony

This study aimed to develop a STEAM- and Tri Hita Karana-based comic that is proven to be valid, practical, and effective in improving the scientific literacy of fifth-grade elementary school students. The media was developed using the ADDIE model, which consists of the analysis, design, development, implementation, and evaluation stages. The comic, entitled “Sahabat Alam”, features visual illustrations created using generative AI technology and is complemented by Augmented Reality (AR) and interactive quizzes to enhance students’ engagement and understanding in learning. The study was conducted at SD Negeri 6 Penatih. Data were collected using validation questionnaires for content, media, design, and language, practicality questionnaires completed by teachers and students, and a scientific literacy test to measure the effectiveness of the media. The results showed that the “Sahabat Alam” comic met the criteria of being highly feasible. Content expert validation achieved a score of 96%, media expert validation 98%, design expert validation 96%, and language expert validation 97%, all of which fell into the “very feasible” category. The practicality test conducted by teachers resulted in a percentage of 98%, while student practicality reached 94.51%, indicating that the comic is highly practical and well accepted by students. The effectiveness test using pretest and posttest results revealed a significant improvement in students’ scientific literacy ($p < 0.001$) with a high effect size (Cohen’s $d = 3.208$). Based on these findings, it can be concluded that the STEAM- and Tri Hita Karana-based comic is effective in improving the scientific literacy of fifth-grade elementary school students and is suitable for use as an innovative learning medium that integrates character development grounded in local culture and the use of technology.