

**PENGEMBANGAN KOMIK DIGITAL MATERI FOTOSINTESIS
BERBASIS *DISCOVERY LEARNING* UNTUK MENINGKATKAN HASIL
BELAJAR IPAS SISWA KELAS IV SD No. 2 KEROBOKAN**

Oleh:

Ni Made Sinta Sri Dewi, NIM 2211031379

Program Studi Pendidikan Guru Sekolah Dasar

Jurusan Pendidikan Dasar

ABSTRAK

Pembelajaran IPAS pada materi fotosintesis di Sekolah Dasar masih menghadapi berbagai kendala, seperti rendahnya pemahaman konsep siswa, kurangnya keterlibatan aktif, serta penggunaan media pembelajaran yang belum optimal sehingga berdampak pada rendahnya hasil belajar siswa. Oleh karena itu, diperlukan media pembelajaran yang inovatif melalui penerapan model *discovery learning*. Penelitian ini bertujuan mengembangkan media komik digital berbasis *discovery learning* pada materi fotosintesis siswa kelas IV Sekolah Dasar serta mengetahui rancang bangun, validitas, kepraktisan, dan efektivitas media yang dikembangkan. Penelitian ini merupakan penelitian dan pengembangan (*Research and Development*) dengan model ADDIE yang meliputi tahap *Analysis*, *Design*, *Development*, *Implementation*, dan *Evaluation*. Data dikumpulkan menggunakan angket validitas, angket kepraktisan, dan tes hasil belajar, kemudian dianalisis menggunakan statistik deskriptif dan inferensial dengan uji-*t* sampel *dependent*. Hasil penelitian menunjukkan bahwa media yang dikembangkan berupa komik digital berbasis *discovery learning* yang disusun sesuai tahapan ADDIE dengan mengintegrasikan alur cerita kontekstual, ilustrasi, teks, audio, dan sintaks *discovery learning*. Hasil validitas menunjukkan media memperoleh kualifikasi sangat baik berdasarkan penilaian ahli isi/materi sebesar 93,33%, ahli desain instruksional sebesar 92,50%, dan ahli media pembelajaran sebesar 95,00%. Hasil kepraktisan menunjukkan persentase sebesar 97,78% pada uji coba perorangan, 97,41% pada uji kelompok kecil, dan 97,50% pada uji kepraktisan guru dengan kualifikasi sangat baik. Hasil uji efektivitas menunjukkan nilai *t*-hitung sebesar 30,51 lebih besar daripada *t*-tabel sebesar 1,697 pada taraf signifikansi 5%, sehingga media efektif meningkatkan hasil belajar IPAS siswa. Dengan demikian, media komik digital berbasis *discovery learning* dinyatakan valid, sangat praktis, dan efektif sehingga layak digunakan untuk meningkatkan hasil belajar IPAS pada materi fotosintesis di Sekolah Dasar.

Kata Kunci: Komik Digital, *Discovery Learning*, Hasil Belajar, IPAS, Fotosintesis, Sekolah Dasar.

ABSTRACT

Science and Social Studies (IPAS) learning on the topic of photosynthesis in elementary schools still faces several challenges, including students' low conceptual understanding, limited active participation in the learning process, and the suboptimal use of instructional media, which contribute to low learning outcomes. Therefore, innovative instructional media based on the Discovery Learning model are needed. This study aimed to develop a Discovery Learning-based digital comic for teaching photosynthesis to fourth-grade elementary school students and to examine its design, validity, practicality, and effectiveness. This study employed a Research and Development (R&D) approach using the ADDIE model, which consists of the Analysis, Design, Development, Implementation, and Evaluation stages. Data were collected through validity questionnaires, practicality questionnaires, and learning achievement tests, and were analyzed using descriptive and inferential statistics with a paired-samples t-test. The results showed that the developed media was a Discovery Learning-based digital comic designed according to the ADDIE model by integrating contextual storylines, illustrations, text, audio, and the syntax of the Discovery Learning model. The validity results indicated that the media achieved an excellent qualification, with scores of 93.33% from subject matter experts, 92.50% from instructional design experts, and 95.00% from instructional media experts. The practicality results showed percentages of 97.78% in the individual trial, 97.41% in the small-group trial, and 97.50% in the teacher practicality evaluation, all of which were categorized as excellent. The effectiveness test revealed that the calculated t-value (30.51) was higher than the critical t-value (1.697) at the 5% significance level, indicating that the media was effective in improving students' IPAS learning outcomes. Therefore, the Discovery Learning-based digital comic was found to be valid, highly practical, and effective, making it suitable for improving elementary school students' learning outcomes in photosynthesis.

Keywords: Digital Comic, Discovery Learning, Learning Outcomes, IPAS, Photosynthesis, Elementary School.