THE DEVELOPMENT OF SCIENCE COMIC AS A LEARNING MEDIA TO FACILITATE STUDENT'S CRITICAL THINKING SKILL ON WATER POLLUTION TOPIC

RESEARCH PAPER

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The Development of Science Comic to Facilitate Students' Critical Thinking on Water Pollution Topic

Oleh

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Sebuah skripsi yang diajukan untuk memenuhi salah satu syarat memperoleh gelar
Sarjana Pendidikan pada Fakultas Pendidikan Matematika dan Ilmu Pengetahuan Alam

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**THE DEVELOPMENT OF SCIENCE COMIC AS A LEARNING MEDIA
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DECLARATION

I do hereby declare that every aspect was written in this research paper entitled "The Development of Science Comic as a Learning Media to Facilitate Students' Critical Thinking Skill on Water Pollution Topic" is the original result of my idea, efforts, and works without copying or plagiarizing from other papers. The theories, opinion,s and others that contained in this paper have been quoted or referenced based on scientific code from UPI and under scientific ethics that applies in scholarly society. This declaration is created truthfully and mindfully. Unless it is eventually considered to be violation of scientific ethics, or whether there is a statement by other authenticity of this research paper, I can accept the authorization of scholars or copyright that are found. Hence, I am willing take responsibility and accept academic sanctions corresponds to the rules.

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THE DEVELOPMENT OF SCIENCE COMIC AS A LEARNING MEDIA TO FACILITATE STUDENTS' CRITICAL THINKING ON WATER POLLUTION TOPIC

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ABSTRACT

This study presents the development of science comic as a learning media. This study aims to develop a science comic as a learning media to facilitate students' critical thinking skill on water pollution topic. This study used a research and development method with ADDIE model. The research participants are three experts judgment, forty students, and three science teachers from one of junior high school in Bandung. The analyzing stage begin with analyzing characters and needs, analyzing material, and analyzing software and hardware. The designing stage consists of designing storyline, flowchart, and storyboard. In the developing stage the comic is developed using application, and the science comic is validated by three experts judgment, then the comic revised based on experts judgment suggestion. In the implementation stage, the science comic is given to teachers and students to test. The result from experts judgment for design indicator show a score of 0.828 for content material indicator show a score of 0.678, for language indicator a score of 0.889, and average score 0.785. It indicates the validation of the comic is medium. The results from teachers and students for critical thinking category show a score of 87.5 and 87.708, for language and design category show a score of 83.33 and 85.625, and for learning experience category with a score of 97.5 and 91.25, it indicates the use of science comic is very good facilitating students critical thinking on water pollution topic, and the science comic is ready to be used in water pollution learning.

Keywords: Comic-Based Media, Critical Thinking, Water Pollution

PENGEMBANGAN KOMIK SAINS UNTUK MEMFASILITASI SKILL BERPIKIR KRITIS PADA SISWA TERHADAP TOPIK PENCEMARAN AIR

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ABSTRAK

Penelitian ini menyajikan pengembangan komik sains sebagai media pembelajaran. Penelitian ini bertujuan untuk mengembangkan komik sebagai media pembelajaran untuk memfasilitasi murid dalam skill berpikir kritis pada topik pencemaran air. Penelitian ini menggunakan metode pengembangan sebagai metode penelitian dengan ADDIE model. Partisipan penelitian terdiri dari tiga penilai ahli, empat puluh siswa, dan tiga guru sains dari sebuah sekolah menengah di Bandung. Tahap analisis dimulai dengan menganalisis karakter dan kebutuhan, juga analisis perangkat keras dan lunak yang digunakan. Tahap perancangan terdiri dari membuat storyline, flowchart, dan storyboard. Tahap pengembangan terdiri dari mengembangkan komik menggunakan aplikasi, meninjau validitas komik dengan memberikannya kepada ahli. Tahap implementasi terdiri dari membagikan komik dan kuesioner kepada tiga guru sains dan empat puluh siswa. Tahap evaluasi sebagai tahap terakhir, yaitu mengevaluasi respon yang didapat dari guru sains dan murid. Hasil dari ahli untuk indikator desain menunjukan skor 0,828, indikator isi materi dengan skor 0,678, dan indicator bahasa dengan skor 0,889. Rata-rata skor yang didapatkan yaitu 0,785 yang berarti bernilai medium. Sedangkan hasil dari guru dan siswa untuk kategori skill berpikir kritis menunjukkan skor 87,5 dan 87,708, kategori bahasa dan desain dengan skor 83,33 dan 85,625, dan untuk kategori pengalaman belajar menunjukkan skor 97,5 dan 91,25. Hal ini berarti penggunaan komik sains sangat baik untuk memfasilitasi skill berpikir kritis dalam topik pembelajaran pencemaran air, dan sains komik siap digunakan dalam pembelajaran pencemaran air.

Kata Kunci : Media Pembelajaran Berbasis Komik, Skill Berpikir Kritis, Pencemaran air

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