INTISARI

Kecelakaan di perlintasan kereta api masih menjadi permasalahan serius di Indonesia. PT KAI mencatat 535 kejadian tabrakan di perlintasan kereta api sepanjang Januari–Agustus 2024. Kurangnya kesadaran masyarakat terhadap aturan keselamatan serta minimnya sosialisasi menjadi faktor utama tingginya angka kecelakaan. Oleh karena itu, diperlukan media edukasi yang lebih menarik dan mudah dipahami guna meningkatkan kesadaran keselamatan di jalur kereta api. Penelitian ini bertujuan untuk membuat video animasi 3D sebagai media edukasi keselamatan di perlintasan sebidang menggunakan metode *Multimedia Development Life Cycle* (MDLC). Proses pengembangan terdiri dari enam tahap, yaitu konsep, desain, pengumpulan materi, pembuatan, pengujian, dan distribusi. Pengujian dilakukan melalui alpha test dan beta test. Hasil alpha test menunjukkan bahwa animasi memiliki kualitas visual, audio, dan penyampaian informasi yang sesuai dengan tujuan edukasi. Sementara itu, hasil beta test dengan 30 responden di kawasan jalur kereta api menunjukkan bahwa video ini berhasil meningkatkan pemahaman keselamatan masyarakat, dengan rata-rata indeks sebesar 92,12%, yang berarti animasi ini layak sebagai media edukasi keselamatan di jalur kereta api. Dengan distribusi melalui platform digital, video ini diharapkan dapat menjangkau lebih banyak masyarakat dan berkontribusi dalam menekan angka kecelakaan di perlintasan sebidang.

Kata kunci: Animasi 3D, Keselamatan Kereta Api, Edukasi, Perlintasan Kereta Api, MDLC.

ABSTRACT

Accidents at railway crossings remain a serious issue in Indonesia. PT KAI recorded 535 train collisions incidents from January to August 2024. Lack of public awareness regarding safety regulations and limited socialization efforts are the main factors contributing to the high number of accidents. Therefore, an educational medium that is more engaging and easier to understand is needed to raise awareness of railway safety. This study aims to create a 3D animated video as an educational medium for railway crossing safety using the Multimedia Development Life Cycle (MDLC) method. The development process consists of six stages: concept, design, material collection, assembly, testing, and distribution. The testing phase includes both alpha and beta tests. The alpha test results indicate that the animation meets the expected standards in terms of visual quality, audio, and information delivery. Meanwhile, the beta test, conducted with 30 respondents in the railway crossing area, shows that the video effectively improves public understanding of railway safety, with an average index score of 92.12%, indicating that the animation is suitable as an educational medium for railway safety. By distributing the video through digital platforms, it is expected to reach a wider audience and contribute to reducing the number of accidents at railway crossings.

Keywords: 3D Animation, Railway Safety, Education, Railway Crossing, MDLC.