

Development of motion graphic animation lesson in potential energy

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Abstract

The purpose of this study was to 1) design and develop the motion graphic animation lesson in potential energy and 2) investigate the efficiency of the development of motion graphic animation lesson in potential energy. This study uses a type of research and development research, the statistics used in the analysis were the mean and the standard deviation. The result showed that 1) the motion graphic animation as a learning materials, had following the learning objectives, the O-NET test example, as well as images, voice, music and character and background design 2) the efficiency of the motion graphic animation content was at excellent level and 3) the efficiency of the motion graphic animation media was at good level.

Keywords: computer animation, learning media, motion graphic video, potential energy lesson

1. Introduction

From the National Education Plan 2017 - 2036 (Office of the Education Council Ministry of Education, 2017) that has given importance to the development of the population in school age by increasing educational opportunities, as the advance in technologically to create opportunities for educational equality and equality in access to learning that meet the needs of students through digital technology. The new forms of these learning channels can help students to receive an education that is appropriate for their potential. Therefore, education in school has the idea to use the technology to create knowledge to be used for education, such as digital learning media which will enable students to access this knowledge at all time. Education aims to provide students with the knowledge and skills needed in work life, so the community will gain knowledge and skills, so that it is expected to improve the quality of life of individuals and communities.

Today, technology and networking take a big part of human life (Kayimbasioglu et al., 2016). As advances in computer technology, computer graphics and digital media occurred as a media for representing information such as education media, film, advertising or other entertainment media. The development of digital media has the key that can be accessed anytime, anywhere, and makes it easier for humans to obtain information. So, in the future technology will become an important part of human life and all aspects of life will use technology, including education (Hapsari et al., 2019). Modern information and communication technology (ICT) have spread in all areas of human activities, such as in education, to improve the effectiveness and quality of lecturer work (Hlasna, Klimova, & Poulouva, 2017). Motion graphics are a way to communicate with the viewer, and add depth to the story together with music, they can give a powerful content with the use of motion graphic to create ads, title sequences for movies, videos and to share information (Biteable, 2020)

Based on the problem mentioned, as the advance in digital media technology, this study have an idea to develop interactive motion graphic animation lessons in potential energy which was one important physics learning objective for high school students. As the students like to watch cartoons and animations, so the development of this learning media was directed at making animation. Animation video in the utilization now has various video formats that can be played by various electronic devices. Motion graphic is chosen since it has proven to attract the viewers by moving images. Moreover, animated media also prevent students from getting bored and attracting students' attention.

2. Objectives

2.1 To develop motion graphic animation of potential energy lesson

2.2 To determine the efficiency of motion graphic animation of potential energy lesson