



Learning Effectiveness of 3D Hologram Animation on Primary School Learners

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Abstract. Integration of technology in education is changing traditional learning methods to satisfy global requirement towards Industrial Revolution (IR) 4.0. Innovative teaching methods help teachers to motivate and engage students in their learning. This study analyzed the application of three-dimensional hologram (3DH) technology for students in primary one, two and three, to find the learning effectiveness of 3D hologram technology in the classroom. Pre-test and post-test designs were adopted according to the primary school syllabus to collect data, which were analyzed statistically using the SPSS software. The results revealed that 3DH technology integration has a great effect that positively enhances the students' learning capacity and attracts their attention. As indicated, 72% of the students had better scores in the post-test compared to the pre-test examination after watching a 3DH animation. The increased scores prove that 3DH technology can positively influence and enhance the knowledge gained during the student learning process. An illustration in the form of a 3D hologram animation was able to grab the students' interest and capture their attention. This paper contributes to the field of education by looking at the adoption of 3DH technology, which could effectively enhance student learning quality at an early stage.

Keywords: *3D hologram animation; education; effective learning; integration technology; primary school.*

1 Introduction

Technology integration means the effective implementation of educational technology to inspire positive changes in teaching methods to facilitate students' learning and boost their capacity, productivity, and performance in their learning process. In Malaysia, Education 4.0 has been established, pushing the current education system towards the goals set by the government's new policy laid down in the Malaysia Education Blueprint 2013-2025. According to Fisk [1], this new vision on learning entails identifying sources of knowledge and motivating learners to learn the skills and knowledge they need. As for learning strategies, learners should be able to concentrate, which is one of the major factors in successful learning [2]. This is important especially for primary