

ABSTRACT

DEVELOPMENT OF AN ORTHODONTIC RECOGNITION LEARNING SYSTEM USING 360 VIRTUAL REALITY PHOTOS WEB-BASED

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UNESCO organized a survey about the learning system in a high-level education under the impact of COVID-19 in 2021. There are more than half of countries all around the world use hybrid learning systems, while one-third of them use online learning methods. The survey results said that the majority of the learning system in high-level education was carried out by online method, as a purpose to reduce the spread of COVID-19 during the pandemic. Orthodontics is a knowledge discussed the art of dental care that affects the appearance of teeth, face, oral, and body health. The dental education field is one of the fields most affected by COVID-19, so the government takes anticipation against it by making changes to the learning process using online methods. The online learning process for dentistry students has been through difficulty in understanding orthodontics theory as it is merely explained from the written theory. Because as the purpose to understand orthodontics theory is necessary to observe each existing tooth arrangement detail. Students also feel bored if learning is only carried out by using concepts explaining theories from the books. Based on the existing problems, it is necessary to improve the online learning system, thus the students feel easier to understand the orthodontics theory. The best solution given is to make orthodontics introduction learning applications using 3D animation in web-based. The web development will be conducted using the Waterfall Model with Codeigniter Framework 3 and MySQL for the database. The design of this system produces 10 use cases and 4 actors and also testing this system produces 100% passed from the 10 use cases tested.

Keywords: Orthodontics, Online Learning, PhotoVR 360, Waterfall Model