The Development of Volleyball Teaching Media based on Android Applications for Students of Physical Education, Health and Recreation Department in State University of Medan

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**ABSTRACT**

The purpose of this study is to develop teaching media, assist and facilitate the learning process of volleyball refereeing material by implementing this android-based volleyball refereeing teaching media, for students majoring in Physical Education, Health, and Recreation Department (PIKR), State University of Medan (Unimed). In this study using the R & D Model according to (Borg and Gall). This research method is development, data collection techniques with research instrument questionnaire sheets, data analysis techniques with percentages. The population of the study were students majoring in PIKR Unimed Batch 2022. The product was designed and then validated by 4 experts. Material experts, media experts, linguists and learning experts. Initial field trials totaled 10 students, main field trials numbered 70 students for small trials and large trials. This teaching media has been previously validated by 1 material expert 1 volleyball expert who has a background in sports education. The validation results of the expert questionnaire assessment are declared valid and can be used with the total percentage is 85% and 72% material expert, the percentage is 72.5%, 70% and 80% media expert, the percentage is 72% and 72% linguist and the percentage is 86.67% and 76.36% learning expert. The results of the student subject questionnaire assessment sheets with percentages of 93.33% and 95.55% (very valid or very feasible) by stating the level of understanding, use, clarity, attractiveness, usability, design are good so that the category is declared feasible or valid. Through the research stage and validation assessment by experts, the product is suitable and suitable for use by students, so it can be concluded that the Android-based volleyball refereeing teaching media for students majoring in PIKR Unimed is valid or appropriate and can be used for the learning process of volleyball refereeing material.

**KEYWORDS**

Teaching media; volleyball; volleyball refereeing; students

**INTRODUCTION**

The progress of sports science and technology has had a positive impact on various sports fields such as training, refereeing and competitions (Adika, 2016). With the support of science and technology, it will help and improve the quality of all components involved in a match or competition. The technology that is now widely used is the smartphone. Smartphones now have several multifunctional advantages that can help human work and facilitate desired activities in one hand (Putro et al., 2018). According to (Gustian, 2017). Smartphones are the development of cellular phones which are then added features and other
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