Development of learning media for physical education, sports, and health on basic football techniques based on articulate storyline application

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\textbf{ABSTRACT}

The purpose of this research is to develop PJOK learning media in the form of interactive multimedia in the form of the Articulate Storyline application. So, it is hoped that through the development of this learning media it can help and make it easier for PJOK teachers in high schools to convey basic football technical material in an interesting way and help students understand basic football technical material easily. This study uses development research methods with data obtained in the form of qualitative and quantitative data. The results showed that the average value obtained from the validation of football learning experts was 89\%, the validation of learning media experts was 96.2\%, the PJOK expert validation was 89.4 and product trial was 87.7\%. From this research, it can be concluded that the learning media for basic football technique material based on the Articulate Storyline application for class XI students at State Senior High School 2 Batu is feasible to be applied without any revision.

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\section*{Introduction}

Education is one of the efforts in learning with consciousness and conscious planning for the development of individual potential to have the power to control themselves, educate, noble morals and religion as well as the development of self-skills in accordance with the needs carried out and the surrounding environment in accordance with the expected goals, happiness, and prosperity. Education becomes an experience that is being experienced and provides a dynamic influence in both physical and spiritual aspects (Anwar, 2015). Physical education is an effort with the aim of having a positive influence on the physical and mental health of every human being. According to Rahayu (2013), with physical education, sports, and health (PJOK), individual abilities are obtained in terms of physical, emotional, and mental. According to Paturusi (2012), children can develop their potential in the physical field, and social, moral, and emotional problems can be fostered through activities in physical education.

The world of education has utilized various kinds of technology to support learning activities to achieve the expected results. Education in Indonesia has implemented technology as one of the learning resources, learning media, and administrative tools (Lestari, 2018). Learning media can affect the psychology of students, it can even increase motivation, the novelty of interest and desire, and stimulate learning (Angkowo & Kosasih, 2007). The content of learning media is designed based on the competencies that will be achieved and the content of the learning itself. This means that the quality of the teaching and learning process can be improved through learning media (Akrim, 2020). Therefore, creative and innovative media development is needed in learning activities to create an effective and appropriate learning atmosphere.

Articulate storyline is a tool (application or software) with its function in designing interactive learning content as one of the electronic learning media (Saepuloh, 2022). According to Donnellan (2021), Articulate Storyline 360 (Articulate Global Inc.) is an authoring tool designed to create interactive
e-learning resources. The complete features include flash with an easy interface like PowerPoint, as this application is applied for interactive multimedia (Yasin & Duch, 2017).

Development is the process of designing learning activities to determine all activities in the learning process by considering the competence and potential of students, which is carried out logically and systematically (Majid, 2005). According to Rahmaniyah (2010), development focuses on physical aspects such as agility, health, skill, creativity, and so on. Learning can be interpreted as a change in oneself in a positive direction, and in the final stage, newer knowledge and skills are obtained due to the process of adding insight and knowledge through awareness of the activities carried out by a person (Saefudin & Berdiati, 2014). Teaching and learning interactions with an atmosphere of educative interaction that is aware of the goal is an activity of the learning process (Musrini, 2016). Meanwhile, according to Al-Tabany (2017) learning is a two-way interaction and communication (transfer) between teachers and students to achieve predetermined targets. Based on the material, aspects of teaching materials by the development of knowledge and other methodological and substance aspects relate to the development of learning strategies, both theoretically and practically (Hamid, 2013).

Education will have a dynamic effect on its development as an experience that is experienced both physically and mentally (Anwar, 2015). Rosdiani (2015) argues that physical education is an educational process to stimulate physical growth, thinking and motor skills, social, emotional, and moral as well as the formation of a healthy and active lifestyle provided through learning experiences to students that are planned systematically by doing physical activity, playing, and exercising.

In learning PJOK, there are several big ball game materials, one of which is football. At the XI grade high school level, the football game material presented analyzes movement skills in basic techniques in football. Football comes from two words, namely "Football" and "Ball". Football or kicking can be interpreted as kicking (using the foot), while “ball” is a round-shaped game tool made of rubber, leather, or the like (Zakariah, 2019).

Yumini & Rakhmawati (2015) have conducted research with the results showing that interactive learning media based on the articulate storyline application is declared very feasible with a rating of 87.2% by validators so that it can be used as independent learning material by students and support learning activities at school. Interactive learning media based on articulate storyline received a good response from students, shown through the student response questionnaire assessment results, which obtained very good results. Other research conducted by Citra & Kurniawan (2021) states that using the articulate storyline application development product will facilitate learning activities and make it easier to obtain information, accuracy, clarity, convenience, and attractiveness.

Based on the results of initial observations on October 5, 2021, at SMA Negeri 2 Batu Batu City, which was carried out in the form of direct observation by researchers on the learning of PJOK for class XI students while conducting field practice studies, it was found that the teacher conducted PJOK learning in PTMT (Limited Face-to-Face Learning), football material was only given using PPT media and teacher-centered explanations and did not use TPACK (Technological Pedagogic Content Knowledge) so that learning was still monotonous. Learning still uses media in the form of textbooks, Google Meet, Google Drive, and Google Forms. Football learning is considered to be less utilizing technology, still using books and teacher-centered, so the active role of students is minimal in PJOK learning activities. Some students are active in learning, and some others only listen to the teacher's explanation without responding to anything, many students turn off the camera during online learning, talk to their friends instead of listening to the teacher during offline learning, and there are even students who fall asleep during PJOK learning in class so that learning is considered less conducive. This can be considered as a need for student learning motivation towards learning PJOK, especially the material of basic football techniques. The use of learning media has long been applied, besides that, there are no learning media for basic football techniques based on the articulate storyline application.
Amiroh (2019) states that an articulate storyline as a multimedia authoring tool is expressed in the form of the combined content of several animations, videos, graphics, sounds, texts, and images in achieving interactive learning media. In accordance with the background of the problems that have been described, research was conducted with the title “Development of Learning Media for Basic Football Techniques Based on Articulate Storyline Application for Class XI at State Senior High School 2 Batu”.

**Method**

The research was conducted by applying and developing the model (Owens et al., 2004) with the following steps: (1) analysis, namely by conducting direct observations of PJOK learning activities in class XI at State Senior High School 2 Batu to identify research needs analysis, (2) design, namely designing designs, material content, and collecting the media needed in application-based media development (3) development, namely developing products through the process of structuring the results that have been designed in the articulate storyline application, then validated by several experts to get suggestions and input (4) implementation, which is in testing the product on grade XI students related to the product that has been developed, (5) evaluation, which is carried out to improve the product of field testing results as well as student assessment on the effectiveness of product use in learning activities seen through filling out student questionnaires. The research conducted required some quantitative and qualitative data. Qualitative data is obtained from the opinions of experts who have been generated in validation, while quantitative data is generated in product trials.

Data collection instruments used direct observation and questionnaires. Direct observation is done when collecting initial data (needs analysis). Questionnaires are used for validation of materials and media for learning basic football techniques based on articulate storyline application for class XI at State Senior High School 2 Batu.

Data analysis techniques were used by developing descriptive statistics with a Likert scale, and to process the data, quantitative percentage analysis was used (Akbar & Sriwiyana, 2011). Furthermore, to facilitate the process of concluding the results of the analysis, it is converted into several eligibility criteria according to the percentage obtained, namely: (1) 75.01%-100% included in the very valid category, (2) 50.01%-75% included in the valid category, (3) 25.01%-50% included in the less valid category, and (4) 0%-25% included in the invalid category.

**Results and Discussion**

**Results**

In accordance with the results of the needs analysis conducted on October 5, 2021 at State Senior High School 2 Batu, it is known that: (1) the teacher conducts PJOK learning by PTMT (Limited Face-to-Face Learning), (2) PJOK learning is conducted 1 meeting a week, 3) PJOK learning time is 3 lesson hours, for 1 lesson hour for 30 minutes, (4) football material is given using media in the form of PPT and books and teacher-centered explanations, (5) learning does not use TPACK (Technological Pedagogic Content Knowledge). From the results of direct observation, it is also known that the methods and learning media for basic football technique material used are less interesting, and less effective when applied to PTMT (Limited Face-to-Face Learning) activities.

From the results of the validation of football learning experts with a questionnaire instrument of 25 questions, the results were 89%, so the learning media for basic football technique material based on the Articulate Storyline application is very feasible to use. In addition, the input given to this media includes: (1) the addition of learning formations to make it easier for teachers when teaching, (2) an explanation of each basic technique to be written with the correct sentence regarding books on football motion analysis. The results of the validation of learning media experts with a questionnaire instrument of 23 questions obtained a result of 96.2%, so the learning media for basic football technique material...
based on the articulate storyline application is very feasible to use. Also, media experts state that the learning media for basic football technical material based on the articulate storyline application is generally good and suitable for testing or implementation. The results of the validation of experts / PJOK teachers with a questionnaire instrument of 22 questions obtained a result of 89.4%, so the learning media for basic football technical material based on the articulate storyline application is very feasible to use. In addition, PJOK experts/teachers provide input so that room files are added in the form of written material explanations in the application.

Product trial (n = 30) with its implementation on May 20, 2022, at State Senior High School 2 Batu with a total of 50 questions. From the product trial, the results obtained were 87.7%, so the learning media for basic football technique material based on the articulate storyline application is very feasible. The learning media for basic football technical material based on the Articulate Storyline application is very valid (used without revision). However, to further refine the learning media product for basic football technical material based on the articulate storyline application, there are several inputs from the results of suggestions given by students who can revise the product. From the product trial, comments were obtained that the learning media used was very useful for students, the application could be used flexibly, interestingly, and easily accessible, the learning material was easy to understand, the theme used was interesting, the colors were contrasting, the videos and images used were quite easy to understand. The suggestions obtained are that other features should be added, such as material explanation rooms and reducing memory capacity.

Discussion

Based on data collected from football learning experts, media experts, PJOK experts, and data during trials from class XI students at State Senior High School 2 Batu, several parts need to be revised in the learning media based on the articulate storyline application. This is done to optimize the benefits of developing learning media for basic football technique material based on the articulate storyline application for class XI students at State Senior High School 2 Batu.

The following are matters relating to the revision stage, supporting and inhibiting factors, as well as the advantages and disadvantages of learning media development products for basic football technique material based on the Articulate Storyline application for grade XI students at State Senior High School 2 Batu. The product development of learning media for basic football techniques presents learning material, which is the basic technique of football, including: (1) passing the ball, (2) controlling the ball, (3) dribbling, (4) shooting, (5) heading.

Based on the product trial shows that the use of learning media based on the articulate storyline application is responded to well by all students of class XI State Senior High School 2 Batu. This is evidenced that students respond well and are enthusiastic about accessing the learning media, so with the enthusiasm of students, it can be considered positive that students are very motivated to learn by utilizing this application-based media. In addition, the articulate storyline application is considered by students as an application whose learning material is easy to learn, useful, and attractive to PJOK learning activities. This is evidenced by the results of a positive assessment of the indicators in the questionnaire given to students. The results of this study are supported by research conducted by Dikshit, et.al., (2013) which shows that increasing student creativity and activity in the learning process can be done using interactive multimedia. Based on the study results, application-based football basic technical material learning media can increase learning motivation in PJOK learning and make it easier for students to understand the material. This is in accordance with research conducted by Herijanto (2012), which shows that the use of interactive media in learning can provide a positive response and increase student interest in learning. The results of other research and development conducted by Nurmala, Triwoelandari, & Fahri (2021), suggest that the use of Articulate Storyline 3 media in learning
is feasible and effective for developing student creativity. This can be seen in the results of validation by material experts, media experts, and PJOK experts in assessing the feasibility of articulate storyline 3 media, whose assessment results are categorized as very valid.

Supporting factors in the application of learning media for basic football technique material based on the articulate storyline application, among others: (1) application-based learning media has never been developed in PJOK subjects, especially basic football technique material (2) PJOK teachers provide full support for the development of learning media for basic football technique material based on the Articulate Storyline application designed by researchers at State Senior High School 2 Batu (3) students are very enthusiastic about the application that has been tested.

The advantages of learning media for basic football technique material are that the final result of this learning media product is a learning application in which there is a learning video of basic football techniques, so this product is useful for PJOK teachers in class XI State Senior High School 2 Batu because it can be used as a learning media that can make it easier for teachers and students to access learning material by using applications in the learning process, especially in the learning process of basic football techniques in class XI, besides that with an attractive application learning media display can increase students' enthusiasm and interest in learning. In addition, by looking at the application's learning material for basic football game techniques, it can increase the understanding and effectiveness of learning PJOK football learning material for class XI students at State Senior High School 2 Batu. Also, videos of basic football techniques are equipped with explanations of stages and movements of variations of basic football techniques that can be observed clearly and stopped as desired and viewed repeatedly. This is in accordance with research conducted by Afrida (2021), which shows that using articulate storyline 3 has advantages including: (1) having a user interface that is easier to use, (2) being able to create interesting presentations and interactions that are more thorough, creative and varied.

The disadvantages of this learning media for basic football techniques are that this application only focuses on basic football technique material, the use of this learning media is still limited to only be used for class XI students at State Senior High School 2 Batu.

Conclusions

Based on the results of this study, the learning media for basic football technique material based on the Articulate Storyline application is included in the category of very feasible or can be used without revision reinforced by data obtained from validation of media experts, football learning experts, PJOK experts, product trials. Supporting factors in the Articulate Storyline application are very influential in learning activities. The advantages produced by learning media are very useful in achieving football learning goals for students. This learning media based on the Articulate Storyline application can make it easier for students to access football learning materials anywhere and anytime, increase student enthusiasm and interest in learning, and increase student understanding of football learning materials. So, the learning media for basic football technical material based on the Articulate Storyline application can increase the enthusiasm for learning when applied to PJOK subjects, especially basic football technical material in class XI students.

References


