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Application of Animation Video Media to Learning Outcomes Soccer Passing

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ABSTRACT

Introduction: Massive policies from the government resulted in changes in the procedures for learning physical education in schools. In online distance learning, many students and teachers experience unpreparedness in learning. On the one hand it creates new problems because students have to a means of spreading the word. While Physical Education in schools is the function and purpose of each academic unit that forms individual students who are superior and qualified in all fields. **Purpose:** learning outcomes of soccer passing. **Methods:** This study was a quasi-experimental design with a nonrandomized control group pretest-posttest design. The research population was class VII F and VII H of junior high school in Surabaya students in 2021/2022, totaling 33 people. Learning outcomes data were collected through pretest and posttest. Data analysis used normality test, homogeneity test, and t-test with the help of SPSS version 26. Results: In the experimental group, the average value was 94.93. **Conclusions:** Thus, it can be concluded that animated video media significantly affects soccer passing learning outcomes. It is recommended for teachers to use animated video media because it has become one of the efforts to improve student learning outcomes.

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1. INTRODUCTION

In online distance learning, many students and teachers experience unpreparedness in the learning process (Yungga & Sunarsi, 2020). The government's policy of large-scale restrictions has resulted in Junior High School (SMP) Negeri 20 Surabaya carrying out face-to-face learning to go online using the internet. On the one hand, it creates new problems because students have to understand the material in different ways and prepare internet quotas, but on the other hand, it becomes wrong—an epidemic spread. Physical Education, Sports, and Health (PJOK) is the function and purpose of each academic unit that forms superior and qualified individual students in all fields. Studying movement activities through sports media is a branch of science at PJOK (Rahmatullah, 2019). PJOK learning is essential for schools undergoing optimal development, physical, motor, mental and social development. PJOK is also a means of channeling talented students in sports that can be taught to outstanding students. Sports activities carried out regularly with the correct technique significantly affect a person's physical fitness (Prativi et al., 2013). The teacher's role in learning achievement is huge (Mesa Rahmi Stephani, 2016). They are learning PJOK, especially SMA/SMK equivalent, sub-materials about extensive ball game activities, including volleyball, basketball, and soccer.

Soccer is a team game sport that is played by teamwork (Tarju&Wahidi,2017). The game of soccer includes a large ball sport which is identical to being played with the feet. The goal of soccer is to score as many goals as possible to win and defend one's own goal from the opponent's attack by the game's rules and maintain physical fitness. Good mastery of technique is needed because in a team sport such as soccer, the incidence of injury is very high (Pérez-Gómez et al., 2020). Therefore, excellent physical condition is indispensable in the game of soccer (Heri, 2017). Two teams play the soccer game, each consisting of 11 people, including one goalkeeper. Several basic soccer technical skills include shooting, dribbling, control, heading, intercepting, throw-in, sliding tackle, and passing. Passing is one of the basic techniques in soccer where the movement is to feed the ball to teammates by kicking, and the passing technique serves to feed the ball in the intended direction and regulate attacks. The passing procedure in soccer games consists of several kinds, namely passing using the inside of the foot, passing using the outside of the foot, and passing using the back of the foot. Passing can be successful if the foot hits the ball precisely, accurately, and horizontally. With special training, the quality of the passing technique will be maximized (Novianda et al., 2014). According to (Kluger, 2021) "other factors could be used to assess skills and performance of players, such as ball-passing rate, ball-passing accuracy, and ball control." For example, 1) the foot is next to the ball. 2) at the time of feeding the broad view. 3) use the inside of the foot to pass 4) the position of the inside of the foot is pointing forward 5) swing the foot as hard as possible forward 6) lock the heel when touching the ball for more accurate passing—continued with a follow-through movement where after passing the leg swing should not be stopped. PJOK learning in the current pandemic period, teachers must be creative and innovative in delivering learning materials by utilizing audio-visual media or animated videos. Animated video is a learning media that uses images, sound, and writing (Widiyasanti & Ayriza, 2018). Animated videos can optimize the senses rather than textual ones. The use of animated videos also makes a positive contribution to increasing motivation to follow the learning process. Animated video media is an effort to increase the creativity of the teaching and learning process taking place. Interesting updates can be given to help improve students' understanding of soccer material, especially passing. Changes in the form of functions, ways of using, conditions, and benefits without eliminating the characteristics of the old state into a new state (Firmana, 2017). With this

animated video media, it is hoped that students of junior high school can understand the content of animated videos and increase interest, students' attention in soccer learning which indicates increased learning motivation. Moreover, teachers can change innovations to make learning fun (Eka Prasetya & Ferianto Tjahyo Kuntjoro, 2019). Therefore, so that students can participate in soccer learning to the maximum, teachers can create creative learning media in animated videos to be more interested and enthusiastic in participating in education. So it is hoped that with the animated video media of soccer games, students can understand the material well and do the proper passing. Therefore, this study aims to determine the effect and how much the application of animated video media on the learning outcomes of soccer passing.

2. METHODS

This study was conducted at SMP Negeri 20 Surabaya, employing a quasi-experimental research design with a nonrandomized control group pretest-posttest design. This design was chosen to evaluate the effectiveness of animated video media in enhancing students' learning outcomes in performing soccer passing skills. Although random assignment was not possible at the classroom level, efforts were made to minimize potential biases through rigorous sampling and analysis protocols.

Participants

The participants in this study were seventh-grade students enrolled in classes VII-F and VII-H at junior high school in Surabaya during the 2021/2022 academic year. These students were engaged in face-to-face learning (PTM) and hybrid learning modes, reflecting the blended instructional context adopted by the school. The sample was selected using a purposive sampling technique, based on accessibility, attendance consistency, and active participation in physical education sessions. A total of 33 students participated in the study, with class VII F (17 students) assigned as the control group, and class VII H (16 students) as the experimental group. Group assignment was carried out using a simple randomization procedure at the class level to ensure group equivalence at baseline.

Procedure

Prior to the intervention, all participants were given a pretest to assess their initial performance in executing soccer passing skills. The experimental group received instruction using animated video-based learning media, while the control group underwent traditional instruction through conventional methods delivered by the teacher. The intervention lasted over several instructional sessions, during which students in both groups practiced and were guided through soccer passing techniques. Upon completion of the intervention, a posttest was administered to both groups using a standardized performance-based assessment. In this test, each student was asked to perform soccer passing techniques individually in front of the class, and their performance was scored based on predetermined technical criteria (e.g., accuracy, technique, and control).

Instruments

The primary instrument used to assess learning outcomes was a practical performance rubric developed specifically for soccer passing skills. The rubric was validated by physical education experts and covered key indicators including passing accuracy, body posture, foot placement, and control. The scoring was carried out by trained observers to minimize subjectivity.

Statistical analysis

Data analysis was conducted using Microsoft Excel and IBM SPSS Statistics version 25. Preliminary assumption testing was performed, including the Shapiro-Wilk normality test and Levene's test for homogeneity of variances, to determine whether the data fulfilled the conditions for parametric analysis. Based on the outcomes of these tests, the independent sample t-test was used to compare the mean differences between the experimental and control groups. This test was selected to assess whether there was a statistically significant difference in posttest scores between the two independent groups. The level of significance was set at $\alpha = 0.05$.

3. RESULTS

This research was conducted at junior high school in Surabaya, involving two study groups: the control group (class VII F) and the experimental group (class VII H). The research took place over two meetings, from October 5 to October 19, 2021. The control group received instructional material via PowerPoint (PPT)-based learning media, while the experimental group was exposed to animated video media as the primary instructional tool. The purpose was to examine the effect of animated video media on students' learning outcomes in performing soccer passing techniques.

Table 1. Result normality test Kolmogorov-Smirnov^a

	Statistic	df	Sig.
Control Class	.521	17	.000
Experiment Class	.276	16	.002

The Kolmogorov-Smirnov test was employed to evaluate the normality of the data distributions for both groups. The results indicated that the data were not normally distributed, with a significance value of 0.000 for the control group and 0.002 for the experimental group—both of which are below the threshold of 0.05. This result suggests a deviation from normality in both datasets.

Table 2. Result Homogeneity test

Levene Statistic	df1	df2	df3
Based on mean	1.104	4	28
			0.374

Despite the non-normal distribution, the Levene's Test of Equality of Error Variances was used to determine the homogeneity between the two groups. The test result yielded $F = 1.104$ with a significance value of 0.374, which is greater than 0.05. Therefore, it can be concluded that the data between the two groups are homogeneous, and the assumption of equal variances is met. This allows for further comparative analysis between groups.

Table 3. Improvement result

R	R Square	Adjusted R Square	Std. The error of the Estimate
.846 a	0.716	0.706	0.627

To evaluate the effect of the animated video media intervention, an independent sample t-test was conducted. The test results showed a significance value of 0.000, which is less than 0.05, indicating that there is a statistically significant difference in learning outcomes between

the control and experimental groups. Hence, the use of animated video media had a positive and significant effect on students' soccer passing.

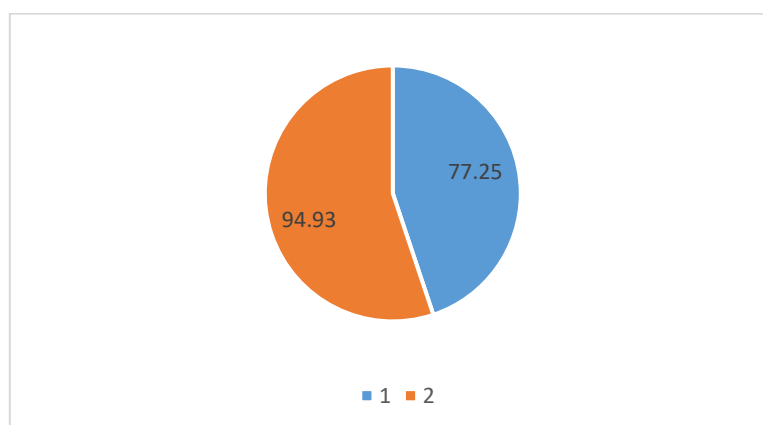
Further analysis using the R-squared (R^2) value revealed that the intervention accounted for 71.6% of the variance in learning outcomes. This means that the animated video media contributed substantially to the improvement in students' soccer passing skills, while the remaining 28.4% may be attributed to other factors not examined in this study.

4. DISCUSSION

In this discussion section, the researcher elaborates on the findings related to the application of animated video media in enhancing students' learning outcomes in soccer passing skills within the context of hybrid and face-to-face learning (PTM). The quantitative results revealed a significant improvement in the performance of students who were exposed to animated video-based instruction compared to those who learned through conventional media such as PowerPoint.

The integration of animated video media in physical education (PJOK) learning was shown to be particularly beneficial under hybrid learning conditions. As highlighted by Putra et al. (2020), learning is unlikely to be effective without active collaboration between teachers and students. During the COVID-19 pandemic, these challenges were further exacerbated, as many students struggled to stay engaged and achieve optimal learning outcomes during online learning sessions. Therefore, the need for innovative learning tools—such as animated instructional videos—has become more urgent to bridge this engagement gap and provide students with clear, visual representations of physical skills.

According to Sayuti and Prihanto (2015), the use of animated videos in learning PJOK subjects, including soccer, can serve as a compelling instructional strategy by attracting students' attention and increasing their motivation. Animated videos provide aesthetic and conceptual clarity, especially when direct practice is limited by learning conditions. Furthermore, Sasmita (2021) emphasizes several key advantages of animated videos: (1) they do not require extensive equipment; (2) they support focused concept development; and (3) they make abstract or procedural knowledge easier to understand and recall.



The improvement in learning outcomes was evident in the experimental group (class VII H), where students achieved an average pretest score of 77.25 and a posttest score of 94.93, resulting in a substantial increase of 18.18 points. In contrast, the control group (class VII F) started with an average pretest score of 76.76 and reached 82.05 post-intervention, with a more modest increase of only 5.29 points. These findings clearly indicate that animated video

media had a stronger effect in improving soccer passing performance compared to traditional instructional methods.

The delivery method also played a crucial role in students' receptiveness and motivation. The novelty of animated video instruction—as it was the first time class VII H students experienced PJOK learning using this medium—contributed to increased enthusiasm and engagement during lessons. Students appeared more motivated, focused, and participative, which in turn translated into better execution of soccer passing techniques.

In terms of practical implementation, the study observed that conventional teaching methods, particularly in hybrid learning settings, where explanation was provided without accompanying demonstration or visualization, proved less effective. The lack of peer interaction and limited teacher modeling, especially during the pandemic, led to a passive classroom environment. This hindered the development of motor skills and conceptual understanding among students. In contrast, animated videos helped bridge these gaps by providing dynamic visual explanations, enabling students to understand and imitate the correct movements independently.

Statistical analysis further reinforces the effectiveness of the animated video intervention, with an R^2 value of 71.6%, indicating that over 70% of the variance in learning outcomes can be explained by the use of this media. This substantial effect size underlines the pedagogical potential of animated videos in physical education settings, especially when direct instruction and physical demonstration opportunities are constrained.

Taken together, these findings support the growing body of literature that emphasizes the role of innovative, media-rich instruction in enhancing student learning outcomes, particularly in motor skill acquisition. The application of animated video media is not only feasible and cost-effective, but also pedagogically sound, particularly for visual learners and during non-ideal instructional conditions such as hybrid learning formats.

5. CONCLUSION

Based on the results of the data analysis and the findings discussed previously, it can be conclusively stated that the implementation of animated video media has a significant positive impact on students' learning outcomes, particularly in mastering soccer passing techniques. The statistical analysis confirmed that the use of animated video enhanced students' performance compared to conventional learning media (PowerPoint), indicating its effectiveness in supporting psychomotor learning in physical education. This study was conducted under the constraints of a hybrid learning environment, which reflects the real-world educational conditions at SMP Negeri 20 Surabaya during the 2021/2022 academic year. The hybrid learning system, wherein students were alternately divided between in-person and remote learning modalities, posed both challenges and opportunities in instructional delivery. Despite these constraints, the findings of this study demonstrate that animated video media can serve as a pedagogically valuable tool capable of bridging the gap between physical and virtual instruction. However, it is important to note that this research was limited by the nature of the hybrid model itself, which may have influenced student engagement and consistency in practice. Future research is recommended to explore the long-term effectiveness of animated instructional media across various motor skill domains and in fully face-to-face settings, to further validate and expand upon these results.

6. AUTHORS' NOTE

In this article, the author declares no potential conflicts of interest concerning copyright, publication, and research.

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