



Learning Media for Bottom Passing Techniques During Volleyball Games

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Abstract
<p>Objective. The research project aimed to create effective learning tools for mastering bottom-passing techniques in the context of volleyball gameplay. The study focused specifically on the students of MA Al-Akbar Air Kumbang, with the use of image-based media as the primary instructional tool. The goal was to design a comprehensive and engaging learning experience that would enhance the students' understanding and performance of bottom passing techniques in volleyball.</p> <p>Materials and Methods. The methodology employed in this study involves the use of research and development methods that are based on the ADDIE development model. This model is widely used in instructional design and involves five phases, which are analysis, design, development, implementation, and evaluation. By following this approach, the researchers aim to ensure that the final product of their research is effective, efficient, and meets the needs of the intended audience.</p> <p>Results. A comprehensive study has been conducted to develop a volleyball learning model for students of MA AL-Akbar Class XI. The learning model has been packaged in the form of a book, which includes image media. The model has undergone thorough validation by experts and has been deemed feasible and valid. The model is expected to enhance students' understanding of volleyball and improve their skills in the sport.</p> <p>Conclusion. According to the research findings, incorporating image media can greatly facilitate the learning process of the bottom passing technique in volleyball for students. The study suggests that visual aids have proven to be an effective tool in enhancing students' comprehension and mastery of the game technique.</p>
Keywords: Development, Learning Media, Bottom Passing Technique, Volleyball

Introduction

Physical education, sports, and health have great significance for education (D. D. Kuswoyo et al., 2020) as a whole, especially in schools. These activities not only improve children's physical health and fitness (Sufitriyono et al., 2023) but also provide experiences that benefit their cognitive, affective, psychomotor, and physical development (Chaeril Saputra, Ferri Hidayad, 2022). Physical Education is an essential part of education. It aims to achieve physical health, sports skills, critical thinking, social skills, emotional stability, moral behavior, and health (Meimulyani, 2013).

Physical education encompasses various aspects that already exist in students and can be further developed through overall education. It is important to provide students with a learning experience that helps them perform daily activities and understand the reasons behind human movements, as well as perform movements safely, effectively, and efficiently. This is where experiential learning comes in, as students engage in activities that enable them to perceive the learning experience and achieve the learning objectives (Kesumawati et al., 2018). Physical education plays an important role in the physical development, skills, and health of students. The game of volleyball is one of the materials usually taught in the physical education curriculum in junior high school (Manullang & Ngatimin, 2023).

Physical learning objectives involve setting specific and clear goals for learning the game of volleyball. These objectives should cover physical aspects, such as improved fitness and motor skills, cognitive aspects, such as understanding the game rules and strategies, and social and emotional aspects, such as teamwork, confidence, and communication skills (Triansyah et al., 2023). To create an engaging learning experience for students, teachers must design effective learning processes. This involves incorporating many determining factors into the learning process to make it interesting and engaging. Teachers should also be able to prepare innovative learning media during the learning process when applying different learning models, methods, and strategies. It is important to choose the right learning media based on the nature of the learning process. (Santoso, 2019). One of the materials in physical education learning is the volleyball game contained in the junior high school curriculum which is studied in formulating various related aspects and lesson plans.

According to (C. yuli Kuswoyo, 2013) in volleyball, players need to master the basic techniques, with the bottom passing technique being the most crucial one. Bottom passing aims to pass the ball to teammates effectively. A good passing technique is crucial to score points, as ineffective passing can lead to defeat for the team (Saputra, 2019). The basic techniques of bottom passing include two key steps. First, you need to start with a normal

standing posture where both your legs are apart and your knees are slightly bent. Your body should be slightly bent forward so that your weight rests on the front legs. This position will make it easier and faster to move in any direction. Second, after hitting the ball, your body should return to its normal upright standing position, followed by coordinated body movements and forward footsteps. Bottom passing can be practiced in pairs or groups of two or more people, depending on the number of balls available. This type of passing is done when the ball is in front or to the side of your body at the abdominal level, with your fingers clenched into fists. (Atsani, 2020, p. 88).

There are various studies and theories that suggest using image media as a learning product to enhance the understanding of the material being delivered. However, solely relying on this media will not suffice, and books should be used alongside it. The use of image media in learning can attract attention and improve comprehension, especially when it comes to basic bottom passing techniques in volleyball. The aim of this study is to create a validated learning product based on image media. Volleyball bottom passing image media can offer convenience, refine learning, and serve as an alternative source for teachers and students, particularly in Ma Al-Akbar Air Kumbang.

Materials and Methods

Study Participants.

The study involved a diverse group of individuals, including one material validator from the physical education study program of PGRI Palembang University, one media validator who was an educator, and 60 students from Ma Al-Akbar Air Kumbang. These students utilized various learning media, and the study aimed to analyze the efficacy of the media in enhancing their educational experience. The study was conducted with great care to ensure accurate results.

Study organization.

The research method used in this study is called Research & Development or development research methods. According to (Sugiono, 2015), this method is used to create a specific product and test its effectiveness. The study was conducted at Ma Al-Akbar Air Kumbang and followed the ADDIE model, which consists of five phases: Analysis, Design, Development, Implementation, and Evaluation (Saputro, 2017).

Statistical analysis.

The study was conducted at Ma Al-Akbar Air Kumbang, which is a reputable institution well-known for education. The study followed the ADDIE model, which is a systematic instructional design process consisting of five phases: Analysis, Design, Development,

Implementation, and Evaluation. During the Analysis phase, the researchers identified the learning needs and goals of the students, as well as the constraints and resources available. In the Design phase, the researchers developed a comprehensive instructional plan, including learning objectives, methods, and assessment strategies. The Development phase involved creating and refining the instructional materials, such as lesson plans, handouts, and multimedia resources. In the Implementation phase, the researchers conducted the actual teaching and learning activities, using the developed materials and strategies. Finally, in the Evaluation phase, the researchers assessed the effectiveness of the instructional plan and materials, using various evaluation methods, such as surveys, quizzes, and observations.

Results

1. Small Scale Trials

The small-scale trials have yielded results in the form of feedback from students and PJOK students regarding the volleyball learning model used to enhance the lower passing skills of class XI students at MA AL-Akbar. The input provided by the students is utilized to make improvements before conducting large-scale trials. The diagram below displays the teacher's evaluation of the volleyball learning model's effectiveness in enhancing the lower passing skills of class XI students at MA AL-Akbar during the small-scale trials.

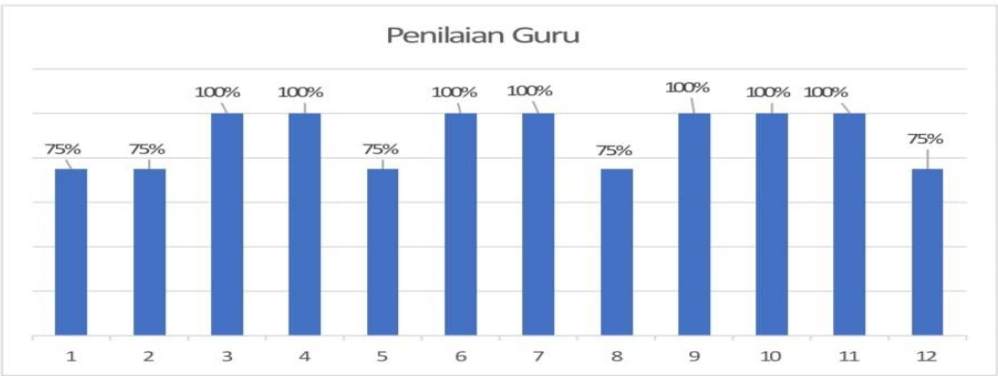


Figure 1. Teacher assessment results on image media

The image above displays the teacher's evaluation of a volleyball learning model that utilizes image media to enhance the passing skills of students in class XI at MA AL-Akbar. The trial was conducted on a small scale and achieved a success rate of 90%. Based on the teacher's assessment, the volleyball learning model to improve passing skills under AL-Akbar class XI students in small-scale trials falls into the 'Very Good' category. Therefore, the suggestions and inputs from the small-scale trials will be revised according to the results of expert assessment. The teacher's assessments in

small-scale trials of the volleyball learning model have been deemed feasible to be tested on a larger scale. Furthermore, the diagram below presents the results of the assessment of students on the volleyball learning model with image media to enhance the lower passing skills of AL-Akbar class XI students on a small scale.

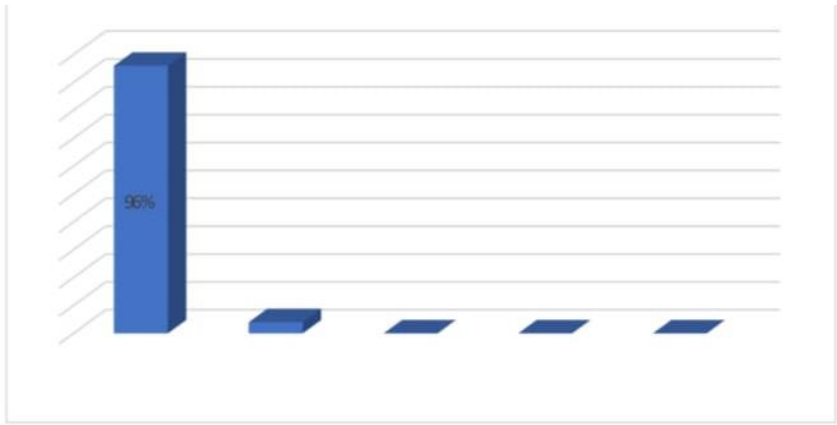


Figure 2. The results of small-scale test image media assessment

The image above depicts the evaluation of students on the volleyball image media development model product. This model aims to enhance the lower passing skills of MA AL-Akbar class XI students in small-scale trials. The evaluation results showed that 0.00% of students were in the very poor category, 0.00% were in the less category, 0.00% were in the enough category, 4% were in the good category, and 96% were in the very good category. The students' assessment demonstrates that the volleyball learning model is effective in improving the passing skills of MA AL-Akbar class XI students in small-scale trials. As a result, the products created are deemed feasible for large-scale trials.

2. Large Scale Trials

The diagram below presents the results of the teacher's assessment of volleyball learning image media products, which were used in large-scale trials to improve the lower passing skills of MA AL-Akbar class XI students:

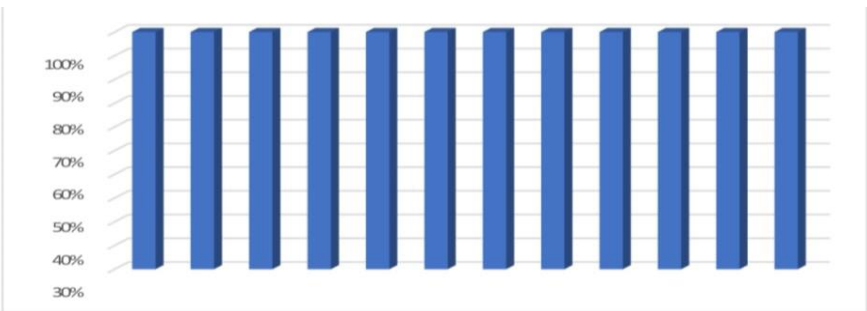


Figure 3. Image media assessment results

The image above displays the teacher's evaluation of media products designed to enhance the lower passing skills of MA AL-Akbar class XI students in a large-scale trial with a 100% success rate. After the teacher assessed the volleyball learning model products to improve the students' passing skills, the evaluation was categorized as "excellent". Based on this assessment, suggestions and inputs from large-scale trials were revised according to the expert's evaluation. The results of the teacher's assessment in large-scale trials of the volleyball learning model are feasible. The diagram below shows the results of MA AL-Akbar class XI students' assessment of using volleyball learning image media to improve their lower passing skills on a large scale:

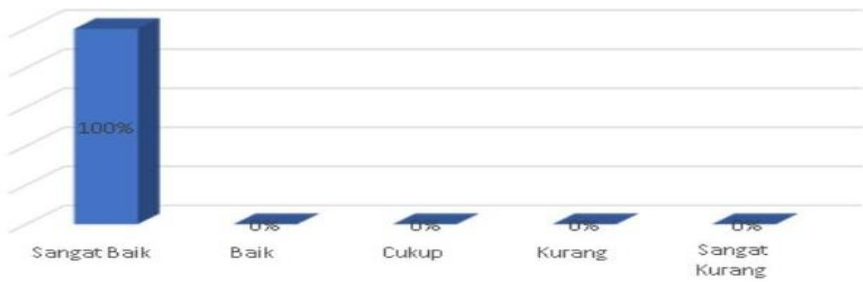


Figure 4. Media Assessment Results of Large-Scale Test

The image above depicts the evaluation of MA AL-Akbar class XI students' performance after using volleyball learning media products to enhance their passing skills. The assessment results were categorized as follows: very less (0.00%), less (0.00%), enough (0.00%), good (0%), and very good (100%). Based on the evaluation, the volleyball learning model proved to be effective in significantly improving the passing skills of MA AL-Akbar students, as demonstrated by the results falling in the "very good" category. Therefore, the product produced is deemed feasible.

Discussion

The analysis results indicate that the development model for volleyball image media to improve the lower passing skills of MA AL-Akbar class XI learners is feasible to be used as a learning guide for volleyball. Additionally, it can be concluded that the development of volleyball image media to improve the passing skills of MA AL-Akbar class XI learners is an effective tool for use in volleyball learning. This is supported by the results of the study (Chaeril Saputra , Ferri Hidayad, 2022) The results show that the development of volleyball learning using interactive media can be used as a medium for learning junior high school students.

The results demonstrate significant achievements from the Peningan-based volleyball passing skills approach when using the volleyball passing model to learn bottom passing skills through image media (Karisman & Supriadi, 2022). It has been discovered through a study that the learning model used for grades XI and XII can be applied to teaching volleyball in elementary schools. This learning model has a positive impact on achieving sports goals because it not only helps to improve volleyball skills, but also motivates students to learn other things (Fitriani et al., 2021).

A study was conducted to develop a test for the bottom passing technique in volleyball games using image media. The outcome of this development project was the production of image media and target walls, which were equipped with user manuals. The image media was found to be useful in helping to calculate automatic passing points in volleyball bottom passing tests. However, the study identified some limitations that need to be addressed in future research, such as the relatively small number of samples studied and inadequate supporting facilities, which caused a slight delay in taking the exam.

Another study was conducted to develop a learning model for passing in volleyball for class XI students at MA AL-Akbar. The results showed that the introduction of volleyball learning image media development material had a validity rate of 8% and a linguistic validity of 96%, indicating that volleyball image media is effective. The confidence level of the small group test was 0.88 and that of the large group test was 0.996, which suggests that the reliability level is high.

Conclusion

The development of volleyball bottom passing learning image media for grade XI students is highly beneficial for effective passing learning. The ability to move is based on genetic and environmental factors, which are divided into two parts: a) phylogenetic skills that are innate skills present in a child from the beginning, and they develop as the child grows older, and b) ontogenetic skills that arise through practice and experience as a result of environmental influences. In essence, mastering a skill or obtaining it is only possible by learning under certain conditions. One of them is skill training or learning activities that should be carried out tenaciously and continuously for a certain period.

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