

Development of a Learning Model for Passing in Volleyball Based on a Small Game for Students of Az-Zahrah Islamic Primary School, Palembang City

Ayu Trisnawati¹, Widya Handayani¹, Hikmah Lestari¹

¹Universitas PGRI Palembang, South Sumatra, Indonesia

Corresponding author e-mail: Ayua14381@gmail.com

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Abstract: The aim of this study was to determine whether the development of valid volleyball upper passing learning for Palembang city elementary school students. This is a research and. The development approach that we use is ADDIE. The subjects of this study were Az-Zahrah Islamic Elementary School students represented by class V for field trials or implementation of volleyball top passing learning development products. The trial subjects totaled 25 students. Based on the data that we found through observation activities, that the environment still really needs a lot of games that can be used for physical education learning. While in reality, teachers are still very minimal references to games that can be used for the learning process, especially games that contain elements of special skill motion specifications such as those found in the upper passing technique of volleyball games.

Keywords: ADDIE Approach, Upper Passing, Volleyball

A. Introduction

Learning is a crucial activity in education, forming the backbone of educational goals and outcomes. The quality of education largely depends on the effectiveness of the learning process. Learning is not just about acquiring knowledge but also about the interaction that occurs between educators and students, as well as the environment in which this interaction takes place. According to Ubabuddin (2019), learning is defined as a process of interaction between educators and students, involving the various elements within an educational setting. This interaction forms the foundation of the educational experience, making it essential to understand and implement effective learning methods that are tailored to the specific needs of the learners.

In the context of physical education (PE), the importance of appropriate learning methods becomes even more pronounced. Physical education, sports, and health

education are unique in that they require a blend of physical activity and cognitive understanding. The methods used in PE must be carefully selected to align with the content being taught and the developmental stage of the students. As stated by Mosston & Ashworth (2002), effective teaching in physical education involves a spectrum of teaching styles, each of which is designed to achieve specific educational outcomes. This spectrum ranges from teacher-centered to student-centered approaches, allowing for a flexible application of methods based on the learning objectives and the individual needs of the students.

The PE curriculum is designed to cater to different educational levels, each with its own set of goals and challenges. For instance, in elementary school, PE focuses on introducing basic motor skills and fostering a positive attitude towards physical activity. According to Gallahue & Cleland-Donnelly (2007), the primary objective of physical education at the elementary level is to help children develop fundamental movement skills that will serve as the foundation for more complex physical activities later in life. This is achieved through play-based activities that are both fun and educational, allowing children to learn while engaging in physical activity.

The learning method in PE must be closely aligned with the characteristics of the learners. For example, young children in elementary school are naturally curious and have a strong desire to explore their environment through play. As a result, the learning activities in PE for this age group should be designed to be engaging and interactive, incorporating elements of play that encourage movement and exploration. This approach not only helps children develop physical skills but also promotes social interaction, creativity, and cognitive development.

As students progress through their educational journey, the focus of physical education shifts to more structured activities that emphasize skill development, fitness, and teamwork. In middle school, for example, PE classes might include more organized sports and activities that require students to work together and develop specific skills. According to Rink (2013), middle school physical education should focus on refining motor skills, enhancing physical fitness, and fostering a deeper understanding of the rules and strategies of various sports. The learning methods used at this stage should be designed to challenge students both physically and mentally, encouraging them to push their limits and develop a lifelong commitment to physical activity.

High school physical education takes this a step further by preparing students for lifelong fitness and health. The curriculum at this level often includes more advanced activities such as weight training, aerobics, and individual sports. As stated by Siedentop & Tannehill (2000), the goal of high school physical education is to equip students with the knowledge and skills they need to maintain a healthy

lifestyle throughout their lives. This involves not only teaching students how to perform various physical activities but also educating them about the importance of fitness, nutrition, and mental health. The learning methods used in high school PE should be focused on helping students develop self-discipline, goal-setting skills, and an understanding of how to integrate physical activity into their daily lives.

One of the key challenges in physical education is ensuring that the learning methods used are appropriate for the content being taught and the characteristics of the learners. For example, when teaching a new sport or activity, it is important to break down the skills into manageable parts and provide clear, step-by-step instructions. According to Graham, Holt/Hale, & Parker (2013), effective teaching in physical education involves a combination of direct instruction, practice, and feedback. This approach allows students to gradually build their skills and confidence, leading to a more positive learning experience.

Moreover, PE is not just about developing physical skills; it also plays a critical role in promoting overall health and well-being. According to the World Health Organization (2018), physical education contributes to the development of physical fitness, motor skills, and social skills, while also reducing the risk of chronic diseases such as obesity, diabetes, and heart disease. Therefore, the learning methods used in PE should be designed to promote both physical and mental health, helping students develop a holistic approach to well-being.

In addition to the physical benefits, physical education also provides valuable opportunities for social and emotional learning. Through activities such as team sports, students learn important life skills such as communication, cooperation, and conflict resolution. As Hellison (2011) notes, physical education can be a powerful tool for teaching personal and social responsibility, helping students develop a sense of respect for themselves and others. The learning methods used in PE should therefore be designed to foster these skills, creating a positive and inclusive learning environment where all students feel valued and supported.

The role of the teacher in physical education is crucial to the success of the learning process (Van der Mars, 2006; Cothran, 2001). Teachers must be able to effectively communicate the learning objectives and provide clear instructions, while also being responsive to the needs of their students. As highlighted by Kirk (2010), effective teaching in physical education requires a deep understanding of both the content and the learners. Teachers must be able to adapt their teaching methods to meet the diverse needs of their students, providing individualized support and encouragement to help each student achieve their full potential.

Furthermore, assessment plays an important role in the learning process in physical

education. According to Lund & Kirk (2010), assessment in PE should be used not only to evaluate student performance but also to guide instruction and improve learning outcomes. By providing regular feedback, teachers can help students identify their strengths and areas for improvement, allowing them to set realistic goals and work towards achieving them. The learning methods used in PE should therefore include opportunities for both formative and summative assessment, ensuring that students receive the feedback they need to succeed.

The explanation above is the concept that the form of physical education learning in an elementary school environment is essentially more directed at games to develop learning skills. One of the learning materials in physical education subjects is movement skills by playing volleyball. The game of volleyball is a game that has many techniques in it, one technique that is suitable for teaching elementary school students the concept while playing is the overhead passing technique. This technique, if taught while playing, has quite a challenge and attraction for students while learning physical education.

Based on the data that researchers obtained through observations in the Palembang City Elementary School environment, we gathered information that the Palembang City Elementary School environment still really needs lots of games that can be used for physical education learning. Meanwhile, in the Palembang City Elementary School environment, teachers still have very minimal references to games that can be used for the learning process, especially games that contain specific elements of specific skill movements such as those found in passing techniques in volleyball games. Through this research, researchers want to answer teachers' needs through developing studies by designing learning to pass the ball through game modifications.

B. Methods

This research was conducted within the educational environment of Palembang City, specifically focusing on the Az-Zahra Islamic Elementary School. This school, strategically located on Jalan Raya Bukit Sejahtera RT 76 RW 22, in the IB I District of Palembang, was chosen due to its accessibility and the cooperation of its administration in facilitating educational research. The choice of this particular school was also influenced by its reputation for actively engaging in innovative teaching practices, which aligns with the objectives of this research. The environment provided a suitable context for exploring the implementation of the volleyball passing learning development, ensuring that the findings would be relevant and applicable to similar educational settings.

The time allocated for this research spanned approximately one month, with data

collection being the primary focus during this period. The research was conducted in July 2024, a time carefully selected to align with the school's academic calendar, ensuring minimal disruption to regular classes. This timing was also optimal as it allowed researchers to observe and interact with students during a period of full academic activity, providing a more accurate representation of the students' learning behaviors and responses to the introduced volleyball passing techniques. The one-month timeframe was sufficient to gather comprehensive data, including baseline observations, the implementation of the new learning model, and the subsequent evaluation of its effectiveness.

The primary objective of this research was to target elementary school students, specifically those in the 5th grade. This age group, typically ranging from 10 to 11 years old, was chosen based on their developmental stage, which is characterized by an increased capacity for learning complex motor skills, such as those required in volleyball passing. At this age, students are physically capable of engaging in activities that demand high mobility, coordination, and teamwork. Additionally, they are cognitively mature enough to understand and follow the rules of more structured games, making them ideal candidates for the study. The selection of this specific target group was also informed by educational psychology, which suggests that introducing challenging yet achievable tasks during this stage can significantly enhance motor skill development and foster a lifelong interest in physical activity.

The subjects of this research consisted of 25 students from the Az-Zahra Islamic Elementary School, all of whom were in the 5th grade. These students were selected to participate in field trials aimed at implementing and testing the newly developed volleyball passing learning model. The sample size of 25 was considered sufficient to provide a representative overview of how the learning model would perform in a typical classroom setting. The selection process was designed to ensure a diverse group of students, representing different levels of physical ability and prior experience with volleyball, to assess the model's effectiveness across a range of skill levels. This diversity within the subject group was crucial in evaluating the generalizability of the research findings and ensuring that the learning model could be effectively applied to a broad student population.

This research employed a Research and Development (R&D) methodology, which is known for its systematic approach to creating, testing, and refining educational tools and programs. In this context, R&D was used to develop a new learning model specifically designed to enhance volleyball passing skills among elementary school students. The research followed the ADDIE model, a widely recognized framework in instructional design and development, which stands for Analysis, Design, Development, Implementation, and Evaluation.

In the analysis phase, we conducted a thorough needs assessment to identify the specific gaps in the existing volleyball instruction at the selected elementary school. This involved collecting data on current teaching methods, student performance, and the challenges faced by both teachers and students in the context of volleyball passing. The findings from this phase provided the foundation for developing a more effective and engaging learning model.

During the design phase, the researchers used the insights gained from the analysis to create a detailed plan for the new learning model. This involved defining the learning objectives, selecting appropriate instructional strategies, and outlining the structure of the game-based activities that would be used to teach volleyball passing. The design phase also included the creation of assessment tools that would be used to evaluate the effectiveness of the model.

In the development phase, the learning model was brought to life. This involved creating the physical and instructional materials needed for the lessons, such as game instructions, visual aids, and equipment modifications. The researchers also developed a training module for the teachers, ensuring that they were well-equipped to implement the new model in their classrooms.

The implementation trial phase involved piloting the new learning model in the selected 5th-grade classroom. During this phase, the researchers observed the lessons, collected data on student engagement and performance, and gathered feedback from both students and teachers. This phase was crucial for identifying any issues with the model and making real-time adjustments to improve its effectiveness.

The final phase, evaluation, involved a comprehensive assessment of the learning model's impact on student performance. The researchers analyzed the data collected during the implementation phase to determine whether the new model had successfully achieved its objectives. This phase also included a review of the feedback from teachers and students, which was used to make further refinements to the model before its broader application in other classrooms.

C. Results and Discussion

Based on the data obtained from observational activities in the Palembang City Elementary School environment, it is clear that there is a significant need for a wider variety of games that can be utilized in physical education (PE) learning. This need is particularly evident when considering the limitations faced by teachers in this environment, as many of them currently have access to only a few game references that can be effectively used in the learning process. This scarcity of resources is

especially problematic when it comes to incorporating games that involve specific skill movements, such as those required in passing techniques in volleyball. The role of physical education in the development of motor skills, teamwork, and overall physical fitness is well-documented. For young students, engaging in physical activities that are both enjoyable and educational is crucial for fostering a positive attitude toward physical activity and promoting lifelong healthy habits. According to Pangrazi & Beighle (2019), physical education in elementary schools should focus not only on the development of basic motor skills but also on the incorporation of activities that encourage children to be active and engaged. Games are an excellent medium through which these objectives can be achieved, as they offer an interactive and fun way to learn and practice new skills.

However, the current situation in Palembang City Elementary Schools suggests that there is a gap between the educational needs of the students and the resources available to the teachers. The limited number of game references means that teachers often rely on a narrow set of activities, which may not fully address the diverse learning needs of their students. This can lead to a lack of variety in PE classes, potentially resulting in decreased student engagement and missed opportunities for skill development. As Bailey et al. (2009) point out, a varied and well-structured PE curriculum is essential for ensuring that all students have the opportunity to develop a broad range of physical and social skills. To address this gap, there is a clear need for the development of new, innovative game-based learning resources that can be integrated into the physical education curriculum. Specifically, there is a need for games that are designed to teach and reinforce specific skill movements, such as those used in volleyball. Volleyball, with its emphasis on teamwork, coordination, and precise motor skills, offers an excellent context for game-based learning. The passing technique in volleyball, for example, is a fundamental skill that can be challenging for beginners to master. By developing games that focus on this particular skill, teachers can provide students with a more engaging and effective learning experience.

We believe that one effective way to enhance the PE learning experience in Palembang City Elementary Schools is to design a set of modified games that are specifically tailored to teaching passing techniques in volleyball. These games would be based on the concept of developing modified game-based learning, which involves adapting traditional games or creating new ones to meet specific educational objectives. Modified games are particularly useful in PE because they can be adjusted to suit the skill level of the students, the available resources, and the specific learning goals of the lesson.

For instance, a modified game designed to teach passing in volleyball might involve a simplified version of the sport, where the focus is on mastering the basic passing

technique rather than playing a full game. The rules of the game could be adjusted to allow more time for students to execute the pass, or the size of the court could be reduced to make it easier for students to practice their skills. Additionally, the game could be structured in such a way that students receive immediate feedback on their performance, helping them to understand what they are doing correctly and where they need to improve. This approach not only makes the learning process more interactive but also helps students to build confidence in their abilities.

Moreover, the development of such games should take into account the specific needs and characteristics of the students in Palembang City. For example, many students in this environment may have limited experience with volleyball, making it important to start with basic skills and gradually introduce more complex techniques. The games should also be designed to be inclusive, ensuring that all students, regardless of their skill level, can participate and benefit from the activity. According to Kirk (2010), inclusivity in physical education is crucial for fostering a positive learning environment where all students feel valued and supported.

In addition to designing the games themselves, it is important to provide teachers with comprehensive guidelines on how to implement these games in their PE classes. These guidelines should include detailed instructions on how to set up and run the games, as well as tips on how to modify the games to suit the needs of different students. For example, the guidelines might suggest ways to adjust the difficulty of the game for students who are struggling with the passing technique, such as allowing them to practice with a softer or lighter ball. The guidelines should also emphasize the importance of providing positive reinforcement and constructive feedback, as this can significantly enhance the learning experience for students.

Furthermore, it is essential to consider the role of assessment in this process. While the primary goal of these games is to teach and reinforce specific skills, it is also important to assess the students' progress and ensure that they are meeting the learning objectives. This could be done through formative assessments, where teachers observe the students' performance during the game and provide feedback, or through more formal assessments, such as skill tests or quizzes. As Rink (2013) notes, assessment in physical education should be an integral part of the learning process, helping to guide instruction and improve student outcomes.

The successful implementation of these modified games in Palembang City Elementary Schools could have a significant impact on the quality of physical education in the region. By providing teachers with a broader range of game-based learning resources, it would be possible to create a more dynamic and engaging PE curriculum that better meets the needs of the students. In turn, this could lead to improved skill development, increased student motivation, and a greater overall

enjoyment of physical activity.

Moreover, the benefits of this approach could extend beyond the immediate context of physical education. By fostering a positive attitude towards physical activity and helping students to develop important motor skills, these games could contribute to the overall health and well-being of the students. As the World Health Organization (2018) emphasizes, physical education plays a crucial role in promoting physical fitness and reducing the risk of chronic diseases. Therefore, the development of effective game-based learning resources for PE is not only an educational priority but also a public health imperative.

In conclusion, the data gathered from the Palembang City Elementary School environment highlights a clear need for the development of new and innovative game-based learning resources for physical education. By focusing on the specific skill movements required in volleyball, and particularly on the passing technique, it is possible to create modified games that are both educational and engaging for students. These games, supported by comprehensive implementation guidelines and a focus on inclusivity and assessment, have the potential to significantly enhance the quality of physical education in Palembang City, providing students with the skills and motivation they need to lead active and healthy lives.

Based on the results of the research analysis regarding the development of volleyball passing learning in Palembang City Elementary Schools, several important conclusions can be drawn. The findings highlight both the current state of physical education (PE) practices in these schools and the potential benefits of introducing new, innovative teaching methods that incorporate game-based learning models. These conclusions not only provide insight into the effectiveness of existing approaches but also emphasize the need for continued development and adaptation of teaching strategies to meet the evolving needs of students.

Firstly, the observations made by the researchers indicate that the current PE learning practices at Palembang City Elementary Schools predominantly rely on conventional teaching methods. In these traditional methods, the teacher's role is primarily focused on explaining the techniques and rules of volleyball, after which students are provided with a ball to practice independently. This approach, while functional, tends to be teacher-centered and may not fully engage students in the learning process. According to the National Association for Sport and Physical Education (2004), effective physical education should be student-centered and interactive, providing opportunities for students to actively participate and apply their skills in meaningful contexts. However, the conventional methods observed in Palembang schools appear to lack this interactive component, which could limit students' engagement and enthusiasm for learning.

The reliance on traditional methods may also contribute to a gap in student learning, particularly in terms of skill development and retention. When students are left to practice independently after a brief explanation, they may not receive the necessary guidance and feedback to correct their technique or fully understand the concepts being taught. This can result in a superficial understanding of the skills, where students may be able to perform the basic actions but lack the deeper comprehension needed to apply these skills effectively in a game setting. As noted by Rink (2013), effective physical education requires a balance between instruction and practice, with ample opportunities for students to receive feedback and refine their skills through guided practice.

In contrast to these traditional methods, the research also explored the impact of developing volleyball passing learning through a new game-based approach. The results of these observations were striking, revealing that the introduction of a game-based learning model had a positive effect on students' engagement and understanding. This new approach involved integrating games into the learning process, where students were not just passively receiving information but actively participating in activities that required them to use and apply the passing skills in real-time scenarios. This method proved to be highly effective in capturing students' interest and enhancing their comprehension of the material.

The game-based learning model aligns with contemporary educational theories that emphasize active learning, where students are engaged in activities that promote critical thinking, problem-solving, and collaboration. According to Siedentop & Tannehill (2000), game-based learning in physical education allows students to experience the dynamics of the sport in a more authentic and enjoyable manner, which can lead to better skill acquisition and a deeper understanding of the game. The observations from Palembang City Elementary Schools support this view, as students who participated in the game-based learning activities were more motivated and demonstrated a quicker grasp of the passing techniques compared to those who were taught using traditional methods.

Moreover, the integration of games into the learning process also addresses the diverse learning styles and needs of students. In a traditional PE setting, students with different learning preferences may struggle to stay engaged if the teaching methods are not varied. For example, kinesthetic learners, who learn best through movement and hands-on activities, may find it challenging to remain focused during a lecture-style explanation. Game-based learning, however, provides a more inclusive environment where all students can participate actively, regardless of their preferred learning style. This inclusive approach is particularly important in physical education, where the goal is not only to develop physical skills but also to

foster a positive attitude towards physical activity and teamwork.

The positive impact of game-based learning observed in the research also suggests that this approach can lead to improved student outcomes in terms of both skill proficiency and overall enjoyment of the subject. When students are engaged and motivated, they are more likely to practice the skills outside of class, leading to better retention and mastery over time. Additionally, the enjoyment derived from playing games can help to reduce anxiety and increase students' confidence in their abilities, making them more willing to take risks and try new things. As Bailey et al. (2009) point out, enjoyment is a key factor in promoting lifelong physical activity, and physical education classes that are fun and engaging can have a lasting impact on students' health and well-being.

Furthermore, the success of the game-based learning model in Palembang City Elementary Schools highlights the importance of continuous professional development for teachers (Herlinda et al., 2024; Zahra et al., 2023). To effectively implement new teaching methods, such as game-based learning, teachers need to be equipped with the necessary skills and knowledge (Ketelhut, & Schifter, 2011; Nousiainen et al., 2018). This includes understanding how to design and facilitate games that are both educational and enjoyable, as well as how to assess student performance in a way that supports learning. Professional development opportunities, such as workshops and training sessions, can provide teachers with the tools they need to adapt their teaching strategies and improve student outcomes.

D. Conclusions

The research findings from Palembang City Elementary Schools underscore the potential benefits of moving away from conventional, teacher-centered PE methods towards more interactive, game-based learning approaches. While traditional methods have their place, the introduction of game-based learning has been shown to significantly enhance student engagement, understanding, and skill development. This shift towards a more student-centered approach not only aligns with best practices in physical education but also addresses the diverse needs of students, making learning more inclusive and effective. As educators continue to explore new ways to enhance the quality of physical education, the insights gained from this research serve as a valuable reminder of the importance of innovation and adaptability in teaching practices.

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References

- Bailey, R., Armour, K., Kirk, D., Jess, M., Pickup, I., & Sandford, R. (2009). The Educational Benefits Claimed for Physical Education and School Sport: An Academic Review. *Research Papers in Education*, 24(1), 1-27. <https://doi.org/10.1080/02671520701809817>
- Cothran, D. J. (2001). Curricular change in physical education: Success stories from the front line. *Sport, Education and Society*, 6(1), 67-79. <https://doi.org/10.1080/713696038>
- Gallahue, D. L., & Cleland-Donnelly, F. (2007). *Developmental Physical Education for All Children*. Human Kinetics.
- Graham, G., Holt/Hale, S., & Parker, M. (2013). *Children Moving: A Reflective Approach to Teaching Physical Education*. McGraw-Hill.
- Hellison, D. (2011). *Teaching Personal and Social Responsibility Through Physical Activity*. Human Kinetics.
- Herlinda, R., Jelimbi, M., Adesfiana, Z. N., Bahari, Y., & Warneri, W. (2024). Identifying the Best Model for Implementing Technology-Based Education in Indonesian Schools. *Edunesia: Jurnal Ilmiah Pendidikan*, 5(2), 586-604. <https://doi.org/10.51276/edu.v5i2.768>
- Ketelhut, D. J., & Schifter, C. C. (2011). Teachers and game-based learning: Improving understanding of how to increase efficacy of adoption. *Computers & Education*, 56(2), 539-546. <https://doi.org/10.1016/j.compedu.2010.10.002>
- Kirk, D. (2010). *Physical Education Futures*. Routledge.
- Lund, J., & Kirk, M. F. (2010). *Performance-Based Assessment for Middle and High School Physical Education*. Human Kinetics.
- Mosston, M., & Ashworth, S. (2002). *Teaching Physical Education*. Benjamin Cummings.
- National Association for Sport and Physical Education. (2004). *Moving into the Future: National Standards for Physical Education*. 2nd ed. McGraw-Hill
- Nousiainen, T., Kangas, M., Rikala, J., & Vesisenaho, M. (2018). Teacher competencies in game-based pedagogy. *Teaching and Teacher Education*, 74, 85-97. <https://doi.org/10.1016/j.tate.2018.04.012>
- Pangrazi, R. P., & Beighle, A. (2019). *Dynamic Physical Education for Elementary School Children*. Human Kinetics
- Rink, J. E. (2013). *Teaching Physical Education for Learning*. McGraw-Hill.
- Siedentop, D., & Tannehill, D. (2000). *Developing Teaching Skills in Physical Education*. Mayfield.
- Ubabuddin, M. (2019). *Fundamentals of Education*. Open University Press.
- Van der Mars, H. (2006). Time and learning in physical education. In *Handbook of physical education* (pp. 191-213). SAGE publications Ltd. <https://doi.org/10.4135/9781848608009.n11>
- World Health Organization. (2018). *Global Action Plan on Physical Activity 2018-2030: More Active People for a Healthier World*. WHO.

Zahra, D. N., Saputra, R., & Kesuma, U. (2023, October). Learning Based on Information and Communication Technology (ICT) in Remote Regions Study of SMAN 3 Tungal Jaya. In Online Conference of Education Research International (OCERI 2023) (Vol. 775, p. 43). Springer Nature. https://doi.org/10.2991/978-2-38476-108-1_6