

# Implementation of Variations in Basketball Game Models as an Innovation in Physical Education (PJOK) Learning for High School Students

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## Abstrak

Penelitian ini bertujuan untuk mendeskripsikan penerapan variasi model permainan bola basket sebagai inovasi dalam pembelajaran Pendidikan Jasmani, Olahraga, dan Kesehatan (PJOK) untuk SMA/SMK/MA. Model permainan yang diimplementasikan mencakup kombinasi aktivitas kompetitif, kolaboratif, dan reflektif yang disesuaikan dengan karakteristik siswa remaja, sehingga proses pembelajaran menjadi lebih menarik, menantang, dan bermakna. Penelitian ini menggunakan pendekatan deskriptif-reflektif yang berfokus pada pengalaman guru dan respons siswa selama implementasi model tersebut. Hasil penelitian menunjukkan bahwa variasi permainan bola basket dapat meningkatkan motivasi belajar, kepercayaan diri, dan kerja sama antar siswa dalam pembelajaran PJOK. Inovasi ini juga berkontribusi pada pengembangan strategi pembelajaran aktif yang menekankan kesenangan dan partisipasi siswa. Temuan ini diharapkan dapat menginspirasi guru PJOK dalam menciptakan suasana pembelajaran kreatif yang relevan dengan kebutuhan siswa di era modern.

**Kata kunci:** Bola basket, Inovasi Pembelajaran, Motivasi Belajar, Pendidikan Jasmani, SMA/SMK/MA

## Abstract

This study aims to describe the application of variations in basketball game models as an innovation in Physical Education, Sports, and Health (PJOK) learning for SMA. The game model implemented includes a combination of competitive, collaborative, and reflective activities adapted to the characteristics of adolescent students, so that the learning process becomes more interesting, challenging, and meaningful. This study uses a descriptive-reflective approach that focuses on teacher experiences and student responses during the implementation of the model. The results of the study indicate that variations in basketball games can increase learning motivation, self-confidence, and cooperation among students in PJOK learning. This innovation also contributes to the development of active learning strategies that emphasize student enjoyment and participation. These findings are expected to inspire PJOK teachers in creating a creative learning atmosphere that is relevant to the needs of students in the modern era.

**Keywords:** Basbasketball, Learning Innovation, Learning Motivation, Physical Education, SMA/SMK/MA

## 1. INTRODUCTION

Physical Education, Sports, and Health (PJOK) plays a crucial role in developing students' physical fitness, character, and social skills. Through PJOK, students are not only encouraged to master motor skills but also learn values such as sportsmanship, responsibility, cooperation, and honesty (Wijaya et al., 2024). However, in practice, PJOK instruction at the high school (SMA) level is often monotonous and dominated by conventional methods.

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Activities that focus on basic technique training without game variations lead to low student interest and participation (Nurulita & Arfanda, 2024). In the context of basketball instruction, many teachers still employ traditional training patterns, such as repeating dribbling, passing, and shooting techniques without innovative gameplay. This results in reduced student engagement and decreased motivation to learn (Choi et al., 2024). Students with little interest in competitive sports become passive, while those with high abilities dominate the game.

To address these challenges, PJOK teachers need to innovate by creating more adaptive and enjoyable learning. One strategy that can be implemented is the use of various basketball game models. These game models are designed to enable students to learn through playing experiences that involve cooperation, healthy competition, and self-reflection (Perdima et al., 2024). A game-based approach not only develops motor skills but also motivates students to be more active and creative during the learning process (Tendinha et al., 2021).

## **2. METHOD**

This study uses a descriptive-reflective approach, focusing on the experiences of physical education teachers and student responses to the implementation of various basketball game models at the senior high school (SMA) level. This approach was chosen because it allows for an in-depth and contextual depiction of the learning reality without altering the natural classroom environment.

### ***2.1 Research Subjects and Location***

The study was conducted at a public high school in Ogan Ilir Regency, South Sumatra Province, during the even semester of the 2024/2025 academic year. The subjects were 30 11th-grade students, consisting of 18 boys and 12 girls, along with a physical education teacher as a collaborator. The location and subjects were selected purposively, considering that the school has adequate basketball court facilities and teachers actively developing learning innovations (Wijaya et al., 2024).

### ***2.2 Research Design and Approach***

This study does not aim to test hypotheses, but rather to describe the process of implementing various basketball game models and reflect on their implementation. Each

meeting lasted 90 minutes and was conducted over four weeks. The five basketball game variations implemented are modifications of previous game models, with adjustments to the characteristics of high school students:

- 1) Team Strategy Basketball – a teamwork-based game, requiring simple tactical planning to achieve a target score.
- 2) Challenge Combination Basketball – a timing and accuracy-based game that fosters quick thinking and agility.
- 3) Dynamic Color Basketball – a game with varying ball and target colors to improve focus and adaptability.
- 4) Puzzle Basketball – a strategy-based game for small groups to solve game missions.
- 5) Fast Rotation Basketball – a game based on player rotation speed that emphasizes teamwork and communication.

These variations were developed to balance students' physical, cognitive, and affective aspects in accordance with the active learning approach in the Independent Curriculum (Perdima et al., 2024).

### ***2.3 Data Collection Techniques***

Data were collected through three main techniques:

- 1) Participatory observation, to record student engagement and enthusiasm during learning.
- 2) Reflective interviews, conducted with the Physical Education teacher and six students to determine their perceptions of the game model's effectiveness.
- 3) Documentation, in the form of activity photos, lesson plans (RPP), and field notes.

In addition, teachers' reflective notes were also used to strengthen the analysis of changes in student behavior and motivation (Culajara, 2022).

### ***2.4 Data Analysis Techniques***

Data analysis was conducted using the Miles and Huberman model, which includes three stages: data reduction, data presentation, and conclusion drawing. The results of observations, interviews, and documentation were reduced to identify key themes related to student motivation, cooperation, and enthusiasm. Teacher reflections were used to enrich the interpretation of the results, resulting in a deeper understanding of the implementation of learning innovations (Tendinha et al., 2021).

## ***2.5 Data Validity***

Data validity was tested through triangulation of sources and methods. Data from observations were compared with interview results and teacher reflections. Reflective discussions were held at the end of each meeting between the researcher and the physical education teacher to ensure the reliability of the findings.

## **3. RESULT AND DISCUSSION**

### ***3.1 Overview of Learning Implementation***

The implementation of various basketball game models was conducted over four 90-minute sessions. The Physical Education (PJOK) teacher acted as a facilitator, while students actively participated as the main participants in the learning process. Each session focused on one or two game variations to provide students with a diverse and non-monotonous learning experience.

Observations showed that the classroom atmosphere became more lively and participatory compared to conventional learning (Nurulita & Arfanda, 2024). Team Strategy Basketball and Fast Rotation Basketball were the two most popular variations among students (Perdima et al., 2024). They assessed that these games encouraged cooperation, communication, and quick decision-making. The teacher also noted that more than 80% of students actively participated in the play activities, including students who had previously tended to be passive. This finding aligns with research showing that the use of game models in PJOK increases students' intrinsic motivation because they experience enjoyment and freedom to express themselves through physical activity. This demonstrates that play activities can bridge the gap between enjoyment and meaningful learning.

### ***3.2 Increased Student Motivation and Engagement***

One of the main findings of this study was increased student motivation and engagement during the learning process (Choi et al., 2024). Based on reflective interviews, most students reported being more enthusiastic about participating in Physical Education (PJOK) because the learning activities were no longer boring and stressful as before. They felt challenged to participate in various forms of games that combined elements of strategy, speed, and cooperation (Wang et al., 2024).

Research supports this finding, where active, game-based learning can increase student engagement and a sense of responsibility for the learning process. An international study by Wang et al. even found that implementing game-based learning in basketball can increase participation, concentration, and long-term interest in physical activity. (Wang et al., 2024). Thus, the variety of game models implemented in this study proved to be aligned with the characteristics of high school students who require challenging and contextual activities. Teachers can utilize this as an innovative strategy to foster sustainable learning motivation.

### ***3.3 Development of Social and Emotional Skills***

In addition to increasing motivation, the implementation of a variety of game models also impacts students' social and emotional skills. In Team Strategy Basketball and Puzzle Basketball, students learn to develop strategies, respect the opinions of their peers, and work together to achieve common goals. Teachers noted improvements in students' communication skills and emotional control during the activities. This aligns with findings that explain that game-based learning can foster empathy, tolerance, and sportsmanship. Recent research by Perdima et al. also confirms that small group game activities can strengthen social and collaborative aspects without diminishing the seriousness of learning sports techniques (Perdima et al., 2024).

In this context, basketball is an effective medium for integrating cognitive, affective, and psychomotor aspects into one integrated activity. Thus, the variety of game models not only teaches playing techniques but also character values important in modern physical education.

### ***3.4 Teacher Reflections on Model Implementation***

The Physical Education (PJOK) teachers involved in this study stated that learning using a variety of game models provided a new experience in teaching. Teachers felt more motivated to design creative and flexible activities. Although time management is a challenge, the benefits are commensurate with increased student enthusiasm. Teacher reflections indicate that game activities provide space for students with diverse abilities to participate equally. This supports the principles of inclusive learning, which emphasizes the involvement of all students without discrimination of ability. Teachers also mentioned that this approach encourages students to be more confident in expressing their opinions and to be more confident when presenting in front of their classmates.

### ***3.5 Implications of Innovation in Physical Education Learning,***

The implementation of variations in the basketball game model is a form of innovation in Physical Education learning in the Independent Curriculum era. This approach positions students as active and creative learners, while teachers act as learning facilitators (Wang et al., 2024)(Wang et al., 2024). Through play activities, students learn to solve problems, make quick decisions, and collaborate skills that are essential in the context of 21st-century education. Furthermore, variations in games can help teachers create a positive learning environment. Consistent with the opinion that innovation in Physical Education learning is not only oriented toward skill outcomes, but also toward a learning process that fosters student motivation and character. Thus, the results of this study confirm that variations in basketball game models can be an effective alternative strategy to enrich the learning experience, increase motivation, and strengthen social relationships among high school students.

## **4. CONCLUSION**

The implementation of various basketball game models as a Physical Education (PJOK) learning innovation in high schools has been proven to increase learning motivation, student engagement, and social skills development. Through game variations such as Team Strategy Basketball, Challenge Combination Basketball, and Fast Rotation Basketball, students gain a more enjoyable, competitive, and meaningful learning experience.

Learning focuses not only on basic technical skills but also on character development, teamwork, and student self-confidence. Physical Education (PJOK) teachers gain reflective experiences that strengthen their understanding of active and creative learning. Therefore, this game variation-based innovation can be an effective alternative for creating a dynamic, inclusive, and relevant learning environment, in line with the spirit of the Independent Curriculum.

This research is descriptive-reflective in nature, so the results are limited to a specific school context. Further research is recommended to quantitatively evaluate the effectiveness of this model, involving more participants and schools, so that the results can be more broadly generalized.

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## 6. REFERENCES

- Alderman, B. L., & Hodge, K. (2016). Motivation and engagement in physical education: Applications of self-determination theory. *Journal of Physical Activity and Health, 13*(5), 485–493. <https://doi.org/10.1123/jpah.2015-0567>
- Almeida, F., & Rodrigues, D. (2021). Game-based learning in physical education: Enhancing student participation and skills. *European Journal of Sport Science, 21*(8), 1123–1134. <https://doi.org/10.1080/17461391.2021.1902563>
- Bailey, R. (2006). Physical education and sport in schools: A review of benefits and outcomes. *Journal of School Health, 76*(8), 397–401. <https://doi.org/10.1111/j.1746-1561.2006.00132.x>
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. W.H. Freeman.
- Casey, A., & Goodyear, V. (2015). Can cooperative learning achieve the four learning outcomes of physical education? *Quest, 67*(1), 56–72. <https://doi.org/10.1080/00336297.2014.986430>
- Choi, S. M., Wang, F. J., Sum, R. K. W., Ching, B. H. H., Leung, E. F. L., & Ho, R. W. K. (2024). The motivational impact of sport education model on daily physical activity levels among university students: A mediation analysis. *Scientific Reports, 14*(1), 1–10. <https://doi.org/10.1038/s41598-024-78446-8>
- Culajara, C. J. (2022). Integrating game-based approach in students learning experiences in physical education: A phenomenological study. *Edu Sportivo: Indonesian Journal of Physical Education, 3*(3), 242–254. [https://doi.org/10.25299/es:ijope.2022.vol3\(3\).10520](https://doi.org/10.25299/es:ijope.2022.vol3(3).10520)
- Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and self-determination of behavior. *Psychological Inquiry, 11*(4), 227–268. [https://doi.org/10.1207/S15327965PLI1104\\_01](https://doi.org/10.1207/S15327965PLI1104_01)

- Dyson, B. (2014). Quality physical education: A commentary on effective teaching models. *Research Quarterly for Exercise and Sport*, 85(2), 119–130. <https://doi.org/10.1080/02701367.2014.902455>
- Firmansyah, A., et al. (2022). Pengaruh model pembelajaran tactical games dalam permainan bola basket SMA. *Jurnal Ilmu Wahana Pendidikan*. <https://jurnal.peneliti.net/index.php/JIWP/article/view/5511>
- Griffin, L., & Butler, J. (2005). *Teaching games for understanding: Theory, research, and practice*. Human Kinetics.
- Harvey, S., & Jarrett, K. (2014). A review of the game-centered approaches to teaching and coaching literature. *Physical Education and Sport Pedagogy*, 19(3), 278–300. <https://doi.org/10.1080/17408989.2013.777247>
- Hastie, P. A., & Casey, A. (2014). Fidelity in models-based practice research in sport pedagogy. *Journal of Teaching in Physical Education*, 33(3), 422–431. <https://doi.org/10.1123/jtpe.2013-0211>
- Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. Routledge.
- Hidayat, T., et al. (2021). Model pembelajaran bola basket berbasis permainan terhadap peningkatan passing. *Sportivo Journal*. <https://journal.uir.ac.id/index.php/SPORTIVO/article/view/7953>
- Juniarta, I. G. A., et al. (2023). Model blended learning untuk meningkatkan hasil belajar PJOK materi bola basket. *Jurnal Ilmiah Ilmu Keolahragaan Undiksha*. <https://ejournal.undiksha.ac.id/index.php/JJIK/article/view/59428>
- Kirk, D. (2010). *Physical education futures*. Routledge.
- Light, R. (2013). *Game sense: Pedagogy for performance, participation and enjoyment*. Routledge.
- Metzler, M. W. (2017). *Instructional models for physical education* (3rd ed.). Routledge.
- Mitchell, S., Oslin, J., & Griffin, L. (2013). *Teaching sport concepts and skills: A tactical games approach* (3rd ed.). Human Kinetics.
- Nurulita, R. F., & Arfanda, P. E. (2024). Analysis of game-based learning to increase student engagement in physical education, sports and health classes. *KING: Knowledge Integrated Networking for Global Sport and Health*, 1, 52–56.
- Perdima, F. E., Apriansyah, D., Sumantri, A., Ertanto, D., & Sofyan, D. (2024). Enhancing technical proficiency through small-sided basketball games: A strategic approach for student athletes. *Journal Sport Area*, 9(2), 195–206. [https://doi.org/10.25299/sportarea.2024.vol9\(2\).16651](https://doi.org/10.25299/sportarea.2024.vol9(2).16651)

- Pranata, D., et al. (2024). Implementation of flipped learning in PJOK. *Kinestetik: Jurnal Ilmiah Pendidikan Jasmani*. <https://ejournal.unib.ac.id/kinestetik/article/view/45749>
- Prasetyo, B., et al. (2021). Pengembangan model pembelajaran kolary untuk permainan bola basket di SMA. *Jurnal Mahasiswa UNY*. <https://journal.student.uny.ac.id/pok/article/view/17996>
- Putra, R. D., et al. (2023). Pengaruh modifikasi permainan bola basket pada pembelajaran PJOK. *Jurnal Pendidikan Tambusai*. <https://jptam.org/index.php/jptam/article/view/27435>
- Rahman, A., et al. (2022). Model pembelajaran problem based learning dalam permainan bola basket. *Global Journal of Sport Science*. <https://sainsglobal.com/jurnal/index.php/gjss/article/view/1853>
- Santoso, H., et al. (2019). Pengembangan model pembelajaran basketball game based modification untuk SMA. *JIPES UNJ*. <https://journal.unj.ac.id/unj/index.php/jipes/article/view/8079>
- Sari, N., et al. (2022). Permainan bola basket modifikasi untuk meningkatkan keterampilan variasi gerak dasar. *Indonesian Journal of Islamic Elementary Education*. <https://ejournal.uingusdur.ac.id/ijiee/article/view/1605>
- Saryono, S., et al. (2017). Pengembangan model permainan untuk pembelajaran teknik dasar bola basket di SMP. *Jurnal Pendidikan Jasmani Indonesia*. <https://jurnal.uny.ac.id/index.php/jolahraga/article/view/12758>
- Slavin, R. (2015). *Cooperative learning: Theory, research, and practice*. Allyn & Bacon.
- Smith, L., & Brown, R. (2023). Technological innovations and pedagogical advancements in basketball skill learning. *Inspire Journal of Education*. <https://inspire.igiinsight.com/index.php/inspiree/article/view/158>
- Standage, M., Duda, J., & Ntoumanis, N. (2005). A test of self-determination theory in school physical education. *British Journal of Educational Psychology*, 75(3), 411–433. <https://doi.org/10.1348/000709905X25878>
- Tendinha, R., Alves, M. D., Freitas, T., Appleton, G., Gonçalves, L., Ihle, A., Gouveia, É. R., & Marques, A. (2021). Impact of sports education model in physical education on students' motivation: A systematic review. *Children*, 8(7), 1–9. <https://doi.org/10.3390/children8070588>
- Utami, D., et al. (2020). Persepsi siswa tentang variasi permainan terhadap hasil belajar dribble bola basket. *Jurnal Pendidikan Jasmani Unesa*. <https://ejournal.unesa.ac.id/index.php/jurnal-pendidikan-jasmani/article/view/37139>
- Wang, J., Chee, C. S., & Samsudin, S. (2024). Enhancing university students' motivation in basketball courses through tactical games model. *Behavioral Sciences*, 14(7), 1–14. <https://doi.org/10.3390/bs14070515>

Wijaya, K., Oktavia, R., Abdillah, Y. N., & Suseno, I. (2024). The influence of self-regulated learning model in basketball games on learning motivation of SMP Negeri 1 Telagasari students. *Journal of Physical Education Innovation*, 1(1), 11–15.

Yusuf, M., et al. (2022). Implementation of inclusion style method in basketball game PJOK learning. *Jurnal Ilmu Pendidikan Modern*.  
<https://ejurnal.kampusakademik.my.id/index.php/jipm/article/view/1267>