Journal of Fundamental Movement Skills Vol. 1, No. 1, Tahun 2026, pp. 1-10
ISSN: 3164-3264 (Online)
https://jfms.smartmotionjournals.com

The Effect of the Bridge Football Game Implemented Through the Fun Learning Method on Students' Interest and Soccer Learning Outcomes at SMK Negeri 3 Bojonegoro

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Article Info:
Received: *22-01-2026*
Revised: *28-01-2026*
Accepted: *02-02-2026*
Online: *13-03-2026*

Keywords:
bridge football; fun learning; learning interest; cognitive learning outcomes; psychomotor skills

ABSTRACT

Students at SMK Negeri 3 Bojonegoro, particularly in class X MPLB 1, often experience boredom and low motivation during football learning activities, as football is perceived as difficult and physically demanding. This condition affects students' interest and learning outcomes in physical education.This study aimed to examine the effect of implementing the Bridge Football game through the Fun Learning method on students' learning interest, cognitive learning outcomes, and psychomotor skills in football learning. This research employed a quasi-experimental design using a one-group pretest–posttest approach. The participants consisted of 35 students from class X MPLB 1 at SMK Negeri 3 Bojonegoro, selected using a total sampling technique. Data were collected through a learning interest questionnaire, cognitive achievement tests, and psychomotor skills assessments. Data analysis was conducted using descriptive statistics and inferential analysis to determine differences between pretest and posttest scores. The results showed a significant improvement in students' learning interest, with an increase of 8.13 points. Cognitive learning outcomes increased by 17.42 points, while psychomotor skills showed the highest improvement, with an increase of 37.28 points. These findings indicate that the Bridge Football game effectively enhances students' engagement and learning performance. The implementation of the Bridge Football game through the Fun Learning method significantly improves students' learning interest and learning outcomes across affective, cognitive, and psychomotor domains in football learning.

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INTRODUCTION

Education plays a vital role in national development by preparing individuals who are intellectually competent, physically healthy, and ready to face future challenges. In Indonesia, the National Education System emphasizes the importance of optimizing students' potential through meaningful learning experiences. Physical Education, Sports, and Health (PJOK) is an essential component of the school curriculum, aiming not only to develop physical fitness but also to foster character, sportsmanship, social skills, and awareness of active and healthy lifestyles (Puspitasari et al., 2023). Football is one of the main learning materials in PJOK that requires technical skills, teamwork, and strategic thinking. Through football activities, students can improve coordination, agility, strength, and decision-making skills. However, football learning in schools often encounters problems related to low learning interest and unsatisfactory learning outcomes, largely due to conventional teaching approaches and students' perceptions that football is physically demanding and difficult (Rusdianto et al., 2021).

Preliminary observations at SMK Negeri 3 Bojonegoro revealed that students in class X MPLB 1 demonstrated low interest and limited engagement during football lessons. Many students showed passive behavior, which negatively affected their learning outcomes as reflected in PJOK assessment records. Learning interest plays a crucial role in the success of the learning process, as it encourages active participation, concentration, and better understanding of learning materials. Conversely, low learning interest often leads to boredom, avoidance, and ineffective learning (Setyowati et al., 2022; Panjaitan & Fardana, 2023). Previous studies have shown that game-based and cooperative learning approaches can effectively increase students' motivation and engagement in physical education. Rayhan et al. (2025) reported that play-based learning significantly improved students' interest, while Suroyo and Hartati (2014) demonstrated that enjoyable and collaborative learning models enhanced football skill outcomes. Nevertheless, innovative football learning games that are inclusive and systematically designed for vocational high school students remain limited.

To address this gap, this study introduces an innovative game called Bridge Football, developed based on the principles of fun learning. This game integrates fundamental football skills with cooperative and engaging gameplay mechanics, enabling students to learn in an enjoyable and motivating environment. By emphasizing active participation and positive learning experiences, Bridge Football is expected to overcome students' boredom and low motivation. Therefore, this study aims to examine the effect of implementing the Bridge Football game using the Fun Learning method on students' learning interest and football learning outcomes across cognitive, affective, and psychomotor domains at SMK Negeri 3 Bojonegoro.

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METHODS

This study employed a quantitative approach using a quasi-experimental design with a one-group pretest–posttest model. The design involved a single experimental group without a control group to examine changes in students' learning interest and football learning outcomes before and after the implementation of the Bridge Football game using the Fun Learning method.

Participants and Sampling

The participants consisted of 35 students from class X MPLB 1 at SMK Negeri 3 Bojonegoro, East Java, Indonesia. The sample was selected using purposive sampling based on recommendations from the Physical Education (PJOK) teacher, considering the students' low learning interest and suboptimal learning outcomes in football learning. All students in the selected class participated in the study. The research was conducted during the 2025 academic year and implemented over four learning sessions, consisting of a pretest session, two intervention sessions, and a posttest session.

This study was conducted in accordance with the ethical principles of the Declaration of Helsinki. All participants were informed about the objectives and procedures of the study, and written informed consent was obtained prior to participation. The study received ethical approval from the ethical committee of University State of Surabaya with the assigned approval number B/159726/UN38.6/LT.02.02/2025.

Instruments and Apparatus

Data were collected using three instruments: a learning interest questionnaire, a cognitive achievement test, and a psychomotor skills assessment. Learning interest was measured using a closed-ended questionnaire consisting of 21 items based on five indicators: enjoyment, interest, motivation, attention, and involvement, using a five-point Likert scale. Cognitive learning outcomes were assessed through a multiple-choice test comprising 10 items related to basic football knowledge. Psychomotor learning outcomes were measured using a performance-based assessment with a scoring rubric evaluating shooting accuracy, passing accuracy, movement coordination, and dribbling skills. All instruments were validated by experts in physical education and educational evaluation to ensure content validity.

Procedures / Data Collection

The intervention in this study consisted of the implementation of the Bridge Football game using the Fun Learning method. Bridge Football is a modified football learning activity designed to increase students' active participation, cooperation, motivation, and movement coordination in a fun and engaging learning environment. The intervention was conducted during the second and third learning sessions following the pretest.

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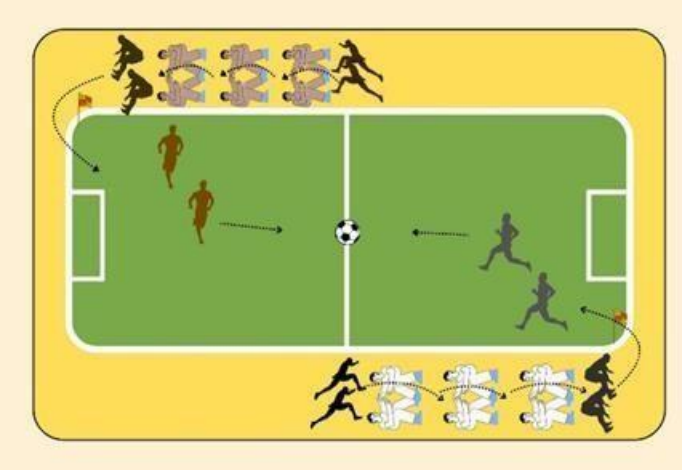


Figure 1. Design of the Bridge Football Game Model 1

The Bridge Football game was implemented through two game models adapted to students' abilities and learning objectives. In Model 1, students were divided into two teams. Before entering the playing area, active players were required to jump over three "bridge" formations created by their teammates. After successfully passing through the bridge, players were allowed to enter the playing field and attempt to score goals using fundamental football techniques. The ball was played using the feet in accordance with basic football rules. Violations such as handling the ball, failing to jump over the bridge correctly, or entering the playing area without passing through the bridge resulted in points being awarded to the opposing team. The design of the Bridge Football Game Model 1 is presented in Figure 1.

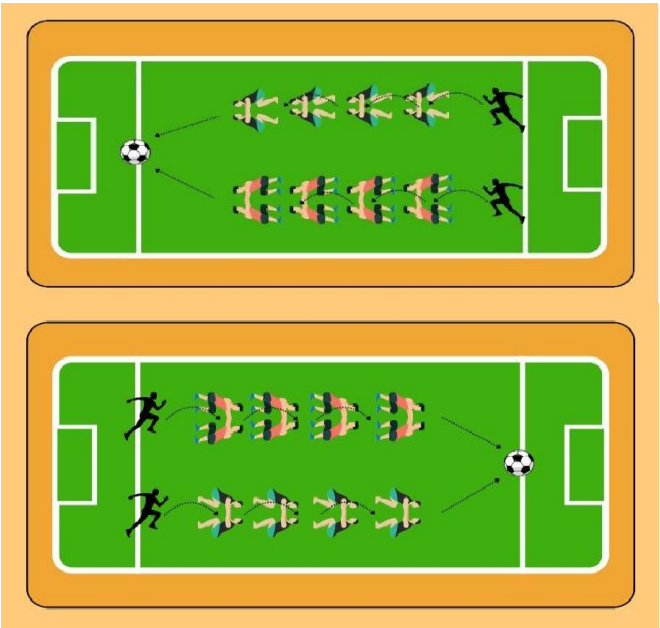


Figure 2. Design of the Bridge Football Game Model 2

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In Model 2, the game structure was simplified to ensure equal participation among students. Each team consisted of three players, with two players acting as bridges and one player serving as the jumper. The jumper was required to pass over the bridge before moving toward the scoring area. Player roles were rotated systematically so that all students experienced each role during the game. This model emphasized teamwork, movement coordination, and fair participation while maintaining the essential elements of football learning. The design of the Bridge Football Game Model 2 is shown in Figure 2.

Both game models were implemented under teacher supervision to ensure student safety and proper movement execution. The integration of the Fun Learning method allowed students to actively engage in football learning while improving affective, cognitive, and psychomotor learning outcomes.

Data Analysis

Data analysis was conducted using descriptive and inferential statistical techniques with the assistance of SPSS software. Descriptive statistics were used to calculate mean scores and standard deviations for pretest and posttest data. Prior to hypothesis testing, normality and homogeneity tests were performed to ensure that the data met the assumptions for parametric analysis. Paired sample t-tests were applied to determine significant differences between pretest and posttest scores for learning interest, cognitive learning outcomes, and psychomotor skills, with the level of significance set at 0.05.

RESULTS

This study was conducted with 35 students of class X MPLB 1 at SMK Negeri 3 Bojonegoro. The research was carried out over four meetings, consisting of a pretest, the implementation of the Bridge Football game using the Fun Learning method, and a posttest. Research data were collected through an interest questionnaire, a cognitive achievement test, and a football skills performance test. All data were analyzed using the Statistical Package for Social Sciences (SPSS) version 27.

Table 1. Descriptive Statistics of Pretest and Posttest

Variable	N	Pretest Mean	Posttest Mean	Improvement
Learning Interest	35	68.22	76.35	8.13
Cognitive Learning Outcomes	35	72.29	89.71	17.42
Skill-Based Learning Outcomes	35	38.86	76.14	37.28

Based on Table 1, all research variables show an increase in mean scores after the implementation of the Bridge Football game using the Fun Learning method. Students' learning interest increased by 8.13 points, indicating improvements in enthusiasm, motivation, and engagement during the football learning process. Cognitive learning outcomes increased by 17.42 points, reflecting a better understanding of football concepts, rules, and basic techniques. The greatest improvement was observed in skill-based learning

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outcomes, with an increase of 37.28 points, suggesting that game-based learning is highly effective in developing students' psychomotor abilities through meaningful and enjoyable activities. These findings are consistent with Bailey et al. (2019), who emphasize that actively designed and participatory physical education learning can enhance students' cognitive achievement and motor skills, and are further supported by Vasconcellos et al. (2020), who highlight that enjoyable learning environments that encourage student participation contribute significantly to increased motivation, engagement, and learning outcomes in physical education.

Prior to hypothesis testing, the data were first analyzed using the Shapiro–Wilk normality test to determine whether the data were normally distributed. Normality testing is an essential step in statistical analysis because it determines the appropriate type of hypothesis testing to be applied, either parametric or nonparametric (Maksum, 2018). The results indicated that the difference scores for learning interest and cognitive learning outcomes were not normally distributed ($p < 0.05$), whereas the difference scores for skill-based learning outcomes were normally distributed ($p > 0.05$). Therefore, hypothesis testing for learning interest and cognitive learning outcomes was conducted using the Wilcoxon Signed-Ranks Test as a nonparametric test, while skill-based learning outcomes were analyzed using the Paired-Samples t-Test because the normality assumption was satisfied (Yusuf, 2016).

Table 2. Hypothesis Testing Results

Variable	Statistical Test	Test Value	Sig. (p)	Interpretation
Learning Interest	Wilcoxon	Z = −4.595	0.000	Significant
Cognitive Learning Outcomes	Wilcoxon	Z = −4.472	0.000	Significant
Skill-Based Learning Outcomes	Paired t-test	t = −15.300	< 0.001	Significant

The results presented in Table 2 indicate that all variables have significance values below 0.05, indicating statistically significant differences between pretest and posttest scores. These findings confirm that the implementation of the Bridge Football game using the Fun Learning method has a significant effect on students' learning interest, cognitive learning outcomes, and skill-based learning outcomes. The results of this study are consistent with the findings of Kurniawan et al. (2025), who reported that game-based physical education learning significantly improves students' learning outcomes based on comparisons between pretest and posttest scores. In addition, Perlman (2011) emphasized that game-based instructional approaches in physical education have a significant positive impact on student engagement and learning achievement, particularly in the cognitive and psychomotor domains.

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DISCUSSION

The increase in learning interest indicates that game-based learning is able to create an enjoyable and engaging learning environment, thereby encouraging students' active involvement in the learning process. The Fun Learning method can reduce learning pressure and foster positive emotions during instruction, which ultimately enhances students' motivation. This finding is consistent with Firmana (2023), who reported that physical education learning involving enjoyable physical activities has a significant effect on improving students' learning interest. From a theoretical perspective, learning conditions that provide enjoyment, opportunities for participation, and experiences of success fulfill students' basic psychological needs, which in turn promote intrinsic motivation (Ryan & Deci, 2017). In addition, Slavin (2018) emphasized that active and experiential learning approaches, including game-based activities, can enhance learning interest because students are directly involved in the learning process rather than acting solely as passive recipients of information.

The improvement in cognitive learning outcomes indicates that game-based learning not only influences the affective domain but also strengthens students' conceptual understanding of football content. Learning activities that emphasize direct experience through games enable students to understand rules, concepts, and strategies in a more contextual and meaningful manner. Active student involvement in game situations stimulates thinking processes, decision-making, and problem-solving skills, which contribute to the enhancement of students' cognitive abilities. This finding is consistent with Putra (2024), who reported that game-based football learning is effective in improving students' conceptual understanding. The results of this study are also supported by Hastie, de Ojeda, and Luquin (2011), who explained that game-based learning in physical education can enhance students' tactical and cognitive understanding through direct engagement in authentic game situations. Furthermore, Metzler (2017) emphasized that game-based instructional models promote the integration of cognitive and skill domains through meaningful, student-centered learning activities.

The greatest improvement was observed in skill-based learning outcomes, indicating that the Bridge Football game is highly effective in enhancing students' motor skills and movement coordination. Active student involvement in structured and cooperative gameplay provides repeated practice opportunities within a meaningful and enjoyable context, thereby supporting optimal mastery of motor skills. Game-based learning enables students to learn through direct experience and repeated practice that closely reflects real-game situations. This finding is consistent with Satria (2024), who reported that game-based physical education learning significantly improves students' motor skill development. Similar results were also reported by Prasetyo (2025), who found that game-based learning methods are effective in developing motor abilities and movement coordination among physical education students. Furthermore, Izzu (2025) emphasized that game models focusing on locomotor and manipulative activities can significantly enhance basic football skills.

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CONCLUSION

This study concludes that the implementation of the Bridge Football game using the Fun Learning method has a significant positive effect on students' learning interest and football learning outcomes. The findings indicate a meaningful increase in students' learning interest after the intervention, reflected in higher motivation, engagement, and enjoyment during the learning process. In addition, the application of the Bridge Football game significantly improves students' cognitive learning outcomes, demonstrating a better understanding of football concepts, rules, and basic techniques. The most substantial improvement is observed in skill-based learning outcomes, confirming that game-based learning is highly effective in enhancing students' motor skills and movement coordination through active and enjoyable participation. Overall, the Bridge Football game integrated with the Fun Learning method can be considered an effective and practical instructional approach for football learning in vocational high schools, as it supports cognitive and psychomotor development while fostering positive learning attitudes.

ACKNOWLEDGMENTS

The authors would like to express their sincere gratitude to SMK Negeri 3 Bojonegoro for granting permission to conduct this research. Special appreciation is extended to the Physical Education (PJOK) teacher for valuable assistance during the implementation of the learning activities, as well as to all students of class X MPLB 1 for their active participation and cooperation throughout the research process.

FUNDING STATEMENT

This research does not receive external funding.

CONFLICT OF INTEREST

The authors hereby declare that this research is free from conflicts of interest with any party.

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