

## **SOCCER LIKE GAMES BASED ON INDONESIAN FOOTBALL PHILOSOPHY: A STUDY ON IMPROVING THE TACTICAL KNOWLEDGE OF 12-YEAR-OLD FOOTBALL SCHOOL STUDENTS**

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**Abstract:** The purpose of this study was to determine the impact of soccer like games intervention based on Indonesian football philosophy on improving tactical knowledge in soccer games of 12-year-old football school students in Mataram city. Quantitative research method with pre-experiment one group pre-test and post-test design. A total of 42 12-year-old players from three Soccer Schools affiliated with PSSI Mataram City participated in this study and have met the predetermined inclusion criteria. The selection of soccer schools was done purposively which have a similar training structure or have used the Indonesian soccer coaching curriculum. The instrument used in this study is the Game Performance Assessment Instrument (GPAI). The results showed that SSB RW experienced a significant improvement in students' tactical knowledge, with a score increase of 85 points from pre-test to post-test. SSB IF also experienced a significant improvement in students' tactical knowledge, with a score increase of 90 points. SSB MA showed the highest improvement in students' tactical knowledge, with an increase in score of 112 points. The significance value (p-value) of (0.000) is smaller than 0.05, meaning that the difference between the pre-test and post-test is highly statistically significant. The average increase of 6.833 points in the post-test indicates that the training intervention conducted had a significant positive impact on the football tactical knowledge of 12-year-old football school students. These findings will help coaches and academics design more effective training programs that cater to the specific needs of young players, encouraging their growth into skilled and tactically aware athletes.

**Keywords:** Soccer like games, Filanesia, Tactical Knowledge

## INTRODUCTION

The Indonesian Football Association (PSSI) through the high performance field conducted a study and analysis related to the strengths and weaknesses of the playing system from the National team to the clubs participating in the Indonesian league to the way of playing at the elite pro academy level and this became the starting point for formulating the Indonesian Football Development Curriculum which was named the Indonesian Football Philosophy (Filanesia). Filanesia is a development of the Indonesian football curriculum which is the foundation of the Indonesian football game (Setiawan, 2021). This formulation considers the advantages of Indonesian players, the cultural-geographical-sociological society of Indonesia and of course the demands of top-level world football (Danurwindo et al., 2017). Proactive play in possession, pressing and constructive play is a way of playing developed through filanesia which means having the desire to dominate possession in a match, fast in pressing and zone marking and the ability to play from line to line to score goals.

Implementing this philosophy is not easy, early age football players at SSB are required to be exposed to multifaceted training that emphasizes technical skills, physical condition, and cognitive abilities. Among these, cognitive ability, which includes tactical knowledge, is an important component that greatly influences a player's performance in making decisions on the pitch. Tactical knowledge has become the cornerstone of effective soccer performance, influencing individual and team success. Players with superior tactical understanding can anticipate opponents' movements, make better strategic decisions, and adapt to changing game situations more effectively. Tactical knowledge in football includes an understanding of rules, positions, functions, offensive and defensive strategies, and the tactical-technical logic of the game. It is this aspect of "knowing what to do" that distinguishes skilled players. (Sánchez-López et al., 2021) define tactical knowledge as a critical factor for team success, affecting both individual and collective performance. Effective training models, such as those incorporating game-like scenarios, have been shown to improve players' tactical understanding and adaptability (Matos et al., 2023).

(Kannekens et al., 2011) emphasized the importance of declarative and procedural knowledge in attacking and defending situations for players in various positions, which highlights the importance of tactical skills in various game scenarios. In soccer, players' tactical knowledge is crucial for team success and development. Training methodologies play an important role in improving this tactical knowledge (Carlos, 2018). Training focused on developing decision-making ability and motor efficiency allows players to be better prepared for dynamic and complex game situations, allowing them to make a more significant contribution to team success. Understanding the decision-making process and motor efficiency in different playing positions during training sessions can help coaches and players

anticipate actions during matches, which will ultimately improve their performance (Matos et al., 2023). This tactical awareness not only helps players understand their role in the context of the team's strategy, but also improves their ability to adapt to the ever-changing dynamics of the game, thus being able to make better and quicker decisions on the field. The integration of tactical knowledge into training programs, as outlined in these studies, demonstrates how a deeper understanding of various game situations can significantly improve individual and collective performance in football.

The importance of cognitive and perceptual skills in football cannot be understated as they are closely related to a player's intelligence on the pitch. (Teoldo, 2023) emphasizes that players who can quickly interpret game situations and make the right decisions have a significant advantage. This skill is especially important for a player to have in high pressure situations, where quick and accurate decisions can determine the outcome of the game. Meanwhile in (Siregar et al., 2020) stated that soccer is a simple game, the secret of a good soccer game is to do simple things as well as possible. Soccer is a team game, where players must have the intelligence to think quickly when in the game a player holds the ball, the player must be quick in making a decision (Prastyanto & Sutijono, 2022). However, to implement simple football, a varied training model is needed related to playing skills which are the initial foundation of Proactive play in possession, pressing and constructive play. The importance of a training model that combines cognitive and perceptual training will greatly help players improve situational awareness, speed of decision-making, and the ability to anticipate opponents' actions.

Soccer like games have emerged as a popular training tool to improve tactical knowledge among young and professional players. Soccer like games simulate actual match conditions but on a smaller scale, providing more touches on the ball, increased engagement in the game, and more frequent decision-making opportunities. Research (Oppici et al., 2018) shows that futsal, a variant of soccer played on a smaller pitch with fewer players, effectively improves passing and decision-making skills, which can be transferred to standard soccer matches. Soccer like games involving fewer players per team and modified rules to emphasize specific skills or tactical aspects. (Bergkamp et al., 2020) provide evidence that soccer like games are effective in developing tactical knowledge and predicting performance in standard 11-on-11 matches. These games create a more engaging and less structured environment, encouraging players to experiment with different strategies and develop a deeper understanding of the tactical aspects of the game.

Youth soccer players who are members of SSBs, especially those in the under-12 age group, are at a critical stage in their development. This period is characterized by rapid cognitive and physical growth, making it an ideal time to introduce complex tactical concepts. The presence of filanesia makes SSB coaches should have a reference in preparing training programs. Based on the results of the

preliminary study, SSB coaches in Mataram City, especially those responsible for the age group under 12 years old still focus on improving basic technical skills and biomotor abilities of players so that they do not touch the cognitive development of children and put children in training situations that encourage children to always make the right decisions quickly when playing because no training is done to develop tactical knowledge. Despite the extensive research on the benefits of soccer like games and the importance of tactical knowledge, there are still some gaps. There is limited research on how this training method specifically impacts different age groups, particularly players aged 12 and under. Most research has focused on youth or professional players, so there are gaps in understanding the developmental stages of younger players. The novelty of this research lies in the age-specific focus and the integration of Indonesian football philosophy, this research aims to provide insight into how an approach using an integrated training model based on the philosophy that has been outlined in the Indonesian football coaching curriculum can improve the tactical knowledge of SSB students in Mataram city.

## METHOD

The method used in this research is an experiment with a pre-experimental design of one group pre-test and post-test. (Sugiyono, 2016) says that pre-experimental design is a design that includes only one group or class that is given a pre and post-test. This one group pretest and posttest design is given to only one group without involving a control or comparison group. This study was conducted for 6 months with a training frequency of 3 times a week and carried out on 3 different soccer fields located in the city of Mataram, this was done to evaluate the effectiveness of soccer like games based on Indonesian football philosophy in improving the tactical knowledge of 12-year-old football school students. A total of 42 12-year-old players from three SSBs affiliated with PSSI Mataram City participated in this study. The selection of SSBs was done purposively to ensure participation from SSBs that have a similar training structure or have used the Indonesian football coaching curriculum and commitment to the development of early age players who are prepared for national and international tournaments. To be included in the research sample, a player must meet the following inclusion criteria: (1) have not suffered or are currently suffering from an injury during the last two months. (2) attend all training sessions during the intervention (3) the players are players who are prepared for the Bali United Academy Mataram Anniversary and Barati Cup tournaments. Researchers in determining the forms of soccer like games training in accordance with filanesia and the data collection process were assisted by 3 trainers with a C Diploma license.

The instrument used in this study is the Game Performance Assessment Instrument (GPAI) (Oslin et al., 1998). GPAI is a comprehensive assessment tool used to measure player performance in real game situations. There are seven

components observed to get an overview of the student's playing performance observation for game sports according to Oslin et al. in (Lianda et al., 2023) are as follows: a. Base: Returning to home or recovery position of the student is a skill effort. b. Adjust: The student's movement, either offensive or defensive, or skill in a football moment. c. Decision Made: Making the right options and decisions that are appropriate when holding the ball. d. Skill execution: Efficiency of the selected basic soccer skill. e. Support: Movement without the ball to provide support to a friend holding the ball (or throwing). f. Cover: A defensive transition to cover an opponent moving with the ball or toward the ball. g. Guard/mark: Providing guard to opponents both in possession of the ball and not in possession of the ball or pressing both individually and as a team. This instrument was chosen due to its proven validity and reliability in the context of football performance assessment.

The pre-test data collection was conducted by conducting a trofeo friendly match involving the three subject SSBs and the post-test was conducted during the Bali United Academy Mataram Anniversary tournament. Furthermore, to get maximum results and help the coach conduct in-depth analysis, data collection is assisted by video recording of the match using a handycam which is then analyzed after the match is over. The data collected from the pre-test and post-test results were analyzed using appropriate statistical tests to determine significant differences in tactical knowledge. The analysis was conducted using the latest version of SPSS statistical software. The soccer like games intervention program for the first 3 months or 12 meetings of the study is presented in the following table:

**Table. 1** Main Objectives Soccer Like Games Start- For A 12 Week Training Program

| STAGE | TYPE  | 3 MONTHS  |   |   |   |   |   |
|-------|---|---|---|---|---|---|---|
|       |   | 2 WEEKS   | 2 WEEKS   | 2 WEEKS   | 2 WEEKS   | 2 WEEKS   | 2 WEEKS   |
| U-12  | Possession (Adjustable play area size)                  | 3+3vs3  | 4+2vs4  | 3+3vs3  | 4+2vs4  | 3+3vs3  | 4+2vs4  |
|       |   | control, passing and moving (3 minute X 5 repitition)         | control, passing and moving (3 minute X 5 repitition)                   | control, passing and moving (potitioning) (4 minute X 5 repitition) | control, passing and moving (potitioning) (4 minute X 5 repitition)     | "a player touches a maximum of 2 times" control, passing and moving (4 minute X 5 repitition) | "a player touches a maximum of 2 times" control, passing and moving (4 minute X 5 repitition) |
|       | Possession And Switch Play (Adjustabl e play area size) | GK+4+2vs4   | 4+2vs4+GK   | GK+4+2vs4   | 4+2vs4+GK   | GK+4+2vs4   | 4+2vs4+GK   |
|       |   | Build Up, Possesion and Switch Play (4 minute X 5 repitition) | Finishing, Progresive Passing and switch Play (4 minute X 5 repitition) | Build Up, Possesion and Switch Play (4 minute X 5 repitition)       | Finishing, Progresive Passing and switch Play (4 minute X 5 repitition) | Build Up, Possesion and Switch Play (4 minute X 5 repitition)                                 | Finishing, Progresive Passing and switch Play (4 minute X 5 repitition)                       |

## RESULTS

The statistics of the data normality test results are presented in the following table:

**Table 2.** Data normality test

| One-Sample Kolmogorov-Smirnov Test  |                |                         |
|-------------------------------------|----------------|-------------------------|
|                                     |                | Unstandardized Residual |
| N                                   |                | 42                      |
| Normal Parameters <sup>a,b</sup>    | Mean           | .0000000                |
|                                     | Std. Deviation | 1.08407046              |
| Most Extreme Differences            | Absolute       | .159                    |
|                                     | Positive       | .145                    |
|                                     | Negative       | -.159                   |
| Test Statistic                      |                | .159                    |
| Asymp. Sig. (2-tailed) <sup>c</sup> |                | .09                     |

The significance value (p-value) is 0.09 which is greater than the common threshold of 0.05. This explains that the null hypothesis (H0) stating that the residual data is normally distributed cannot be rejected.

Descriptive statistics are presented in the following table:

**Table 3.** Descriptive Statistics

|                    | N  | Minimum | Maximum | Mean  | Std. Deviation |
|--------------------|----|---------|---------|-------|----------------|
| Pre-Test           | 42 | 9       | 13      | 11.57 | 1.085          |
| Post-Test          | 42 | 17      | 21      | 18.40 | 1.326          |
| Valid N (listwise) | 42 |         |         |       |                |

There were significant improvements in all components of football tactical knowledge after the training intervention for all groups (RW, IF, MA). This improvement was reflected both in the mean and the sum from pre-test to post-test.

Descriptive statistics of the variable measurement results are presented in the following table:

**Table 4.** Descriptive Statistics of Variable Measurement Results

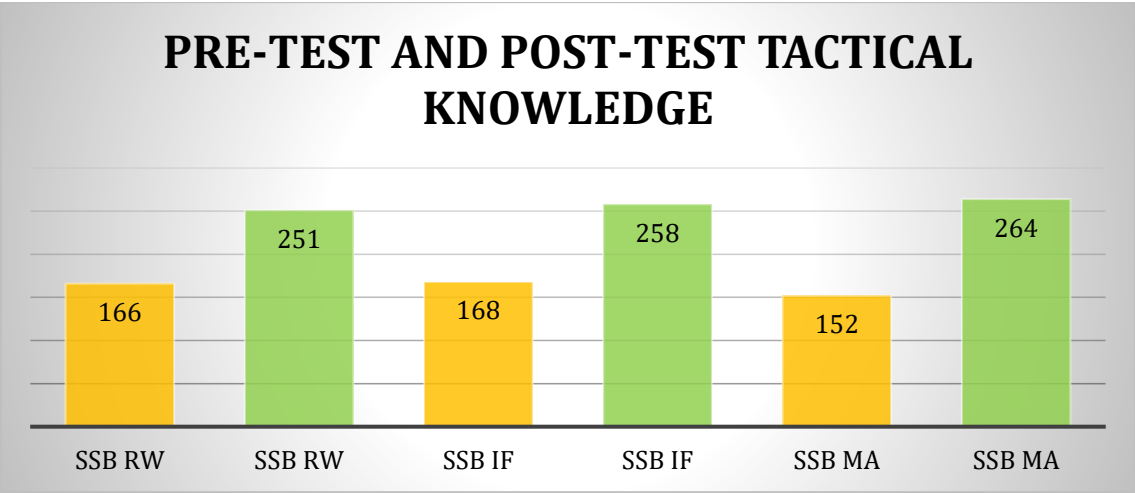
| <b>Kelompok</b> | <b>Pre-Test</b> | <b>Post-Test</b> | <b>Pre-Test</b> | <b>Post-Test</b> |
|-----------------|-----------------|------------------|-----------------|------------------|
| <b>RW</b>       | <b>Mean</b>     | <b>Mean</b>      | <b>Sum</b>      | <b>Sum</b>       |
| Base            | 1.79            | 3.21             | 25              | 45               |
| Adjust          | 1.79            | 2.07             | 25              | 29               |
| Decesion Made   | 1.79            | 2.29             | 25              | 32               |
| Skill Execution | 1.79            | 2.36             | 25              | 33               |
| Support         | 1.57            | 2.71             | 22              | 38               |
| Cover           | 1.64            | 2.50             | 23              | 35               |



|                 |                 |                  |                 |                  |
|-----------------|-----------------|------------------|-----------------|------------------|
| Guard/Mark      | 1.50            | 2.79             | 21              | 39               |
| <b>Kelompok</b> | <i>Pre-Test</i> | <i>Post-Test</i> | <i>Pre-Test</i> | <i>Post-Test</i> |
| <b>IF</b>       | <i>Mean</i>     | <i>Mean</i>      | <i>Sum</i>      | <i>Sum</i>       |
| Base            | 1.86            | 2.64             | 26              | 37               |
| Adjust          | 1.79            | 2.64             | 25              | 37               |
| Decesion Made   | 1.64            | 2.50             | 23              | 35               |
| Skill Execution | 1.79            | 2.79             | 25              | 39               |
| Support         | 1.86            | 2.57             | 26              | 36               |
| Cover           | 1.50            | 2.57             | 21              | 36               |
| Guard/Mark      | 1.57            | 2.71             | 22              | 38               |
| <b>Kelompok</b> | <i>Pre-Test</i> | <i>Post-Test</i> | <i>Pre-Test</i> | <i>Post-Test</i> |
| <b>Ma</b>       | <i>Mean</i>     | <i>Mean</i>      | <i>Sum</i>      | <i>Sum</i>       |
| Base            | 1.50            | 2.79             | 21              | 39               |
| Adjust          | 1.71            | 2.64             | 24              | 37               |
| Decesion Made   | 1.71            | 2.64             | 24              | 37               |
| Skill Execution | 1.64            | 2.43             | 23              | 34               |
| Support         | 1.43            | 2.64             | 20              | 37               |
| Cover           | 1.64            | 2.93             | 23              | 41               |
| Guard/Mark      | 1.21            | 2.79             | 17              | 39               |

There were significant improvements in all components of football tactical knowledge after the training intervention for all groups (RW, IF, MA). This increase was reflected both in the mean and the sum from pre-test to post-test. The filanesia-based soccer like games intervention for 12-year-old SSB students could not only improve the skills of each tactical knowledge variable as a group, but all samples individually experienced an increase. Overall, this data shows that the training intervention applied is effective in improving football tactical knowledge in 12-year-old football school students. This improvement occurred in all components of tactical knowledge measured, indicating that the training approach used was successful in improving the players' tactical knowledge.

The statistics of the differences in the pre-test and post-test results of tactical knowledge are presented in the following table:



**Picture 1.** Diagram of pre-test and post-test results of tactical knowledge

SSB RW showed a significant improvement in students' tactical knowledge, with a score increase of 85 points from pre-test to post-test. SSB IF also had a significant increase in students' tactical knowledge, with an increase in score of 90 points. SSB MA showed the highest improvement in students' tactical knowledge, with a score increase of 112 points. This indicates that the training program was very effective in improving students' tactical knowledge. This increase indicates that the training program implemented was very effective in improving students' tactical knowledge. SSB MA experienced the highest increase, which may indicate that the training method or intensity at SSB MA was more effective compared to the other SSBs. This indicates that there is variability in the success of the training program between SSBs which may be due to various factors such as training methods, quality of coaches, and training intensity, however all SSBs showed positive results signifying the overall success of the implemented training program. The significant increase in scores indicates that students not only understand the tactical concepts taught, but are also able to apply them in game situations. The significance test statistics are presented in the following table:

**Table 5.** Significance test statistics

|        |                      | Paired Samples Test |                |                 |   |        |         |    |                 |
|--------|----------------------|---------------------|----------------|-----------------|---|--------|---------|----|-----------------|
|        |                      | Paired Differences  |                |                 |   |        |         |    |                 |
|        |                      | Mean                | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference |        | t       | df | Sig. (2-tailed) |
|        |                      |                     |                |                 | Lower                                     | Upper  |         |    |                 |
| Pair 1 | Pre-Test – Post-Test | -6.833              | 1.752          | .270            | -7.379                                    | -6.287 | -25.279 | 41 | .000            |

The significance value (p-value) of (0.000) is smaller than 0.05, which means that the difference between the pre-test and post-test is highly statistically significant. The average increase of 6.833 points in the post-test indicates that the training intervention conducted had a significant positive impact on the football tactical knowledge of 12-year-old football school students.

## DISCUSSION

The development of tactical knowledge in SSBs is an important aspect in nurturing early age players to excel in the sport. SSBs or football academies around the world focus on improving players' decision-making abilities and problem-solving skills through specialized training programs (Jia, 2024). For Mataram city itself, coaches focus too much on technical improvement and never assess tactical knowledge. Efforts to improve tactical understanding are made to provide new insights to coaches at the SSB level and at what age coaches begin to instill tactical knowledge to early age players through the seccer like games training method. Based on the results of the study (Nicholls et al., 2017) found the fact that coaches at the academy spend significant time working with players to improve their technical skills and tactical understanding of the game, emphasizing the importance



of continuous learning and development in football. Assessment of soccer players' tactical-technical knowledge is essential to design effective teaching processes that suit individual needs and learning styles (García-Ceberino, Medina, et al., 2020). Moreover, evaluating tactical expertise in youth soccer through representative tasks during training sessions can provide valuable insights into players' understanding and application of strategies on the field (Serra-Olivares et al., 2016). In the realm of football, the acquisition of tactical knowledge is strongly linked to decision-making and motor efficiency, especially for young players in various playing positions (Matos et al., 2023).

Structured training programs play an important role in shaping players' tactical knowledge, as evidenced by studies evaluating the impact of specific training programs on players' understanding of football tactics (Carlos, 2018). The same was expressed by (Hintermann et al., 2021) who emphasized that understanding the technical and tactical actions of dominant and non-dominant players in children's football is essential for optimizing training methods and improving overall performance. Management of the training process in football academies involves implementing a phased system of tactical and technical training to maximize the potential of players at a professional level (Ніколаєнко & Vorobiov, 2023). The Indonesian football coaching curriculum is the foundation for SSBs to develop training programs both in the short term and long-term training programs. Implementing soccer like games in every training session has had a significant impact on the tactical knowledge of early age players. The 6-month program focuses on players who are more involved with technical situations in matches so this study did not include goalkeepers in the research sample.

A multi-disciplinary perspective on football talent identification emphasizes the need to consider players' technical and tactical attributes across different phases of development to support their growth and progress in an academy setting (Towilson et al., 2019). Position-specific performance and tactical formations significantly influence players' strategic decisions and overall team dynamics on the pitch (Modrić et al., 2020). The greater opportunity for youth players to compete at the national level due to the large number of early childhood and youth events is the basis for equipping youth players, especially at the beginning of the playing phase and the introduction of playing positions, about the importance of tactical understanding. Educational programs in football academies provide young players with access to experienced coaches and the best infrastructure, creating an ideal environment for the development of tactical skills and understanding (Fenyő & Rábai, 2020). The synthesis of research on tactical knowledge in football academies emphasizes the importance of decision-making training, problem-solving skills, and continuous learning in fostering young players. By focusing on assessing tactical expertise, implementing effective training programs and utilizing technological advances, SSBs can improve players' strategic understanding and performance on

the field. Accurate decision making has been identified as an important factor for successful performance in team sports (Silva et al., 2020).

Based on the results of his research (Carlos, 2018) concluded that tactical knowledge increases in different ways depending on the competitive category. In line with the results of the research that has been done, it shows that soccer like games designed with certain modifications can be adapted to existing facilities and infrastructure and the creativity of coaches at SSB in providing corrections and input to players is another key thing. This allows the coach to adjust the game to the focal point of training (coaching point) so that it is easier to improve the playing skills of early childhood (Baisyah & Budiman, 2017). In addition, the quality of coaches' understanding and preparation in applying better training methods also plays an important role in shaping players' tactical knowledge. (García-Ceberino, Gamero, et al., 2020). Showed that coaches with a deep understanding of tactical training methods tend to produce players with better tactical knowledge. These findings emphasize the importance of the coach's role in using tactical games as a tool to develop players' decision-making ability and efficiency on the field.

Research conducted by (Rață & Felegeanu\*, 2019) concluded that 12-14 years old football players can improve their decision-making ability through the application of specific technical-tactical actions and action systems during the training process. By practicing these action systems consistently, players can improve their overall performance and make the right decisions in a limited amount of time (Praça et al., 2015)). In addition, research (Praça et al., 2017) suggests that differences in the quality of tactical actions need to be considered in the characterization of performance levels associated with procedural tactical behavior. However, this idea is still a hypothesis that requires further investigation to be verified. The results of this study support the finding that a training program using a soccer like games model based on filanisea by considering tactical aspects without excluding technical aspects can significantly improve the tactical knowledge and performance of early age players which is relevant to the focus of the study on improving the tactical knowledge of 12-year-old SSB students in Mataram city.

## CONCLUSION

Understanding and improving tactical knowledge through well-programmed training methods such as soccer like games interventions is essential for developing early childhood soccer players. By addressing identified research gaps and introducing new elements, this study achieves the goal of making a significant contribution to the field of sports coaching and youth player development. The findings will help coaches and academics design more effective training programs that meet the specific needs of youth players, promoting their growth into skilled and tactically aware athletes.

## Conflict of Interest

The author(s) declare that they have no conflict of interest.

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