https://e-journal.hamzanwadi.ac.id/index.php/porkes
Vol. 9, No. 2, pp 988-998 June 2026
Doi: 10.29408/porkes.v9i2.34681

Level of Basic Soccer Skills Among 14-Year-Old Players at SSB PS Unimuda Sorong

Jimmy Aronggear*, Waskito Aji Suryo Putro, Saiful Anwar, Harmaman, Leo Pratama

Universitas Pendidikan Muhamamdiyah Sorong, Indonesia

*Coresponding: aronggear084@gmail.com

Abstract

Background. Basic technical skills form the foundation of soccer and determine a player's performance quality, particularly during the developmental years (ages 13–17). Uneven mastery of these techniques among young players is a persistent challenge in youth academy training and necessitates measurable, objective evaluation. Objective. This study aims to analyze the level of basic soccer technical skills among 14-year-old players at SSB PS Unimuda Sorong based on five main components: passing, dribbling, heading, ball control, and shooting. The central research question is: "What is the level of basic technical skills among 14-year-old soccer players at SSB PS Unimuda Sorong across five technical components?" Methods. A quantitative descriptive survey design was employed. The sample comprised 35 players selected via total sampling. Data were collected through standardized tests and measurements, then analyzed using descriptive statistics (frequency, percentage, mean, and standard deviation) to categorize players' skill levels into good, average, or poor categories based on established norms. Results. Overall, 51.4% of players were categorized as "good" and 41.8% as "average." Shooting was the strongest skill (57.1% good; M = 8.46, SD = 1.12), while heading was the weakest (2.9% good; M = 3.34, SD = 0.87), with all 35 players falling in the average category for ball control (M = 15.20, SD = 2.43). Conclusion. Basic technical skills among 14-year-old players at SSB PS Unimuda Sorong are at a sufficiently good but unevenly distributed level. Heading and ball control require the most targeted intervention. Coaches are recommended to integrate specific heading drills and multi-contact ball control exercises into the weekly training program. Future research should adopt experimental designs to examine the effects of structured interventions on identified technical weaknesses.

Keywords: Basic technical skills; youth soccer; soccer academy (SSB); skill assessment; sports development.

Received: April 26, 2026 | Revised: May 8, 23, 24, 2026
Accepted: June 1, 2026 | Published: June 8, 2026

Introduction

Soccer is a team sport that requires the integration of physical, cognitive, and tactical abilities, with basic technical skills passing, dribbling, heading, ball control, and shooting serving as prerequisites for effective performance on the field (Wilson et al., 2025). At the global level, the urgency of developing young players is underscored by FIFA's Forward 3.0 program (2023-2026), which allocates USD 2.25 billion to youth development pathways, a near 30% increase from the previous cycle. In an academic context, improving the quality of basic technical skills during the developmental years is considered crucial because technical ability serves as the foundation for tactical adaptation and competitive performance in subsequent phases (Davis et al., 2025; Rahmoune et al., 2026).

Despite this recognized importance, systematic and context-specific evaluation of young players' technical profiles remains underrepresented in the scientific literature, particularly in eastern Indonesia. The central research question of this study is: "What is the level of basic technical skills among 14-year-old soccer players at SSB PS Unimuda Sorong across five technical components: passing, dribbling, heading, ball control, and shooting?" This question is grounded in the practical reality observed at SSB PS Unimuda Sorong, where declining performance in recent matches has been linked to deteriorating movement skill quality. At age 14, players are in a critical stage of developing motor coordination, mastering techniques, and preparing for more structured training loads making this a diagnostically decisive period (Schmidt & Lee, 2018).

Evaluating basic technical skills at this stage is therefore not merely an administrative exercise but a diagnostic step to map athletes' technical readiness and guide training priorities. Several Indonesian studies have documented uneven technical profiles among young players. (Putra et al., 2024), studying players at SSB Beji Timur Football Academy, found that passing and control were in the "adequate" category, dribbling in the "good" category, shooting in the "poor" category, and heading in the "adequate" category, indicating that young players tend to exhibit unbalanced technical development. More recently, (Harahap & Hendryanto, 2025) reported that players at PESPA Pamuatan SSB in Sijunjung Regency showed good passing and control, adequate dribbling, and poor shooting, confirming that structured and sustained training is still required across all components.

Both studies confirm that issues with basic technical skills among young players remain a current concern in various soccer schools across Indonesia. At the international level, research has increasingly focused on how technical skills are improved through training interventions rather than on mapping basic technical profiles within specific development populations. (Clemente et al., 2021), through a systematic review and meta-analysis, demonstrated that small-sided games have a positive effect on technical execution in young players. (Esposito et al., 2024) found that an ecological-dynamic approach is more effective than the traditional prescriptive approach in improving passing skills among youth players. (Sørensen et al., 2024) further reported that performance improvements on skill courses for players aged 9-12 were not always significantly different across intervention groups, highlighting that the assessment of basic skills still requires context-specific measurements tailored to age groups, instruments, and training environments.

(Wilson et al., 2025), in an international journal of sports science and coaching, confirmed that dribbling and passing performances are strong predictors of individual success in small-sided games, reinforcing the importance of assessing these skills. Collectively, these findings indicate that the literature remains dominated by intervention studies and has not yet provided a sufficient number of comprehensive descriptive accounts of players' basic skill levels within specific soccer school contexts, particularly in eastern Indonesia. Based on this review, the research gap of this study lies in three areas. First, previous Indonesian studies have been conducted predominantly in western Indonesia and have not represented the training conditions in West Papua.

Second, many recent descriptive studies have only assessed certain technical components without simultaneously mapping all five key components used in this study. Third, recent international intervention studies emphasize the importance of technical development but have not addressed the fundamental need for coaches to understand the initial profile of players' technical abilities at specific developmental ages before designing training programs. Therefore, this study occupies a crucial position as the first study to simultaneously map all five technical components (passing, dribbling, heading, ball control, and shooting) in West Papua's soccer development context, bridging the gap between on-field evaluation needs and the development of more targeted training models (Wilson et al., 2025).

Theoretically, this study contributes to strengthening research on the evaluation of basic technical skills in youth soccer by providing empirical evidence from a development context rarely reported in the literature, particularly in the Sorong region of West Papua. Practically, the results can be used by coaches, SSB managers, and sports administrators as a basis for setting training priorities, modifying technical learning approaches, and designing training that is more adaptive to the needs of 14-year-old players. Additionally, this study provides a foundation for further research seeking to examine the relationship between basic technical profiles and match performance, training models, or player development within a broader talent development framework.

Methods

This study employed a quantitative approach, with the research subjects being 14-year-old soccer players at SSB PS Unimuda Sorong, West Papua. The population comprised 35 active players currently enrolled in the SSB training program. Given the relatively small and manageable population size ($n < 100$), the entire population was selected as the sample using total sampling a non-probability sampling technique in which all members of the population serve as respondents (Cresswell, 2018; Creswell & Creswell, 2017). This approach eliminates sampling bias and ensures a comprehensive picture of players' basic technical skill levels. Inclusion criteria required players to be aged 14 years and actively participating in regular training sessions; players absent from more than 20% of scheduled sessions in the preceding month were excluded to control for training consistency as a confounding variable.

This study employed a quantitative descriptive design with a survey approach, aimed at objectively describing the level of basic soccer technical skills based on standardized measurement results. Data collection involved direct testing and measurement of five

components: passing, dribbling, heading, ball control, and shooting. The instruments were adapted from soccer skill tests previously validated in prior research (Hilmi, 2023) and confirmed appropriate for the 14-year-old age group through content validity assessment by three expert judges (two certified soccer coaches and one sports science lecturer), who rated each item's clarity, relevance, and technical specificity on a four-point scale. Items reaching a Content Validity Index (CVI) ≥ 0.80 were retained. Instrument reliability was established through a test-retest procedure conducted on a pilot sample of 10 players from a different SSB in the same region, administered two weeks apart, yielding intraclass correlation coefficients (ICC) ranging from 0.81 to 0.93 across the five components indicating good to excellent reliability (Bird, 2018; Field, 2018).

The classification thresholds for each skill component, as presented in table 1, were established based on normative standards from the referenced instrument and supplemented by age-appropriate benchmarks derived from the literature on youth soccer technical assessment (Hilmi, 2023; Putra et al., 2024). These thresholds reflect expected performance levels for 14-year-old players undergoing structured SSB training.

Table 1. Classification thresholds for basic soccer technical skills assessment

Component	Good	Average	Poor
Passing (repetitions)	≥ 8	6–7	≤ 5
Dribbling (seconds)	≤ 23	24–26	≥ 27
Heading (repetitions)	5	3–4	≤ 2
Ball Control (30 seconds)	≥ 20	11–19	≤ 10
Shooting (score)	≥ 8	6–7	≤ 5

Data collection was conducted over three consecutive sessions at the SSB PS Unimuda Sorong training ground in standardized environmental conditions (morning, 07:00-09:00 WIT, dry weather). Session 1 involved briefing, warm-up standardization, and administration of passing and dribbling tests. Session 2 covered heading and ball control tests. Session 3 administered the shooting test and recorded final scores. Each player performed two trials for each test, and the best result was recorded for analysis, consistent with established protocols for youth soccer skill testing (Bird, 2018). Standardized rest periods of 5 minutes between test components were maintained to minimize fatigue effects. Test administrators were two trained research assistants who underwent a 4-hour calibration session prior to data collection to ensure inter-rater consistency.

Data were analyzed using descriptive statistics: frequency, percentage, mean (M), standard deviation (SD), minimum, and maximum values were calculated for each of the five skill components and for the total basic technical skill score. The percentage formula P = (F/N) x 100% was applied to determine the proportion of players in each category, where P is the percentage, F is the frequency of players in a given category, and N is the total number of respondents (n = 35). To examine whether differences across the five skill components were statistically meaningful, a Friedman test a non-parametric alternative to one-way repeated-measures ANOVA appropriate for ordinal category data was applied, with pairwise Wilcoxon signed-rank post-hoc tests used to identify specific component differences (Field, 2018). The significance level was set at $\alpha = 0.05$. Results are presented in frequency distribution tables and

bar charts for each component and the overall score. Data processing was performed using Microsoft Excel and IBM SPSS Statistics 26.

Results

The results are presented based on five components of basic soccer technical skills measured across 35 players aged 14 years at SSB PS Unimuda Sorong. Descriptive statistics (mean, standard deviation, minimum, and maximum) for each component are presented in table 2, followed by categorical frequency distributions (Tables 3-8) and an overall skill summary (table 8).

Table 2. Descriptive statistics of basic soccer technical skill components

Component	M	SD	Min	Max
Passing (reps)	7.14	1.23	4	10
Dribbling (sec)	24.31	1.56	20.4	28.7
Heading (reps)	3.34	0.87	1	5
Ball Control (reps/30 s)	15.20	2.43	11	19
Shooting (score)	8.46	1.12	5	11

Table 2 presents a summary of the descriptive statistics for the five components of basic soccer technical skills among 14-year-old players at SSB PS Unimuda Sorong (n=35). The analysis results show that the highest mean score was found in the shooting component (M = 8.46; SD = 1.12) with a score range between 5 and 11, indicating that finishing ability tends to be the players' primary strength. The passing component showed an average of 7.14 repetitions (SD = 1.23) with a range of 4-10, while dribbling recorded an average time of 24.31 seconds (SD = 1.56) and a range of 20.4-28.7 seconds. As for ball control, it had an average of 15.20 repetitions per 30 seconds (SD = 2.43) with a range of 11-19, with no players reaching the "good" category (≥ 20). Meanwhile, heading was the component with the lowest average (M = 3.34; SD = 0.87) and a range of 1-5 repetitions, confirming that heading ability is the most critical weakness among the five measured components. Overall, the relatively small standard deviations for each component indicate that the players' technical abilities tend to be homogeneous, although the distribution across components is uneven.

Table 3. Classification of passing skills (n = 35)

No	Category	Norm (reps)	Frequency (f)	Percentage (%)
1	Good	≥ 8	12	34.3
2	Average	6–7	20	57.1
3	Poor	≤ 5	3	8.6
	Total		35	100

Table 3 shows that the majority of players fall into the "average" category for passing (57.1%; M = 7.14, SD = 1.23), with 34.3% in the "good" and 8.6% in the "poor" category. This indicates that passing skills require improvement through more structured training focused on accuracy and speed of ball distribution.

Table 4. Classification of dribbling skills (n = 35)

No	Category	Norm (sec)	Frequency (f)	Percentage (%)
1	Good	≤ 23	12	34.3
2	Average	24–26	22	62.9
3	Poor	≥ 27	1	2.9
	Total		35	100

Table 4 indicates that most players fall into the average category for dribbling (62.9%; M = 24.31 s, SD = 1.56 s), with only 34.3% in the good category. This suggests that dribbling speed and ball control under movement conditions need further development.

Table 5. Classification of heading skills (n = 35)

No	Category	Norm (reps)	Frequency (f)	Percentage (%)
1	Good	5	1	2.9
2	Average	3–4	28	80.0
3	Poor	≤ 2	6	17.1
	Total		35	100

Heading is the weakest component (Table 5), with only 2.9% of players in the good category (M = 3.34, SD = 0.87). The majority are in the average category (80%), and 17.1% fall into the poor category, indicating that aerial ball control and heading technique represent a critical area requiring targeted intervention.

Table 6. Classification of ball control skills (n = 35)

No	Category	Norm (reps/30 s)	Frequency (f)	Percentage (%)
1	Good	≥ 20	0	0
2	Average	11–19	35	100
3	Poor	≤ 10	0	0
	Total		35	100

Table 6 reveals a distinctive finding: all 35 players (100%) fall into the average category for ball control (M = 15.20, SD = 2.43). While this indicates homogeneity in the group's ball control ability, the absence of any player in the good category signals that training has not yet produced differentiated mastery of this skill.

Table 7. Classification of shooting skills (n = 35)

No	Category	Norm (score)	Frequency (f)	Percentage (%)
1	Good	≥ 8	20	57.1
2	Average	6–7	12	34.3
3	Poor	≤ 5	3	8.6
	Total		35	100

Shooting is the strongest skill component (Table 7), with 57.1% of players in the good category (M = 8.46, SD = 1.12). This indicates that finishing ability has been more consistently developed in training compared to other technical components.

Table 8. Overall classification of basic soccer technical skills (n = 35)

No	Category	Score Range	Frequency (f)	Percentage (%)
1	Good	> 31	18	51.4
2	Average	21–30	17	41.8
3	Poor	< 20	0	0
	Total		35	100

The overall results (Table 8) show that 51.4% of players are categorized as "good" and 41.8% as "average," with no players falling into the "poor" category. This indicates that, in general, the basic technical skills of 14-year-old players at SSB PS Unimuda Sorong are at a fairly good level, although the uneven distribution across components particularly the weakness in heading and ball control relative to shooting underscores the need for more targeted, component-specific training programs. The Friedman test confirmed statistically significant differences across the five skill components ($\chi 2(4) = 68.34$, $p < 0.001$), with pairwise post-hoc tests indicating that shooting scores were significantly higher than heading scores ($Z = -4.82$, $p < 0.001$) and that ball control differed significantly from both shooting and heading ($p < 0.05$ for both comparisons).

Discussion

The overall finding that 51.4% of players possess "good" basic technical skills is encouraging for SSB PS Unimuda Sorong but warrants careful interpretation. In the context of motor learning theory, basic technical ability develops through repeated practice involving neuromuscular coordination, motion perception, and progressive playing experience (Schmidt & Lee, 2018). The uneven distribution of ability across components suggests that the current training program has concentrated on some technical elements particularly shooting at the expense of more comprehensive skill development. This aligns with (Coker, 2021) argument that generalized training without targeted component-specific interventions tends to produce homogeneous but sub-optimal skill profiles, as evidenced by the ball control finding (100% in the average category).

Shooting emerged as the players' most dominant skill (57.1% good; M = 8.46, SD = 1.12), consistent with findings by (Syaiful et al., 2024), who noted that shooting ability in SSB players tends to be more developed because it is frequently practiced in game situations and scrimmages. However, the dominance of shooting ability does not necessarily reflect overall game quality, as soccer demands a balance between attacking technique and all-round ball mastery (Wilson et al., 2025). From an ecological-dynamic perspective (Esposito et al., 2024), effective technical development requires exposure to varied, context-rich practice that integrates all skill components a condition that may be insufficiently met in the current training environment at SSB PS Unimuda Sorong.

Heading was the weakest component (2.9% good; M = 3.34, SD = 0.87), a finding consistent with research by (Naufal et al., 2022; Putra et al., 2024), who similarly identified heading as the least mastered technique among young players. From a biomechanical and psychological standpoint, heading technique requires coordination among neck strength, precise timing, and the psychological confidence to make contact with an aerial ball (Shu et al., 2025). Low heading proficiency at SSB PS Unimuda Sorong may be attributed to a combination of (a) insufficient specific heading drills in the weekly training schedule, (b) psychological barriers such as fear of ball contact, particularly for players with limited heading experience, and (c) a lack of graduated progression exercises (e.g., soft balls to standard balls, stationary to moving targets).

These factors are rarely addressed in generalized training programs focused predominantly on positional and shooting exercises. Coaches are therefore recommended to introduce specific heading drills such as hanging-ball exercises and progressive partner heading sequences at least twice per week, alongside psychological conditioning strategies to reduce ball-contact anxiety. The passing (57.1% average; M = 7.14) and dribbling (62.9% average; M = 24.31 s) findings indicate that basic abilities in ball distribution and close control remain at a sufficient but sub-optimal level. According to (Clemente et al., 2021), passing and dribbling are the core elements of game control, directly linked to decision-making and ball possession in match situations.

Results in the average category suggest that players are not yet consistently able to apply these techniques effectively in dynamic game conditions. This may be influenced by training intensity, limited variety in teaching methodologies (e.g., overreliance on linear drills versus small-sided games), and the relatively limited competitive playing experience characteristic of SSBs in the West Papua region. Incorporating small-sided games which (Clemente et al., 2021) demonstrated have a significant positive effect on technical execution could meaningfully improve passing and dribbling performance. The most distinctive finding of this study is the ball control result all 35 players fell into the average category (M = 15.20, SD = 2.43), with no player reaching the good threshold (≥ 20 repetitions in 30 seconds).

This homogeneity suggests a ceiling imposed by the current training approach. From a motor learning perspective (Coker, 2021), ball control ability is highly dependent on touch sensitivity (ball feeling), which develops through repeated, multi-surface contact in varied game situations. A training environment that predominantly uses structured drills in fixed formations provides insufficient variability for players to develop the adaptive touch control required to surpass the average threshold. Wall-passing exercises, first-touch circuits, and rondo-style small group possession games are specifically recommended to introduce the repetition variety needed to shift players into the good category.

Comparatively, this study's findings align with the broader pattern documented in Indonesian youth soccer research, where the average category predominates across most skill components (Putra et al., 2024; Harahap & Hendryanto, 2025). A notable contextual difference, however, is that SSB PS Unimuda Sorong's players performed above the Indonesian national average in shooting, potentially reflecting a training culture that prioritizes finishing skills. This deviation from the typical pattern where shooting is often rated poor or average (Putra et al., 2024) warrants further investigation into the specific training methods used for shooting at this

SSB. At the same time, the weaknesses in heading and ball control mirror those reported across SSBs in other regions, confirming that these components represent systemic challenges in Indonesian youth soccer development that transcend geographic context (Harahap & Hendryanto, 2025).

Factors influencing these results include training frequency, quality of development programs, player motivation, and access to facilities. Inconsistent training attendance noted in the SSB's records directly impacts the variation in technical abilities across players, given that, as (Bompa & Buzzichelli, 2019) emphasize, consistency and systematic progressive overload are key to technical skill improvement. Limited training infrastructure (field quality, equipment availability) in the Sorong region may further constrain the variety and quality of technical drills available. These contextual factors represent limitations of this study, as they were not systematically measured but could confound the observed skill levels.

Future research should incorporate structured observations or coach interviews to capture these environmental and programmatic factors as explanatory variables. This study has several limitations. The sample is restricted to a single SSB in Sorong, limiting the generalizability of findings to other regions or player populations. The descriptive cross-sectional design precludes causal inference regarding factors that explain the observed skill levels. The test-retest reliability was established on a separate pilot sample, not on the study sample itself, introducing some uncertainty in reliability estimates. Additionally, training frequency per week a key determinant of skill development was not systematically recorded for each player, representing an uncontrolled confound. Future research should employ experimental or quasi-experimental designs with pre- and post-test measurements, broader multi-SSB samples, and systematic recording of training load variables to provide more causally informative evidence.

Conclusion

This study concludes that the basic soccer technical skills of 14-year-old players at SSB PS Unimuda Sorong are at a generally good but unevenly distributed level. Shooting is the players' primary technical strength (57.1% good; M = 8.46), while heading is the critical weakness (only 2.9% good; M = 3.34). Ball control is a concern of a different type: all players fell in the average category with none reaching the good threshold, indicating that training has not yet produced differentiated mastery of this skill. Statistically significant differences across the five components ($\chi 2(4) = 68.34$, $p < 0.001$) confirm that the uneven skill profile is not attributable to chance. Based on these findings, the following actionable recommendations are provided:

1. For heading: incorporate hanging-ball aerial contact drills and progressive partner heading circuits (stationary to moving, soft to standard ball) at least twice per week, combined with psychological conditioning to reduce ball-contact anxiety.
2. For ball control: integrate wall-passing exercises, first-touch circuits, and rondo-style small-group possession games to increase repetition variety and develop adaptive touch quality.
3. For passing and dribbling: adopt small-sided game formats (e.g., 3v3 and 4v4 possession games) that require players to apply passing and dribbling under realistic defensive pressure, complementing existing linear drills.

4. For the Department of Youth and Sports and SSB management: implement periodic (semester-based) technical skill assessments using standardized instruments to monitor player development and guide evidence-based training planning.

For future research, experimental studies with pretest-posttest designs are needed to examine the effect of specific structured interventions (e.g., a 6-week heading-specific training program) on improving identified weaknesses. Multi-SSB comparative studies across West Papua and eastern Indonesia would also strengthen the regional generalizability of these findings and provide a more representative picture of youth soccer development in underrepresented areas of Indonesia.

Acknowledgment

The authors would like to express their sincere gratitude to all parties who have contributed to the successful completion of this research. Special appreciation is extended to the management, coaches, and players of SSB PS Unimuda Sorong, particularly the U-13 team, for their exceptional cooperation, dedication, and willingness to participate in the testing process. The authors also acknowledge the support provided by the Faculty of Education, Universitas Pendidikan Muhammadiyah Sorong, for facilitating the research permits and providing logistical support. Finally, thanks are due to the research assistants who assisted during the data collection process, ensuring the accuracy and reliability of the measurements. This work would not have been possible without their collective contributions.

References

Bird, S. R. (Ed.). (2019). *Research methods in physical activity and health*. Routledge. https://doi.org/10.4324/9781315158501

Bompa, T. O., & Buzzichelli, C. A. (2019). *Periodization: Theory and methodology of training (6th ed.)*. Human Kinetics. https://doi.org/10.5040/9781718225435

Clemente, F. M., Ramirez-Campillo, R., Sarmento, H., Praca, G. M., Afonso, J., Silva, A. F., ... & Knechtle, B. (2021). Effects of small-sided game interventions on the technical execution and tactical behaviors of young and youth team sports players: A systematic review and meta-analysis. *Frontiers in Psychology*, *12*, 667041. https://doi.org/10.3389/fpsyg.2021.667041

Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications. https://www.ucg.ac.me/skladiste/blog_609332/objava_105202/fajlovi/Creswell.pdf

Coker, C. A. (2021). *Motor learning and control for practitioners (5th ed.)*. Routledge. https://doi.org/10.4324/9781003039716

Cresswell, J. D. (2018). Research design: Qualitative, quantitative, and mixed methods approaches (5th ed.). SAGE Publications.

Davis, A. J., Gray, B., Driscoll, T., Orchard, J. W., Hamilton, B., Doughty, R. N., ... & Orchard, J. J. (2025). Results of a cardiac screening program in elite football players in New Zealand. *Science and Medicine in Football*, 10(2). 1-7. https://doi.org/10.1080/24733938.2025.2533790

Esposito, G., Ceruso, R., Aliberti, S., & Raiola, G. (2024). Ecological-dynamic approach vs. traditional prescriptive approach in improving technical skills of young soccer players. *Journal of Functional Morphology and Kinesiology*, 9(3), 162. https://doi.org/10.3390/jfmk9030162

Field, A. (2018). Discovering statistics using IBM SPSS statistics (5th ed.). SAGE Publications.

Harahap, H. H., & Hendryanto, F. (2025). Tinjauan Kemampuan Teknik Dasar Sepak Bola Passing, Dribbling, Shoothing pada Siswa Ekstrakurikuler MTS. S Al-Jumhuriyah. *Jurnal Pendidikan Tambusai*, *9*(2), 13001-13009. https://jptam.org/index.php/jptam/article/view/26938

Hilmi, D. (2023). Survei keterampilan teknik dasar permainan sepak bola pada umur 14 tahun SSB Sekecamatan Tebing Tinggi [Unpublished thesis]. Universitas Jambi. https://repository.unja.ac.id/62769/

Naufal, M. R., Srianto, W., & Muryadi, A. D. (2022). Analisis kemampuan shooting sepak bola usia 10-12 tahun pada Sekolah Sepak Bola (SSB) Bina Nusantara Klaten tahun 2022. *Jurnal ilmiah penjas (Penelitian, Pendidikan dan Pengajaran)*, *8*(2), 12-26. https://doi.org/10.36728/jip.v8i2.2025

Putra, A., Gunawan, R., & Retnawati, S. (2024). Kemampuan teknik dasar sepak bola pada siswa Sekolah Sepak Bola (SSB) Beji Timur Football Academy. *Jurnal Pendidikan dan Pengajaran.*

Rahmoune, M. A., Selmi, O., Bouali, S., Bouassida, A., Alexe, D. I., Aldhahi, M. I., … Alexe, C. I. (2026). Effects of small-sided games and dribbling circuit training on physical and technical skills in youth soccer players. *Scientific Reports*. 16(1). 1731. https://doi.org/10.1038/s41598-025-31382-7

Schmidt, R. A., & Lee, T. D. (2018). Motor control and learning: A behavioral emphasis (6th ed.). Human Kinetics.

Shu, M. Y., Oh, H. S., Jo, Y. J., Eom, S. H., Liang, J., Jung, S. M., … Kim, C. H. (2025). The impact of electromyostimulation on strength, recovery, and performance in soccer athletes: A systematic review. Applied Sciences, 15(14), 7950. https://doi.org/10.3390/app15147950

Sørensen, A., Dalen, T., & Lagestad, P. (2024). Effects of a short-term soccer training intervention on skill course performance in youth players: A randomized study. *Sports*, 12(12), 345. https://doi.org/10.3390/sports12120345

Syaiful, W., Irawadi, H., Umar, U., & Arifan, I. (2024). Tinjauan Kondisi Fisik Dan Teknik Dasar Siswa Sekolah Sepak Bola (SSB). *Jurnal Gladiator*, *4*(3), 787-800. https://doi.org/10.24036/gltdor1124011

Wilson, R. S., Hunter, A. H., Camata, T. V., Foster, C. S., Sparkes, G. R., Santiago, P. R., & Smith, N. M. (2026). Dribbling and passing performances predict individual success in small-sided soccer games. *International Journal of Sports Science & Coaching*, *21*(1), 143-153. https://doi.org/10.1177/17479541251346902