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Game-Based Futsal Passing Training Model for Children Aged 10-12 Years

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Abstract

Passing is a crucial aspect in futsal because it is the main key in building attacks and maintaining ball possession. This study aims to develop a game-based futsal passing training model for children aged 10-12 years. This study uses the Research and Development (RnD) method which refers to the ADDIE (Analysis, Design, Development, Implementation, and Evaluation) model involving 4 people as validators and 30 children as samples. Data collection was carried out through interviews, observations and tests. The results showed that 15 out of 23 were considered feasible and the model was able to improve futsal passing in children aged 10-12 years with a sig. value of 0.00 <0.05 which indicates a significant increase in the passing skills of children aged 10-12 years after being given the game-based passing training model treatment. The recommendations in this study are the importance of variation, active involvement, and contextualization in training.

How to Cite

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INTRODUCTION

Passing is a crucial aspect in futsal because it is the main key in building attacks and maintaining possession of the ball (Doewes et al., 2022). This skill not only supports the effectiveness of team play but also hones coordination, concentration, and the ability to make quick decisions (Putra et al., 2024). In children aged 10–12 years, passing training aims not only to improve technical skills but also to support the development of fine motor skills, teamwork, and discipline (Mahfud & Fahrizqi, 2022). This age is a transition period from individual play to collective tactical understanding, so it is very important to apply a training approach that is appropriate to their developmental characteristics, namely through fun, active, and contextual activities (Rico-González et al., 2021).

However, the facts in the field show that the achievement of futsal passing in children aged 10-12 years is still not optimal (Savescu & Sandra, 2021). Many children show inaccuracy in passing the ball, both in terms of accuracy and decision making while playing, which indicates that the training process is not fully effective (Machado et al., 2023). One of the main causes of this condition is the training approach that tends to be monotonous, such as drills that are rigid and detached from the context of real games (Rasyad & Listyaningrum, 2024). As a result, children quickly get bored and are less motivated to actively participate in training (Setiorini, 2025). In addition, the lack of support from parents, both in accompanying training and providing motivation, also worsens the coaching conditions (Weigl et al., 2025). In fact, parental involvement greatly influences children's enthusiasm and consistency in learning (Gemael & Sari, 2025). As a result, children become less confident, have difficulty building teamwork, and often make technical errors when competing (Fahey, 2022). If not addressed immediately, this can hinder the development of basic skills while reducing the benefits of character education that should be formed through sports such as cooperation, responsibility, and sportsmanship.

Game-based futsal passing training is believed to be effective in improving players' passing skills and accuracy, even though it has a high level of difficulty in its implementation (Prabowo et al., 2023). Various literatures have studied game-based futsal passing training such as Santosa and Barokah (2022)who conducted a study to determine the effect of using the small side game training method on futsal passing accuracy. Their study involved a sample of 18 students from Senior High School 17 Bandung. The results of their study showed that the small side game training method had a significant effect on improving futsal passing in futsal students at Senior High School 17 Bandung. Furthermore, Djaba et al. (2022) also studied the effect of small side game training on passing skills for 20 female athletes from Parda Sleman. The results of their study showed a significant effect of small side game training on passing skills, with an increase of 14.55%. In contrast to previous research Bahtra et al. (2025) who conducted a study on the development of a basic futsal passing technique training model based on games for 10 athletes aged 8-13 years. The research involving 3 expert judges as assessors of the success of the model stated that 96.6% was in the feasible category.

Based on the results of the description above, this study focuses on the development of a game-based futsal passing training model for children aged 10-12 years which is arranged in the form of questions, namely: how is the process and effectiveness of the game-based futsal passing training model for children aged 10-12 years? Therefore, through variations in the game, it is expected to create a more collective, contextual, and applicable training atmosphere, so that children aged 10-12 years are not only technically proficient, but also have situational understanding and enjoy playing futsal continuously.

METHODS

This study uses Research and Development (RnD) which refers to the ADDIE model (Analysis, Design, Development, Implementation, and Evaluation) (Branch & Varank, 2009; Larson et al., 2014; Molenda, 2015; Piskurich, 2015). The model is mapped operationally into five stages, namely Analysis, Design, Development, Implementation, and Evaluation.

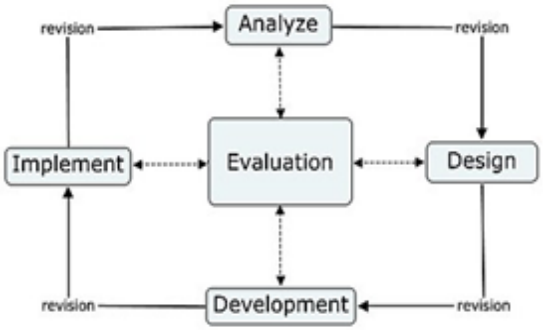


Figure 1. ADDIE Stages

In the initial stage, an analysis is carried

out by conducting a needs assessment to identify existing problems or needs. In addition, a task analysis is also carried out to understand the relevant and essential tasks in developing the model (Cotter et al., 2023). The second stage of design is to formulate SMART training objectives (Specific, Measurable, Applicable, Realistic, and Time-bound). After that, a test tool or evaluation instrument is designed based on the formulated training objectives (Lestari & Sari, 2024). The third stage of Development is to realize the previously created design into a concrete product. Initial testing (trial) is carried out as an important part of this stage to ensure that the product being developed meets the standards and is in accordance with the initial objectives (Maydiantoro, 2021). This testing stage is also included in the formative evaluation step, which aims to revise and improve the product based on the findings from the trial. The fourth stage of implementation is carried out with the actual application of the system or model that has been developed. All elements that have been previously designed and tested are arranged in such a way that they can function according to their role. At this stage, the model is applied directly to the target subjects to test its effectiveness in a real context (Spatioti et al., 2022). The fifth stage of evaluation is carried out to see the extent to which the developed model has succeeded in achieving the expected goals. This evaluation can be carried out formatively (during the development process at each stage) and summatively (after implementation is complete) to ensure the effectiveness and success of the model. (Sial et al., 2024).

This study involved 30 children aged 10-12 years who actively practice futsal at a club located in Bogor City. This study was conducted in 15 meetings. In addition, this study also involved 4 experts to validate the model and implementation that had been carried out.

Data collection was carried out using several techniques, namely field observation, interviews, and tests starting in December 2024. Therefore, the research instruments used consisted of observation guidelines, interview guidelines, and questionnaires. The data obtained were then analyzed using quantitative analysis techniques with the help of IBM SPSS Statistics 25.

RESULTS AND DISCUSSION

Initial analysis data was obtained through interviews with the following **Table 1**. The results of the needs analysis showed several main findings: (1) athletes enjoyed passing training activities, (2) the passing training that was carried out tended to be less varied, (3) children had difficulty in passing well because passing training materials were rarely given specifically, and (4) children supported the development of a special passing training model for ages 10-12 years. The findings from the preliminary study or the results of field observations were then described and analyzed descriptively and analytically, in accordance with the objectives of the preliminary study. The description of the results of the needs analysis and the field findings that had been obtained were then analyzed to proceed to the training model design stage.

Table 1. Interview Results

Question Items	Findings
What materials do coaches usually provide to children during training sessions?	The coach provides training that includes passing , dribbling , shooting techniques, as well as playing in a 5 vs 5 format.
Does your child show enthusiasm when participating in futsal training?	The children were very excited and enthusiastic for the practice.
Is there a specific training model for futsal passing skills?	passing exercises , but they are not varied.
passing skill material provided intensively in every training session?	Not always given during training, because more of playing 5v5.
What steps do coaches take to improve children's passing abilities ?	Looking for various training models to improve passing ability .
passing skills training model ?	It is very necessary because routine training is carried out and there are still many children who have not mastered passing techniques .
Does your child have difficulty passing ?	Some of them are still having difficulties
Does the child know the variations of passing techniques ?	Don't know much, because I'm rarely given material
Has the child mastered the steps of passing skills ?	I haven't mastered it completely, only a part of it.

At the design stage in the ADDIE development model, the formulation of a game-based futsal passing training model for children aged 10–12 years is focused on designing activities that are in accordance with the characteristics of

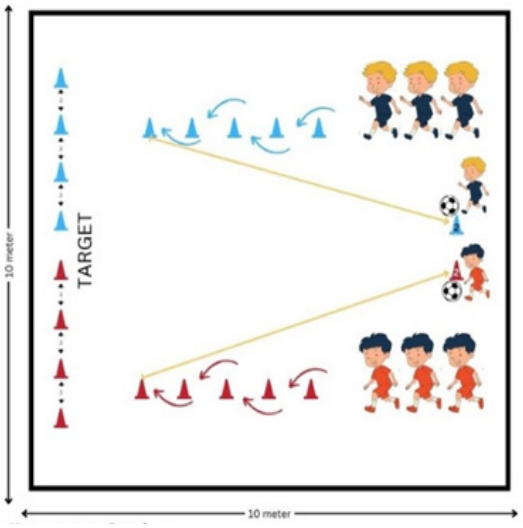
child development and the objectives of learning passing techniques in a fun and effective way. This stage includes the preparation of a systematic training structure, starting from simple game forms to more complex games that resemble real match situations. Each game design is designed by considering pedagogical principles that are appropriate for children, such as aspects of playing while learning, variations in activities, and challenges that trigger exploration of movement and cooperation. The following are designs of game-based futsal passing training models for children aged 10–12 years.

Model 1. Run and Hit It

Objective: To practice Forefoot Passing Skills

How to Play: Players must pass the cones in front of them in a zigzag manner and quickly head to the cone marked "2". Once they reach the cone marked "2" they must pass to try to knock down the opponent's target cone. Each person only has one chance to kick and then line up behind their team. The team that knocks down all of the opponent's target cones first will be the winner.

Simulation

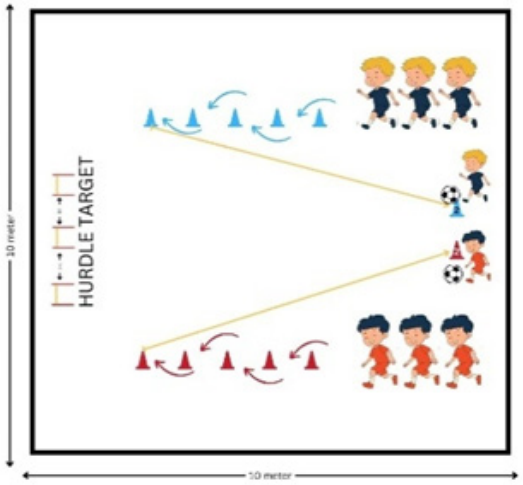


Model 2. Run and Pass to Hurdles

Objective: Practicing Forefoot Passing Skills

How to Play: Players must pass through the cones in front of them in a zigzag manner and quickly head to the cone marked "2". Once they reach the cone marked "2" they must pass towards the target in the form of a "hurdle". When the ball enters through the middle of the hurdle horizontally without dropping/touching the hurdle, the team will get a point. The team that can collect the most points will be the winner.

Simulation

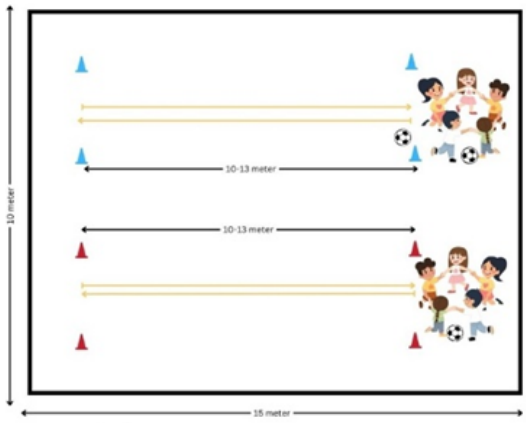


Model 3. Hold Friends Hand and Move

Objective: Practice Outside of the Foot Passing Skills

How to Play : Players will hold hands with their team records. And they must pass with one touch while moving towards the reversal cones and then return to the starting cones. The condition of this game is that the grip must not be released and the ball must not go out of the circle area of the team holding hands. If the grip is released or the ball goes out, it must be repeated from the starting line. The team that reaches the finish line the fastest will be the winner of this game.

Simulation



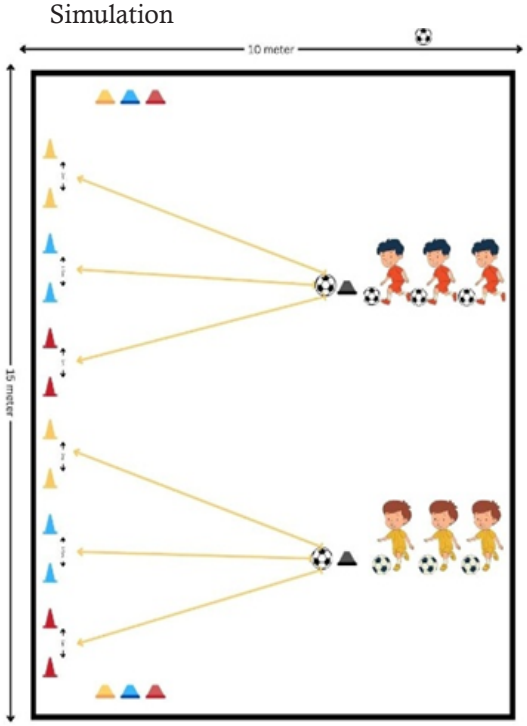
Model 4. Collect the Point

Objective: Practice Inside of the Foot Passing Skills

How to Play: Both teams line up with their respective teams, their main task is to pass to cones with different colors and with different distances between cones. If their pass enters between the red cones, they have the right to run to take 1 red marker, when entering between the

blue cones they have the right to take 1 blue marker and so on with the yellow ones. Each marker has different points, the red marker has 3 points, the blue marker 2 points and the yellow marker 1 point. The team that collects the most points is the winner of this game.

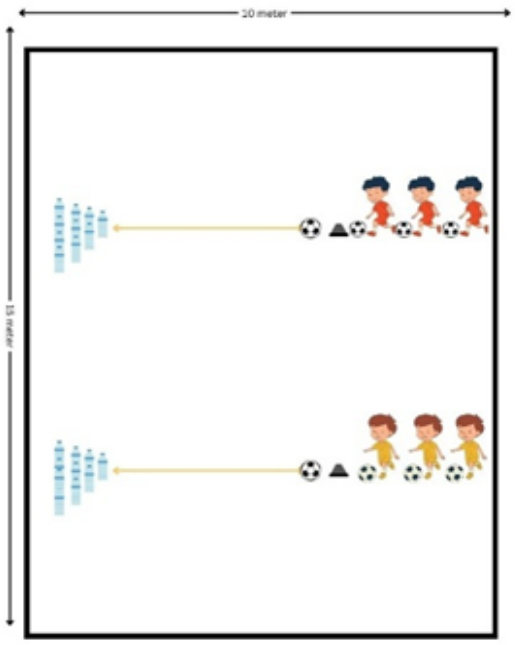
Simulation



Model 5. Pass Like Bowler

Objective: Practicing Forefoot Passing Skills

Simulation



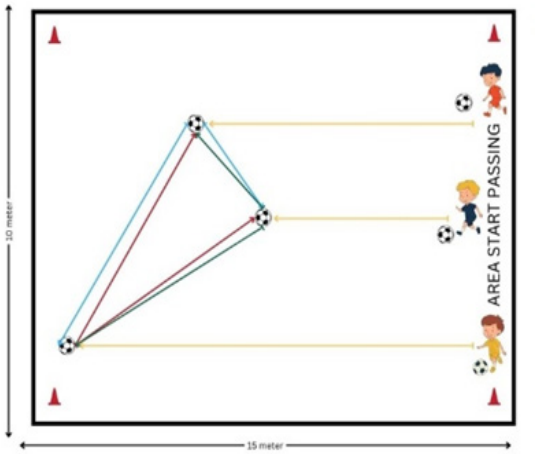
How to Play: Both teams line up with their respective teams, their main task is to pass towards the bottles arranged like a bowling game. Each person has 1 chance to pass , then each turn is counted the number of bottles that fall, after falling the bottles are re-arranged to be dropped by the next player. Continue doing this until all team members have passed and dropped bottles. The total number of bottles dropped is accumulated, the team that drops the most bottles in each round will be the winner of this game.

Model 6. Marble (Marble with Ball)

Objective: Practice Inside of the Foot Passing Skills

How to Play: At the beginning of the game, all players pass the ball forward at the same time. The distance where the ball stops will determine who gets the first turn, second and so on (the furthest will get the first turn). The task of all players is to pass to hit their opponent's ball, when the ball hits an opponent, the opponent will be eliminated. Each person gets one chance to kick each turn, but if they succeed in eliminating an opponent they will get the chance to pass again. The kicking turns continue until all opponents are eliminated and there is one winner left.

Simulation



Model 7. Lob Through the Goal

Objective: Practicing Lob Passing Skills

How to Play: Each team forms a line at the end of the field, and 1 person from each team is in front of him who is tasked with giving a wall pass. The player is tasked with making a flat pass to the player in front of him to then get the ball back after being given a wall pass with one touch from his friend. After getting the ball back, the player must make a lob pass with one touch and the ball must bounce over the goal. When the ball successfully bounces over the goal without touching the goal, his team will get a point. Continue taking turns with the next friend after doing a lob pass until the time is up. The team that successful-

ly makes the most lob passes will be the winner.

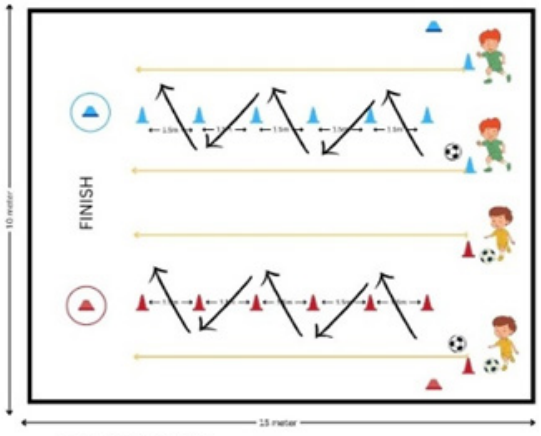
Simulation

Model 8. Wall Pass till the Finish Line

Objective: Practice Outside of the Foot Passing Skills

How to Play: This game is played by dividing the children into two groups. Each group makes two lines. Their task is one player carries a marker, then does a wall passing with one touch with a friend in front of him and the ball must pass between the cones one by one without making the ball touch the cone, if the ball touches the cone then they must start over from the starting line. Until they reach the finish line, they must put the marker they carry to be placed in the circle area. And after putting the marker, they return with the ball and take turns with their friend. Continue doing that until time runs out, the winner is the team that collects the most markers.

Simulation

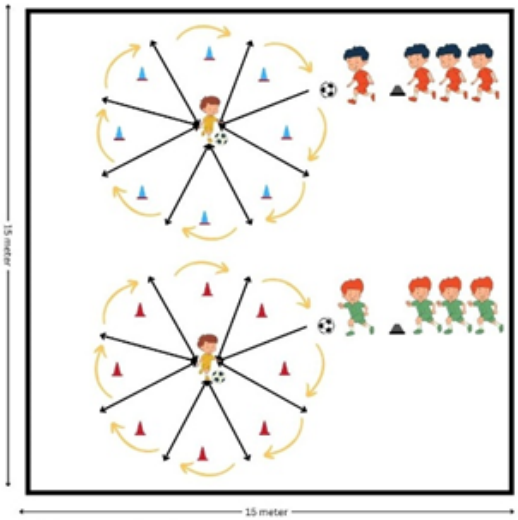


Model 9. Passing Around the World

Objective: Practice Outside of the Foot Passing Skills

How to Play: This game is played by dividing the children into two groups. Each group makes two lines and each group chooses one person who will stand in the middle of the circle. Their task is to do a wall pass with one touch to the person in the middle of the circle. And doing the wall pass must pass through the cones in all directions in sequence clockwise. When the ball touches the cone, the passing in that area must be repeated, after doing a full wall pass in one circle, the player in the middle returns to the line, and the player who finished passing replaces the player in the middle. And so on. When they succeed in doing a full wall pass in one circle, they will get 1 point. And the team with the most points will win the game.

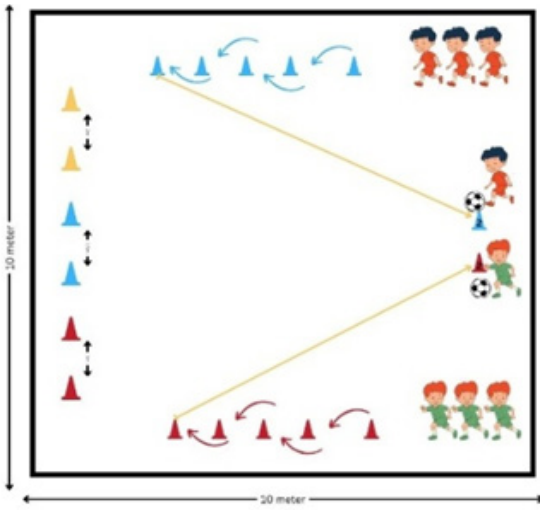
Simulation



Model 10. Run and Pass to Target Color

Objective: Practicing Lob Passing Skills

Simulation



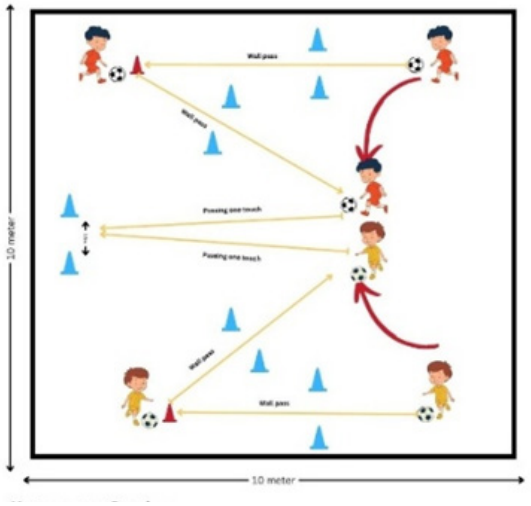
How to Play: Starting with the coach's whistle, players must pass the cones in front of them in a zigzag manner and quickly head towards the cone marked "2". As they run, the coach will give instructions "Red", "Blue" or "Yellow". The color mentioned by the coach will be the target where they must pass. Players who can pass quickly and according to the given target will get points. The team that manages to collect the most points will be the winner of this game.

Model 11. Wall Pass and Score

Objective: Practice Inside of the Foot Passing Skills

How to Play: Starting with the coach's whistle, the player must do a wall pass by passing the cones to his friend and moving according to the arrow, after doing a wall pass with his friend he must pass towards the target cones to be able to score. Passing is done with one touch and must go through the cones, if there is more than one touch and or the ball does not enter or even touch the cones then passing must be done from the beginning of the line. Every time a series of wall passes is successfully done and ends with a score, the team will get a point. The team with the most points will win the game.

Simulation

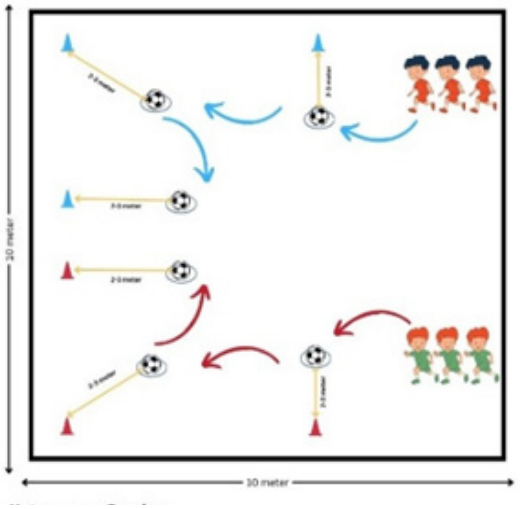


Model 12. Hit all with the Pass

Objective: Practice Inside of the Foot Passing Skills

How to Play: Starting with the coach's whistle, players must run and pass to cones at three different points. If they successfully hit the cones at each point, the player can move to the next point to pass to the next cone, but if the pass fails to hit the cone, the player must retrieve the ball and try passing again. If a player has hit all the cones, they can return to the line and take turns with their friends. The team that is the fastest for all its players to hit the cones with a pass will be the winner of this game.

Simulation

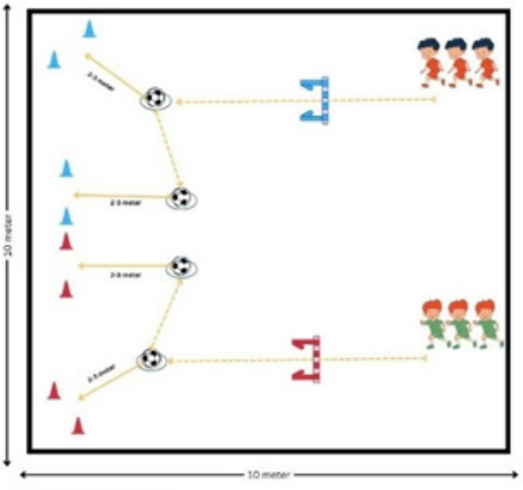


Model 13. Run, Jump and Score

Objective: Practice Inside of the Shoe Passing Skills

How to Play: Starting with the coach's whistle, players must run and jump over hurdles before passing to the target (marker) at two different points. If the ball successfully enters between the 2 cones at each point they will get points, and the player can move to the next point to pass to the next target, but if the pass fails to pass between the cones or the ball touches the cones they will not get points. If a player has passed at the two points then he can return to the line and take turns with his friends. The team that gets the most points will be the winner.

Simulation

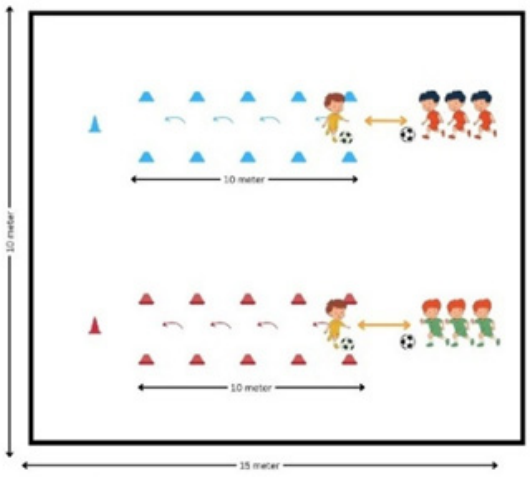


Model 14. Go Further and Pass

Objective: Practice Inside of the Shoe Passing Skills

How to Play: Starting with the whistle from the coach, the player must move and stand between the markers starting from the closest marker, he must make a one-touch pass with the player in the front row then move to the next marker and make another pass and move further and so on. Arriving at the last marker after passing , the player is considered to have reached the finish line, followed by the next player to make a turn to pass . The row whose players all manage to reach the finish line the fastest will be the winner. If there is a mistake when passing , the passing must be repeated from that point.

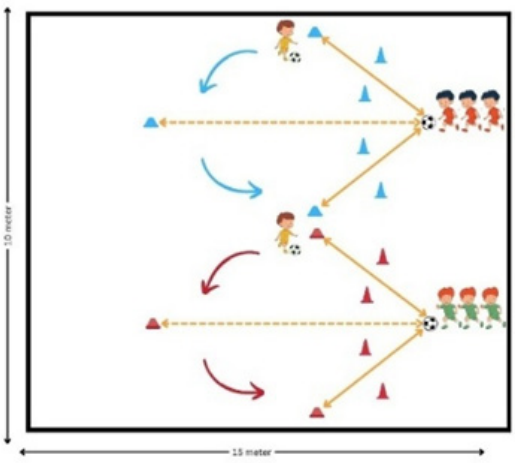
Simulation



Model 15. Pass and Home Run

Objective: Practicing Inside of the Shoe and Lob Passing Skills

Simulation



How to Play: Starting with the coach's whistle, players must move counterclockwise towards the marker that has been placed, upon arriving at the marker a friend in the front row will pass and he must control and return the ball with a flat pass (the pass must pass through the middle of the cones). After passing at the first marker he must move to the next marker and at the second marker his friend will pass and he must return it using a lob pass, after doing a lob pass he moves to the next marker to receive and pass like at the first marker. After passing at all markers he can return to his line and his team will get 1 point. Taking turns with his friend and so on like that, the team that collects the most points will be the winner.

After the data collection stage and the preparation of the initial design of the game-based futsal passing skill training model for children aged 10–12 years were completed, the researcher continued to the validation test stage to ensure the feasibility of the model that had been developed. This validation test was carried out by involving four experts, consisting of one futsal expert lecturer, two game expert lecturers, and one experienced futsal coach. Of the total 23 training models proposed, the experts stated that 15 models were declared feasible and valid for use in the context of training children aged 10–12 years. The models that were declared feasible were: run and hit it, run and pass to hurdle, hold friends hand & move, collect the point, pass like bowler, marble (marble with ball), lob through the goal, wall pass till the finish line, passing around the world, run and pass to target color, wall pass and score, hit all with the pass, run, jump and scores, go further and pass, and pass and home run. These models were considered appropriate for the purpose of improving passing skills, safe for use by children, and able to combine elements of technique and fun games.

Meanwhile, eight other models were declared unsuitable, namely those that focus on small team format games such as 4v2 ball possession, 2v2 pass to goal, 3v3 pass to goal, 4v4 pass to goal, 2v1 pass to goal, 3v2 pass to goal, 4v3 pass to goal, and side to side three touch . These models are considered less suitable for children aged 10–12 years because the level of difficulty is high and has the potential to reduce the effectiveness of learning basic passing techniques.

As part of the validation process, the experts also provided a number of constructive suggestions for improving the model. Among them, each training model should be designed to have the right benefits and not deviate from the objectives of the passing technique. Child safety should be a priority in every activity. The imple-

mentation of each model must also have clear instructions so that the training results are more optimal. In addition, the experts emphasized the importance of considering the level of difficulty of the technique so that children can perform it well. Visualization of instructions, especially in the form of images, also needs to be made more attractive and easy to understand. Finally, it is recommended that each model have customization options so that coaches can modify the training according to conditions and needs in the field.

The implementation stage was carried out after the game-based futsal passing training model was declared feasible by experts. A total of 23 models were tested on a limited group of 30 children to see their implementation in the field. The implementation results showed that 15 models could be implemented well, such as run and hit it, collect the point, pass like bowler, wall pass till the finish line, and others. One model, lob through the goal , was not implemented due to technical constraints, while seven other previously invalid models, such as ball possession 4v2 to side to side three touch , were also not implemented because they were considered inappropriate for the abilities of children aged 10–12 years.

The implementation results are presented in descriptive statistics, correlation coefficients and t-tests. The test results using IBM SPSS Statistic 25 software are as **Table 2.**

Table 2. Descriptive Statistics

	Mean	N	Std. Deviation	Std. Error Mean
Pretest	9.2000	30	2.26518	.41356
Posttest	17.6667	30	1.39786	.25521

Based on **Table 2** the output results using IBM SPSS Statistics 25, it is known that the average passing exercise result before being given the exercise model was 9.20. After being given treatment using the passing exercise model, the average increased to 17.67. This shows a significant increase in the average value of passing skills.

Based on the output results of the table above, it is known that the correlation coefficient between training before and after being given the passing training model is 0.00, with a significance value of <0.05. Therefore, it can be concluded that there is a correlation between the pretest and posttest results on passing ability.

In the significance test of the difference with IBM SPSS Statistics 25, the Sig. (2-tailed) value was obtained as 0.000<0.05, so it can be concluded that there is a significant increase in the passing skills of children aged 10-12 years after being given a game-based passing training model treatment.

Overall, the implementation results show that most of the designed game-based training models can be implemented well in the context of children's passing technique training, while providing a fun learning experience and supporting skill improvement.

The evaluation stage was carried out after the implementation of the game-based passing training model for children aged 10–12 years. This evaluation includes two main aspects, namely the implementation test by experts and the effectiveness test based on the results of implementation in the field. Based on the evaluation results, it was concluded that all items in the training model that had been implemented could be carried out according to the design. The implementation process also went well and in accordance with the development objectives, indicating that this model is feasible to be used to improve children's passing skills effectively and enjoyably.

The results of this study indicate significant significance in the development of futsal passing skills in children aged 10-12 years through a game-based training model approach. The increase in the average score from 9.20 in the pretest to 17.67 in the posttest, which is supported by a significance value of 0.000 (p <0.05), confirms that this training model is statistically effective in improving passing skills. This significance is not only seen from the quantitative aspect, but also from the quality of the training which is more contextual and enjoyable, in accordance with the characteristics of child development. An approach that integrates game elements has been shown to increase emotional involvement and learning motivation, in line with Piaget's view which emphasizes the importance of play activities in children's cognitive development and Vygotsky's theory which emphasizes the role of social interaction in training and learning (Veraksa et al., 2022).

Furthermore, the success of this model can also be attributed to the game-based learning approach which according to Beik and Dehghanizadeh (2024)emphasizes practice through real game situations to improve understanding of tactics and technical skills in sports. The training model which is structured based on variation, progressiveness, and suitability of difficulty level provides optimal stimulus to improve mastery of ba-

sic passing techniques. This is also supported by motor learning theory such as from Gianferrara et al. (2021)which states that variation in training can strengthen skill transfer and movement adaptation in the context of real games. Therefore, the significance of this model is not only limited to the achievement of skill results, but also to the pedagogical approach that builds a more meaningful learning experience and is in accordance with the developmental needs of students.

From a practical perspective, these findings provide a real contribution to the world of coaching, especially in designing training models that are not monotonous and more focused on developing specific skills. Given the fact that previous coaches tended to provide limited and less varied passing training, the developed model is able to fill this gap. The use of games as a learning medium is not only effective from a technical perspective, but also supports the formation of social characters such as cooperation, communication, and responsibility. Thus, this game-based passing training model is relevant and applicable to be used as a guide for futsal training for children aged 10–12 years that is oriented towards a holistic pedagogical approach.

CONCLUSION

Based on the results of the study, it can be concluded that the game-based futsal passing training model for children aged 10–12 years has proven effective in significantly improving passing skills. This model not only provides a variety of exercises that are in accordance with the characteristics of child development, but also creates a fun and meaningful learning atmosphere. Validation by experts and implementation results show that most models can be implemented well and support the achievement of training objectives. The meaningfulness of this model is reinforced by motor learning theory and the game-based learning approach , which emphasizes the importance of variation, active involvement, and contextualization of exercises in learning sports techniques. Thus, this model is worthy of being used as a guide in futsal passing technique training for children's age groups.

REFERENCES

Bahtra, R., Susanto, N., & Fajri, H. P. (2025). pengembangan model latihan teknik dasar passing pada cabang olahraga futsal berbasis permainan untuk usia 8-13 tahun. Jurnal IKEOR, 3(1).

Beik, S., & Dehghanizadeh, J. (2024). Effect of Futsal-Based Game Training on Performance, Self-Efficacy, Motivation, and Exercise Addiction in Adolescent Non-Athlete Girls. bioRxiv, 2024-2009.

Branch, R. M., & Varank, İ. (2009). Instructional design: The ADDIE approach (Vol. 722). Springer.

Cotter, S., Yamamoto, J., & Stevenson, C. (2023). A systematic characterization of food safety training interventions using the analyze, design, develop, implement, evaluate (ADDIE) instructional design framework. Food Control, 145, 109415.

Djaba, H. S. W., Irianto, D. P., Arianto, A. C., & Hartanto, A. (2022). Small side game: Effectiveness of increasing futsal passing. International Journal of Multidisciplinary Research and Analysis, 5(08), 2234-2238.

Doewes, R. I., Elumalai, G., & Azmi, S. H. (2022). Analysis of the passing distance of professional futsal players in the Indonesia Pro Futsal League. SPORT TK-Revista EuroAmericana de Ciencias del Deporte, 17-17.

Fahey, J. (2022). Futsal: The Story of an Indoor Football Revolution. Melville House.

Gemael, Q. A., & Sari, Z. N. (2025). Exploring the interest of early teenagers in futsal extracurricular participation. Jurnal SPORTIF: Jurnal Penelitian Pembelajaran, 11(1), 64-80.

Gianferrara, P. G., Betts, S., & Anderson, J. R. (2021). Cognitive & motor skill transfer across speeds: A video game study. Plos one, 16(10), e0258242.

Larson, M. B., Lockee, B. B., & Streamlined, I. D. (2014). A practical guide to instructional design. In: Routledge.

Lestari, K. I. D., & Sari, N. M. D. S. (2024). Optimizing Feedback for Elementary Students through Structured SMART-Based Assessment Tools. Journal of Education Technology, 8(3).

Machado, G., González-Víllora, S., & Teoldo, I. (2023). The relationship between deliberate practice, play, and futsal in childhood and adolescence and the development of different decision-making skills in professional female soccer players. Psychology of Sport and Exercise, 68, 102470.

Mahfud, I., & Fahrizqi, E. B. (2022). Development of Soccer Passing Training Models with Play Method for Base School Beginners. JOURNAL SPORTINDO, 1(1), 15-22.

Maydiantoro, A. (2021). Research model development: Brief literature review. Jurnal Pengembangan Profesi Pendidik Indonesia, 1(2), 29-35.

Molenda, M. (2015). In search of the elusive ADDIE model. Performance improvement, 54(2).

Piskurich, G. M. (2015). Rapid instructional design: Learning ID fast and right. John Wiley & Sons.

Prabowo, E., Nurulfa, R., & Irawan, A. (2023). Socialization of Amendment Futsal Laws of The Game 2020/2021 Edition at the Sports Teacher Working Group (KKGO). GANDRUNG: Jur-

nal Pengabdian Kepada Masyarakat, 4(1), 930-940.

Putra, R. A., Agus, A., Bahtra, R., Kurniawan, R., Makadada, F. A., Perdana, G. S., Lolowang, D. M., Mangolo, E. W., Ayubi, N., & Ndayisenga, J. (2024). The Effect of Combination of Cone Drill (Zigzag) with Core Stability, Combination of Ladder Drill (Snake Jump) with Core Stability, and Speed on Agility of Futsal Players: A Factorial Experimental Design. Retos: Nuevas Perspectivas de Educación Física, Deporte y Recreación, 58.

Rasyad, A., & Listyaningrum, R. A. (2024). Coach's Strategy in Instilling Hard Work Character Education in Gymnastics Trainees at the Persani Training Center, Malang City. Proceedings Series of Educational Studies(5), 1316-1328.

Rico-González, M., Pino-Ortega, J., Clemente, F., Rojas-Valverde, D., & Los Arcos, A. (2021). A systematic review of collective tactical behavior in futsal using positional data. Biology of Sport, 38(1), 23-36.

Santosa, A., & Barokah, P. (2022). The Small Sided Game Training Method on Futsal Passing Accuracy. 1st International Physical Education Conference

Savescu, D. V., & Sandra, M. (2021). Aspects regarding the development of basic motor skills in 10-12 year old children in football. Perspectives of the coach. Geosport for Society, 18(1), 1-8.

Setiorini, R. S. (2025). Pendekatan Bermain Sebagai Metode Pembelajaran Efektif Untuk Meningkatkan Teknik Lari Jarak Pendek Di SDN Perak Barat VI Surabaya. Paradigma: Jurnal Pemikiran Dan Penelitian Pendidikan, 11(1), 31-46.

Sial, Z. A., Fatima, Z., & Fatima, S. Z. (2024). Addie Model of Instructional Effectiveness?: Analyzing The Impact On Students Learning. vol, 6, 64-72.

Spatioti, A. G., Kazanidis, I., & Pange, J. (2022). A comparative study of the ADDIE instructional design model in distance education. Information, 13(9), 402.

Veraksa, N., Colliver, Y., & Sukhikh, V. (2022). Piaget and Vygotsky's play theories: The profile of twenty-first-century evidence. In Piaget and Vygotsky in XXI century: Discourse in early childhood education (pp. 165-190). Springer.

Weigl, L.-M., Jabeen, F., Treur, J., Rob Taal, H., & Roelofsma, P. H. M. P. (2025). Learning for a better safety and security culture within an organization: Reducing the risk in communication with AI coaching for security communication through cyberspace. In Using Shared Mental Models and Organisational Learning to Support Safety and Security Through Cyberspace: A Computational Analysis Approach (pp. 235-303). Springer.