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Development Of Basic Attacking Technique Training Using The Feet In Teqball Games For Pjkr Students Of The Class Of 2025

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Abstract

This study aims to develop a basic attack technique training model using the feet in Teqball for Physical education, health, and recreation (PJKR) students at Tadulako University. The research method used is Research and Development (R&D) with reference to the ten steps of Borg and Gall, including needs analysis, planning, initial product development, expert validation, revision, and phase I and II trials. The research subjects consisted of 15 students in the small group trial and 20 students in the large group trial, with the instrument being a rating scale questionnaire. The results of the phase I trial showed that several training models had met the feasibility criteria with a percentage range of 60%–77%, but several models needed to be revised because they were below 50%. After the revision, the phase II trial showed a significant improvement, where most models were in the "used" category with a percentage of 67%–98%. Validation by Teqball experts and learning experts also showed a high level of feasibility with a percentage of 67%–73%. Overall, the development of ten training models—ranging from two-touch attacks to reflex kicks—proved to be feasible and could be used as a learning and training tool to improve foot-attacking skills in Teqball.

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INTRODUCTION

Sport is an activity, whether physical or psychological, that is useful for maintaining, improving, preserving and supporting the quality of a person's health so that they remain fit, strong and support the organs that work every day to function optimally for all groups.(Khairuddin, 2020). Sports continue to thrive across countries and around the world. As demonstrated, competitions of skill, strength, and endurance have always been important in every culture, whether in rituals or simply for the fun of a lively sport.(Nugroho & Aji, 2022).

Teqball itself was first introduced in 2014 by two football fans: Gábor Borsanyi, a former professional football player, and Viktor Huszár. After being created by Hungarian sports fans who wanted to combine their skills with a ball using a special curved table, Teqball has become a widely recognized sport.(A. Rahadian, 2020).

*Teqball*has developed in forty countries, including Indonesia. This began when the International Teqball Federation (FITEQ) initiated a campaign to increase the popularity of Teqball in Indonesia when the country hosted the 2018 Asian Games. Then, Erick Thohir, Chairman of the Asian Games Organizing Committee (INASGOC), was tasked by FITEQ with establishing the organization. The Indonesian Teqball Sports Association (POTSI) was founded in 2019. Teqball has not experienced significant development since its arrival in Indonesia in 2019. The POTSI Central Board has even spread football to all provinces in Indonesia, including South Kalimantan Province.(Syahbanabc et al., 2025).

Teqball in Central Sulawesi was recently established at the Central Sulawesi KONI Provincial Working Meeting under the name POTSI Sulteng on December 22, 2024, at the Sutan Raja Hotel in Palu. Teqball is a sport with an engaging and inventive gameplay model. It can help improve physical and mental skills, especially for children. However, currently, the progress of Teqball in Central Sulawesi is still relatively small. Therefore, to accelerate development in the region, sports organizations and local governments must support it.(Syahban, 2023)

The sport of Teqball, as a combination of soccer and table tennis, requires mastery of precise and adaptive foot striking techniques.(Raharjo et al., 2018). To achieve attack effectiveness, the development of initial training products needs to consider the analysis of the goals and characteristics of the players, as well as basic movement and kicking skills in the game.(Raharjo et al., 2018)This involves identifying the specific needs of Teqball players regarding accuracy, power, and variety of kicks, which are essential for dominating the game.(Muhammad Iqbal, 2020).

Developing a systematic and structured training program is crucial to improving the quality of a player's attack, which will ultimately correlate with better biomotor performance and optimal match results.(Nur Ahmad Muharram, 2020). The development of this exercise also takes into account the unique characteristics of Teqball which are different from conventional football, where ball control and accuracy of

placement are the determining factors for the success of an attack.(Kurniawan & Mylsidayu, 2015)

This study aimed to design and test the effectiveness of ten specific training models focused on improving footed attacking skills in Teqball, ranging from two-touch attacks to reflex kicks. These training models were designed to not only improve kicking accuracy and power, but also to develop players' agility and reaction time in attacking situations.(Hidayat & Haryanto, 2021)

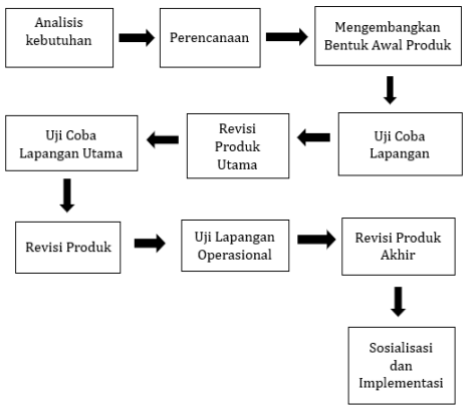
Based on the results of filling out the needs analysis questionnaire by PJKR students, it was found that the need to develop basic attack technique training models using the feet in Teqball games was needed by 78.3% of students and those who did not need it were 21.7%, therefore based on the results of observations of filling out the student needs questionnaire with the Teqball branch and researchers, the development of an attack training model using the feet will be carried out so that the objectives of this sport continue to develop.

METHODS

The research method for developing a training model for attacking techniques using the feet uses the R&D (Research and Development) research and development model from(Liloi & Kungku, 2024) To develop a product in the form of a basic attack technique training model using the feet in Teqball, the process is carried out by designing procedures and training forms that suit the characteristics of the Teqball game. This development product is then systematically tested through two stages of validation tests, both by Teqball experts and learning experts, to ensure that the prepared training model meets the eligibility criteria. The revision stage is carried out at each validation cycle until a suitable, effective, and applicable foot attack technique training model is obtained for use as a training activity in Teqball learning and training, especially on the basic attack technique material (kicking attack).

Research and Development (R&D) is currently one of the types of research that is often carried out because of the importance of developing scientific knowledge to facilitate every learning process that is carried out.(Wanto, 2020).

The Borg and Gall development research method focuses on the application of systematic steps developed in the model as the basis for the product development and refinement process. This development research uses the Borg and Gall steps, which have 10 research steps.(Rohmaini et al., 2020).



The research begins with information gathering and needs analysis through preliminary studies, observations, interviews, and literature reviews to understand the problems and needs of

product development. Once needs are identified, researchers enter the planning stage, which includes setting objectives, formulating success indicators, and designing an initial product concept. The next stage is developing an initial product form or prototype to be tested. The prototype is then tested through a limited initial trial to obtain input on product weaknesses and feasibility. Based on the results of the limited trial, researchers make major revisions as an effort to improve the product before testing it on a larger group through a main field trial. The results of the main field trial are further analyzed to make operational revisions, so that the product becomes more mature and approaches the expected standards.

The product is retested through operational trials under more realistic conditions to ensure its effectiveness in a real-world environment. Input from this stage is used to make final revisions to ensure the product is truly usable. The final stage in the Borg and Gall procedure is dissemination and implementation, which involves disseminating the product to users through publications, training, and direct field application. All these stages form a structured development process to ensure the resulting product is truly valid, feasible, and ready for implementation.

No	Percentage	classification	meaning
1	80%-100%	80%-100%	Used
2	60%-79%	60%-79%	Used
3	50%-59%	50%-59%	Replaced
4	<50%	<50%	Replaced

The population in this study was PJKR students, with a sample size of 15 people in the small group and 20 in the large group. The instrument used in this stage was a value scale questionnaire. The trial subjects in this study were 15 people in the small group and 20 people in the large group. The subjects in this study will participate in the process of attacking training using the feet. The data analysis technique in this development research uses a form of data analysis technique, namely qualitative descriptive data analysis and quantitative descriptive data analysis.(Sari et al., 2023)

This study used descriptive percentage analysis to process data from experts and trials. The results of this data analysis serve as the basis for improving this development. The formula used to collect data from learning experts, Teqball experts, and students from the Department of Physical Education, Health, and Recreation, Faculty of Teacher Training and Education, Tadulako University. To determine the conclusions that have been reached, criteria were established as shown in the following table:

Figure 2. Percentage of Research

RESULT

The results of this development research refer to the R&D (Research and Development) development model of Borg and Gall which consists of 10 research steps. The researcher used a questionnaire data collection method to obtain data from the first phase trial of 15 students, the second phase trial of 20 students, and

evaluations for three experts (1) two Teqball experts and (2) one learning trainer expert to be the validator of this foot attack technique training.

A. Data from the results of the first phase of the trial (small group)

Based on the evaluation results from the first phase of the trial (small group), the observed aspects related to footwork attack techniques in Teqball are presented in Table 1 as quantitative data. The details of this data are as follows.

Table 1. Trial 1 Result Data

No	Aspect	Criteria
1	What do you think about the exercise in picture 1 that you have done?	72% Used
2	In your opinion, how did you carry out the exercise in Figure 1?	68% Used
3	In your opinion, is the exercise in picture 1 that you have done useful in playing Teqball?	65% Used
4	What do you think about the exercise in picture 2 that you have done?	28% Replaced
5	In your opinion, how did you carry out the exercise in Figure 2?	28% Replaced
6	In your opinion, is the exercise in picture 2 that you have done useful in playing Teqball?	35% Replaced
7	What do you think about the exercise in picture 3 that you have done?	42% Replaced
8	In your opinion, how do you carry out the exercise in Figure 3?	48% Replaced
9	In your opinion, is the exercise in picture 3 that you have done useful in playing Teqball?	48% Replaced
10	What do you think about the exercise in Figure 4 that you have done?	42% Replaced
11	In your opinion, how do you carry out the exercise in Figure 4?	37% Replaced
12	In your opinion, is the exercise in picture 4 that you have done useful in playing Teqball?	43% Replaced
13	What do you think about the exercise in Figure 5 that you have done?	45% Replaced
14	In your opinion, how do you carry out the exercise in Figure 5?	53% Replaced
15	In your opinion, is the exercise in picture 5 that you have done useful in playing Teqball?	45% Replaced
16	What do you think about the exercise in figure 6 that you have done?	62% Used
17	In your opinion, how do you carry out the exercise in Figure 6?	60% Used
18	In your opinion, is the exercise in picture 6 that you have done useful in playing Teqball?	63% Used
19	What do you think about the exercise in figure 7 that you have done?	67% Used

20	In your opinion, how do you carry out the exercise in Figure 7 that you have done?	68% Used
21	In your opinion, is the exercise in picture 7 that you have done useful in playing Teqball?	62% Used
22	What do you think about the exercise in figure 8 that you have done?	77% Used
23	In your opinion, how do you carry out the exercise in Figure 8?	75% Used
24	In your opinion, is the exercise in figure 8 that you have done useful in playing Teqball?	75% Used
25	What do you think about the exercise in figure 9 that you have done?	62% Used
26	In your opinion, how do you carry out the exercise in Figure 9?	70% Used
27	In your opinion, is the exercise in picture 9 that you have done useful in playing Teqball?	65% Used
28	What do you think about the exercise in figure 10 that you have done?	68% Used
29	In your opinion, how do you carry out the exercise in figure 10 that you have done?	68% Used
30	In your opinion, is the exercise in picture 10 that you have done useful in the game of Teqball?	67% Used

B. Phase II trial results data (Large Group)

Based on the evaluation results of the Phase II (large group) trial, the observed aspects related to foot-attacking techniques in Teqball are presented in Table 2 as quantitative data. The details of this data are as follows.

Table 2. Data from trial II results

No	Aspect	Criteria
1	What do you think about the exercise in picture 1 that you have done?	72% Used
2	In your opinion, how did you carry out the exercise in Figure 1?	75% Used
3	In your opinion, is the exercise in picture 1 that you have done useful in playing Teqball?	83% Used
4	What do you think about the exercise in picture 2 that you have done?	67% Used
5	In your opinion, how did you carry out the exercise in Figure 2?	78% Used
6	In your opinion, is the exercise in picture 2 that you have done useful in playing Teqball?	83% Used
7	What do you think about the exercise in picture 3 that you have done?	75% Used
8	In your opinion, how do you carry out the exercise in Figure 3?	82% Used
9	In your opinion, is the exercise in picture 3 that you have done	77% Used

	useful in playing Teqball?	
10	What do you think about the exercise in Figure 4 that you have done?	57% Replaced
11	In your opinion, how do you carry out the exercise in Figure 4?	48% Replaced
12	In your opinion, is the exercise in picture 4 that you have done useful in playing Teqball?	52% Replaced
13	What do you think about the exercise in Figure 5 that you have done?	57% Replaced
14	In your opinion, how do you carry out the exercise in Figure 5?	55% Replaced
15	In your opinion, is the exercise in picture 5 that you have done useful in playing Teqball?	50% Replaced
16	What do you think about the exercise in figure 6 that you have done?	92% Used
17	In your opinion, how do you carry out the exercise in Figure 6?	95% Used
18	In your opinion, is the exercise in picture 6 that you have done useful in playing Teqball?	98% Used

Based on Table 2, the results of the second phase of the trial show that most of the exercises in Figures 1, 2, and 3 are in the used category with a percentage of 67%–83%, indicating that the exercises were considered effective and beneficial by the participants. However, the exercises in Figures 4 and 5 obtained the lowest percentages, namely 48%–57%, so they were categorized as replaced because they did not meet the eligibility criteria. Conversely, the exercises in Figure 6 showed the highest results with a percentage of 92%–98% in all aspects, which confirms that this training model is very good and suitable for use in learning Teqball techniques.

DISCUSSION

The development of a training model for attacking techniques using the feet in Teqball for PJKR students was carried out through the R&D research stages of the Borg and Gall model. This discussion outlines the interpretation of the results of the trial phase I (small group) and phase II (large group), as well as the results of expert validation, to assess the feasibility and effectiveness of the developed training model. The results showed that in the trial phase I, most of the training models met the feasibility criteria, although there were several aspects that required revision. The exercises in figures 1, 6, 7, 8, 9, and 10 obtained percentages above 68% to 90%, which indicates that students were able to understand the form of the exercise and felt the benefits of its implementation.

These findings indicate that some training designs meet the basic movement requirements of Teqball, such as foot coordination, ball control, touch accuracy, and adaptability to a curved table. These results align with Raharjo et al.'s (2018) opinion, which emphasizes the importance of mastering precise and adaptive attack techniques in Teqball. However, in the first

phase of the trial, several training exercises yielded low success rates, including those in Figures 2, 3, 4, and 5, with scores ranging from 33% to 58%. This low level of suitability indicates that the training model requires improvement in terms of instruction, movement complexity, and relevance to actual game situations.

Students tend to have difficulty following movement patterns that are too complex or not yet suited to the initial abilities of beginner Teqball players. This condition aligns with the statement by Hidayat & Haryanto (2021) that the development of training models must consider physical readiness, experience level, and the specific needs of players in an attacking context. Improvements were made based on input from expert Teqball validators and learning experts, who highlighted that some training models needed simplification of movement stages, modification of intensity, and clarification of the practical objectives of each exercise. These revisions had a positive impact, as seen in the phase II trial.

In the second phase of the trial, evaluation results indicated an increase in the feasibility of the training model, although some exercises still needed improvement. The exercises in Figures 1, 6, and 7 showed percentages between 75% and 85%, confirming that these models were effective in improving understanding of the foot strike technique. This improvement indicates that the product revisions successfully addressed weaknesses identified in the first trial. Furthermore, students were assessed as being able to apply movement patterns more effectively after the instructional improvements.

Several drills in Figures 2–5 still scored below the established standard (less than 60%). Based on these percentages, certain drill models do not fully meet the requirements for use in Teqball learning. This could be due to coordination issues, excessively high technical requirements, or a lack of correlation between the drill format and actual game conditions. This supports Kurniawan and Mylsidayu's (2015) argument that systematic basic training must be conducted before mastering attacking techniques.

The results of both phases of the trial showed that the development of this attacking training model utilizing the feet was successful; the model largely met the established criteria. The fact that the training needed to be modified demonstrates the importance of designing training gradually to suit the abilities of beginner players. Furthermore, expert validation significantly contributed to product refinement, ensuring that the developed training model was relevant, efficient, and suited to the characteristics of the modern Teqball game.

The findings of this study reinforce the idea that developing a structured training program can improve the quality of players' attacking techniques, as Nur Ahmad Muharram (2020) stated that improving basic technique will have a direct impact on match performance. Therefore, the developed training model can be an alternative learning product for developing attacking techniques in Teqball, both in the context of physical education and sports training.

CONCLUSION

Based on the results of the research and discussion, it can be concluded from the research that the development of attack training using the feet in the Teqball game, in order to improve Teqball playing skills in PJKR students. The training models that have been tested include 10 training models 1) Two-touch attack training 2) Opposite corner attack training with the X pattern 3) Repeated attack training to the small zone 4) Attack training with 2 feet 5) Attack training following the coach's cues 6) Blind Spot Attack Training 7) Attack & Run Training 8) Reflex Kick Training 9) Training with a hung takraw ball 10) aTouch -Based attack Drill.

The conclusion of this study is the level of use of foot attack training in Teqball games in PJKR students of Class of 2025 based on the assessment of 1) Teqball Expert I obtained a score percentage of 67% with the criteria used no need for revision, 2) Teqball Expert II obtained a score percentage of 71% with the criteria used no need for revision, 3) learning experts obtained a score percentage of 83% with the criteria used. To find out the use of foot attack training development products in Teqball games. The results of student respondent data in large group trials obtained a score percentage of 68.06% with the criteria used.

REFERENCES

Adi Rahadian. (2020). Jurnal Menssana. *Jurnal Menssana*, *5 No.2*(2), 146–156.

Hidayat, S., & Haryanto, A. I. (2021). *Pengembangan Tes Kelincahan Tendangan Pencak Silat*. *3*, 74–80.

Khairuddin. (2020). Olahraga Dalam Pandangan Agama Islam. *Jurnal Ilmu Sosial Dan Pendidikan*, *Vol.4*(No. 3), 56.

Kurniawan, F., & Mylsidayu, A. (2015). *Development Of Futsal Basic Technique Training Model*. 26–32.

Liloi, D. K., & Kungku, C. (2024). *Pengembangan Model Latihan Keterampilan Servis Sila Dalam Permainan Sepak Takraw Pendahuluan*. *7*(2), 807–819. Https://Doi.Org/10.29408/Porkes.V7i2.26928

Muhammad Iqbal. (2020). *Analisis Kebutuhan Mahasiswa Dalam Penerapan Multimedia Interaktif Pada Cabang Olahraga Futsal*. *01*(02), 90–99.

Nugroho, R., & Aji, B. (2022). *Museum Olahraga Nasional Sebagai Pusat Data Dan Kajian Sejarah Olahraga National Sports Museum As A Data Center And Study Of Sports History*. *3*(1), 74–80.

Nur Ahmad Muharram, Puspadori. (2020). *Jurnal Kejaora : Jurnal Kesehatan Jasmani Dan Olah Raga*. *5*(November), 41–46.

Raharjo, S. M., Keolahragaan, F. I., & Yogyakarta, U. N. (2018). *Pengembangan Alat Target Tendangan Untuk*. *14*, 164–177.

Rohmaini, L., Nendra, F., & Qiftiyah, M. (2020). *Pengembangan Modul Pembelajaran Matematika Berbasis Etnomatematika Berbantuan Wingeom Berdasarkan Langkah Borg And Gall*. *5*(September), 176–186.

Sari, M., Rachman, H., Astuti, N. J., Afgani, M. W., & Abdullah, R. (2023). *Explanatory Survey Dalam Metode Penelitian Deskriptif Kuantitatif*. *3*(1), 10–16.

Sugar Wanto, Ardo Okilanda, Arisman, Muhsana El Cintami Lanos, Dede

Dwiansyah Putra, Hikmah Lestari , Mirza Awali, O. (2020). *Kupas Tuntas Penelitian Pengembangan Model Borg & Gall*. *3*(2).

Syahban, A. (2023). *Analisis Swot Olahraga Teqball Di Indonesia*. *February*. Https://Doi.Org/10.13140/Rg.2.2.29609.06248

Syahbanabc, A., Antoniabc, D., Seprianidef, R., Tri, A., & Hanafidef, M. (2025). *Machine Translated By Google Survei Minat Masyarakat Terhadap Olahraga Teqball Di Kalimantan Selatan Machine Translated By Google*. *10*(4), 78–92.