The Effect of a Program Using Auxiliary Tools to Improve The Long Passing Skill of Football Juniors

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ABSTRACT

Background: Football was one of the first games to become widely played around the world, and as it developed quickly, the need to enhance skillful performance arose **Aim**: The study was conducted to designing auxiliary training tools that develop the long passing skill of football juniors, designing a training program using the proposed training tools to develop the long-passing skills of football juniors, and identifying the effect of a training program using the suggested training tools in developing the emerging long passing skills in football.

Methods: two groups the control and experimental groups using the pre and post measurement system. The research community consists of football players under (17) years old in Iraq, numbering (100) players and the research sample includes the players of the National Center for the Nurturing of Athletic Talent in football under (17) years in the Republic of Iraq / Baghdad Governorate, whose number is (20) players representing the National Center for the Nurturing of Athletic Talent in football in (Al-Shaab Stadium), and they were chosen in a random method, and they were divided Players by lottery.

Results: The experimental program using the auxiliary tools applied to the sample had a positive effect on the research sample in improving the long scrolling skill.

Conclusion: Need to use auxiliary tools in training programs for juniors because of their positive improving impact.

Keywords: long passing, football, program using auxiliary tools

INTRODUCTION

The goal of sports training is to increase performance levels in all sports-related games and activities, whether they be competitive or recreational. Improvements in levels across different sports have been made possible by the use of organized, standardized training programs built on scientific principles. These programs have helped individual athletes compete at the highest levels possible in sporting competitions. Unlocking athletes' potential to perform at the greatest levels and achieve sporting success through sports training is one of the branches of training that is concerned with enhancing and developing performance[1].

Football was one of the first games to become widely played around the world, and as it developed quickly, the need to enhance skillful performance arose. As a result, conducting applied scientific research in the area has become absolutely necessary for football players to perform automatically and expertly under any match circumstances. Football, with the intention of furthering this field, and the younger age groups serve as the firm framework upon which to construct a more advanced level of football in the future.

"The training of young people aims to prepare and prepare the young person to reach the higher levels appropriate to the characteristics of his age stage, his individual characteristics, the possibility of his biological development, his ability to adapt to the requirements of the higher levels, and to build a solid base for those levels." And the development of kinetic capabilities and capabilities so that the player has a large kinetic and skill base that will be a kinetic balance through which the youth can continue the training

process and focus on other aspects of training such as the tactical aspects and adaptations for the practiced activity, building and developing the elements of physical fitness and others to reach the higher levels [2].

The stage of preparing young people is one of the important stages in the career of the athlete and preparing him properly by providing him with the skills, experience and knowledge related to the practiced activity as well as developing the elements of general and specific physical fitness and the necessary psychological preparation.

So, the person in charge of the training process must be sufficiently aware of the characteristics of this age stage. That is, the process of developing the athlete is greatly affected by biological development as well as his ability to adapt as a result of the training process, since the athlete at this age stage is in the stage of growth of the functional systems and the kinetic system (skeletal-muscular). So any mistake or negligence in training can lead to problems or injuries that may have undesirable consequences in the future.

Therefore, it must be taken into account that the size of the training load is commensurate with the athlete to ensure progress at the level at the ideal speed and rationing the training load in the early stages of training with an increase in the training volume and with moderate intensity, in order to suit the age stage that they are going through. Taking into account not spacing the units training during one week to avoid losing the adaptations that occurred during the previous training units Between (3-6) training units per week.

The use of auxiliary training tools is one of the crucial and essential steps in developing and preparing players because they speed up the process of

learning fundamental skills for both the coach and the player, add excitement and suspense by having the player play with a partner or the tool itself, and indirectly speed up the process of mastering technical performance.

Research problem:

The skill of passing in the football game is one of the basic skills of great importance, as through it the ball is transferred between the team members throughout the field, and the team whose members are fluent in this skill can better fulfill the requirements of the game.

And when the researcher was answering about a new method of training that works to unleash the enthusiasm of the players in training and stimulate their desires positively in hard endurance, the researcher also called for the quality of the research idea, which is (the effect of a program using tools to improve the skill of long passing for soccer players).

Hence, it illustrates the importance of using auxiliary tools in sports training, as the researcher worked as a local/international player in football, as well as his interest in learning about the training curricula for specialized trainers for the youth category. There are still existing problems related to the training process in developing basic and technical skills in the football game. From here, the research problem emerged in answering the following question:

- Does the use of some auxiliary training tools and methods have a positive effect on developing the long passing skill in the football game?

Research objective:

- Designing auxiliary training tools that develop the long passing skill of football juniors.
- Designing a training program using the proposed training tools to develop the long-passing skills of football juniors.
- Identifying the effect of a training program using the suggested training tools in developing the emerging long passing skills in football.

Research hypotheses:

- There are statistically significant variations between the pre- and post-tests of the experimental and control groups in how young football players develop their long passing ability.
- The experimental group improved the long passing ability of the young soccer players by statistically significantly more than the control group in the dimensions measures between the two groups.

Research fields:

- Human field: The pre-measurements, the basic experiment and the post-measurements were applied to the research in the stadium of the National Center for the Nurturing of Athletic Talent in Football.
- Time field: (10/6/2021) to (12/8/2021)
- Spatial field: Players of the National Center for the Nurturing of Sports Talent in Football at the age of (17) years.

METHODOLOGY

Due to its applicability to the nature of the research and ability to accomplish its goals, the researcher used the experimental approach with the experimental design of the control and experimental groups utilizing the pre and post measurement system.

Community and sample research:

The research community consists of football players under (17) years old in Iraq, numbering (100) players and the research sample includes the players of the National Center for the Nurturing of Athletic Talent in football under (17) years in the Republic of Iraq / Baghdad Governorate, whose number is (20) players representing the National Center for the Nurturing of Athletic Talent in football in (Al-Shaab Stadium), and they were chosen in a simple random way, and they were divided players by lottery to: Two groups comprising (10) players who were trained according to the program prepared by the coach, and an experimental group comprising (10) players trained according to the program for the research. Ten players representing the National Center for Nurturing Sports Talent in Football were selected in (Al-Karkh Stadium) to be used in conducting the exploratory experiment, the proposed experimental program will be applied to the experimental group, while the regular program will be applied to the control group by the trainer and his assistant, as shown in Table (1).

Table (1) Description of the basic and exploratory research sample

No.	Sample	Number of Players	Club
1	Basic study	20	The National Center / Al-Shaab Stadium
2	Exploratory study	10	The National Center / Karkh
3	the total	30	-------

Table (2) Statistical homogeneity in the basic measurements of football juniors, n = 30

No.	variables	Arithmetic mean	Standard deviation	Median	Skewness
1	length / cm	158	7.91	160	0.75
2	Weight / kg	51.66	6.10	52.5	0.41
3	Training age / year	2.4	1.6	3	0.25

It is clear from Table (2) the arithmetic mean and standard deviation in the basic measurements, as the torsion coefficients were close to zero and one, which indicates the moderation of the values and the homogeneity of the research sample of football juniors before applying the basic study.

Research measurements:

The researcher determined the research measurements and data collection tools by looking at the scientific references and practical research related to the subject of the research, such as Al-Suwaidi (1998), Nawfal Fadel Rashid (2010), Hussam Muhammad, Nizar Nazim (2018) to determine the measurements used, as well as identifying the exercises using the auxiliary tools that It affects the improvement of the passing skill in football, which achieves goals and fits the nature of the sample, as follows:

Research Measurements: Basic Measurements:
- Age (years).
- Height (cm).
- Weight (kg).
- Number of years of practice (years).
  Skill performance measurements for football junior's appendix (2).
- Test the accuracy of the long pass skill.
- Handling test towards a small target from (10m) away.
- Handling test towards a bench for 30 seconds.

Research process steps:
- Defining and designing utilities.
- View scientific references and previous and related studies that are concerned with the use of training aids for testing and modifying some of those tools.
- Design of suggested tools.
- Designing the training program by presenting it to experts to obtain their opinions.
- Selecting the sample and dividing it into two groups, one of which is experimental (the training program is applied to it) and the other is a control group (the regular program is applied to it).
- Conducting an exploratory study with the aim of preparing and training the assistants, as well as making sure of the validity of the tests (scientific transactions).
- Applying a basic study through:
- Application of tribal measurements.
- Application of the training program.

- Application of dimensional measurements.
- Collecting and preparing data for statistical analysis.
- Getting results.

Tools and devices used in the program:
- A legal football field.
- Legal footballs.
- A small goal measuring (100 x 75) cm.
- Stopwatches, whistles, cones.
- Medical scale.
- A terrace with a height of (20) cm and a width of (3) m.
- Tape measure.
- Cones.

Suggested program-using utilities:
The basis for developing the proposed program:
- The researcher believes that it is necessary to take into account some of the foundations on which the program is built, in accordance with the abilities of the players, so that he can build an appropriate program that achieves its goals. He has identified the following foundations as criteria for the program:
- Determine the content of the program according to the correct gradation of the dental stage, taking into account individual differences in determining loads.
- Determine the general objective of the training program, which is to improve the long passing skill of football juniors.
- Follow the principle of gradual selection of exercises from easy to difficult and from simple to complex.
- The program's content is appropriate to the age group of the main research sample.
- The flexibility of the proposed program and its acceptance of scientific application.
- Diversity in the use of exercises in order to reach the goal to be achieved.
- Taking into account the individual differences between the players during the training period.
- Taking into account security and safety factors throughout the implementation period of the program.
  Considerations to be taken into account when implementing the proposed program:
- At the beginning of the training unit, the objective of the training unit is explained.
- You must start with simple easy exercises in order for players to feel self-confident.
- Taking into account the security and safety factor during the application.
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Parts of the training unit:

Warm-up: gradual warm-up and preparation of the player for the main part of the training unit, and the use of auxiliary tools.

Main part: It contains the skill preparation of players and exercises using auxiliary tools, and its time is determined based on the goal of the training units.

Concluding part: aims to return the players to a normal state as much as possible by using calming and relaxation exercises.

Time distribution of the training program:
- The duration of the proposed program is (2) months.
- The number of weekly training units (2) training units on days (Sunday - Wednesday).
- The total number of training units in the program (16) training units.
- Training unit time (60: 90) minutes distributed as follows:
- Warm-up (10:15) minutes.
- Passing time from training units (20) minutes.
- The main part (45: 65) minutes.
- Conclusion (5:10) minutes.

Exploratory study:

The researcher conducted the exploratory study on a random sample outside the main research sample and from the research community, the number of which is (10) football players representing the National Center for the Nurturing of Sports Talent in football at (Al-Karkh Stadium) in the period from 6/4/2021 to 6/7/2021.

Aim of the exploratory study:

In order to achieve the final form of the data registration forms, to identify the challenges and obstacles that the researcher might encounter when carrying out the research procedures, and to assess the effectiveness of the assistant work team, it was intended to test the validity of the tools and devices used and the tests.

Results of the exploratory
- Ensure the validity of the tools and equipment used.
- Ensure the efficiency of the assistant work team and train them on the method of registration.
- Registration cards are designed.
- The validity of the tests and their measurement methods has been confirmed.
- The time required to complete the proposed program (exercise time) has been determined and calculated.

Basic study:

The researcher conducted the basic study and applied the exercises on the basic research sample in the period from 10/6/2021 to 12/8/2021, according to the following implementation steps:

Pre-measurement:

The researcher conducted the tribal measurement in the period from 10/6/2021 to 12/6/2021 by measuring the long passing skill tests for the football juniors under study. The tests showed the existence of individual differences between the sample members, which explains the large difference in the research sample in the performance of the passing skill.

Application of the training program using the auxiliary tools to the football youth:

The training program was implemented during the period from 15/6/2021 to 10/8/2021, as the total period for implementing the program was (two months) and the total number of units (16) units, at the rate of (2) units per week, and the unit time starts from (60) minutes until Up to (90) minutes.

Post- measurement:

The researcher conducted the post-measurement in the period from 9/8/2021 to 12/8/2021 with the same procedures for arranging and implementing the pre-measurement, then collecting and processing the data statistically.

Research tools used:

The comprehensive device for improving passing accuracy: It is a comprehensive and multi-use device to improve the basic skills in the football game, including the skill of passing through its use during training units and work to improve handling accuracy for young players. The device has the following measurements: height 150 cm, width 60 cm, and base length 60 cm, as shown in the figure (1).

Figure (1) shows the comprehensive device for improving passing accuracy

- A tool to improve passing control at multiple heights: It is an easy-to-make tool, consisting of two columns of

the same height (2.50 cm), and two small bases for each column to fix it firmly on the ground, and from the top of the two columns, two ropes are fixed at any height the coach needs during training. The task of the tool is to pass the ball between the two ropes, in order to control the direction and heights of the ball when it passes through the two ropes from the top to the player, in addition to gradually making the exercises difficult according to the desired goal. It is also possible to manipulate the height of the ropes, up and down, by easily changing the location of the ropes on the supporting columns and the tool with the following measurements: height 250 cm, width 150 cm, and length of the base for each column 25 cm. as shown in the figure (2).
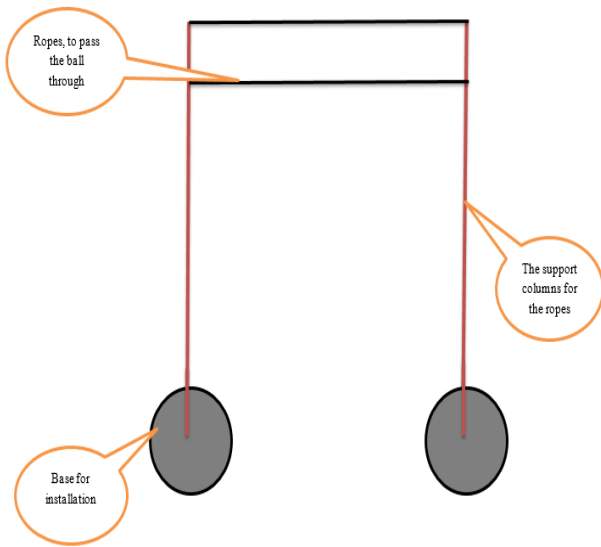
Figure (2) shows a tool to improve scroll control with multiple heights

- The researcher extracted these proposed tools by reviewing previous studies (Ali Faraj Muhammad's study / 2012), (Muhammad Ali Majeed's study / 2014) and specialized scientific references.
- These tools were presented to experts in football training to ensure their validity (see appendix (1)) explains the opinion of the experts.
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- **Statistical treatments:**
  The researcher processed the data using IBM SPSS Statistics 20 to obtain the following statistical treatments:
- Percentage.
- Arithmetic mean.
- Standard Deviation.
- Skewness coefficient.
- T-test for independent samples.
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- **Ethical consent:**
- **Informed consent was taken from the player's relatives or the player's himself when he was still conscious with keeping the players's ` records confidential in all stages of the study. This work has been carried out in accordance with The Code of Ethics of the World Medical Association (Declaration of Helsinki) for studies involving humans.**

RESULTS

Pre and post-tests of the skill of long scrolling for the control group:

Table (3) shows the statistical parameters, the calculated (t) value, and the level of significance show the differences between the pre and post-tests of the control group for the variables under study.

Variable	Measuring unit	Post-test		Pre-test		arithmetic mean of difference	standard deviation of differences	T value calculated	Level Sig	Type Sig
		Standard deviation	Arithmetic mean	Standard deviation	Arithmetic mean					
Long pass	Degree	0.10	2.42	0.20	1.31	4.10	0.67	6.08	0.000	Sig

The long pass test showed the following: The passing test measures the accuracy of passing on a square from a distance of 30 m. The score is measured by the accuracy of the performance of the long pass, and by treating these results statistically with the (t) test, it showed significant differences between the pre and post-tests, and the validity of the post-test for the control group, as the value of (t) the calculated value is (5.01) and its value (sig) is (0.00), and when compared to the level of significance (0.05), we find that it is smaller, meaning there is a significant difference.

Pre and post-tests of the long pass skill of the experimental group"
Table (4) shows the statistical parameters, the calculated (t) value, and the level of significance for the pre and post-tests of the experimental group for the variables in the study.

Variable	Measuring unit	Post-test		Pre-test		arithmetic mean of difference	standard deviation of differences	T value calculated	Level Sig	Type Sig
		Standard deviation	Arithmetic mean	Standard deviation	Arithmetic mean					
Long pass	Degree	0.10	3.09	0.10	2.00	8.00	0.82	9.63	.000	Sig

The long pass test showed the following: The passing test, which measures the accuracy of handling a square from a distance of 40 m, and the degree is accurately measured by the performance of the long pass, and by treating these results statistically with the (t) test, it showed significant differences between the pre and post-tests, and the validity of the post-test for the control group, as the value of (t) The calculated value is (9.63) and its value (sig) is (0.00), and when compared to the level of significance (0.05), we find that it is smaller, meaning there is a significant difference.

Posttests for the skill of long passing for the control and experimental groups:

Table (5) shows the arithmetic mean, standard deviations, t-value, and level of significance for the control and experimental groups in the post-tests for the two groups.

Variable	Measuring unit	Control		Experimental		arithmetic mean of difference	standard deviation of differences	T value calculated	Level Sig	Type Sig
		Standard deviation	Arithmetic mean	Standard deviation	Arithmetic mean					
Long pass	Degree	0.20	1.31	0.10	2.00	3.80	0.75	5.01	0.000	Sig

The post-test findings for the lengthy pass under examination between the experimental and control groups were significantly different, as shown in table (5), favoring the experimental group. The researcher credits this to the nature of the training program and the exercises included in this program. Where a program was used using auxiliary tools, which helped in the tangible development of the members of the experimental group, and helped in raising the level of kinetic and physical abilities among the juniors, which improved their skill performance. This development is due to the nature of the program using the auxiliary tools that were used for the first time among the experimental group's juniors They had never been trained on such auxiliary tools that had an impact on their skill and kinetic level, as well as a tangible impact on the player's psyche by bringing joy, pleasure and excitement to their psyche when applying the exercises to break the routine of traditional exercises has been mentioned. [3] "The planned and targeted training program for the content of elaborate exercises in a scientific manner leads to obtaining the best results. "The researcher showed that the training program using the auxiliary tools achieved the goal of influencing all the variables under study, and this indicates the success of the content of the program and what was applied through the exercises set with all sincerity and objectivity, and this confirms the validity of the results of the study in the presence of differences between the experimental and control groups in favor of the group Experimental.

Table (6) show the presence of differences between the experimental and control groups in favor of the group Experimental

Variable	Measuring unit	Control		Experimental		T value calculated	Level Sig	Type Sig
		Standard deviation	Arithmetic mean	Standard deviation	Arithmetic mean			
Long pass	Degree	0.10	1.15	0.10	1.10	0.198	0.909	Non sig

DISCUSSION
Discussing the results of pre and post-skill tests for the control group:

It is clear from Table (3) that there are significant differences in testing the speed and accuracy of the pass as well as the long pass. The researcher attributes the reason for this significant difference to the fact that passes in all their forms are a basic skill for the soccer player, whether in attack or defense, as they are the most used skills in training and match in order to let the player reaches the degree of mastery or mechanism in transferring the ball between the players, whether the pass is direct or to the appropriate space, "and there is nothing that destroys the team or the player more than inaccurate passes" [4,5].

The continuation of training "plays an important role in the player's access to the high level in terms of technical performance of the skill in terms of accuracy, integration, fixation, and mechanism of high technical performance," in addition to the regularity of training and stability without interruption among the members of the control group. [6].

Discussing the results of the pre and post skill tests of the experimental group:

It is clear from Table (4) that there are significant differences between the pre and post-tests and in favor of the post-test in the accuracy and speed of the long pass. In the ways and means of learning and training, and accordingly, the use of auxiliary means is of no less scientific value than realistic experiences if they are used well and serve as alternative experiences as well, as one of the factors that raise the level of training in mastering football skills is the use of auxiliary tools and means because they lead to the process of learning skills and help speed up the completion of various programs as they help shorten the time allotted for each educational stage. According to other researcher, the reason for the development of passing skill is that it is one of the skills that requires both accuracy and the right amount of strength at the same time. This is what requires good compatibility in performance because it is one of the more challenging skills in comparison to other skills and requires highly skilled performance in how to use the part. The proper foot portion to use to strike the ball, consistent with what was said. The correct pass must meet the following requirements: be directed toward the proper player, be executed at the proper time, be strong, and be accurate [7].

As well as giving the passing skill enough time to perform in the research exercises, which helped in teaching and developing it, and here it was clear that the experimental group used (the aids in the training unit) was the best in the long passing skill, as evidenced by the moral differences. The researcher attributes the reason for this to the fact that the passing skill is one of the Basic skills in the game of football, as it is one of

the most used skills and requires auxiliary tools in order to learn and master it, and passing exercises with which auxiliary tools were used from balls of different weights in terms of the amount of air it contains and passing on a wall and from different distances and handling to a colleague or on a person or on a pole. The goal or on small barriers of movement and stability helped to make the training process more effective, as the use of multiple means of aids to learn kinetic skills in the fields of sports, as the results were exciting without any doubt about the effectiveness and positivity of that use [3]

The variety of auxiliary tools worked to make the learner exposed to multiple and different situations, which led to storing many kinetic programs related to the performance of that skill, which helped the learner's ability to perform the skill under any circumstances. "That the devices and tools contribute to shortening the time for each educational stage and that they are used as preliminary exercises that facilitate the possibility of learning difficult movements"[8]

CONCLUSIONS
According to the research results and within the limits of the sample and statistical treatments, the researcher reached the following conclusions:

- The study's findings demonstrated that the experimental program's application to the sample of auxiliary tools improved the extended scrolling ability of the research sample.
- The levels of performance of the long pass skill under examination show statistically significant differences between the means of measurement (pre and post), favoring the post measurement among the experimental group members.
- The levels of performance of the long pass skill under study and in favor of the post-measurement among the members of the experimental group show statistically significant differences between the averages of the (post-post) measurement between the control and experimental groups.

RECOMMENDATIONS
Based on the data collected by the researcher through this study, and based on the conclusions drawn, and within the framework of the study, the researcher makes the following recommendations:

- Need to use auxiliary tools in training programs for juniors because of their positive impact on improving and developing the long passing skill of football players.
- Using the proposed training program to improve the skillful performance of soccer players.
- Use of exercises that are in line with the nature and direction of performance, as happens during competitions. The need to choose the content of the exercises provided in accordance with the nature of the study sample.

- Carrying out another similar study on the age groups that were not covered by the current study.
- Need to carry out a similar study on soccer players in clubs, national teams and other national centers.

Conflict of interest: The authors declare no conflict of interest.

REFERENCES

1. **Ryan D, Lewin C, Forsythe S** *et al.* **(2018):** Developing world-class soccer players: An example of the academy physical development program from an english premier league team. *Strength Cond. J.*, 40(3):2-11. doi:10.1519/SSC.0000000000000340
2. **Hassan M, Fadel B, Abd Al Zahra M** *et al.* **(2022):** Analysis of morale and social-kinetic cohesion in young football players. *Sport TK-Revista Euroam Ciencias del Deport.* doi:10.6018/sportk.509421
3. **Andrzejewski M, Chmura J, Pluta B** *et al.* **(2013):** Analysis of sprinting activities of professional soccer players. *J. Strength Cond. Res.* ,27(8):2134-2140. doi:10.1519/JSC.0b013e318279423e
4. **Lieberman J, Breazeal C (2007):** Development of a wearable vibrotactile feedback suit for accelerated human motor learning. *Proc - IEEE Int. Conf. Robot Autom.*, 23(5):4001-4006. doi:10.1109/ROBOT.2007.364093
5. **Nishida J, Suzuki K. (2017):** A paired wearable device for blending kinesthetic experience. In: *Conference on Human Factors in Computing Systems.*doi:10.1145/3025453.3025829
6. **Jaber A (2022):** The Effect Of Functional Exercises On Developing The Level Of Special Physical Performance And Some Basic Football Skills For Young Players. *Res. J. Anal Invent.*, 3(11):41-51.
7. **Kadragic A (2010):** Commentary : Media in the UAE : The Abu Dhabi powerhouse Media in the UAE : The Abu Dhabi powerhouse. *Asia Pacific Media Educ.*, 1(20):247-252.
8. **Alajjouri M (2022):** The Effect of Water Training for Lepro Players on Some Physical and Skill Abilities in Volleyball. *J Hunan Univ Nat Sci.*, 49(11):36-49. doi:10.55463/issn.1674-2974.49.11.5