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## The Effect of Exercises According to the Posner Model in Developing the Skill of Blocking Volleyball for Juniors

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### Abstract

The researchers discussed the importance of research in keeping pace with the development in using the Posner model in developing the blocking skill to be prepared in a manner commensurate with the development in the game in general and in defensive skills in particular, As for the research problem, it was represented by the presence of fluctuation in the actual performance of the players, or their mastery of certain skills and not others, which may affect the actual performance and the overall result of the game, The researchers used the experimental method, As for the research sample of (30) players, it consisted of two clubs (Al-Madina and Al-Chibayish). The researchers prepared an educational curriculum that lasted (10) weeks. They conducted pre and posttests for the two research groups, and found appropriate statistical coefficients for them, and the results were discussed in the light of statistics. The most important conclusions and the most important recommendations were: The exercises prepared according to the Posner model contributed to the development of the accuracy of the blocking skill in volleyball for juniors, The researchers recommended the need Follow the scientific foundations, methods and methods to develop educational and training curricula that will develop and improve the level of skillful performance, especially among young volleyball players, to find out their real levels.

## **1) Definition of research:**

### **1-1 similar studies:**

The study of Nibras Fadel Hussein Al-Yasiri (2015) (2), which aims to know the impact of the Posner model on the achievement of geography among second-grade female students, and the researcher used the experimental method in conducting her studies. The research was conducted on a sample consisting of (78) female students for middle and secondary schools in the Hashemite district in Babil Governorate for the academic year 2014–2015. The researcher concluded that Posner's model has a positive effect on the achievement of geography for the experimental sample of second grade female students.

The study of Ahmed Khattar Saad Al-Zergawi (2017) (7), which aims to prepare an educational curriculum according to the Posner and Jaeger model in developing motivation and teaching some badminton skills for first-stage students of the Faculty of Physical Education and Sports Sciences, University of Babylon. And to identify the effect of the educational curriculum according to these two models in developing motivation and learning some badminton skills for first-stage students in the College of Physical Education and Sports Sciences, University of Babylon. The research was conducted on a sample of (48) students, and the results indicated that there is a positive effect of the educational curriculum according to Posner and Jaeger model for developing motivation and learning some badminton skills for students.

The study of Hassan Badr Mahmoud Lafta Baron (2019) (9), which aims to measure the effectiveness of Posner's strategy in modifying alternative mathematical perceptions of middle school students in the State of Kuwait. (Mulla Hassan Al-Kandari Intermediate School for Boys) in Al-Ahmadi City, State of Kuwait, for the academic year 2018–2019, and the results indicated that Posner's model has a positive impact in modifying the alternative mathematical perceptions of middle school students in the State of Kuwait.

A study by Duha Jawad Kazem (2022)(8), which aims to identify the impact of the educational curriculum on the Posner model of conceptual change in analytical thinking, cognitive achievement and arbitration performance in handball. And to identify the preference of the effect between the educational curriculum in the Posner model of conceptual thinking, cognitive achievement, arbitration performance, and the approach used in the teaching mechanism by the teacher in the post-tests for the students of the fourth stage, the College of Physical Education

and Sports Sciences, University of Karbala. The research was conducted on a sample of (46) female students, and the results indicated that there is a positive effect of the educational curriculum according to the Posner model of conceptual change in developing analytical thinking, cognitive achievement, and arbitration performance in handball for female students.

### **1-2 Introduction and the importance of research:**

The Posner model is one of the most important models developed to modify and develop misconceptions. The model relies on constructivist theory as a theoretical basis for it. It corrects the misconceptions of learners and provides them with correct perceptions.

Posner's model is not based on replacing old concepts with other alternative concepts only, but rather it is based on the interaction of new concepts with old ones in order to change, modify and correct them so that learners' knowledge is integrated for effective learning events.

The game of volleyball is one of the most important sports that has enjoyed a great deal of development, whether in the physical, mental or skill aspects, which has brought the game to the pinnacle of excitement and challenge.

It is one of the very popular games, which includes several and difficult skills at the same time due to the limited handling of it within the limits of one touch within a small field and a short time, so players must deal with skillful performance with high knowledge and accuracy in order to get points and win the round and the match, and most importantly What distinguishes the game of volleyball is that it is not abstract performances and skills, but rather legal knowledge concepts that are inseparable from the skill side, eventually forming an integrated building. Improvement of the learning process and increase the motivation of the learners, hence the importance of the research in trying to use a modern model that deals seriously with the learners according to their internal motives to develop the skill of blocking the wall and in a way that meets their desires, as the researchers are keen to deliver this study to the level of great benefit for the learners in order to create a new generation Educated according to the latest educational models.

### **1-3 Research problem:**

Through the researcher's follow-up of the skillful performance of the young players, the researchers noticed the fluctuation of their actual performance in the blocking wall skill, which may

affect the actual performance and the overall result of the game. Or the methods used in the educational process have a kind of stagnation and ill-conceived repetition that causes boredom and boredom, which leads to not acquiring integrated knowledge of the skillful performance of the blocking wall, which may hinder them to reach the comprehensive performance of skills, and from here the research problem was manifested in not creating a good balance in acquiring And learning knowledge of the basic and different skills in the game of volleyball, which it is hoped that we will seek to achieve in the use of special exercises that are prepared in a scientifically sound and comprehensive way for the skills according to the Posner model to develop the accuracy of the skill of blocking the wall in volleyball for juniors.

#### **1-4 Research Objectives:**

1. Preparation of exercises according to the Posner model to develop the accuracy of the skill of blocking the wall in volleyball for juniors.
2. To identify the effect of the experimental method in developing the accuracy of the blocking skill in volleyball for juniors.

#### **1-5 Research hypotheses:**

1. There are statistically significant differences in the values of the accuracy tests of the pre and post skill of blocking tests for the control and experimental groups, in favor of the posttest.
2. There are statistically significant differences in the values of the tests of the accuracy of the dimension skill of blocking for the control and experimental groups, in favor of the experimental group.

#### **1-6 research areas:**

##### **1-6-1 The human field:**

young players within the clubs of Al-Chibayish and Al-Madinah.

##### **1-6-2 Time range:**

for the period from 1/11/2022 to 1/3/2023.

##### **1-6-3 The spatial field:**

Al-Chibayish Club Hall in Dhi Qar Governorate and Al-Madina Club in Basra Governorate.

## **2) Research methodology and field procedures:**

### **2-1 Research Methodology:**

The researchers used the experimental method in the style of two equal groups (the experimental group and the control group) with two pre and post measurements, which is "the closest and most honest to solving many scientific problems practically and theoretically (Farqad, Farhan. 2022).

## **2-2 Research population and sample:**

The research community is represented by the players of Al-Chibayish clubs and Al-Madina for juniors volleyball players in the governorates of Dhi Qar and Basra, who number (30) players, and they were chosen by the intentional method in order to achieve the objectives of the research, as the intentionality is in which the choice is free from the researchers according to the nature of his research and in order to achieve the goal of the study (Kazem. 2021). The sample was selected from (24) players, as it was divided into two groups (control and experimental), (12) players as an experimental sample from the players of the Chibayish club in the district of Chibayish and (12) players from the city club for juniors volleyball players in the district of Medina as a control sample and (6) players from the research community as an exploratory sample, and the exploratory sample was chosen randomly (lottery). The researchers also conducted homogeneity and equivalence for the research sample, and it was found that the sample is homogeneous if the value of the coefficient of difference is (30) or less than (Noor, J. 2022), and it was found that there are no significant differences This indicates that the two samples are equivalent in all variables.

## **2-3 Methods, tools and devices used in the research:**

### **2-3-1 Means of collecting data and information:**

1. Arabic and foreign sources.
2. Tests and measurements.
3. Test results registration forms.

### **2-3-2 Tools and devices used in the research:**

1. Volleyballs number (14). Whistle number (2).
2. Wooden crates with a height of (80) cm<sup>3</sup>.
3. An electronic medical device for measuring weight and height.
4. A rubber rope with a length of (1) m.
5. Signs and cones number (10).

## **2-4 Tests used in the research:**

### **2-4-1 A successful test of the technical performance of the blocking wall skill (individual) from a good reception or defense ball (6-74):**

The purpose of the test: to measure the accuracy of the technical performance of the players in the blocking skill against an offensive performance from a good receiver or defense ball.

**Tools used:** volleyball court, (15) balls, (3) wooden boxes measuring (80 cm<sup>3</sup>).

**Performance specifications:** The testers stand to perform the blocking wall skill in the centers (2-3-4), and the preparer in the center (3) in the opposite field prepares from the ball coming from the coach who is in the center (6) to determine the location of the attack in one of the offensive centers (2-2). 3-4), the testers move to perform the blocking wall appropriate to the type and location of the attack and tackle the ball coming from the attackers standing on boxes in the opposite field in the centers (2-3-4), as they attack with the balls they carry and not with the balls prepared by the preparer.

**Conditions:** The testers had three (3) attempts for each attempt to block an unknown direction.

**Scoring:** (5) marks are given for each attempt to block the attacking ball from the opposite position and it falls directly into the opponent's court.

- (4) marks are given for each individual attempt to block the ball and reach the team's defense for the purpose of building the counter attack.

- (3) marks are given for each attempt to block the ball and return it to the opposing team (with the possibility of attacking again).

- (2) marks are given for each attempt to block the ball as it goes out of the field (close to the sideline).

- One (1) mark is given for each attempt made by the player to move without blocking the ball.

A zero is given for each failed attempt.

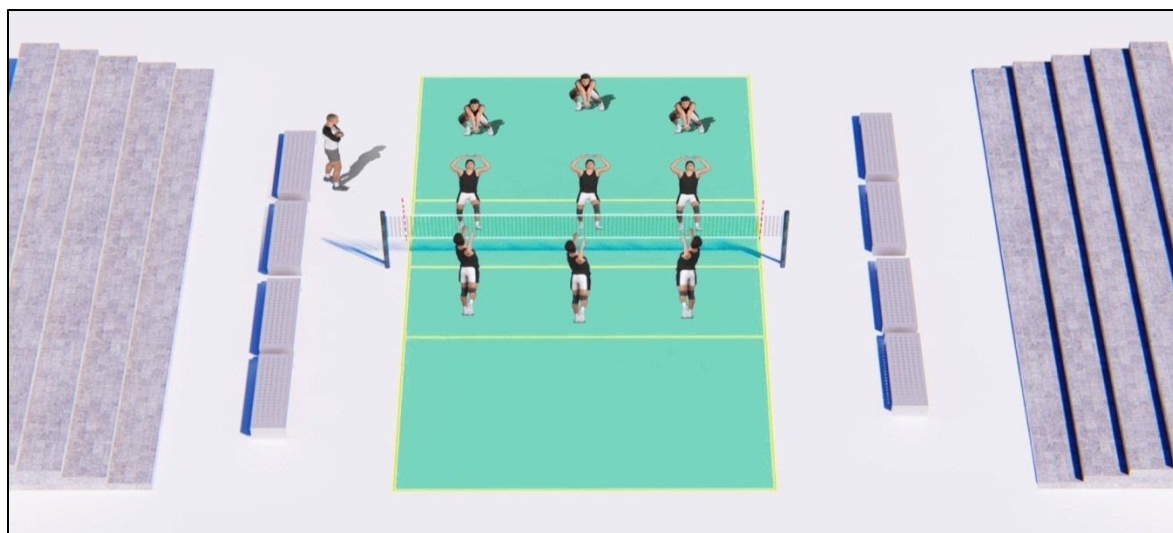


Figure (1) shows a successful test of the technical performance of the blocking wall skill (individual from a good reception or defense ball).

### **2-4-2 A successful test for the technical performance of the blocking wall skill (duo) (6-76):**

The purpose of the test: measuring the accuracy of the technical performance of the players in the blocking wall skill against an offensive performance from the center (2-4).

**Tools used:** volleyball court, (15) balls, (3) wooden boxes measuring (80 cm<sup>3</sup>).

**Performance specifications:** the testers stand to perform the blocking wall skill in the centers (2-4), and the preparer in the center (3) in the opposite field prepares from the ball coming from the coach who is in the center (6) to determine the location of the attack in one of the offensive centers (2-4). The testers move and form a bilateral blocking wall appropriate to the type and location of the attack and tackle the ball coming from the attackers standing on boxes in the opposite field in the centers (2-4), as they attack with the balls they carry and not with the balls prepared by the preparer.

**Conditions:** The testers had three (3) attempts to block the unknown direction.

**Scoring:** (5) marks are given for each attempt to block the attacking ball from the positions (2-4) of the opposite court, and it falls directly inside the opposing team's court.

- (4) marks are given for each attempt to block the ball and reach the team's defense for the purpose of building the counter attack.
- (3) marks are given for each attempt to block the ball and return it to the opposing team (with the possibility of attacking again).
- (2) marks are given for each attempt to block the ball as it goes out of the field (close to the sideline).
- One (1) mark is given for each attempt they made to move without blocking the ball.

A zero is given for each failed attempt.

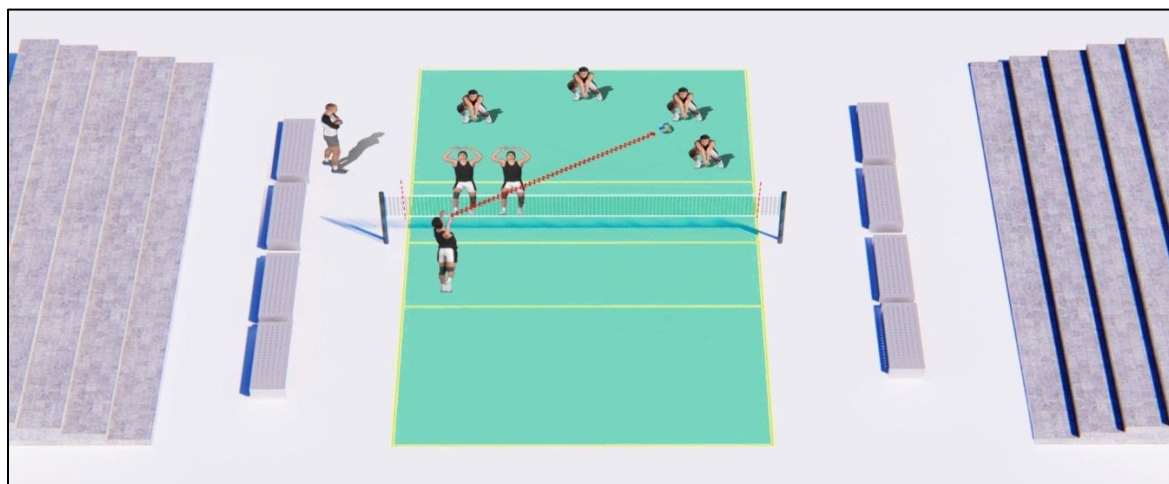


Figure (2) shows a successful test of the technical performance of the blocking wall skill (duo) from a good reception or defense ball.

## **2-5 Exploratory Experience:**

In order to identify the obstacles and difficulties that may arise during the main experiment, as well as to know the validity of the devices, means and tools used, in addition to knowing the negatives that the researchers will face in order to avoid them, the researchers conducted an exploratory experiment in the hall of the Al-Chibayish Sports Club on Friday 11/4/2022 at Nine o'clock in the morning on a sample of (6) players from outside the original sample to find out the validity of the skill tests used and the applicability of them. The aim was:

1. Identifying the difficulties and obstacles that the researchers face in order to avoid them in the future.
2. Ensure that the devices and tools used in the skills test are suitable for the sample.
3. Knowing the appropriateness of the tests on the research sample.
4. Identify the time each player takes to perform the test.
5. Efficiency of the supporting work team.

## **2-6 Pre-test:**

The pre-test was conducted for the two research samples (experimental and control) at nine o'clock in the morning, on Saturday and Sunday corresponding to 5/11/2022, as the test included the skill side of the individual and bilateral barrier, while the control sample was tested on Sunday, corresponding to 6/11/2022.

## **2-7 Educational Curriculum:**

After conducting the exploratory experiment and ensuring the validity of the procedures followed, the tests, and the method of applying the exercises, the main experiment was implemented by proceeding with the application of the educational units based on special exercises according to the Posner model on the experimental research sample of (12) players representing the youth players of the Al-Chebayesh Sports Club. In Dhi Qar Governorate, volleyball was played on Saturday 11/11/2022, with three educational units per week and for days (Saturday, Monday and Wednesday) of each week, as the total educational units reached (18 educational units) distributed over (6) weeks, and the time of the educational unit was (90) minutes, with a total time of (1620) minutes, and the times of the educational units were at 3:30 in the afternoon, under the supervision of the responsible trainer, and the implementation of the curriculum was completed on Friday 12/23/2022.

## **2-8 exercises used:**

After the researchers looked at some of the available scientific sources and research related to the subject of the research, he prepared exercises aimed at developing the accuracy of the skill of blocking volleyball for juniors. Dhi Qar Governorate for the experimental sample, and the application of the exercises took (6) weeks, with (3) educational units, with a time limit of (90) minutes. On the members of the experimental research sample, the researchers took into account the principle of gradation from easy to difficult in implementing the exercises, as well as introducing exercises that simulate the actual performance and all expected conditions during the



match, as well as using the element of motivation and encouragement for optimal performance, especially that they are in an age group who have a love of appearance and distinction. The vocabulary exercises were implemented on the experimental group by the trainer and under the supervision and guidance of the two researchers.

### **2-9 Post-test:**

The post-test was conducted for the experimental research sample at nine o'clock on Friday, 12/30/2022, as the test included the skill side of the individual and double blocking wall, while the control sample was tested on Saturday, 12/31/2022.

### **2-10 The data were processed statistically through the use of the statistical bag program (SPSS ver. 20).**

### **3) Presentation, discussion and analysis of the results:**

#### **3-1 Presenting the results of the pre and post wall tests for the control and experimental groups:**

**Table (1)  
shows the results of the pre and post wall tests for the control group**

significance level (sig)	t value	Post-test		Pretest		
		standard deviation	Arithmetic mean	standard deviation	Arithmetic mean	
0.035	5.058	1.44338	8.9167	2.19331	6.4167	Double push test center 2
0.037	4.921	1.56428	9.4167	0.8528	7.0000	Double push test center 4
0.024	5.867	1.23091	9.6667	1.87487	7.6667	Individual bump test

**Table (2)  
shows the results of the pre and post wall tests for the experimental group**

significance level (sig)	t value	Post news		Pretest		
		standard deviation	Arithmetic mean	standard deviation	Arithmetic mean	
0.043	9.95	0.65134	10.6667	1.23091	6.6667	Double push test center 2
0.032	9.464	0.75378	11.25	1.5667	6.5	Double push test center 4
0.028	10.344	0.66856	11.0833	1.3817	6.5	Individual bump test

#### **3-2 Discussing the results of the pre and post wall tests for the control and experimental groups**

It is clear from the results shown in tables (1-2) the emergence of significant differences in all the values of the individual and double wall tests in volleyball for the control and experimental research groups, which are less than the value of (0.05), which the researchers attribute to the regularity of the learners in the learning process during the application of the exercises that have been prepared. It is sufficient to bring about a clear development in the skill of blocking the wall of the research sample, and this was confirmed by (Muafaq, 2019) "It is a natural manifestation of the learning process that there must be a development in learning as long as the trainer follows the steps and sound foundations in the educational process and rehearses the correct performance. And focus on it until the performance is consolidated and steadfast" (8-273), in addition to the fact that the nature of the various exercises that were used by the learners during the application and repetitions for the purpose of the occurrence of the response and thus the occurrence of improvement and development in performance as it develops among the learners an increasing desire towards the educational process and therefore requires its performance. Regular motor abilities, and the researchers attribute the development in the skillful performance in the two research groups as a result of the use of special exercises with variable stimuli such as the height and drop of the ball and the speed and direction of the ball. The place where it fell and where the player stood, all these stimuli had a positive impact on the development of the skill side, as well as the good choice of the type of exercises that gave interaction with the interesting educational atmosphere, This agrees with what was mentioned by (Noor,J, 2022) "The trainer should give the largest possible amount of repetitions when performing any exercise to develop the required skill or characteristic" (2-51), and the researchers attribute this development in the skillful performance to the nature of the exercises according to the Posner model. Which was prepared as a result of the logical sequence from simple to complex, which had a significant impact on a significant improvement of this skill, as the nature of the exercises that were used by the trainer occur with different degrees of strength and effectiveness, as the learners perform the skills.

### **3-3 Discuss the results of the post-test of the experimental and control groups:**

**Table (3)**  
**shows the results of the post barrier tests for the control and experimental groups**

significance level (sig)	t value	experimental group		the control group		
		standard deviation	Arithmetic mean	standard deviation	Arithmetic mean	
0.046	4.494	0.65134	10.6667	1.44338	8.9167	Double push test center 2
0.046	4.461	0.75378	11.25	1.56428	9.4167	Double push test center 4
0.029	5.484	0.66856	11.0833	1.23091	9.6667	Individual bump test

It is clear from the results shown in Table (3) that there are significant differences in all the values of the performance tests of the accuracy of the individual and double wall blocking skill in volleyball for the two research groups, which are less than the value of (0.05) and in favor of the

post-test of the experimental group, as the researchers see that the credit is due to the exercises that were done its use, which focused on the players taking the appropriate and correct position for the entire body movements or parts of it, such as the movements of the torso, the arms, the torso, and the legs, which were very similar to the ideal performance position, which fits the requirements and requirements of the skill of blocking and for the various positions and formations, as some exercises contained giving a full explanation to the player about the performance The right one that fits with the various formations so that the ball paths are in an unknown direction, which requires the player to take the correct and appropriate position for the movement of the body with strong anticipation of the path of the ball in order to shorten the period of time that can be prolonged in the event that the path of the ball is known for the learners, as it is natural to help The approach followed by the trainer in achieving a percentage of learning and development as long as this development is commensurate with the effectiveness of the curriculum in achieving The set goals, in addition to that the repetition of the exercises gives stability in the skillful performance that can only be achieved through practice and repetition coupled with a high and careful understanding of the instructions (7-101), as the researchers believe that no improvement and development can occur in the performance of the learners without following the methodology Regular and prepared in a scientifically sound way, and the development of the control group is due to the continuity and regularity in the training and learning that the learners followed during the implementation of the regular curriculum prepared by the trainer responsible for teaching the control group, which was an important link in the preparation program and at all levels, as the The repetition of the players in the control group learning technical skills for a period not short of (6) weeks has increased the interdependence between the basic components of the different skills, and the amount of practice it takes for the player to learn a specific skill or more, individual or compound, will inevitably lead to improving and developing skill performance. This is what (Muhammad Oneissi Joy and Ahmed Hassan) indicated (that the use of the optimal approach and method is the main engine of the educational process in order to develop educational experiences that lead to the achievement of learning goals.

#### **4) Conclusions and recommendations:**

##### **4-1 conclusions:**

The researchers concluded the following points:

1. The exercises prepared according to the Posner model contributed to the development of the accuracy of the blocking skill in volleyball for juniors.
2. Following the scientific foundations and methods when implementing educational curricula greatly develops the level of skill performance.

##### **4-2 Recommendations:**

The researchers exposed the following points:

1. Follow the scientific foundations, methods and methods to develop educational and training curricula that will develop and improve the level of skillful performance, especially among young volleyball players, to find out their real levels.
2. Conducting more studies and research according to the Posner model in teaching other skills in the game of volleyball.

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### Appendix unit

Notes	exercise	exercise time	Sections of the unit
<ul style="list-style-type: none"> <li>- Emphasis that the fingers are open and tight and the palms are adjacent.</li> <li>- Emphasis on the performance of the bilateral repulsion at the same time and at one height.</li> <li>- The player must perform the movement with great grace.</li> <li>- Emphasis should be placed on the position of the palms, as the left midfield player's palm should be in front of the ball.</li> <li>- The player must enjoy the agility of movement and face the opponent's court when moving.</li> </ul>	<ul style="list-style-type: none"> <li>- The individual blocking wall exercise from the three front positions without balls. The blocking player must take the appropriate body position in terms of extending the arms and directing the palms downward, with an emphasis on crossing the arms towards the opposing court.</li> <li>- Double blocking exercise from positions 4 and 2 without balls. The blocking players must take the appropriate body position in terms of extending the arms and directing the palms downward, with an emphasis on the arms being adjacent to each other.</li> <li>- An exercise by 3 attackers on the terraces of the other side of the court, and one blocking player performs the blocking process according to the signal of the coach standing behind the player, who gives the signal to carry out the attack. The blocking player must move at high speed towards the attack while maintaining the accuracy and agility of the individual movement.</li> <li>- An exercise by 3 attackers on terraces in the opposing court, the purpose is to form a double blocking wall, as the players perform the blocking process according to the signal of the coach standing behind the player who gives the signal to attack, the blocking players must move at high speed towards the place of the attack while maintaining accuracy and agility Bilateral movement.</li> <li>- Individual blocking exercise from 4 The player moves sideways and touches the attack line to perform the defense operation, then returns quickly to perform the blocking operation against the attack from position 2 of the opposing court.</li> <li>- Individual blocking exercise from position 4, as the player makes a lateral movement and touches the attack line to perform the defense operation, then returns quickly to perform the blocking operation against the attack from position 2 of the opposing court.</li> </ul>	<p>60</p> <p>5 m</p> <p>15 m</p> <p>15 m</p> <p>15 m</p> <p>10 m</p>	<p>main section</p>