

DOI: <https://doi.org/10.54702/tzhseb37>**The effect of the mastery learning strategy on the mental toughness and skill performance of receiving the serve in volleyball for students**Nahida Abid Zaid Al-Dulaimi <sup>(1)</sup> ✉, Firas Suhail Ibrahim <sup>(2)</sup> ✉, Azhar Hussein Ulaiwi <sup>(3)</sup> ✉

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**Received: 29/01/2024, Accepted: 18/02/2024, Published: 30/04/2024**This work is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/), © Modern Sport**Abstract**

The problem of the research is that, although the time available is sufficient to learn volleyball skills, it is not sufficient to achieve the degree of mastery of these skills, especially the skill of receiving the serve. The reason for this may be due to the educational strategies, methods and approaches used in the educational process, as well as the lack of interest in the aspects of learning. This skill, especially the psychological aspect and the appropriate psychological abilities, especially mental toughness, which means that the student reaches the maximum possible performance or performance that exceeds his capabilities, so the matter requires thinking about using effective, organized learning strategies based on scientific foundations that may contribute to this psychological ability and then Reaching the skill performance of receiving the serve to a good degree of proficiency. The research aimed to prepare a measure of mental toughness for the students as well as identifying the effect of the learning strategy for mastery on the mental toughness and skill performance of receiving the serve with volleyball for the students. The researchers followed the experimental approach by designing two equal groups with pre- and post-tests. The research community was represented by the students of the second stage in the College of Physical Education and Sports Sciences at the University of Babylon, amounting to (132) students, and the main research sample was chosen with a number of (30) students who were divided into two groups, experimental and control, equally, and parity was found between them after the pre-tests were conducted and then Applying the mastery learning strategy to the students of the experimental group, during a period of (4) weeks, with two educational units per week (2), and with a time of (90) minutes for the educational unit. After completing the application of the strategy, post-tests were conducted on the research sample, and after obtaining the results and processing them statistically, several conclusions were reached, the most important of which is that the learning strategy for mastery plays a major role in increasing the mental toughness and skill performance of receiving the volleyball serve for students. and this achieves one of the sustainable development goals of the United Nations in Iraq which is (Quality Education). According to the researchers recommended the necessity of adopting the learning for mastery strategy in learning to receive the volleyball serve for students, in addition to emphasizing the conduct of continuous tests for students regarding the variables. Psychological and mental.

**Keywords****Strategy, mastery, mental toughness, performance****Introduction:**

The educational process depends largely on educational strategies in order to achieve the goals of the educational process, which is to bring the learner to good skill performance. One of these strategies is the mastery learning strategy, which

emphasizes the student's understanding of the nature of the skill that he will learn and continue to learn, by dividing the educational content into educational units. Providing tests at the end of each educational unit, providing appropriate feedback to correct the student's mistakes and

overcoming the difficulties he faces, after each test, while allowing an appropriate time for learning within the original time of the educational unit in order to overcome the difficulties by providing alternative educational opportunities. In addition, the strategy provides Mastery learning provides the opportunity for the student to proceed with his learning at his own pace so that he receives the assistance he needs in doing so. The process of learning kinetic skills includes complex stages, varying in degree of difficulty from one stage to another. This process takes place as a result of exercises aimed at controlling the skill, knowing its stages, and trying to master it. These experiences at the beginning of the educational process require a great effort from the student and do not stop when learning the raw form. For the skill, it continues until the student is able to make the necessary modifications and achieve the accurate and appropriate form for the learned kinetic skill, as (Al-Borai Ibrahim Al-Sayed Qabil et al.) point out, "Mastery of the kinetic skill is based on reaching good levels in various sports, no matter how high the level of the student's physical abilities is, and no matter how characterized he is." He has congenital and voluntary characteristics, so he will not achieve the desired results, as all of this is linked to complete mastery of that kinetic skill in the type of sporting activity in which he specializes." (1). Volleyball, as (Al-Dulaimi) state, is "one of the most fortunate sports games to utilize modern applications to achieve the highest levels of learning, as it is a game characterized by several different skills, including offensive and defensive ones." (5), and among the defensive skills is the skill of receiving the serve, which, As (Muhammad) points out, "It is one of the defensive skills of great importance in volleyball, which is receiving the ball sent by the opposing team player in order to prepare it for the prepared player or teammate on the court in order to absorb its speed and strength and pass it from the bottom to the top with the forearms according to the strength of the ball or the ball." Its sponsorship and the status of the future player Therefore, it is a skill that is not easy to acquire. Rather, it requires time and strategies built on special, sound foundations. This is in addition to the necessity of providing the student with many psychological

and mental abilities, especially mental stamina, so that the student can perform this skill well and deliver the ball to a colleague without making mistakes, as it is a skill that is not easy to acquire. Mental toughness is a multi-dimensional psychological component that crystallizes the way in which an individual responds to difficult situations and recovers from shocks and problems, as it includes many positive psychological sources that affect how an individual evaluates and responds to a situation in a way that enables him to continue achieving his goals. (11). On this basis, the importance of the research lies in adopting a learning strategy for mastery in increasing mental toughness and learning the skill of receiving a volleyball serve for students, as it is one of the important kinetic learning strategies that aims to advance the level of skill performance in all its aspects and form it completely. Through the experience of researchers in teaching the volleyball course for the second stage at the College of Physical Education and Sports Sciences at the University of Babylon, they noticed that the time available, although sufficient to learn volleyball skills, is not sufficient to achieve the degree of mastery of these skills, especially the skill of receiving the serve, and the reason may be due to This is due to the educational strategies, methods and approaches used in the educational process, in addition to the lack of interest in the aspects of learning this skill, especially the psychological aspect and the appropriate psychological abilities, especially mental toughness, which means that the student reaches the maximum possible performance or performance that exceeds his capabilities. Therefore, the matter calls for thinking about... Using effective, organized learning strategies based on scientific foundations may contribute to this psychological ability and then bring the skill performance of receiving the serve to a good degree of proficiency.

#### **Research objectives:**

- Preparing a volleyball mental toughness scale for students.
- Identify the effect of the mastery learning strategy on mental toughness and skill performance of receiving serve.

**Research hypothesis:**

- The learning strategy for mastery has a positive effect on the mental toughness and skill performance of serving volleyball for students.

**Research fields:**

- Human field: Second-year students in the College of Physical Education and Sports Sciences at the University of Babylon
- Time field: (23/10/2023) to (12/12/2023)
- Spatial field: The indoor sports hall in the College of Physical Education and Sports Sciences at the University of Babylon

**Definition of terms:**

- 1- **The learning strategy for mastery:** As (Salem) referred to it, it is “a strategy for teaching an educational subject sequential in a hierarchical manner, where the educational material to be taught is divided into units, each of which is given in one class or in several classes, and the student is given a test at the end of the unit. If They did not reach the degree of mastery in the required performance. 85% more are provided with additional time

and teaching until they are able to reach the degree of mastery of basic skills (9).

- 2- **Mental toughness:** (As Al-Laithi) pointed out, it is “the individual’s ability to achieve and perform effectively in stressful situations, and demonstrates effective control, defying difficulties, commitment, and acting with confidence” (7).

**Research Methodology:**

The researchers followed the experimental method by designing two equal groups with a pre-test and a post-test, as it suits the nature of the research problem and its objectives.

**Community and sample research:**

The research community and its sample: The research community was represented by the students of the second stage in the College of Physical Education and Sports Sciences at the University of Babylon. Their number was (132) students. The research sample was chosen randomly. The number of (30) students was divided into two groups, control and experimental, equally, and in a percentage (22.72%), and the researchers moderated the data for the research sample in the variables (chronological age, height and mass), as shown in Table (1).

**Table .1** shows the moderation of data for the research sample in the variables (chronological age, height and mass)

No.	Variables	Mean	Std. Deviations	Mode	Skewness
1	Chronological age/year	20.18	0.32	20	0.56
2	Length/cm	173.89	4.56	171	0.64
3	Mass/kg	66.72	3.23	65	0.52

Table (1) indicates that the skewness coefficients for the selected variables are less than (+1), which confirms that these variables are moderately distributed.

**Tests:**

1- **Mental Toughness Scale:** To measure the students’ mental toughness, the researchers adopted the special scale prepared by the researcher (12), and the paragraphs of this scale were presented to a group of experts and specialists in the fields of (kinetic learning and volleyball) (Appendix 1), and after To extract the results, all (28) paragraphs were approved with a correction key based on four alternatives: (always,

often, sometimes, never) according to a scale of degrees (4, 3, 2, 1) for the positive paragraphs and vice versa for the negative paragraphs, and thus the highest score of the scale is (112) degrees, the lowest score of the scale is (28) degrees, with a hypothetical average of (70) degrees (Appendix 2).

2- **Determining the skill of receiving serve with volleyball and its tests:** - The skill of receiving serve with volleyball was determined and it is part of the educational curriculum for second-year students in the College of Physical Education and Sports Sciences at the University of Babylon. Tests for this skill were determined, and they are standardized tests used according to the

specifications of the research sample itself. (Appendix 3).

#### **Exploratory experiment:**

The exploratory experiment of the scale was conducted on a sample of (10) students from outside the main research sample, on 22/10/2023, at nine in the morning in the closed sports hall in the College of Physical Education and Sports Sciences at the University of Babylon, in the presence of the assistant work team.

#### **Scientific transactions for the mental toughness scale and the skill performance test:**

- 1- Validity coefficient: The researchers used apparent validity, by preparing special questionnaires to measure mental toughness and the skill performance test, and they were presented to a group of experts and specialists (Appendix 2). After the process of collecting the questionnaires and extracting their results, the validity of the scale and skill performance was calculated, as follows. Shown in Table (2).
- 2- Stability coefficient: Extracting the stability coefficient to test skill performance. The researchers adopted the test and retest method, as the first application was done on the exploratory sample of (10) students on 23/10/2023, and after 7 days the second application was repeated on the same sample, i.e. On 30/10/2023, the results of the reliability coefficient were extracted, as shown in Table (2). As for the reliability coefficient of the mental toughness scale, the researchers used

the half division method, as the researchers divided the scale's (28) items into Two halves, odd items and even items. The correlation coefficient between the total scores of the two halves was extracted using the simple correlation coefficient (Pearson). The value of the simple Pearson correlation coefficient was (0.78), as the extracted correlation coefficient means reliability for only half of the test, in order to obtain complete reliability of the test. The researchers applied the Spearman-Brown correction equation and thus reached the value of the reliability coefficient for the Motivation Types Scale. (0.89) which is a high indicator of the reliability of the scale.

- 3- Objectivity coefficient: - With regard to the objectivity of the measure, the researchers chose the multiple-choice method, in addition to the fact that the test of the accuracy of the performance of the serve reception has specific and clear instructions and degree of measurement, and since this type of measure and test, a clear solution key is provided for it, there is no difference between two people. From raters or arbitrators, which gives the measure and test high objectivity. As for the test of the technical performance of receiving serve in volleyball, an objectivity coefficient was calculated by finding the correlation between the scores of two raters (Appendix 4), and after processing it statistically, it was found that the test has a degree of objectivity. High as shown in Table (2).

**Table .2** shows the values of the scientific parameters for the measure of mental toughness and skill performance for receiving serve

No.	Tests	Validity	Stability	Objectivity
1	Mental toughness/degree	% 100	0.95	-
2	Technical performance of receiver to serve /degree	% 100	0.92	0.93
3	Serve reception performance accuracy/degree	%100	0.94	-

#### **Pretests:**

The pre-tests for the mental toughness scale and the skill performance test for receiving serve were conducted on the research sample of (28) students on 11/6/2023 at nine in the morning in the closed sports hall in the College of Physical Education and Sports Sciences at the University of Babylon, in the presence of the assistant work team.

#### **Equality of the two groups:**

To begin with a single starting line, the researchers conducted the process of equalizing the two groups in the variables of mental toughness and skill performance of receiving serve with volleyball, based on the results of the pre-tests, as shown in Table (3)

**Table .3** shows the equality of the two groups in the measure of mental toughness and skill performance for receiving serve

No.	Variables	Experimental group		Control group		T value Calculated	Type sig
		Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation		
1	Mental toughness/degree	66.38	4.45	67.72	4.17	0.92	Non sig
2	Technical performance of receiver to serve /degree	2.56	0.79	2.68	0.82	0.89	Non sig
3	Serve reception performance accuracy/degree	11.97	2.35	12.24	2.53	0.48	Non sig

Table (3) indicates that the calculated (t) values for the measure of mental toughness and skill performance for receiving serve were smaller than its tabulated value of (2.05) at a significance level of (0.05) and a degree of freedom (28), and this indicates the equality of the two research groups in These variables.

#### **Learning Strategy Vocabulary for Mastery:**

The Learning Strategy Vocabulary for Mastery was applied to the students of the experimental group on 13/11/2023, in the closed sports hall at the College of Physical Education and Sports Sciences - University of Babylon. This application included the following procedures: -

- 1- The implementation time took (4) weeks.
- 2- Number of educational units per week (2 units) (Appendix 5).
- 3- The learning strategy for mastery with skill exercises (Appendix 6) was applied in the main part of the educational unit and its time is (60) minutes, which contributed to meeting the desires of the students of the experimental group and increasing their motivation towards learning the skill of receiving serve with volleyball, according to the following steps: -
  - Determine what students are expected to learn from the objectives of the educational units related to the serve reception skill.
  - Conducting a pre-performance (diagnostic) test for all students to identify the nature of their performance of the serve receiving skill after giving them one introductory educational unit.
  - Displaying the skill of receiving serve and attracting students' interest in it.

- Giving feedback in educational units and diagnosing difficulties through inter-tests in each unit with data that express the nature of the modification of students' learning and determining the degree of mastery in these tests at (80%-90%).
- Diversity of educational alternatives (educational booklet, educational poster, data show) to confront difficulties in learning the skill of receiving serve.
- The teacher motivates the students and informs them of what he expects them to learn and the level they want to reach in learning the skill of receiving serve.
- The teacher's explanation of the skill of receiving serve, explaining the errors and their treatment revealed by the formative tests, and determining the levels of students who have mastered and those who have not.
- Providing the opportunity for proficient students to practice additional activities or participate in helping non-proficient students. After the teacher finishes the corrective feedback, he begins the second unit, the third, and so on.
- The teacher diagnoses the difficulties of learning the skill of receiving serve by relying on students' self-correction or performing this process himself.
- The teacher took into account the increase in the available and specified time, especially in the first educational units over the last units, as the time available at the beginning of the educational units clearly helped the students reach the level of mastery.
- Applying summative tests for all students, and determining their level of proficiency, as this type of test provokes each student to compete

with himself and with the skill of receiving the serve that he is required to learn.

- 4- The control group followed the educational method used by the subject teacher.

**Post-tests:** The post-tests were conducted after completing the implementation of (8) educational units over a period of (4) weeks, on 12/12/2023, under the same conditions and conditions as the pre-tests, in terms of the time and place of the tests, and in the presence of the assistant work team.

**Statistical methods:** The researchers used the following statistical methods: (3).

Percentage. -Arithmetic mean. -standard deviation. -Simple correlation coefficient (Pearson). -T-test for symmetrical samples. -T-test for independent samples.

### **Results and discussion:**

**Presenting, analyzing and discussing the results of the differences between the pre- and post-tests of mental toughness and skill performance of receiving serve with volleyball for the experimental group:**

**Table .4** shows the values of the arithmetic means, standard deviations, and the (t) value calculated between the pre- and post-tests of mental toughness and skill performance of receiving serve with volleyball for the experimental group.

No.	Variables	Pre-test		Post-test		T value Calculated	Type sig
		Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation		
1	Mental toughness/degree	66.38	4.45	96.42	2.61	7.86	Non sig
2	Technical performance of receiver to serve /degree	2.56	0.79	7.84	0.52	6.45	Non sig
3	Serve reception performance accuracy/degree	11.97	2.35	22.76	1.05	6.59	Non sig

Table (4) indicates the calculated (t) values between the pre- and post-tests of mental toughness and skill performance of receiving serve with volleyball for the experimental group, as it was greater than its tabulated value of (2.14) under a degree of freedom (14) and at a significance level (0.05), which indicates There are significant differences between the pre- and post-tests and in favor of the post-tests. The researchers attribute the reason for these differences to the positive effect of the mastery learning strategy that was prepared on scientific foundations that were appropriate to the learning level of the members of this group, in increasing their mental toughness and learning to receive serve, which requires many abilities. Psychologically and mentally, as this strategy sought to provide the student with successful learning experiences, it helped the students of this group to perform well in receiving serve by directing each student in the context of group

learning, as the most important characteristic of this strategy is the significant improvement in the continuous feedback tools, In addition to the diversity of means to help correct errors in skill performance, the learning strategy for mastery focuses on making most students reach a high level of skill performance, as it depends on making little variation between them, by providing special feedback for the skill to be learned, and giving students who They need additional time for that feedback in order to reach the level of mastery required of them while learning the skill, and this is consistent with what was mentioned by (Al-Dulaimi, and Ahmed) that “feedback works to direct the player towards achieving a specific goal or standard, in addition to that it contributes to evaluating The link between the stimulus and the kinetic response, and it also works to encourage appropriate kinetic responses when performing repeatedly, because

encouragement clarifies to the player what is required of him in the correct manner” (2).

### Presenting the results of the differences between the pre- and post-tests of mental

**Table .5** shows the values of the arithmetic means, standard deviations, and the calculated (t) value between the pre- and post-tests of mental toughness and skill performance of receiving serve with volleyball for the control group.

No.	Variables	Pre-test		Post-test		T value Calculated	Type sig
		Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation		
1	Mental toughness/degree	67.72	4.17	84.95	3.48	6.17	Non sig
2	Technical performance of receiver to serve /degree	2.68	0.82	5.87	0.73	4.63	Non sig
3	Serve reception performance accuracy/degree	12.24	2.53	17.92	1.54	5.92	Non sig

Table (5) indicates the (t) values calculated between the pre- and post-tests of motivation and the serve skill in volleyball for the control group. They were greater than their tabulated value of (2.14) under a degree of freedom (14) and at a significance level (0.05), which indicates the presence of significant differences between the pre- and post-tests are in favor of the post-tests. The researchers attribute this result to repetition and practice enhanced with feedback in the process of learning the serve skill in volleyball, in addition to the regular application of these repetitions and performing them correctly and

### toughness and skill performance of receiving serve with volleyball for the control group, analyzing and discussing them:

guided by the subject teacher, which made the students of this group accept to learn the serve reception skill. He played volleyball with good strength, and this is consistent with what was mentioned by (Al-Dulaimi, and Yusra) that “the many repetitions that the learner practices during practical application help learning (4) ”.

### Presenting, analyzing and discussing the results of the differences in the post-tests of mental toughness and skill performance of receiving serve with volleyball for the experimental and control groups:

**Table .6** shows the values of the arithmetic means, standard deviations, and the calculated (t) value in the post-tests of mental toughness and skill performance of receiving serve with volleyball between the experimental and control groups.

No.	Variables	Experimental group		Control group		T value Calculated	Type sig
		Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation		
1	Mental toughness/degree	96.42	2.61	84.95	3.48	9.47	Non sig
2	Technical performance of receiver to serve /degree	7.84	0.52	5.87	0.73	8.52	Non sig
3	Serve reception performance accuracy/degree	22.76	1.05	17.92	1.54	7.38	Non sig

Table (6) indicates that the (t) values calculated between the pre- and post-tests of mental toughness and skill performance of receiving serve with a volleyball between the experimental and control groups were greater than their tabulated value of (2.05) under a degree of freedom (28) and at a significance level (0.05), which It indicates that there are significant differences between the two groups and in favor of the experimental group. The researchers attribute this result to the major role of the learning strategy for mastery, as it provided the students of the experimental group with different and new learning situations that enabled them to interact and be motivated towards learning the skill of receiving serve and increasing their mental toughness, as the skill of receiving requires Serve volleyball generates continuous interaction from students, and this requires the ability to think, adapt, co-ordinate, and have mental toughness to adapt to changing situations, which are often fast and sudden in playing situations, and thus have fluctuating effects on the emotional state of students that may push them in a single moment from success to failure. Or vice versa, This is consistent with what (Hassan) mentioned, that there are experiments that indicate that “psychological preparation is an educational process that has an effective role in the success or failure of the player, and this is no less important than physical and skill preparation, as success in all of this depends on the feeling of The player with his abilities and the appreciation of others And their look at him was filled with admiration and appreciation” (8).

The researchers also believe that the experimental group’s adoption of the mastery learning strategy helped take into account individual differences among students. Therefore, students who can reach mastery in performance by using one of the educational alternatives differ in the rate and speed of their learning from students who can reach mastery in performance by Using another educational alternative, meaning that using the educational alternative appropriate to the student’s level and allowing sufficient time necessary to master the skill helped increase excitement, keep his mind away from boredom, and increase his psychological toughness, which expresses the student’s ability to continuously strive to achieve

his goals and overcome the difficult situations he faces during Performance, and this is consistent with what (Madeed) stated that mental toughness is “the social tendencies of individuals and the ability to calm down and relax. They are able to compete in many situations with low levels of anxiety, better than others, with a high sense of self-confidence, and they have the ability to self-restraint and control situations.” Emotions during exposure to difficult circumstances” (13).

As it is mentioned in the similar studies (14) & (15)

### **Conclusions:**

- Establishing a measure of mental toughness in volleyball for students.
- The mastery learning strategy has a major role in increasing students’ mental toughness and skill performance to receive volleyball.
- The experimental group that followed the mastery learning strategy outperformed the control group in all research variables.
- The control group achieved a noticeable effect in mental toughness and skill performance of receiving serve with volleyball.

### **Recommendations:**

- The necessity of adopting a learning strategy for mastery in learning to receive serve with volleyball for students.
- It is necessary to pay attention to psychological and mental abilities while learning volleyball skills, especially mental toughness.
- Emphasis on conducting continuous tests for students regarding psychological and mental variables.
- Emphasis on volleyball teachers to diversify kinetic learning strategies in a way that increases students’ ability to perform and creates excitement, suspense and a desire to participate in learning.
- Conducting other studies and research related to psychological, mental, skill and other variables and on other samples of both genders.

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### Appendix 1

Shows the names of the experts and specialists who were presented with the mental toughness scale and the skills performance test

No.	Name	Specialization	Affiliations	Scale	Tests
1	Prof. Dr. Mazen Abdel Hadi	Kinetic learning	University of Babylon - college of physical education and sports sciences	X	-
2	Prof. Dr. Amer Saeed Jassim	Sports psychology	University of Babylon - college of physical education and sports sciences	X	-
3	Prof. Dr. Haider Abdel Reda	Sports psychology	University of Babylon - college of physical education and sports sciences	X	-
4	Prof. Dr. Lama Samir Hamoudi	Kinetic learning-volleyball	University of Babylon - college of physical education and sports sciences for women	X	X
5	Prof. Dr. Basem Hassan Ghazi	Volley ball	University of kufa - college of physical education and sports sciences	-	X
6	Prof. Dr. Maitham Latif Ibrahim	Kinetic learning-volleyball	University of Babylon - college of physical education and sports sciences	X	X
7	Prof. Dr. Wissam Riad Hussein	Kinetic learning-volleyball	University of babylon - college of physical education and sports sciences	X	X
8	Prof. Dr. Hatem Fleih	Kinetic learning-volleyball	University of kufa - college of physical education and sports sciences	-	X
9	Assist. Prof. Dr. Hamida Obaid Abdel Amir	Kinetic learning-volleyball	University of kufa - girls education - department of physical and sports sciences	X	X
10	Assist. Prof. Dr. Mahmoud Nasser	Volley ball	University of kufa - college of physical education and sports sciences	-	X

### Appendix (2)

Shows the mental toughness scale in volleyball for students

Dear student:

In your hands is a measure of mental toughness, which consists of a set of (28) items, each of which has four alternatives, each answer representing a specific choice for your opinion about it. Please read these paragraphs well and answer them with complete precision and transparency to identify your degree of mental toughness, by marking Mark (√) as for the choice that suits you, noting that your answers are for scientific research purposes only, noting that no paragraph is left unanswered, as shown in the following example:

No.	Paragraphs	Always	Sometimes	often	Never
1	I have values and principles that I adhere to.	√			

No.	Paragraphs	Always	Sometimes	often	Never
1	I have values and principles that I adhere to.				
2	I respect those who work hard to achieve their goals.				
3	The joy of learning lies in adhering to the conditions and principles.				
4	I adhere to the values and morals I have acquired.				
5	I do not give up on my goals because my personality is strong.				
6	I do whatever ideas I believe in.				
7	I can control my skill performance in volleyball.				
8	I feel that I am an influential person on the people around me.				
9	I perform my volleyball skills. Efficiently.				
10	I make my own decisions.				

11	I plan effectively to achieve excellence in volleyball skill performance.				
12	I control my emotions in stressful learning situations for volleyball skills.				
13	I rely on myself to perform my volleyball skill duties.				
14	I am confident in my ability to excel with my volleyball skills.				
15	I draw encouragement from my colleagues in the educational unit.				
16	I have experience performing my skill duties in volleyball.				
17	I believe in my ability to withstand the pressures of the educational process.				
18	The learning stage is the stage of proving my abilities.				
19	I feel the help of those around me in planning to excel in my volleyball skills.				
20	I can achieve my ambition no matter the obstacles.				
21	Difficult situations in the educational process provoke my abilities.				
22	I prepare to pass volleyball skill testing situations efficiently.				
23	I find that difficulties reveal my abilities.				
24	I feel that I have the ability to persevere to achieve my goals.				
25	I take the initiative to confront the problems that hinder my skill performance in volleyball.				
26	I feel threatened when faced with the problems I face.				
27	I feel that surrendering to difficult circumstances brings failure.				
28	I would love to continue learning the volleyball skills required of me.				

### Appendix (3)

Shows skill performance tests for receiving serve in volleyball

1- Testing the technical performance of receiving serve in volleyball.(10).

- The purpose of the test:- To measure the technical performance of the skill of receiving serve with the forearms from below.
- Tools used: -3 volleyballs, a legal volleyball court, measuring tape, colored tape, and evaluation form.
- Performance specifications: The student stands in position No. (6), facing the net. The teacher must send the ball to him so that he can receive it and direct it into the front area. Each laboratory student is given three attempts.
- Registration: The performance of the tested student in the three attempts is evaluated by the evaluators (Appendix 3) through direct observation, and the evaluation is of (10) marks for each attempt, as shown in Figure (1).

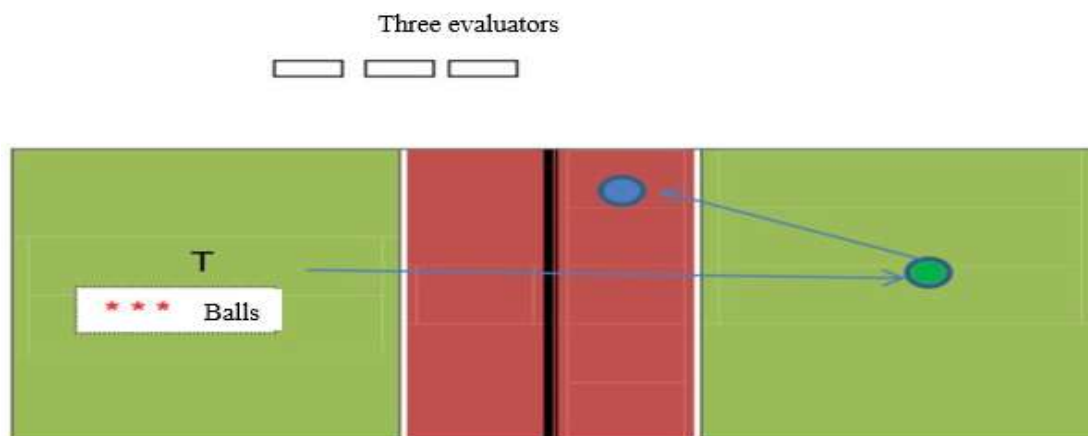


Figure (1) shows the technical performance test of receiving serve with the forearms from below in a volleyball

- 2- Testing the accuracy of the performance of receiving serve with a volleyball. (6).
- The aim of the test: to measure the accuracy of performing the skill of receiving the serve with the forearms from below.
- Tools used: - A legal volleyball court, 10 legal volleyballs, a measuring tape, a colored tape to divide the court, and an evaluation form.
- Performance specifications: - The tested student performs (5) attempts from area (A) to centers (2, 3, 4), and performs (5) attempts from area (B) to centers (2, 3, 4). He must the testing student must commit to receiving serve from the designated area and directing the ball to the center, as shown in Figure (2).
- Registration: The testing student takes the score of the position in which the ball falls, as follows:
  - The ball that falls in the center (4), the tested student receives (1) degree.
  - The ball that falls in the center (3) the student tested receives (2) degree.
  - The ball that falls in the center (2), the student tested receives (3) degree.
  - If the ball falls on the line separating two areas, the score of the higher area is calculated.
  - The maximum score for the test is (30) degree.

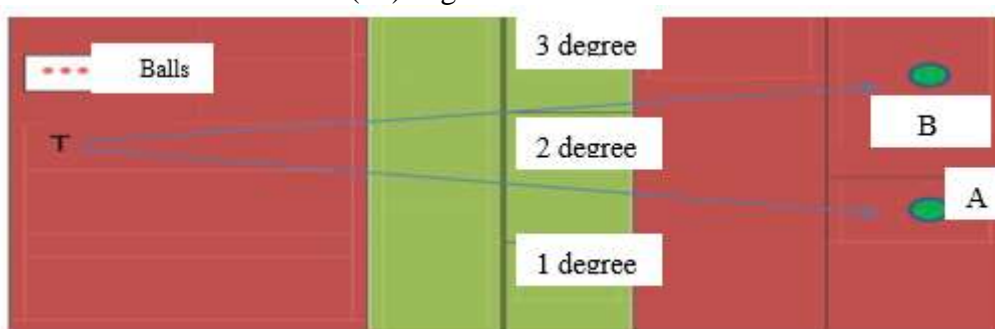


Figure (2) shows the accuracy test of receiving serve from the bottom with the forearms in a volleyball Appendix (4)

Shows the names of the masters evaluating the technician performance to receive serve

No.	Name	Specialization	Affiliations
1	Prof. Dr. Wissam Riad Hussein*	Volley ball	University of Babylon - College of Physical Education and Sports Sciences
2	Prof. Dr. Hatem Fleih*	Volley ball	University of Kufa - College of Physical Education and Sports Sciences
3	Assist. Prof. Dr. Mahmoud Nasser	Volley ball	University of Kufa - College of Physical Education and Sports Sciences

\*Their scores were approved to extract the objectivity of the technical performance test for the serve receiving skill in volleyball.

#### Appendix (5)

Shows a model of the main section of an educational unit for learning the skill of receiving serve from below with the forearms in a volleyball according to the learning strategy for mastery

Group: Experimental

Number of students: (15) students

Educational goal: To accustom students to commitment and self-confidence

Unit time: (90) minutes

Educational goal: Learn to receive serve from below with the forearms.





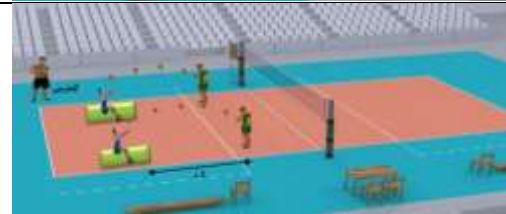



Main section time: (60) minutes

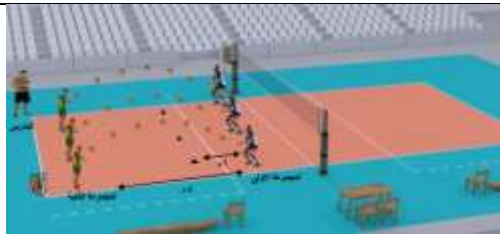
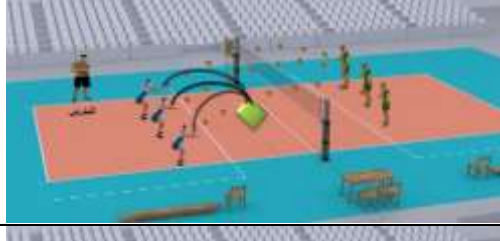

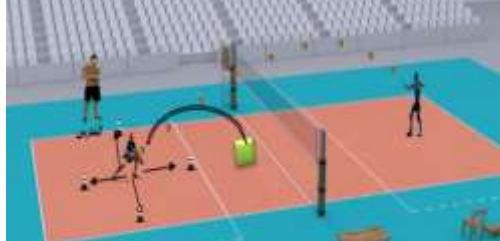


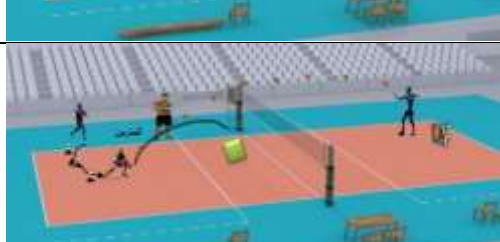
Main section	Time	Details of the educational part	Notes
Educational part	15 minutes	-The teacher explained the skill and explained the parts of the skill and its importance. -Explaining the technical performance of the skill with its own illustrations (educational poster). -The skill is presented by the teacher and then presented by a model (the live model) several times.	Focus students' attention on the explanation and demonstration of the skill.
Applied part	45 minutes	Details of the Applied part	Notes
	5 minutes	Students stand in one-half of the field on the sidelines in two groups facing each other and perform the skill without a ball.	Monitoring the subject teacher as he applies the skill.
	7 minutes	The students are divided into two groups, where each group performs the serve reception skill using a stick from a sitting position on the knees on the spongy mat through a ball thrown by a colleague at a distance of 2 meters.	Emphasis on the movement of the palms and arms in performance.
	7 minutes	Perform the skill from a standing position using the stick, while trying to direct the ball to the box located in center (3).	Emphasis on the movement of the arms and torso in performance.
	7 minutes	Performing the skill from a standing position using the stick, alternating between the students, while trying to direct the ball to the box located in center (2).	Emphasis on the movement of the body as a whole in performance.
	7 minutes	The students stand in one-half of the field in the form of two groups facing each other, 6 meters apart. The students of the first group carry the balls, and these students throw the balls towards the second group, which receives the balls and tries to insert them directly into the hoop located in center (2).	Emphasis on the movement of the palms and arms in performance.
	8 minutes	The student stands 3 meters away from the wall and performs the skill of receiving serve from below from a ball thrown to him by a colleague and directing the ball over the line drawn on the wall at a height of 3 meters.	Emphasis on arm movement and accuracy in performance.
	4 minutes	Rest for one minute between one exercise and another	

#### Appendix (6)

Shows exercises for the skill of receiving serve from below with the forearms in volleyball

No.	Skill exercises: Serve from below with the forearms	Illustration
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1	The students stand in one half of the field on the sidelines in two groups facing each other and perform the entire skill without the ball.	
2	The students stand in one half of the court in the form of two groups facing each other, 6 meters apart. The students of the first group carry tennis balls and the students of the second group carry cones. When the starting whistle is given, the students of the first group throw the balls towards the students of the second group, which performs the process of receiving the ball and trying to enter it directly in the funnel, the two groups are switched.	
3	The students stand in one half of the field in the form of two groups facing each other, 6 meters apart. The students of the first group carry plastic hoops and the second group carries volleyballs. These students throw the balls towards the first group, which receives the balls and tries to insert them directly into the hoop.	
4	Each student holds a volleyball in his hands and hits the ball hard on the ground, and after it bounces off the ground, he performs the skill of receiving the ball correctly.	
5	The students are divided into two groups, where each group performs the serve reception skill using a stick from a sitting position on the knees on the spongy mat through a ball thrown by a colleague at a distance of 2 meters.	
6	The students stand in two formations facing each other, 3 meters apart. The students of the first group throw balls to the students of the second group, who receive the ball and try to deliver it to a colleague, and they switch between the two groups.	
7	The student stands 3 meters away from the wall and performs the skill of receiving serve from the bottom of a ball thrown to him by a colleague and tries to direct the ball over the line drawn on the wall at a height of 3 meters.	
8	The student stands facing the wall at a distance of 3 meters, and two students stand behind him, one of whom throws tennis balls and the other throws volleyballs towards the wall. When the starting whistle is given, the two students throw the balls in succession (a tennis ball once, then immediately after that, a volleyball again), so that the first student catches the tennis ball with his hands. After it bounces off the wall, he then receives the volleyball with his	

	forearms and directs it toward the wall.	
9	The students stand in one half of the field in the form of two groups facing each other at a distance of 4 meters, and a mark is placed in front of each student at a distance of one meter. The student in the first group throws the ball to the student in the second group, who runs towards the mark, touches it, then returns to his place and performs the skill of receiving. Down and trying to deliver the ball to the student throwing.	
10	The students stand in two groups facing each other on the field, each group on one side, so that the students of the first group throw the ball over the net to the students of the second group, who perform the skill of receiving the serve from below and try to drop the ball on the spongy mat located in center 3.	
11	The students stand in two groups facing each other on the field, each group on one side, so that the students of the first group throw the ball over the net to the students of the second group, who perform the skill of receiving the serve from below and try to drop the ball on the spongy mat located in center 3.	
12	The student stands in center (6) between four markers, and when the starting whistle is given, he runs to the first marker in front of him, touches him, then returns to his place, and performs the skill of receiving serve from below from a ball thrown by a colleague on the other side of the field and directing the ball to the spongy mat in the center. (3) The second time, he goes to the other sign, touches him, returns to his place, performs the skill, and so on with the rest of the signs.	
13	The student stands at a distance of 4 meters with his back to the wall, and three hurdles are placed between him and the wall. When the starting whistle is given, the student turns around and runs towards the wall, jumping over the hurdles and touching the wall, then returning also by jumping over the hurdles and standing in his place to perform the skill of receiving from the bottom of a ball thrown to him. From a colleague and try to direct the ball to a rectangle drawn on the wall (2x1 metres).	
14	The student stands in position 6 to perform the skill of receiving serve from the bottom. When the starting whistle is heard, the student runs forward and touches the net, then returns to position 6 and performs the skill from a ball thrown to him by a colleague on the other side of the court, and tries to direct the ball to the spongy mat located in position 2	
15	The student stands outside the sideline next to position 5, in which three markers are placed. When the starting whistle is given, the student runs between the markers and stands in position 6 to perform the skill of receiving “serve” from the bottom of a ball thrown to him by a teammate on the other side of the field, and directing the ball to the existing foam mat. In position 4.	

## تأثير استراتيجيات التعلم للإتقان في المتانة العقلية والأداء المهاري لاستقبال الإرسال بالكرة الطائرة للطلاب

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2&amp;1 جامعة بابل/ كلية التربية البدنية وعلوم الرياضة

3 مديرية تربية بابل

مستخلص البحث

تحدد مشكلة البحث في أن الوقت المتاح وأن كان كافياً لتعلم مهارات الكرة الطائرة، إلا أنه غير كافٍ للوصول بدرجة الإتقان لهذه المهارات ولاسيما مهارة استقبال الإرسال، وقد يرجع السبب في ذلك إلى الاستراتيجيات والأساليب والمداخل التعليمية المستعملة في العملية التعليمية، فضلاً عن قلة الاهتمام بجوانب تعلم هذه المهارة لاسيما الجانب النفسية وما يناسبها من قدرات نفسية خاصة المتانة العقلية التي تعني ان يصل الطالب إلى اقصى أداء ممكن أو أداء يفوق إمكانياته، لذا فإن الأمر يستدعي التفكير في استعمال استراتيجيات تعلم فاعلة منظمة مبنية على أسس علمية قد تسهم في هذه القدرة النفسية ومن ثم الوصول بالأداء المهاري لاستقبال الإرسال الى درجة جيدة من الإتقان، وهدف البحث إلى إعداد مقياس المتانة العقلية للطلاب فضلاً عن التعرف على تأثير استراتيجيات التعلم للإتقان في المتانة العقلية والأداء المهاري لاستقبال الإرسال بالكرة الطائرة للطلاب، واتبع الباحثون المنهج التجريبي بتصميم المجموعتين المتكافئتين ذات الاختبارين القبلي والبعدي، وتمثل مجتمع البحث بطلاب المرحلة الثانية في كلية التربية البدنية وعلوم الرياضة في جامعة بابل والبالغ (132) طالباً، وتم اختيار عينة البحث الرئيسة وبعدها (30) طالباً تم تقسيمهم على مجموعتين تجريبية وضابطة وبالتساوي، وتم إيجاد التكافؤ بينهما بعدما أجريت الاختبارات القبليّة ومن ثم تطبيق استراتيجيات التعلم للإتقان على طلاب المجموعة التجريبية، خلال مدة (4) أسابيع وبواقع وحدتين تعليميتين في الأسبوع (2) وبزمن (90) دقيقة للوحدة التعليمية، وبعد الانتهاء من تطبيق الاستراتيجية أجريت الاختبارات البعدية على عينة البحث، وبعد الحصول على النتائج ومعالجتها احصائياً، تم التوصل إلى استنتاجات عدة أهمها لاستراتيجية التعلم للإتقان دوراً كبيراً في زيادة المتانة العقلية والأداء المهاري لاستقبال الإرسال بالكرة الطائرة للطلاب، وهذا ما يحقق احد اهداف التنمية المستدامة للامم المتحدة في العراق (التعليم الجيد). وفي ضوء ذلك أوصى الباحثون بضرورة اعتماد استراتيجيات التعلم للإتقان في تعلم استقبال الإرسال بالكرة الطائرة للطلاب فضلاً عن التأكيد على إجراء اختبارات للطلاب بشكل مستمر للمتغيرات النفسية والعقلية.

الاستراتيجية، الإتقان، المتانة العقلية، الأداء

الكلمات المفتاحية