The Effect Of Educational Units Based On Adams' Theory On Learning The Handball Shooting Skill Among Students

1Mushtaq Talib Kazim Mohammed Abdul-Ridha Kareem2
1.2. University of Misan- College of Physical Education and Sport Science

Abstract

This research aimed to identify the impact of educational units based on Adam's theory on students' learning of handball shooting skills and to determine the results of test differences between the control and experimental groups. The researchers used The experimental method with two equivalent groups, the control and experimental groups, and the research population was defined as the second-year students of the College of Physical Education and Sports Sciences at Maysan University for the academic year). The total number of students was (302), and the research sample was determined to be (24) students using simple random methods. Each group consisted of (12) students, one of which was experimental, and educational units were applied to it according to Adam's theory for teaching the skill of shooting in handball. The curriculum was applied to a control group using the teacher's usual method, and (8) students were selected for the pilot study to test their aiming skills. Pre-tests were conducted, and then the two groups were matched according to the test data. The pre-test was followed by the main experiment, which was conducted from February 11, 2026, to March 11, 2026, with two units per week. Post-tests were then performed, and after statistical analysis of the results using SPSS version 21, the results showed. The results show that the experimental group outperformed the control group by statistically significant differences at the (0.05) significance level, indicating the effectiveness of the educational units used according to Adam's theory. The study concluded with several findings. The most important conclusion is that the educational units are considered good and suitable for teaching handball shooting skills to students according to the theory. The researchers also recommended the necessity of adopting educational units based on Adam's theory with other age groups or educational stages.

Keywords: Adams' Theory, Educational Units, Handball, Shooting Skill, Motor Learning.

Introduction

Handball is considered a team sport that is exciting and requires teaching basic skills, as it is no longer easy and requires the preparation of educational units due to the difficulty of the skills used. This is a result of poor student performance and clear errors. Furthermore, the educational units were designed to identify positive aspects for improvement and negative aspects for the purpose of addressing them. Its treatment, and among the most important of these skills is shooting, which is the essence of the game in handball, as players strive to score goals accurately and quickly, as it is one of the effective skills that makes a difference and distinguishes. The team's results in any match make them more versatile and dangerous in attack. Learning is highlighted as one of the biggest challenges facing the teaching process, enabling students to acquire fundamental skills and develop their performance. Therefore, the researchers decided to prepare units for learning the skill of shooting in handball in order to activate the student's performance and improve the level of performance during the learning process according to Adam's steps.

Research Problem:

Handball is a team sport that requires appropriate skill to achieve good results, whether in college or university tournaments, especially in the College of Education Physical and sports science, and one of the most important skills for achieving team victory is the shooting skill, which requires precise performance. Researchers have noticed a weakness in the performance of the shooting skill, which in turn is reflected in the team's results in general. This prompted researchers to question whether educational units based on the closed theory (Adam's theory) play a role in teaching students the skill of aiming

1.3 Research Objectives:

1. To develop educational units based on Adam's theory for learning the shooting skill in handball.

2. To identify the impact of educational units based on Adam's theory on learning the shooting skill.

1.4 Research Hypotheses:

1. There is an effect of educational units based on Adam's theory on students' learning of handball shooting skills.
2. There are statistically significant differences between the pre-test and post-test scores of the control and experimental groups in the research variables.
3. There are statistically significant differences in the post-tests for the control group and the experimental group, in favor of the experimental group, in the research variables.

1.5 Research Areas:

1.5.1 Spatial Area:

The sports hall at the College of Physical Education and Sports Sciences, University of Maysan.

1.5.2 Human Area

Second-year students at the College of Physical Education and Sports Sciences, University of Maysan, for the academic year (2025-2026).

1.5.3 Time frame:

(1/12/2025) – (15/3/2026)

1.6 Definition of Terms:

1.6.1 Adam's Theory:

Adam's theory in a closed loop means that movements are performed by comparing feedback. Through the body's organs, and between the corrective reference that the individual has previously learned, and the correction that the individual relies on is called the sensory trace, which is formed due to feedback information, which determines the error rate or distance Based on the correct reference (Al-Rubaie, 2013: 14).

2. Theoretical Studies

2.1 The Curriculum of Educational Units:

"The curriculum is one of the most important organizational structures that seeks to help and develop the learner to acquire knowledge in interconnected ways by organizing the educational material into integrated units" (Shaltout et al.: 2008, p. 81) The researchers organized educational units according to the closed (Adam) theory to teach some basic handball skills to students, as it is suitable for a specific time period, unlike the curriculum which requires time. The longest (Ashour, Jihad: 2009, 376) is the skill of jump shooting (high, forward), which is one of the most important offensive skills and requires mastery of motor skills. Researchers believe that educational units are essential for learning and mastering this skill. A cognitive characteristic that aims to achieve integration at all scientific levels, as it prepares situations of experience and the accompanying activity and positivity on the part of the learner (Muhammad: 2008, 70).

2.2 Characteristics of the Educational Units Curriculum (Shaltout et al.: 2008, p. 64)

The educational unit’s curriculum focuses on arranging and organizing learning experiences towards a specific theme. Its most important characteristics are as follows:

1. Integration: Focuses on presenting learning experiences in a comprehensive manner
2. Coherence and Progression: Ensures coherence between objectives and content, leaving no gaps between the components of the learning unit. It also emphasizes the logical sequence and progression of learning experiences.
3. Ease of application, flexibility, and variety: Choosing what suits the learners' abilities and aptitudes.

3-1-2 The concept of the theory:

Closed-Loop Theory

Adams' 1971 theory (closed-loop theory) explained that movements occur through a comparison between feedback

from body parts and a corrective reference point previously learned by the student, called the trace. Perceptual Trace. It is a sensory field or trace resembling a pinprick in the brain. The more the movement is repeated, the more this pinprick is repeated, leaving a deeper trace. (Khayoun: 2010, 88).

The most distinctive feature of this theory is the term "closed circuits," a term derived from engineering science (Al-Din, 2006: 179). This explains the connection between the term "closed circuits" and how it is used. Incoming information (feedback) in self-control.

Adams also believed that "all movements are performed by comparing the feedback coming from the limbs or sensory organs such as the eyes during the movement with a corrective criterion that is acquired through practice," and he launched At this point, the term "cognitive effect" is at stake. According to Adams, the learner is not merely a passive recipient, but rather he tries to understand the task to be learned, as knowing the results provides him with the necessary information for the next attempt. (Al-Din, 2006: 181), and the time of movement begins from its beginning to its end, so the time of the stimulus entering is not counted in the time of movement, and the time of reaction is the time calculated from the entry of the stimulus, to the first muscle contraction. While the time for motor response is that time calculated from the entry of the stimulus until the end of the movement (Ahmed et al., 2024: 141).

4-1-2 Applying Adam's Theory (Closed Circuit).

1. This theory explains the reasons for inaccuracies in motor performance or failure to hit the target.
2. The process of learning the motor performance of a skill begins with stages of information processing.
3. Adam emphasized the importance of practice in increasing an individual's ability to choose the correct and appropriate response to the learning situation.
4. An individual cannot learn a skill without prior experience (Al-Umda: 2012, p. 11).

5-1-2 Shooting Skill:

"It is the pinnacle of the game, its quality and level, which determines victory and defeat. The goal of offensive movements is to end with a successful shot" (Karim: 2020, 59). There are many types of shooting, from which researchers have selected. The skill of shooting from a high jump and the skill of shooting from a forward jump are the most suitable for study, and therefore we seek to achieve clear levels of development for students, through the impact of educational units according to Adam's theory.

1-5-1-2 High Jump Shot:

This is a shot shot with a whip-like motion from a height higher than head level after performing a high jump motion, as if the shooter were attempting to shoot over a defender. (Ibrahim: 2004, p. 121)

As Awda mentions, "This type of shot is used to get rid of defensive plans and to get closer to the opponent's goal, and it is used especially by attackers in the back line." (Awda: 2005, 45)

The skill of high-flying target practice has three stages that the learner goes through:

1. Preparatory section: Take close, three-step steps (left, right, left) taking into account the arm throwing the ball, the shoulder rotation movement, and coordination with the steps while jumping high.
2. Main section: The shooting motion is completed when the student reaches the best height, taking into account the whip movements of the throwing arm, in addition to the movement of the wrist and the foot of take-off and landing.
3. The final section: In this section, attention is paid to the landing foot and arm movement to avoid falls and injuries.

2-5-1-2 Jump Shooting:

"The importance of this type of shot lies in getting past defenders and shooting powerfully out of bounds. (6 meters) to take advantage of the distance between the attacker and the goalkeeper, making it easier for the attacker to direct the ball to the right place in the goal. (Awda: 2005, 46)

The skill of shooting while jumping forward also goes through three stages:

1. Preparatory section: The student approaches at an angle towards the direction of shooting with the shoulder of

the throwing arm rotating slightly backwards, then jumps onto the foot appropriate to the student.
2. Main section: The shot is executed using a whip-like throwing arm motion, focusing on wrist movement to guide the ball.
3. Final section: This section emphasizes coordination between the take-off and landing feet and the arm movements to prevent falls and injuries.

2-2 Previous and Similar Studies:
1-2-2 Study by Riyadh Ali Hussein (Hussein: 2016)
(The effect of educational units on learning the activities of the shot put, long jump and some basic skills in handball for second intermediate students in Baghdad) PhD thesis.

Study objectives:
1. Preparing educational units to teach the activities of the shot put and long jump and some basic handball skills for second intermediate students in Baghdad.
2. To identify the impact of educational units on the learning of shot put, long jump, and some basic handball skills among second-year intermediate school students in Baghdad.

Study Methodology:
The researcher used the experimental method with a two-group approach: control and experimental.

Research Population:
The research population consisted of middle and secondary schools affiliated with the Directorates of Physical Education in Baghdad.

Conclusions:
1. The learning units developed by the researcher had a positive impact on skill development and achievement levels. They can be used by both male and female students.
2. Combining skills-based learning units with enrichment activities yields positive results and enhances skills.

Recommendations:
1. The researcher recommends adopting the educational units and cognitive tests developed from this study as a unified curriculum for the intermediate level.

Similarities and differences between the two studies and the current study:
In the study of Riyadh, the study was similar to the current study in that it prepared educational units in teaching handball skills, but the study differed in the research population, as the study of Riyadh consisted of school students in the education system. The study was conducted in Baghdad Governorate, while the current study population consists of second-year students from physical education and sports science colleges in the southern region. Both studies are similar in methodology, as the researchers relied on the experimental method. Adam's theory: Researchers found no studies on the closed theory (Adam).

3- Research methodology and field procedures.
1-3 Research Methodology:

Methodology is a set of rules and procedures established by specialists in research methodology that the researcher follows to reach or uncover the truth, in order to arrive at sound research results. (Al-Rubaie and others, 2018: 15) The researchers chose the experimental method with two equivalent groups, the control and experimental groups, for the current study.

3-2 Research Population and Sample:
1-2-3 - Research Population:
The selection of the research population is closely related to the nature of the research, and it was deliberately chosen by the researchers, consisting of second-year students in the College of Physical Education and Sports Sciences at

Maysan University. Their number is (302) students for the academic year (2025-2026)

2-2-3 Research Sample:

The research sample was selected using simple random sampling to accurately represent the original population. As Al-Kadhimi defines a sample, it is "the part that represents the original population, or the model on which the researcher conducts the study. The overall focus of his work" (Al-Kadhimi, 2012: 84) was that the research sample represented the total research population, which was selected from the University of Maysan, College of Physical Education and Sports Sciences, with (12) students in each group to conduct Testing the skill of shooting from a high and forward jump with a handball, and thus the total research sample became (24 students) with a percentage of (7.94%).

3-2-3 Homogeneity of the Research Sample

One of the fundamentals of implementing and executing educational units is controlling all variables and factors that may affect the application of the main research experiment.

Table (1) shows the homogeneity of the research sample in some variables

on	Variables	Unit of Measurement	Means	Median	Standard Deviation	Skewness Coefficient
1	Height	cm	173.541	176.000	4.549	0.597-
2	Body mass	kg	74.666	75.000	2.513	0.250-
3	Chronological age	year	22.541	23.000	1.318	0.160-

3-3 Equipment and Tools Used:

The researchers used all the equipment and tools that helped complete the research procedures, including a football field Handball, 10 handballs, whistle, timer, colored tapes, measuring tape, along with a number of stakes and cones.

3-4 Field Research Procedures:

3-4-1 Determining the Tests for Jump Shooting Skills (High - Forward):

Since the researchers deliberately chose to test the jump shooting skill and the skill of Shooting by jumping forward, therefore two tests for each skill were presented to a group of (8) experienced and specialized judges, and the test of shooting from a high jump was accepted (Al-Muhanna: 2019, 76). The accuracy was 100% according to the chi-square test (Ka^2). The purpose of this test is to measure the accuracy of shooting from a high jump. The accuracy of shooting from a forward jump was also accepted (Kareem: 2023, 63) at 75%.

3-4-2 Exploratory testing of educational units as well as tests of the skill of shooting from a high jump and the skill of shooting from a forward jump.

The researchers conducted the pilot study of the educational units and the skill test for shooting from a high and forward jump, on the same day, Sunday (February 8, 2026), at nine o'clock in the morning, after obtaining A book facilitating the task at the College of Physical Education and Sports Sciences, University of Maysan, for (10) students, excluding the designated sample for the control and experimental groups.

3-4-3 Pre-tests for the skill of jump shooting (high and forward)

The test of the range and skill of shooting from a high jump and the skill of shooting from a forward jump was conducted for both the experimental and control groups on the field of the College of Physical Education and Sports Sciences at Maysan University, in Tuesday, February 10, 2026, at 9:00 AM.

3-4-4 Equivalence of the Experimental and Control Groups:

To avoid factors that might influence the results of the main experiment, and to verify the equivalence of the control and experimental groups, the researchers performed equivalence tests, relying on the results of the pre-tests. Researchers from the educational units application extracted the results by applying the (t) law for independent samples to the test data, and the significance level value (sig) was greater than (0.05). This indicates that the differences between the two groups are not statistically significant, meaning the groups are equivalent. Table (2) shows the equivalence of the two research groups.

Table (2) shows the equivalence of the experimental and control groups in the skill of shooting from a jump (high, forward).

Variables	Unit of Measurement	Experimental Group		Control Group		Calculated T-value	Significance Level	Significance
		x	sd	xó	sd			
High Jump Shot	Score	2.416	0.792	2.000	0.852	1.239	0.228	Not significant
Forward Jump Shot	Score	1.750	0.866	1.666	0.492	0.290	0.775	Not significant

3-4-5 Applying the learning units according to Adam's theory to the experimental group:

The researchers prepared and used learning units for this study, organizing them in a way that It is suitable for students' levels, as the number of educational units reached (8) units for the experimental research group, the educational unit (first, second, third and fourth) for the skill of shooting from a high jump, and the unit (Fifth, sixth, seventh, and eighth) for the skill of forward jumping aiming, over a period of four weeks, with two units per week. The program was implemented on Wednesday, February 11, 2026, in coordination with the subject teacher, who had designated Monday as the day. The units are held every Wednesday. The 90-minute learning time for each unit is divided into sections as follows:

First: The preparatory section: Its duration is (18) minutes, including (3) minutes for the introduction to prepare the students, register attendance, and begin the lesson with a sports shout and emphasize the students standing in formation. Then (4) minutes of physical exercises. For general and specific warm-ups (6 minutes) to prepare the body's muscles and joints involved in the activity, through arm rotations forward and backward, torso twists to the sides, high jumps, and various ball exercises. Specifically, the skill component is given a time limit of (5) minutes to stimulate performance and activate memory.

Secondly: The main section, which lasts (72) minutes, is divided into (the educational and practical parts and the concluding section). The duration of the educational segment was (25), where the teacher, as a first step, presents a demonstration such as a visual model and explains the skill precisely. Then the teacher performs the skill according to its steps, the goal of which is to stimulate memory. The next and most important step is internal feedback, which encourages the learner to focus on kinesthetic awareness. Additionally, there is the error reduction phase, the goal of which is to enable the learner to discover their own mistakes in order to achieve [the desired outcome]. The correct motor path is then followed by a question for the learners, the purpose of which is self-assessment and identifying the motor paths towards executing the skill. After the end of the educational section, the researchers allocated time (3 minutes) for a student warm-up after the educational section, after which the teacher moves on to the practical part, which is set at (34 minutes) divided into four exercises suitable for the skill specified in the educational unit. Each exercise lasted 4 minutes, with two repetitions and a 30-second rest period between repetitions. In this section, the instructor, under the supervision of the researchers, emphasized the exchange of roles among the students, providing feedback and correcting errors. To enhance the sensory and perceptual impact of the skill.

Third: The concluding section, lasting (10) minutes, included a short game to calm the body and restore balance. Return the pulse to normal and give a self-assessment sheet to motivate students to know their cognitive levels, and then perform the lesson's closing shout.

6-4-3 Post-tests: After completing the application of the educational units on Sunday (3/8/2026), the researchers conducted the post-tests on Wednesday (3/11/2026). Both the control and experimental groups were in the same stadium and under the same conditions as the pre-test for the jump shooting skill (high and forward).

7-4-3 Statistical methods used: The researchers used the Statistical Package for the Social Sciences (SPSS) program to extract the statistical results, which are the arithmetic mean, median, skewness coefficient, and standard deviation. The t-test for correlated (non-independent) samples, the t-test for uncorrelated (independent) samples, and the simple correlation coefficient (Pearson's rank correlation coefficient) and Spearman's rank correlation coefficient were used.

4- Presenting, analyzing, and discussing the results.

1-4 Presentation and analysis of the results of the pre- and post-tests for the control and experimental research groups for the skill of shooting from a high jump and the skill of shooting from a forward jump.

After the researchers processed the data for the pre- and post-tests of the control and experimental groups, it was statistically analyzed as shown in Table (3).

Table (3) shows the results of the arithmetic means, standard deviations, and the calculated (t) and (Sig) values in the pre- and post-tests for the control and experimental groups for the skill of shooting from a jump (high and forward).

Variables	Group	Unit of Measurement	Pre-test		Post-test		Calculated t-value	Sig. value	Significance
			سَ	ع ±	سَ	ع ±			
High Jump Shot	Experimental	Score	2.500	0.797	6.250	0.753	11.413	0.000	Significant
	Control	Score	2.000	0.852	4.916	0.668	8.147	0.000	Significant
Forward Jump Shot	Experimental	Score	1.7500	0.866	5.083	0.668	11.726	0.000	Significant
	Control	Score	1.666	0.492	3.916	0.792	9.000	0.000	Significant

Significant at a significance level ≤ 0.05 and with (11) degrees of freedom for each group

After reviewing Table (3), which shows the results of the pre- and post-tests for the two groups The experimental and controlled research on jump shooting skills (high and forward) showed that the arithmetic mean of the pre-test for the experimental group was (2.500) with a standard deviation of (0.797). The arithmetic mean in the post-test was (6.250) with a deviation of (0.753). Thus, the difference is statistically significant when using the t-test and in favor of the post-test with a value of (11.413). It is clear to us that the mean The arithmetic mean in the pre-test for the control group was (2.000) with a standard deviation of (0.852), while the arithmetic mean in the post-test was (4.916) with a deviation of (0.668). When using the formula (T-test) for related samples, the calculated value of (t) appeared (8.147), which indicates the statistical difference and is in favor of the post-tests.

As shown in Table (3), the arithmetic mean for the forward-leaning shooting skill test and for the pre-test of the experimental group was (1.7500) and the standard deviation was (0.866), while it was shown that The arithmetic mean

in the post-test was (5.083) with a deviation of (0.668). When using the (T-test) formula for paired samples, the calculated value appeared as (11.726), and this value proves the existence of differences. The statistics favor the post-tests, while the pre-test for the control group had a mean of (1.666) and a deviation of (0.492), whereas the post-test mean was. (3.916) and the deviation (0.792). Thus, there are statistical differences in favor of the post-tests according to the calculated value of (9.000).

2-4 Presentation and analysis of the post-test results for the control and experimental research groups for the skill of shooting from a high jump and the skill of shooting from a forward jump.

Table (4) shows the results of the arithmetic means, standard deviations, calculated (t) value and (Sig) in the post-tests for the control and experimental groups for the skill of shooting from a jump (high - forward).

Variables	Unit of Measurement	**Experimental Group**		**Control Group**		Calculated T-value	Sig	Significance
		Mean	Standard Deviation	Mean	Standard Deviation			
High Jump Shot	Score	6.250	0.753	4.916	0.668	4.415	0.000	Significant
Forward Jump Shot	Score	5.083	0.668	3.916	0.792	3.897	0.000	Significant

Significant at a significance level ≤ 0.05 and with 22 degrees of freedom for both groups.

After reviewing Table (4), it became clear that the arithmetic mean of the experimental group in the post-test. For the skill of shooting by jumping high, the experimental group reached (6.250) and the standard deviation (0.753), while the control group reached the arithmetic mean (4.916) and the deviation (0.668). When using the T-test law For the related samples, the calculated value (4.415) appeared, which indicates its significance at a significance level of (0.05) and a degree of freedom of (22). Thus, the difference is statistically significant and in favor of the experimental group. The mean score in the post-test for the forward-leaning shooting skill for the experimental group was (5.083), with a standard deviation of (0.668). The mean score for the control group was. (3.916) and the standard deviation (0.792), and when using the T-test law for related samples, the calculated value (3.897) appeared, which indicates its significance at a significance level of (0.05) and with a degree of freedom of (22). Therefore, the difference is statistically significant and favors the experimental group.

The results presented in Table (4) clearly demonstrate a significant advantage for the experimental group. Researchers attribute this superiority to the effectiveness of educational units designed according to Adam's theory of motor learning, and that the essence of the theory relies on a closed loop that empowers and helps students discover and correct their own mistakes. As Al-Kaabi explains, feedback is divided into two parts: internal feedback, which appears as natural, inherited outcomes that help the learner in addition to rapid learning and good performance; and external feedback, which is. Motivated by the teacher's approach with beginner students (Al-Kaabi & Aboud: 2022, p. 154), and also because the skill of shooting in handball requires high accuracy and muscular and neurological coordination, and through the application of educational units The students were able to form what Adam calls a cognitive effect, which means storing the correct information after learning the skill.

"Learning the skill is done gradually according to scientific steps that suit their capabilities." (Aziz et al., 2021, p. 62) In addition to diversifying the exercises, this provided a great incentive for the learning process, created a new learning environment, and allowed for comparing the stored information with actual performance in order to reduce errors in performance and increase [their effectiveness]. The stability of the skill is due to the fact that aiming is not just a physical strength but a mental process that requires the selection of immediate information, which enhances the

accuracy of the students' motor performance.

5- Conclusions and Recommendations:

1-5 Conclusions:

* The educational units prepared by the researchers had a positive impact on the experimental group's superiority in learning the skill of shooting by jumping high and forward.

2-5 Recommendations:

* The need to adopt educational units according to Adam's theory in learning basic skills in sports games, due to its positive impact on the development and speed of students' learning of motor skills and increasing their knowledge.

Sources:

[1] Ibrahim, Munir Girgis (2004). Handball for All: Comprehensive Training and Skill Excellence. Cairo: Dar Al-Fikr Al-Arabi.

[2] Ahmed, Mazen Abdel-Hadi, Al-Mufti, Perivan Abdullah, and Hussein, Wissam Riyad (n.d., t.). Model Learning Applications in Physical Education and Sports Science. 1st ed. Jordan: Dar Al-Wifaq for Publishing and Distribution.

[3] Khayoun, Ya'rub (2010). Motor Learning: Between Principle and Application. 2nd ed. Iraq: Dar Al-Kutub Wal-Watha'iq.

[4] Al-Din, Talha Hussein Hussam, Fawzi, Muhammad, and Hilmi, Muhammad Al-Sayed (2006). Motor Education and Control: Principles, Theories, and Applications. 2nd ed. Helwan University: The Book Center for Publishing.

[5] Al-Rubaie, Mahmoud Daoud, Al-Hadithi, Raed Faiq, and Abdel-Hadi, Mazen (2018). Foundations of Scientific Research. Iraq. Safaa Publishing and Distribution House

[6] Al-Rubaie, Mahmoud Daoud, Al-Hadi Mazen, and Al-Taie Mazen Hadi Kazar. (2013). Learning Theories and Mental Processes. 1st ed. Iraq. Dar Al-Kutub Al-Ilmiya - Beirut

[7] Shaltout, Nawal Ibrahim. (2008). Physical Education and Sports Curricula. 1st ed. Alexandria. Dar Al-Wafaa for Printing and Publishing

[8] Ashour, Rateb Qasim, and Jihad, Abdul Rahim Awad. (2009). The Curriculum (Its Construction, Organization, and Practical Applications). 1st ed. Amman. Dar Al-Janadriya for Publishing and Distribution.

[9] Al-Umda, Umm Hashim (2012). Motor Learning Theories and Their Applications in Childhood. 1st ed. Riyadh. Dar Al-Zahraa for Publishing and Distribution

[10] Muhammad, Heba Abdul Azim. (2008). Physical Education Curricula. 1st ed. Alexandria. Dar Al-Wafaa

[11] Awda, Ahmed Oraibi (2004). Handball and its Basic Elements, 2nd ed. Baghdad. National Library

[12] First: A Study by Riyadh Ali Hussein (Hussein: 2016)

[13] Hussein, Riyadh Ali. (2016). The Effect of Educational Units on Learning the Shot Put and Long Jump Activities and Some Basic Skills in Handball. University of Baghdad. College of Physical Education and Sports Sciences. Published PhD Dissertation

[14] Al-Muhanna Ali Adel (2019). The Effect of Compound Exercises on Developing Sensory-Motor Perceptions and Motor Action in Sparring and Shooting Forms for Junior Handball Players. University of Babylon. College of Physical Education and Sports Sciences. Published Master's Thesis

[15] Ansi, Muhammad and Aboud, Muhammad Hadi (2022). Motor Learning: Concepts and Applications. 1st ed. Iraq. Textbook published by the University of Basra

[16] Karim. Mohammed Abdul-Ridha. (2023) Handball in a Simplified Dialogue. 1st ed. Iraq. Dar Al-Dhiya.

[17] Aziz, Ahlam Dara. (2021). "The Effect of a Proposed Educational Program on Developing Sensory Perception, Motor Coordination, and Shooting Accuracy in Handball for the Youth of Al-Daghara Club." Maysan Journal of Physical Education Sciences. 23(23). 61