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## **The effect of programming immediate and delayed feedback according to the stages of building the motor program on learning some compound offensive skills in basketball for students**

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### **Abstract**

This study aimed to identify the impact of immediate and delayed feedback according to the stages of building the motor program in learning some of the offensive skills of the compound basketball for students, where the researcher used the experimental method for the sample numbered (15) students (for the two equal groups) for their suitability to solve the research problem, and that the research problem is The lack of effectiveness of learning some offensive skills in basketball, i.e. the lack of use of feedback and the failure to specify an appropriate time commensurate with the skills stages, so the researcher came to give immediate and delayed feedback, i.e. using a kinetic program to increase the effectiveness of learning and accelerate it and correct errors so that the learner can master the skill, and the researcher used (SPASS) program for statistical treatments, and the researcher concluded that the immediate and delayed feedback has a positive role in learning the complex skills of basketball, and the need to use the feedback in proportion to the stages of building the motor program for skills in basketball. Whereas, the researcher recommended focusing on the use of the types of feedback in basketball, and the necessity of using their types in each stage of the special skill with beginners, so that mistakes can be corrected on an ongoing basis.

**Keywords:** Programming immediate, learning, motor performance, basketball, motor program

### **1. Introduction**

#### **1.1. Introduction and importance of the research**

The development of the level of performance and achievements that we see in various sports events and games came as a result of the development of sports sciences, and the adoption of highly efficient and effective scientific methods in order to benefit from the tools and assistive devices and to invest human energies correctly.

The use of modern learning methods in the educational process is an effective process in achieving better learning with an economy of time, effort and money, especially when using the appropriate learning method and the type of skill to be learned in terms of its type and characteristics.

The feedback is corrective information that reaches the learner's brain for the purpose of correcting performance errors in order to achieve optimal performance for the implementation of the skill, and it comes from various sources, including external, such as the correction process by the trainer, teacher, or others, or internal, which includes information that comes from organs in the human body that Sensations are sent to the brain during motor performance.

The process of learning offensive skills in basketball in general, and complex offensive skills in particular, needs feedback throughout the learning period as a result of the many requirements of this game and the complexity of its performance by linking more than one skill to produce a complex offensive skill such as the skill of (receipt and the patt that ends with the chest handling and the finished receipt By jumping, receiving, and ending with peaceful shooting and other skills) that require long and effective learning periods so that the learner can perform them optimally, which enables him to keep pace with the requirements of the game in terms of speed and accuracy.

#### **1.2. Research problem**

The compound offensive skills in basketball are complex and difficult skills because they need to link several skills to produce an integrated dynamic chain consisting of two skills or

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more, and most of these skills are classified within the open skills whose environment is unpredictable due to the presence of a defensive opponent for each attacking player, which the coach must Or the teacher to increase the effectiveness of learning so that the learner can identify most of the stimuli that may be encountered.

Through the researcher’s experience as he works as a basketball teacher and basketball coach, he noticed that the curriculum is limited to a few lectures, which contains one lecture per week, which necessitates that we increase the effectiveness of learning these skills and correct the errors that the student may face, hence the research problem. The lack of effectiveness in learning some basic skills for students in basketball, and the reason is the lack of feedback from the teachers of the subject and the lack of appropriate timing to present it in proportion to the stages of learning the skill. Therefore, the researcher decided to study the importance of immediate and delayed feedback in proportion to the stages of building the motor program for some offensive skills. Compound basketball in order to increase the effectiveness of learning and accelerate it and continuous correction of errors so that the learner can master the skill with the fewest number of errors.

**1.3. Research Objectives**

1. Recognizing the effect of instantaneous feedback according to the stages of building the motor program in learning some of the offensive skills of the complex basketball for students.
2. Recognizing the impact of late feedback according to the stages of building the motor program in learning some of the offensive skills of the compound basketball for students.
3. Recognizing the priority of the differences between the effect of immediate and delayed feedback according to the stages of building the motor program in learning some of the offensive skills of the compound basketball for students.

**1.4. Research hypotheses**

1. There are statistically significant differences at the level of significance (0.05) for instantaneous feedback according to the stages of building the motor program in learning some of the offensive skills of the compound basketball for students between the two experimental groups.
2. There are statistically significant differences at the significance level (0.05) for the late feedback according to the stages of building the motor program in learning some of the offensive skills of the compound basketball for students.
3. There are significant statistically significant differences at the level of significance (0.05) in the post-test of immediate and delayed feedback according to the stages of building the motor program in learning some of the complex offensive skills in basketball between the two experimental groups.

**1.5. Research Areas**

1. The human field: first-year students in the College of Physical Education and Sports Sciences - Al-Mustansiriya University.
2. Temporal domain: the period from 1/2/2021 to 16/4/2021.
3. Spatial domain: the closed hall in the College of Physical Education and Sports Sciences - Al-Mustansiriya University.

**1.6. Define the terms**

1. Real-time (simultaneous) feedback (20:2) It means the external feedback that is available and given while learning the skill, bearing in mind that correction must be made when the wrong performance is received, which is used in sporting events that take not a short time, as well as in activities that are not characterized by great speed.
2. Final Feedback (8:100) It is the feeding that takes place after the completion of the motor duty, and this type of feedback occurs immediately after the completion of the performance of the movement or activity, because the more immediate and rapid the feedback, the better, and usually takes the form of information about the result (kR) and information about performance (KP).

**2. Research methodology and field procedures**

**2.1. Research Methodology**

The appropriate way to solve any problem in scientific research requires the researcher to choose the appropriate approach to the nature of the problem to be investigated, which is an important and essential step for the success of that research. Scientific Research Methods in Reaching Accurate Results (167:9).

**2.2. The research community and its sample**

The research community included the students of the first stage in the College of Infrastructure Education and Sports Sciences, Al-Mustansiriya University, who numbered (292) students, and Division (c) was deliberately chosen, numbering 35 students, and 5 students were excluded for not adhering to the permanent drawing, and thus the research sample became 30 students who were divided into two experimental samples and each sample consisted of (15) students, the first experiment consisted of (15) students learned according to the immediate feedback, and the second experimental consisted of (15) students learned according to the late feedback.

**2.3. Equivalence of the two research groups**

In order to divide the sample into two equal groups, the researcher arranged the results of the pre-test for the research variables in descending order, and then they were distributed in a row into two equal groups in number. Table (1).

**Table 1:** It shows the statistical measures to find the equivalence of the research sample for the two experimental groups

T	Compound skill tests	Totals	Arithmetic mean	standard deviation	Calculated T-values	Sig	Indication level
1	Receiving and high clapping ending with thoracic handling with two hands	Overdue the moment	14.146	3.402	1.229	0.246	insignificant
			13.957	1.106			
2	Receiving and high clapping, ending with a	Overdue the moment	2.728	1.079	1.039	0.322	insignificant

	jump shot, two points		3.531	1.551			
3	Receiving and high clapping ended with a peaceful correction	Overdue the moment	6.828 6,010	1.661 0.895	1.056	0.317	insignificant

**2.4. Devices and tools used in the research**

1. Basketball courts (legal) closed and open
2. Moving basketball goals
3. Stopwatch number (2)
4. Basketballs number (10)
5. A whistle
6. sticky tape
7. Terraces
8. Signs
9. A tape measure
10. Tools for measuring accuracy, number (2), 200 cm long and 120 cm wide, and a square grid with a side length of 120 cm from the top is suspended inside it, divided into 9 squares, the side length of each square is 40 cm. These nine squares are colored and each color has a numerical value, as the red color represents the highest value of 3. The blue color is 2 degrees and the green color is 1 degree, and from the back a pillar is installed on it, held by the work team, at a distance of 1 m.
11. Columns number 4, length of 2 meters, variable in height from 60 to 200 cm, bearing in mind that the ability to change every 10 cm, as well as a leather barrier hanging on it with a length of 100 cm from the top and a width of 50 cm.

**2.5. Information collection methods**

1. Arab and foreign sources.
2. Personal interviews.
3. Experts and specialists.
4. Auxiliary work team.
5. An expert opinion poll form to determine the tests.
6. A registration form to confirm the test scores.

**2.6. Skills subject to study**

The researcher studied the following skills (Receipt ending with blunt handling - Receiving and tapping ending with

scoring from jumping – Receiving and tapping ending with peaceful scoring).

**2.7. Skill tests**

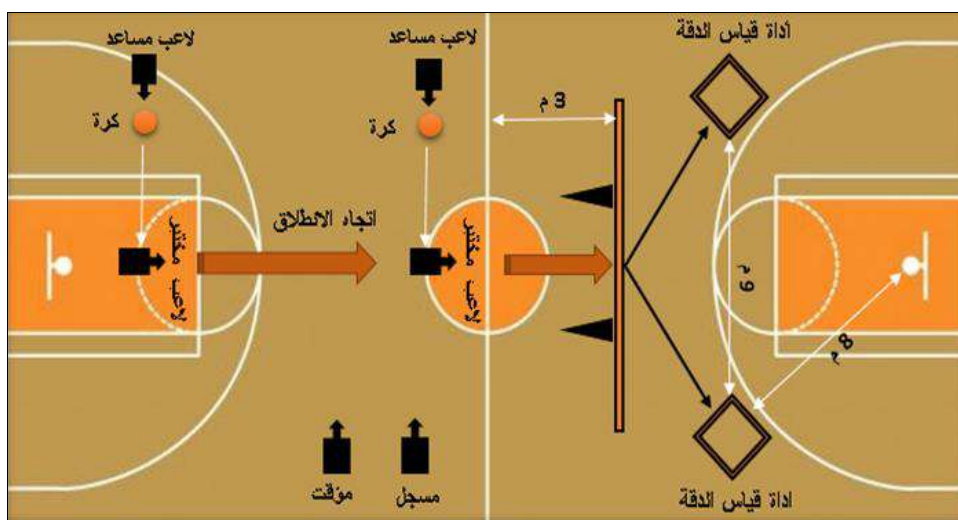
**The first test:** (Receiving and high clapping that ends with pectoral manipulation with both hands): (119:1)

**Purpose of the test:** To measure the ability to receive and the high thump that ends with the thoracic manipulation with both hands.

**Necessary tools:** a basketball court, two people, two tools to measure accuracy, (4) legal basketballs, a leather measuring tape (20 m), an adhesive tape, an electronic stopwatch, and a whistle.

Procedures: see Figure (4).

- Determines a central point at the bottom of the basket, on which it is relied upon to indicate some of the main points.
- Two points for precision measurement tools are determined on both sides, at a distance of (8 m) from the central point, and in turn away from the sideline of the field (1.50 m) and facing the first line of the volleyball court after the middle.
- Sets a volleyball court inside the basketball court.
- Two points (immediately behind the line) are determined, the first of which is at a distance of (3 m) from the first line of the volleyball court, and the second is at a distance of (9 m) from the centerline, and represents the stop of the tested player in the middle, as well as two points on the left side of the first tested player The second is far from the tested player in the first and second points (4.60 m), and represents a member of the work team with the ball at each point.
- Placing two figures on the first line of the volleyball court after the center line and along the sides of the central circle, representing the permissible limits for implementation.



**Fig 1:** shows the receiving and the high thump that ends with the thoracic manipulation with the two hands

**Performance description**

- The tested player stands on the first point marked in the middle and marked behind the center line, and at the same time a member of the work team stands with the ball next to him from the left side.
- At the start of the whistle signal, the ball is handed pectoral handling by one of the staff members at the first point to the test player who performs the receiving and the high thump directly towards the first line of the volleyball court after the center line to perform the

pectoral handling with two hands towards the two precision measuring devices alternately, and return quickly to The same point to repeat the attempt, and then quickly returns to the second point to repeat it twice.

- Once on the right and once on the left until the end of the four attempts.
- The four attempts are divided into two attempts from the first point and towards the first line of the volleyball court after the center line and as in step (1), and the other two attempts are made from the second point and towards the first line of the volleyball court after the center line and as in step (2).

#### Test conditions

- Speed in performance, and help the tested player alert to perform the four attempts from their specified places, and the tested player has the right to cross the first line of the volley ball court after the middle line after performing the chest handling with both hands, as well as committing to the specified area between the two people, and each player has two wrong attempts only.

#### Test management

- Timer: It gives the start signal, as well as calculating the time taken to perform the test.
- Caller: A staff member calls out the colors for the four attempts on the two precision measuring instruments.
- Recorder: It calls the names first and marks each of the colors and the time second.
- Grade Calculation:
- Calculates the time from the test player receiving the ball until the end of the fourth attempt after it touches the precision gauge net.
- Divide the time by (60 sec).
- The player shall be awarded (3) degrees of red, two degrees of blue, and one degree of green.
- A score of two for the mixed color for the four squares (plus ÷ 4), and (2.5) for the red and blue colors (plus ÷

2), and (1.5) for the blue and green (plus ÷ 2), and one for half of the blue, and (0.5) for half green, and (0.75) for half blue and half green (plural ÷ 2).

- Round the final number of colors (resolution) to the nearest whole number, if any.
- Total (final) score: Dividing the result of accuracy by time.
- Flexing Test: (Receiving and High Plumping Ended with Jumping Shoot 2 Points): (129:1)
- Purpose of the test: To measure the ability to receive and the high thump that ends with a jump shot - two points.
- Necessary tools: a basketball court, four obstacles, a star, 10 legal basketballs, a leather measuring tape (20 m), an adhesive tape, an electronic stopwatch, and a whistle.
- Procedures: see Figure (5).
- Determines a central point at the bottom of the basket, on which it is relied upon to indicate the main points.
- Three points are determined, the first of which is in front of the central point with a dimension of (2.32 m), the second on the left side near the distance (4 m) from the central point, which in turn is away from the line under the basket (2 m), and the third on the far left side with a distance of (7.79 m). Which departs from the side line (1 m), representing the stance of the tested player.
- Putting four barriers (the height of the column is 2 m each, and the barrier hanging on each of them is 100 cm long from the top and 50 cm wide), two of them are in the direction of the tested player in the first point and a barrier in the second point, and a barrier in the direction of the tested player from the cut side at the third point.
- Place a pole at the end of the free-throw line to the left of the center point in order to force the tested player to enter the area from his side.
- Determines one front point at a distance of (8.35 m) from the central point, and represents the pause of one of the team members who delivers the ball.

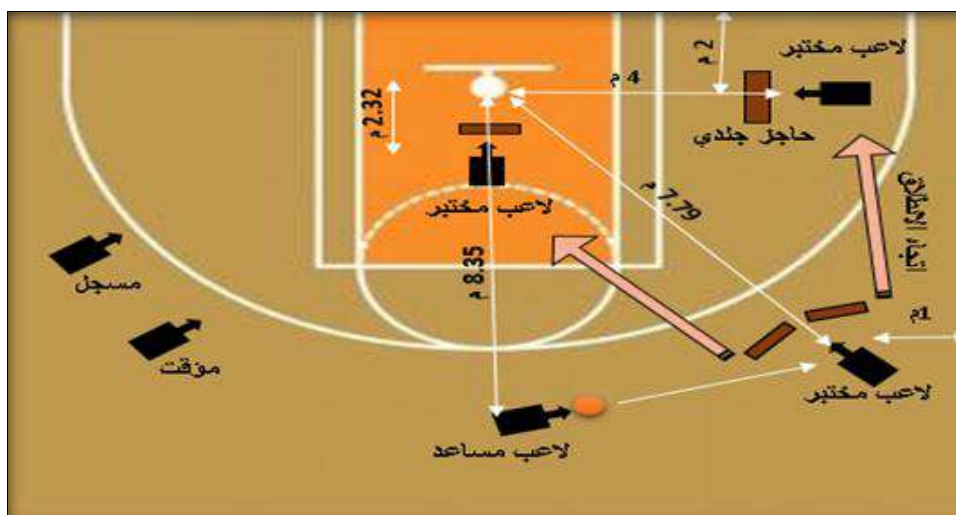


Fig 2: Shows the receiving and the high clutter that ends with the jump shot

#### Performance description

- The tested player stands on the side point marked on the ground on the left side far from the central point, and at the same time a member of the work team stands with the ball on the front point assigned to him.
- At the start of the whistle signal, the ball is handed to the chest with both hands from the front to the tested player who performs the receiving and the high pat directly towards the point inside the area to perform the jump shot two points for one attempt, and then return to

the same point to perform another attempt towards the side point on the left side of the central point after To deliver the ball a second time, and then return to the same point to complete the eight attempts in the same way and alternately.

- The tested player performs 10 attempts divided into 5 attempts in a direction inside the area and another towards the side point alternately.

### Test conditions

- Speed in performance, and the tested player assists the alert to perform the attempts from their specified places, and one of the team members standing at the front point delivers (10) consecutive balls according to the performance description, and each player has two wrong attempts only.

### Test management

- Timer: It gives the start signal, as well as calculating the time taken to perform the test.
- Recorder: It calls the names first, and indicates the successful and failed attempts, and the time second.

### Grade Calculation

- The time is counted from the time that the tester receives the ball until the end of the tenth attempt after the ball has left the tester's hand.
- Divide the time by (60 sec).
- The player gets a score for each successful jump shot.
- A score of zero is given to the player for each failed jump shot.
- Collect scores (accuracy) for successful attempts.
- Total (final) score: Dividing the result of accuracy by time.
- The third test: (Receiving and a loud thump that ends with a peaceful shot): (127:1)

### Purpose of the test

To measure the ability to receive and the high thump that ends with the peaceful shooting.

### Tools needed

A basketball court, four hurdles, a star, (8) legal basketballs, a leather measuring tape (20 m), an adhesive tape, an electronic stopwatch, and a whistle.

### Procedures

- Determines a central point at the bottom of the basket, on which it is relied upon to indicate the main points.
- Two points are determined, the first of which is in front, at a distance of (8.35 m) from the central point, and the second on the far left side, at a distance of (7.79 m) from the central point, which in turn is away from the side line (1 m), and represents the stance of the tested player.
- Placing four barriers (the height of the column is 2 m each, and the barrier hanging on each of them is 100 cm long from the top and 50 cm wide), two of them at a distance of (75 cm) and facing the tested player, and the other two are to the right and left of the central point within the area with a distance of (3.25 m, 2.21 m) respectively.
- Place a pole (50 cm) from the end of the free-throw line to the left of the central point in order to separate the tested player entering the area from the right and left sides.
- Two points are determined, the first of which is in front and at a distance of (8.35 m) from the central point, and the second on the far left side at a distance of (7.79 m), which is away from the side line (1 m), and represents the pause of a member of the work team who delivers the ball to each point.

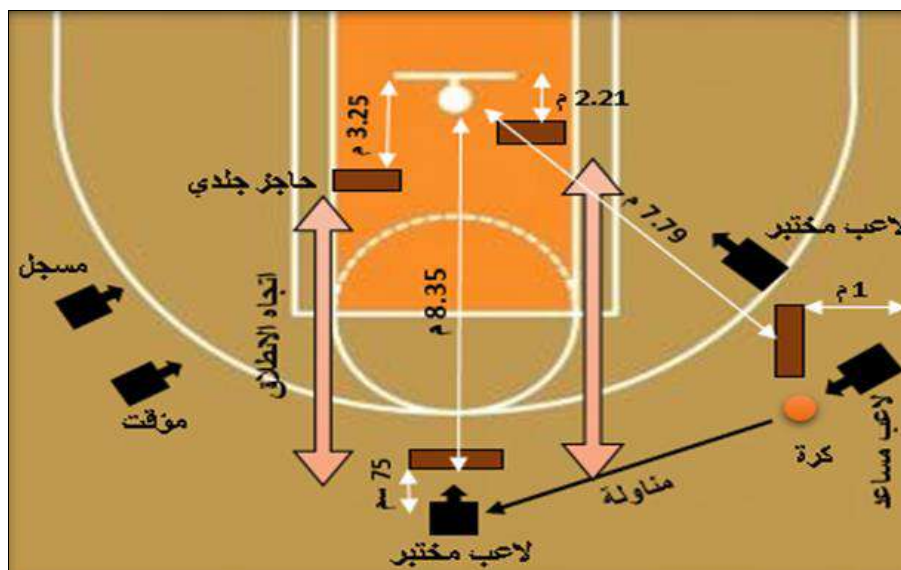


Fig 3: shows the reception and the high thump that ends with the peaceful correction

### Performance description

- The tested player stands on the first front point marked on the ground, and at the same time, two members of the working team stand with the ball on the two specified points.
- At the start of the whistle signal, the ball is handed to the chest with two hands from the right side of the test player who performs the receiving and the high pat directly towards the basket and to the right of the person present to perform the peaceful shooting for one attempt. The delivery is from the right side, and then

move to the second side point to perform another attempt towards the basket and to the left of the person on the left hand is from the front point, and then back to the first front point to complete the attempts.

- The tested player performs eight attempts divided into (4 attempts from the first point and 4 attempts from the second point and alternately).

**Test conditions**

- Speed in performance, and help the player tested alert, to perform the attempts from their specified places, and a member of the work team standing to the left of the tested player delivers (4) balls and (4) balls by a member of the second work team standing to the right of the tested player alternately and on According to the performance description, observing the correct steps and the correct arm for the peaceful shooting, each player has only two wrong attempts.

**Test management**

**Timer**

- It gives the start signal, as well as calculating the time taken to perform the test.

**Recorder**

- It calls the names first and marks each of the successful and unsuccessful attempts and the time second.

**Grade Calculation**

- The time is counted from the time that the tester receives the ball until the end of the tenth attempt after the ball has left the tester's hand.
- Divide the time by (60 sec).
- The player gets a score for each successful jump shot.
- A score of zero is given to the player for each case of a failed jump shot or an incorrect performance.
- Collect scores (accuracy) for successful attempts.
- Total (final) score: division of the result of accuracy by time.

**2.8. Scientific bases for the tests**

**Test stability**

The (test and re-test) method is one of the most widely used methods for test reliability, and it is worthy of being followed in experimental research by applying the test twice in succession and on two different days (162:10), and this indicates (the correlation between the scores of the first application and the degrees of the second application on the stability coefficient of the test) (58:3).

As the assistant work team, under the supervision of the researcher and supervisor, applied the tests on Sunday (3/2/2021) on a sample of (4) students from the same stage, and the test was repeated on the sample on Sunday (10/2/2021) under the circumstances. The same, then the correlation coefficient between the two tests was extracted by Pearson's simple correlation coefficient law for each test and it was found that the tests have a high degree of stability as shown in Table (2).

**Objectivity**

For the purpose of ensuring the objectivity of the tests, the researcher used the scores of arbitrators\* recorded during the re-tests on 10/2/2020 and after their results were statistically processed using the Spearman correlation coefficient, the objectivity of all skill tests was ascertained.

**Veracity of tests**

Honesty depends on the extent to which the test measures the skill or ability to be measured, and that honesty means (the test measures what is intended to be measured) (23:7). See Appendix (3), and they agreed that these tests measure the ability and skill that they were designed to measure. Since the validity coefficient depends on the reliability coefficient, it increases with its increase and decreases by its decrease (118:4), so the researcher used self-honesty where there is a link between stability and self-veracity, which is measured by calculating the square root of the test reliability coefficient. As shown in Table (2).

**Table 2:** which is measured by calculating the square root of the test reliability coefficient

T	Physical and skill tests	Constancy	Indication	Indication level	Self-honesty	Objectivity	Indication	Indication level
1	Receiving and high clapping ending with thoracic handling with two hands	0.995	0.005	moral	0.997	0.996	0.000	moral
2	Receiving and high clapping, ending with a jump shot, two points	0.836	0.024	moral	0.914	0.852	0.002	moral
3	Receiving and high clapping ended with a peaceful correction	0.962	0.038	moral	0.980	0.968	0.000	moral

**2.9. The exploratory experiment: The date of the experiment: on 1/2/2021 in the morning**

- Place of the experiment: the closed hall in the College of Physical Education - University of Karbala.
- Sample: The survey sample consisted of (5) students from the first stage in the College of Physical Education and Sports Sciences - Al-Mustansiriya University and who were not participating in the main experiment.

**Objectives of the experiment**

1. Introducing the assistant work team to the nature of the tests and knowing the extent of their efficiency.
2. Avoiding the obstacles facing the researcher during the implementation of the tests.

3. Knowing the approximate time taken for each test and the time taken to conduct the tests.
4. Ensuring the scientific transactions of the tests.
5. Identify the appropriate time for the exercises used.

**2.10. Tribal tests**

The researcher conducted the tribal tests on 2/12/2021 in the closed hall at the College of Physical Education and Sports Sciences - Al-Mustansiriya University at ten o'clock in the morning.

**2.11. Curriculum**

The researcher applied the educational curriculum by the subject teacher in the college, according to an educational

unit per week, according to the college curriculum, for a period of (10) educational units. For the learned skill under study, the time of the educational unit was 90 d, and the time of the educational unit was divided into the preparatory section (15 d), the main section (65 d) and the final section (10 d), as the educational curriculum began on February 13, 2021 and ended on 4/16/2020 AD. The researcher provided immediate and delayed feedback in a way (oral, audio, visual), and the researcher performed the process of correcting errors by giving immediate and final feedback according to the stages of building the motor program for the skill.

**2.12. Post-tests**

The post-tests of the research sample were applied on 4/16/2021 in the closed hall at the College of Physical Education - University of Karbala, and at ten o'clock in the morning, skill tests were conducted for the complex offensive skills that were the subject of the study.

**2.13. Statistical means**

The statistical bag (303:6) (SPSS) was used to analyze the research data.

**3. Presentation, analysis and discussion of the results**

This chapter consists of presenting and discussing the results of each of the pre and post-tests of the two experimental research groups. The researcher has put the results in tables and illustrations to facilitate noticing the difference and comparing them, leading to the final results, and then discussing them for the purpose of achieving the objectives and hypotheses of the research.

**3.1. Presentation, analysis and discussion of the results in the pre-post-tests of the experimental group for the research variables**

**Table 3:** It shows the arithmetic mean, standard deviation and (t) value calculated for the pre and post tests for the first experimental group (late feedback)

T	Physical and skill tests	Pretest		Post test		P_Q	p	Calculated T-value	Sig	indication
		Q	p	Q	p					
1	Receiving and high clapping ending with thoracic handling with two hands	14.146	3.402	19.977	2.888	5,831	0,514	4,754	0.005	moral
2	Receiving and high clapping, ending with a jump shot, two points	2.728	1.079	6,185	0,832	3,457	0.242	8,512	0.000	moral
3	Receiving and high clapping ended with a peaceful correction	6.828	1.661	8,970	1,015	2,142	0,646	1,213	0.002	moral

**Table 4:** shows the values of the arithmetic mean, standard deviation, and the calculated (t) value for the pre and post tests and for the second experimental group (real-time feedback)

T	Physical and skill tests	Pretest		Post test		Q-Q	p	Calculated T-value	Sig	morale
		Q	p	Q	p					
1	Receiving and high clapping ending with thoracic handling with two hands	13.957	1.106	16,456	2.617	4,099	1,511	3,486	0.000	moral
2	Receiving and high clapping, ending with a jump shot, two points	3.531	1.551	4,998	0,802	1,980	0,749	7,919	0,004	moral
3	Receiving and high clapping ended with a peaceful correction	6,010	0.895	8,873	1,128	2,813	0,233	2,001	0.001	moral

**3.2. Discussing the results of the pre and post-test for the two research groups in the skill tests.**

Through the results that appeared, we note that both groups have obtained significant differences between the results of the pre- and post-tests and in favor of the post-test in the tests under study. From easy to difficult, and this is confirmed by Qassem Lazam and others, “The process of successful learning and training requires continuous practice. To achieve this process, the importance of gradualism appears as an effective and influential factor in it, as gradual difficulty of movements and mathematical skills is from easy to difficult and from easy to complex as it helps On understanding, realizing and comprehending the movement or skill, then he will gradually implement the vocabulary required in performance according to the learner’s limits in his capabilities and functional ability, which will have a positive impact on the level of learning. And Schmitt mentions that the learning that occurs among learners who practice several variations in the exercise of the skill forms will have the ability to perceive the stimuli

they face and thus activate the learning process for these skills (267:11).

Learning in its early stages achieves rapid development, especially if the educated individuals do not have much experience, especially since both groups have received repetitions of learning with feedback, and the sources indicated that “feedback increases performance in the early stages of learning, as learning takes The initial image of the movement and sets an appropriate motor program for the response and implements it, and then compares the result with the built-in target or the scheduled program. (99:12)

**3.3. Presentation and analysis of the results of the post-test for the two research groups in the skill tests**

After collecting the post data for the skill tests and for the two research groups, and for the purpose of knowing the significance of the differences between the two experimental groups in the post test, the researcher used the (t) test as shown in Table (5).

**Table 5:** Shows the arithmetic mean, standard deviation, and Mann and Tenney values calculated for the post-tests and for the first and second experimental groups

T	Physical and skill tests	Totals	Arithmetic mean	standard deviation	Calculated T-values	Sig	Indication level
9	Receiving and high clapping ending with thoracic handling with two hands	Overdue the moment	19,977	2.890	3.325	0.008	moral
			16,456	4.628			
10	Receiving and high clapping, ending with a jump shot, two points	Overdue the moment	6,185	0.831	2,681	0.023	moral
			4,998	2.185			
12	Receiving and high clapping ended with a peaceful correction	Overdue the moment	8,970	1.087	2.574	0.028	moral
			8,873	2.207			

### 3.4. Discussing the results of the post-test for the two research groups in the skill tests.

From the presentation and analysis of the results of the skill tests in the remote test, which are shown in Table (5), it was found that there are significant differences between the two research groups and in favor of the first experimental group (immediate feedback). The researcher attributes these differences in development to the following:

The immediate and final feedback is of great importance in the learning process, as it is necessary and important in the process of control, control, and modification that accompanies interaction and learning processes, and its importance stems from its use in modifying and developing behavior for the better, in addition to its important role in stimulating the learner's motivation through Helping him discover the correct responses and prove them, and delete the wrong responses (25:5).

The development in the results of the first experimental group (delayed feedback) came as a result of their following a programming in giving feedback in proportion to the stages of formation of the motor program, so that the goal of immediate feedback was to facilitate the construction and composition of each stage of the motor program and reach it to mastery and then move to the final stage. By giving information about the result (late feedback), which had the greatest role in stabilizing the skill and reaching ideal performance, since the skills studied are complex and complex skills in performance.

### The programming of immediate and delayed feedback, according to the stages of building the motor program, was as follows:

- At the beginning of the first stage in the formation of the motor program for some complex skills in basketball, which is the formation of a printed picture of the skills under study, where the immediate feedback was provided by the teacher and aimed at forming a clear and correct picture of these skills.
- In the second stage in the formation of the motor program for the studied skills, which were identified by the researcher, the researcher chose one of the stored motor programs that the learner could use to reach the desired goal. The immediate feedback was aimed at helping the learner choose a previous motor program stored in the brain and similar to the motor program for this.
- In the third stage of creating the motor program for the studied skills, which includes the learner implementing the motor program originally stored in the brain and comparing the result with the goal, the immediate feedback about performance was only because the learner in this early stage of learning lacks knowledge of the exact details of the required skill, and that the

goal The feedback here is to compare the goal and the result and give directions about the learner's performance and correct errors on an ongoing basis until there is a match between what has been done and what should be done.

- In the fourth stage in the formation of the motor program for the studied skills, which includes repetition and correction until there is a match between the implemented program and the printed image, the immediate feedback was information about the result to suit this type of feedback with the specificity of these skills. As for the role of the final feedback, it is in At the end of this stage, the directions and advice about the skill as a whole are given at the end of the motor program formation for the skill and because the skills examined are considered complex and difficult skills, so the feedback had the greatest role in learning and installing the motor program for each complex skill.

## 4. Conclusions and recommendations

### 4.1. Conclusions

1. The use of immediate and final feedback has a positive role in learning the skillful performance of some complex skills in basketball.
2. The necessity of using the immediate and final feedback when learning the complex skills and what is commensurate with the stages of building the motor program in basketball.
3. The need to use the final feedback on the result so that the learner knows the result of his performance

### 4.2. Recommendations

1. The need to focus on using the types of feedback while learning the complex skills of basketball.
2. The need to focus on the use of real-time feedback with each stage of skill building, especially with beginners, so that errors are continuously corrected before they become a habit.
3. The need to focus on using the final feedback on the result, especially with difficult and complex skills.

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