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The effect of an educational curriculum on cerebral control in learning some offensive skills in basketball for students of first-stag

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Abstract
The aim of the study is to prepare an educational curriculum according to the brain control of the patterns (right, left and integrated) to learn the skills of types of basketball scoring where the samples were deliberately chosen, and they were (40) students from the College of Physical Education and Sports Sciences/Al-Mustansiriya University/First Stage of the academic year (2018-2019), and the researchers used the experimental approach to solve the research problem, and used several tools and devices to teach different types of basketball scoring in an accurate and interesting way to the student. Here, the research problem appeared is the lack or lack of use of cerebral control in the basketball game, which needs accuracy, speed and high attention during play, and a special Torrance scale form was established to measure brain patterns in the basketball game, and the researchers assumed the existence of statistically significant differences between the groups for patterns (Right, left and integrated) where they concluded that there is an evolution in all research variables and for all groups. The researchers recommended the necessity of conducting a study of the two hemispheres of the brain in learning other skills in basketball game, materials and games for all school levels.

Keywords: Brain control, during play, game

Introduction
This world is witnessing a great development in all aspects of life, in particular those sciences related to the field of physical education and sports, where the principle of integration between knowledge, information and sports sciences, including kinetic learning, is found, and the educational process's interest is no longer limited to students 'acquisition of knowledge and facts, but rather to an interest in ways and methods that help learning and increased interest in studying the brain more to reach the individual to global levels. The game of basketball is practiced in accordance with the laws and regulations of its own and is accurate and requires the learner to make the maximum of his own effort of mental and physical to implement the skill and this is related to the work of collaboration with brain work in an integrated manner, i.e. not being limited to one side without the other.

The results of anatomy studies also showed that the human brain is divided into two halves, namely: the right and the left half, and that these two halves are connected together by a bundle of nerves called the rigid body and the function of this body is to transport nerve signals from one half to the other of the two halves of the brain (288; 11).

The two researchers pointed out that individuals tend to rely on one side of the brain more than the other during the processing of information, this side has been called (the dominant) and has resulted in the emergence of the concept of brain dominance, which is that the control of one side of the brain, which the individual expresses in a certain way in the two processes of learning and thinking. (731; 1)

Brain dominance is defined as the assumption of one of the two halves of the brain to the control of the behavior and actions of individuals, that is, the individual's tendency to depend on one half of the brain more than the other half (5; 8)

The left matter has a function such as: remembering names, recognizing them, responding to verbal vocabulary and names, dealing with one problem, analyzing and abstraction, etc. As for the right half, the function of responding to animated pictorial instructions, the use of imagination, creativity and innovation. (64,2).

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There must be interaction in linking skills with the written, psychological and mental aspects, and not limited to one side without the other, because it plays a major role in developing performance. (76,13)

Here is the importance of the research that the first research on the game of basketball, where the two researchers studied the learning of forward skills in basketball for the right and left halves, integration between them and the treatment of their skill performance.

Research problem

After reviewing the Arab and foreign studies, it was found that there is a lack of use of brain control in the basketball game, which requires accuracy, speed and high attention during play, and the addition of connect of brain control to thinking and skill learning and its dependence on one side of the brain without the other. The two researchers, as coaches for the basketball game, noted that there were no studies that contain an educational curriculum according to the individual differences of the learners in terms of their intellectual, cognitive and physical abilities of the offensive skills of basketball, so the two researchers decided to prepare an educational curriculum according to the brain dominance of the left, right and integrated pattern, which helps to address the individual differences of students and increase their motivation towards learning and distinct skill performance.

3. Research objectives

1. Preparing an educational curriculum according to brain dominance to learn some offensive skills with basketball among first-year students.
2. Identify the impact of the educational curriculum

according to the brain's mastery of learning some offensive skills with basketball among first-stage students.

Terminology
Brain Control: (17; 7)

It is defined as: the use of one of the left or right spherical halves, or both, in mental processes or behavior.

It is also known: that brain control is bipolar, and they represent a continuum on which the control activities are distributed in varying proportions, as most individuals use those patterns (left, right, integrated), but the majority or control in some situations is by one of them one at the expense of the other. (8; 5).

In order to ensure the homogeneity of the sample members and the correctness of the normal distribution among its members, the researcher used the torsion coefficient in the research variables, as shown in

Table 1: Shows the variables, unit of measurement, arithmetic means, the mean, standard deviation and coefficient of torsion to homogeneity of the research sample.

Variables	Measure Unit	Arithmetic Mean	Mean	Standard Deviation	Variables
Age	Year	18,59	0,816	0,78	0,160
Weight	Kgm	67,24	6,221	3,66	0,220
Length	Cm	170,04	3,625	1,67	1,514

The torsion values appeared to be less than + 3 for all variables, which indicated the homogeneity of the research sample. To ensure the equivalence e of the sample members, the researcher used the analysis of variance for the study groups for the results of the pre-tests, as shown in

Table 2: Statistical parameters between groups in the research variables for the purpose of equivalence

Skills	Variance resource	Square sums	Freedom Degree	Square Mean	Calculated F Value	Error Level	Difference Denotation
Free throw	Among	1,000	3	0,333	0,213	0,873	Random
	Inside	51,400	36	1,428			
Jump Shoot	Among	0,001	3	0,002	0,342	0,792	Random
	Inside	0,034	36	0,001			
Ladder Shooting	Among	0,002	3	0,001	0,531	0.601	Random
	Inside	0,043	36	0,001			

* Significant at the error level (0.05) if the error level is less than (0.05).

Torrance scale of brain domination

In their research, the two researchers relied on the scale made by Torrance and his assistants, and (Salah Ahmad Murad) (60; 3) translated and prepared it to be suitable with the Arab environment. The validity and reliability of the scale was proven in its English and Arabic form, and it was applied to a sample of young people and adults. The researcher (Nihad Muhammad Alwan) (102; 9) extract the scientific foundations of the scale on the Iraqi environment, and they demonstrated high values of validity, reliability and objectivity of the scale, and this scale has been used in the this research for the purpose of dividing the sample into those with a brain domination for the right, left and integrated halves, as the scale consists of (28) pair of expressions, one of which indicates the functions of the right half and the other indicates the functions of the left half.

Key to the Torrance scale of domination of a brain

It consists of (28) pairs of expressions, as shown in the

appendix (1), each statement is given one score, meaning that the high score for the test is (28) degrees, and the total score that the player gets is (14) and above represents the right and left halves domination., As for the integral, half score is given for each paragraph.

Tests for research:
Free throw Test (236; 6)

The purpose of the test is to measure the accuracy of the free shot aim behind the free throw line.

Necessary tools: basketball field, basketball goal, basketball.

Number of attempts: Each player was given (20) attempts divided into four groups, each group consists of (5) consecutive attempts.

Calculation of points: one point is calculated and recorded for each player for every successful throw (a ball that enters the basket). No point is counted for the tester when the ball does not enter the basket, and the highest points that can be obtained are (20) points.

Test the accuracy of the jump shot from arc areas:(87:12)

The purpose of the test is to measure the accuracy of the aim of the jump from within the calculated arc with three points.

Tools: a digital electronic device that gives a digital signal from one to ten and can be controlled manually, ten basketballs, a stopwatch.

1. Determine a central point at the bottom of the basket that you can rely on for marking the main points
2. From the central point we define (10) points as follows:
3. From the central point, we draw (5) points in the form of an arc at a distance of (3.5) meters.
4. From the central point, we draw (5) points in the form of an arc at a distance of (4.5) meters.
5. Clear numbers and a different color are placed on the pitch from one to ten and on the points that have been marked, and the numbers are sticky.
6. A basketball is installed next to each basketball number.
7. Each subject has ten shot attempts.

Performance specifications

The device is installed on the basket column below the target plate and the test operator stands against the target plate and outside the three point arc the tester stands under the basket holding the control device and when the signal is given, he runs the stopwatch and presses the stop button on the control device so that the screen stops at a specific number from one to ten randomly, when the subject sees the number in the device, the subject directs to the same number installed on the ground to pick up the ball next to the new number and shoot from the jump, then the test operator turns the device on again to turn the screen on again and when the subject finishes the first attempt, the test operator directly pressing the pause button, the screen stops on another number, so the subject will go towards the new number and pick up the ball to lead a correction from the jump and so continue until the completion of the ten attempts.

Registration method

1- The time is calculated from the start until the ball comes out of the subject hand on the tenth attempt.
2- It is given to the subject (2 marks) for each successful attempt.
3- The subject is given (1 mark) for each attempt that touches the ring and the ball does not enter the basket.
4- No score is given to the subject if the ball does not reach the basket.
5- The final score of the subject is the result of dividing the total accuracy scores by the recorded time.

The Stair Shoot Test after Performing the Dribble (378; 4)

The purpose of the test is to measure the ability to change direction, handle the ball with two hands, speed and accuracy in aiming at the basket.

Tools: (2) chairs, (2) basketball, stopwatch, basket goal surrounded by clear and specific borders.

Procedures: Draw two lines on the ground (A - B) of each length (3.60) meters from the middle of the finish line, so that each line with the finish line makes an angle (45).

1. A chair is placed next to each line, and one basketball chair is placed on each chair.
2. Draws on each of the side lines a line of length (60) cm,

this line is called the starting line.

3. A foot away from this line is placed and on the side of this line a chair is placed on which a basketball is placed.
4. The subject stands next to the chair, and when the start signal is given, it picks up the ball from above the chair and then returns to the starting line (B), then made dribbling and runs with it towards the basket, and when it approaches the basket, it shoots on it, then picks up the ball, and immediately passes it to the assistant standing next to The chair is at the starting line (B), who in turn picks it up and put it on the chair.
5. The after the subject passes the ball towards the starting line (B), he runs towards the chair at (A), then he catches the ball from above the chair and starts to pat it and runs with it from the starting line towards the basket where the run ends with a peaceful correction on the basket and then He picks up the ball after the shooting and passes it to the assistant at (A), who in turn receives it and places it on the chair, and thus continues to catch the ball, running and shooting from both sides alternately until it completes (5) times on each side and the total number of the shots is on the basket (10) shots.
6. Running must begin with the ball on each side from behind the starting line (60 cm) line.
7. The time operator calculates the time from the subject starting signal until the subject catches the ball after shooting it at the basket on the tenth time.
8. Each player is given three consecutive attempts between each attempt and the other, a rest period of not less than (2 minutes).

Test Instructions

The test must begin every time the subject tries to run and dribble with the ball and shoot at the basket from behind the line (24 inches).

1. The ball must be dribble while running legally according to the law of the game.
2. Do not jump twice with the ball in one shot.
3. The attempt is not considered correct, as the subject dribble and ran with it and then stopped and then resumed it again.
4. The time operator calculates the time and records the faults in which the subject made.
5. The scorer calculates the points resulting from shot the target and saves the number of targets scored by the subjectand notes the timer when the tester reaches the ninth shot.
6. The score is calculated by relating the time taken by the subject and its accuracy of correction.
7. The time is calculated from the tester's starting signal until the moment when the ball was caught after shooting it to (1/10) of a second.

Correction accuracy is calculated as follows:

1. The subject gives (2) scores for each ball that enters the basket.
2. The subject gives (1) score for each ball that hits the ring from the top and does not enter the basket.
3. The test operator does not give any score when the ball does not touch the ring.
4. One second is added to the total time recorded by the laboratory, when it commits a violation of the test

instructions.

5. The final score of the test is (the sum of the accuracy scores on the sum of seconds, and the subject best score is calculated for the three attempts).

Pre-tests

The two researchers conducted pre-tests on the styles of basketball scoring (steady throwing free shooting, jumping and ladder scoring) on the research sample on (Sunday) 6/1/2019 at the College of Physical Education and Sports Sciences Hall / Al-Mustansiriya University.

Main Experiment

The educational curriculum was implemented according to brain domination on 1/7/2019, it included (8) weeks and by (3) educational units per week, and the total number of units was (24) educational units, and the departments used the whole unit (90) minutes, and the curriculum ended On Thursday 7/3/209,where in the main section (70) minutes was introduced and explained the skill or exercise, and the researchers used, with the group that is characterized by the right style, computer or the iPad for the purpose of displaying films and educational pictures on attack skills and also showing a model of performance with one of the players at the beginning of the main section and varied in the form of the exercise -by the use of music and several models for each individual and collective performance of skills.

As for the group characterized by the left style, it approved at the beginning of the main section on the use of verbal expressions as well as the explanation and presentation of

the skill by applying the performance with one of the players, and then the players perform the educational duties accurately in terms of adherence to distances and performing exercises at a single pace without using music.

As for the group that is characterized by the integrated style, where the tools and devices of the two previous styles are used in terms of performance and display of the required skills.

As for the control group, it is subject to the exercises of the annual curriculum of the faculty.

Post tests

After completing the application of the educational curriculum on the experimental groups, the researcher conducted the post tests on the research sample on (Thursday) 10/3/2019, as he followed the same method that was used in the pre-tests taking into account the spatial and time conditions, the test methods and the tools Itself and the auxiliary working team group that conducted the same pre-tests.

Results, Discussion and Analysis

Discussion and analysis of the arithmetic mean and standard deviations in the results of the two tests (pre and post) and their analysis

This chapter includes presenting the results of the tests that were used in the research and which the sample was subjected to in the pre and post tests according to tables and illustrations in order to know the differences and compare the results of statistical operations to reach the final results.

Table 3: Arithmetic means and standard deviations in the research variables for the experimental research groups (the right-style group, the left-style group, and the integrated pattern group) and the control group in the pretest.

Variables	Measure Unit	Right style group		Left style group		Integrated style group		Control group	
		S	A	S	A	S	A	S	A
Free throw	Number	6,000	1,054	6,100	1,286	6,400	1,074	6,300	1,337
Jump Shoot	Degree/Time	0,123	0,030	0,123	0,030	0,117	0,031	0,131	0,029
Ladder shoot	Degree/Time	0,141	0,092	0,140	0,031	0,124	0,037	0,137	0,022

Table No. (3) shows

1- In the free throw variable: the arithmetic mean of the three experimental groups in question (the right style group - the left style group - the integrated style group) and the control group in the pre-test reached (6.000) (6.100) (6.400) (6.300) with standard deviations of (1.054) (1.286) (1.074) (1.337) respectively.

2- In the jump shootingvariable: the arithmetic mean of the three experimental groups under investigation (the right style group - the left style group - the integrated style group) and the control group in the pre-test reached (0.123) (0.123) (0.117) (0.131) with standard deviations of (0.030) (0.030) (0.031) (0.029) respectively.

3- In the ladder shooting variable: the arithmetic mean of the three experimental groups in question (the right style group - the left style group - the integrated style group) and the control group in the pre-test reached (0.141) (0.140) (0.124) (0.137) with standard deviations of (0.029) (0.031) (0.037) (0.022) respectively.

Table (4) shows the results of the pre-test before performing the actual experiment for the three experimental groups (the right style group, the left style group - the integrated style group) and the control group. The researcher will review the results of the tests and the values of (t) and (f) in the following tables after the post test development or difference appearance in the results of the current research.

Table 4: Arithmetic means and standard deviations in the search variables for the three experimental research groups (the right style group - the left style group - the integrated group) and the control group in the post test.

Variables	Measure Unit	Right style group		Left style group		Integrated style group		Control group	
		S	A	S	A	S	A	S	A
Free throw	Number	12,800	1,229	10,500	1,433	9,300	1,195	9,200	1,475
Jump Shoot	Degree/Time	0,250	0,016	0,181	0,032	0,198	0,023	0,173	0,029
Ladder shoot	Degree/Time	0,274	0,028	0,250	0,029	0,211	0,026	0,215	0,085

Table No. (4) shows

1- In the free throw accuracy variable: the arithmetic mean of the three experimental groups under investigation (right style group - left style group - Integrated style group) and the Control Group in the post test reached (12.800) (10.500) (9.300) (9.200) with standard deviations of (1.229) (1.433) (1.159) (1.475) respectively.

2- In the jump shot accuracy variable: the arithmetic mean of the three experimental groups in question (right mode group - left mode group - integrated group) and

the control group in the post test reached (0.250) (0.181) (0.198) (0.173) with standard deviations of (0.016) (0.032) (0.023) (0.029), respectively.

3- In the variable accuracy of the ladder shooting: the arithmetic mean of the three experimental groups in question (the right style group - the left style group - the integrated pattern group) and the control group in the post test reached (0.274) (0.250) (0.211) (0.215) with standard deviations of (0.028) (0.029) (0.026) (0.085), respectively.

Table 5: Shows the difference of arithmetic means, its standard deviation, the calculated value (t), and the differences between the results of the two tests (pre and post) for the three experimental research groups (the right style group - the left style group - the integrated style group) and the control group in a free throw variable

Groups	Measure Unit	Difference	A Difference	Calculated t Value	Denotation level	Difference denotation
Right style group	Degree	6,800	0,628	10,812	0,000	Significant
Left style group	Degree	4,400	0,718	6,128	0,000	Significant
Integrated style group	Degree	2,900	0,378	7,660	0,000	Significant
Control group	Degree	2,900	0,585	4,949	0,001	Significant

* Significance at the approved level of significance (0.05) if the level of significance is less than (0.05) at the degree of freedom (10 - 1 = 9) can be seen from Table (5)

The right style group: the difference of the arithmetic mean between the results of the two tests (pre and post) reached (6.800) with a standard deviation of (0.628and since the significance level value is less than (0.05), this indicates the significance of the differences at the approvedlevel of significance (0.05) between the results of the two tests (pre and post) in favor of the post test.

1- The left style group: the difference in the arithmetic mean between the results of the two tests (pre and post) was (4.400) with a standard deviation of (0.718), and the value of (t) calculated was (6.128), while the value of the significance level was (0.000) against of the degree of freedom (9) and since the value of the approved significance level is less than (0.05), that indicates the denotation of the differences at the error level (0.05) between the results of the two tests (pre and post) and in favor of the post test.

2- The integrated style group: the difference of the arithmetic mean between the results of the two tests

(pre and post) was (2,900) with a standard deviation of (0.378), and the value of (t) calculated was (7.660), while the value of the error level was (0.000) and against the degree of freedom (9) and since the significance level value is less than (0.05), that indicates the significance of the differences at the approved level of denotation (0.05) between the results of the two tests (pre and post) for of the post test.

3- Control group: The difference in the arithmetic mean between the results of the two tests (pre and post) was (2,900) with a standard deviation of (0.585), and the value of (t) calculated was (4.949), while the value of the significance level was (0.001) and in front of the degree of freedom (9), and since the error level value is less than (0.05), that indicates the significance of the differences at the approved level of denotation (0.05) between the results of the two tests (pre and post) and in favor of the post test.

Table 6: It shows the difference of arithmetic means, its standard deviation, the calculated (t) value, and the differences between the results of the two tests (pre and post) for the three experimental research groups (the right style group - the left style group - the integrated style group) and the control group in the jump shooting variable

Groups	Measure Unit	Difference	A Difference	Calculated t Value	Denotation level	Difference denotation
Right style group	Degree	0,127	0.011	11,522	0,000	Significant
Left style group	Degree	0,058	0009	5,938	0,000	Significant
Integrated style group	Degree	0,081	0,014	0,652	0,000	Significant
Control group	Degree	0,041	0,006	6,100	0,000	Significant

* Significance at the approved level of significance (0.05) if the level of significance is less than (0.05) at the degree of freedom (10 - 1 = 9) can be seen.

The right style group: the difference of the arithmetic mean between the results of the two tests (pre and post) was (0.127) with a standard deviation of (0.011), and the value of (t) calculated was (11.522), while the value of the error level was (0.000) in front of the degree of freedom (9), Since the level value is less than (0.05), this indicates the significance of the differences at the approved level of denotation (0.05) between the results of the two tests (pre and post) in favor of the post test.

1. The left style group: the difference in the arithmetic mean between the results of the two tests (pre and post)

was (0.058) with a standard deviation of (0.009), and the value of (t) calculated was (5.938), while the value of the error level was (0.000) in front of the degree of freedom (9) and since the significance level value is less than (0.05), this indicates the denotation of the differences at the approved level of significance (0.05) between the results of the two tests (pre and post) for the post test.

2. The integrated pattern group: the difference of the arithmetic mean between the results of the two tests (pre and post) was (0.081) with a standard deviation of

(0.014), and the value of (t) calculated was (5.652), while the value of the error level was (0.000) against of the degree of freedom (9) and since level value is less than (0.05), this indicates the denotation of the differences at the approved level of denotation (0.05) between the results of the two tests (pre and post) in favor of the post test.

3. Control group: The difference in the arithmetic mean between the results of the two tests (pre and post) was (0.041) and a standard deviation of (0.006) since the level value is less than (0.05), this indicates the signifvance of the differences at the approved level of denotation (0.05) between the results of the two tests (pre and post) for the post test.

Table 7: It explains the differences in the arithmetic mean, its standard deviation, the calculated (t) value, and the significance of the denotation between the results of the two tests (pre and post) for the three experimental research groups (the right style group - the left style group - the integrated pattern group) and the control group in the ladder shooting variable.

Groups	Measure Unit	Difference	A Difference	Calculated t Value	Denotation level	Difference denotation
Right style group	Degree	0,132	0.011	11,396	0,000	Significant
Left style group	Degree	0,109	0.013	8,077	0,000	Significant
Integrated style group	Degree	0,086	0,009	0,9060	0,000	Significant
Control group	Degree	0,078	0,030	2,608	0,028	Significant

* Significance at the approved level of significance (0.05) if the level of significance is less than (0.05) at the degree of freedom (10 - 1 = 9).

From Table (7) the following can be seen

1. The right style group: the difference of the arithmetic mean between the results of the two tests (pre and post) was (0.132) with a standard deviation of (0.011), and the value of (t) calculated was (11.396), while the value of the error level was (0.000) in front of the degree of freedom (9) and since the level value is less than (0.05), this indicates the significance of the differences at the approved level of denotation (0.05) between the results of the two tests (pre and post) and in favor of the post test.

2. The left style group: the difference of the arithmetic mean between the results of the two tests (pre and post) was (0.109) with a standard deviation of (0.013), and the value of (t) calculated was (8.077), while the value of the error level was (0.000) against of the degree of freedom (9) and since the level value is less than (0.05), this indicates the significance of the differences at the approved level of denotation (0.05) between the results of the two tests (pre and post) in favor of the post test.

3. The integrated pattern group: the difference in the arithmetic mean between the results of the two tests (pre and post) was (0.086) with a standard deviation of

(0.009), and the value of (t) calculated was (9.060), while the value of the error level was (0.000) in front of the degree of freedom (9) and since the significance level value is less than (0.05), that indicates the significance of the differences at the approved level of denotation (0.05) between the results of the two tests (pre and post) in favor of the post test.

Control group: The difference in the arithmetic mean between the results of the two tests (pre and post) was (0.078) with a standard deviation of (0.030), and the value of (t) calculated was (2.608), while the value of the error level was (0.028) againstfreedom degree (9), and since the significance level value is less than (0.05), this indicates the significant differences at the approved level of significance (0.05) between the results of the two tests (pre and post) for of the post test.

Presentation and analysis of the results of the analysis of variance test (as the P test) for the three experimental research groups and the control group in the results of the post test in the variables under consideration.

Table 8: The analysis of the variance in the variables under research shows the three experimental research groups and the control group in the post-test

Skills	Variance resource	Square sums	Freedom Degree	Square Mean	Calculated F Value	Error Level	Difference Denotation
Free throw	Among	84,100	3	28,033	15,818	0,000	Significant
	Inside	63,800	36	1,722			
Jump Shoot	Among	0,036	3	0,012	17,328	0,000	Significant
	Inside	0,025	36	0,001			
Ladder Shooting	Among	0,027	3	0,009	3,700	0.020	Significant
	Inside	0,043	36	0,001			

Significant at the approved level of significance (0.05) if the level of significance is less than (0.05).

It can be seen from Table (8) that
The (F) test values calculated in the variables under research between the three experimental research groups (the right style group - the left style group - the integrated style group) and the control group in the pre-test amounted to (0.932) (6.090) (6.473) (15.818) (17.328) (3.700) (1.687) (11.362) (11.218) respectively, while the significance level values were (0.435) (0.002) (0.001) (0.000) (0.000) (0.020) (0.187) (0.000) (0.000) respectively and against of the degree of freedom (3-36), and since the value of an error level is less

than (0.05), this indicates the differences at the level of significance approved(0.05) between the four groups in all the variables under consideration in the post-test except for the variant of the dribble for a distance of (20) meters And the flexibility of the trunk joint, and to verify and identify the differences between the groups, the least significant difference test (LSD) was used to indicate the differences between the four groups as follows:
Table (10) shows the results of the lowest significant difference for the research variables for the four groups, as it

appears in the analysis of variance the development of most of the variables between and within the groups in the post test.

Introduce and analysis of LSD results between the three experimental research groups (the right style group - the left style group - the integrated style group) and the

control group in the post-test results in the variables in research.

Discussion and analysis of (LSD) results between the three experimental research groups (the right style group - the left style group - the integrated style group) and the control group in the results of the post test of the free throw variable

Table 9: It shows the difference of the arithmetic mean between the three experimental research groups (the right style group - the left style group - the integrated style group) and the control group and the value (LSD) and the denotation of the differences in the free throw variable

Groups	Means differences	Differences	LSD Value	Differences
Right style-Left style	12,800-10,500	2,300		Significant
Right style-Integrated style	12,800-9,300	3,500		Significant
Right style-control	12,800-9,200	3,600	1,209	Significant
Left style-Integrated style	10,500-9,300	1,200		Significant
Left style-control	10,500-9,300	1,300		Significant
Integrated style	10,500-9,200	0,100		Significant

The significant level is at (0.05) if the indication level is less (0.05).

It can be seen from Table (9)
Table No. (10) shows the results of the value of (LSD) to know the significance of the differences between the arithmetic means for the four groups of the free throw accuracy variable, and the results showed that the highest significant difference is (3,600), which is determined between the right style group with the control group for the right style group. It indicates that The right-style group is the best group in the results of the free throw accuracy variable and then comes the second best difference (3.500), which is determined between the right-style group and the integrated style group for the right-style group and then

comes the third best difference (2.300), which is determined between the right-style group and the left-style group for the right style group, then comes the fourth best difference (1.300), which is determined between the left style group and the control group, for the left style group.

Discussion and analysis of the (LSD) test results between the three experimental research groups (the right style group - the left style group - the integrated pattern group) and the control group in the results of the post test for the jump shot variable.

Table 10: It shows the difference of the arithmetic mean between the three experimental research groups (the right style group - the left style group - the integrated pattern group) and the control group and the value (LSD) and the denotation of the differences in the jump shot variable

Groups	Means differences	Differences	LSD Value	Differences
Right style-Left style	0,250-0,181	0,068		Random
Right style-Integrated style	0,250-0,198	0,051		Random
Right style-control	0,250-0,173	0,077	0,028	Random
Left style-Integrated style	0,181-0,189	0,017		Random
Left style-control	0,181-0,173	0,008		Random
Integrated style	0,198-0,173	0,025		Random

The significant level is at (0.05) if the indication level is less (0.05).

It can be seen from Table (10) that
Table No. (11) shows the results of the (LSD) value to know the significance of the differences between the arithmetic means of the four groups of the shooting accuracy variable from jumping, and the results showed that the highest significant difference is (0.077) that is determined between the right style group with the control group and in favor of the right style group. It indicates The right-style group is the best group in the results of the shooting accuracy variable from jumping and then comes the second best difference (0.068), which is determined between the right-style group

and the left-style group and for the right-style group, then comes the third best difference (0.051), which is determined between the right-style group and the left-style group. Integrated style for the right style group.

4.2.3 Discussion and analysis of LSD results between the three experimental research groups (facilitation and media exercise group - media group - facilities group) and the control group in the results of the post-test for the variable accuracy of ladder shooting

Table 11: It shows the difference of the arithmetic mean between the three experimental research groups (the right style group - the left style group - the integrated group) and the control group and the value of (LSD) and the significance of the denotation in the variable accuracy of ladder shooting

Groups	Means differences	Differences	LSD Value	Differences
Right style-Left style	0,250-0,274	0,024		Random
Right style-Integrated style	0,274-0,211	0,063		Significant
Right style-control	0,274-0,215	0,058	0,040	Significant
Left style-Integrated style	0,250-0,211	0,039		Random

| Left style-control | 0,250-0,215 | 0,034 | | Random |
| Integrated style | 0,211-0,215 | 0,004 | | Random |

The significant level is at (0.05) if the denotation level is less (0.05).

It can be seen from Table (11) that

Table No. (2) shows the results of the value of (LSD) to find out the significance of the differences between the arithmetic means of the four groups of the variable accuracy of the peaceful correction. The results showed that the highest significant difference is (0.063) that is determined between the right style group with the integrated style group for the right style group, and this It indicates that the right style group is the best group in the results of the ladder shooting accuracy variable, and it comes next, after which the second best difference (0.058) is determined between the right style group and the control group and for of the right style group.

The results of Table (10) shows the significance of the differences for the mean difference values and the value of the lowest significant difference (LSD) between the groups in the post test of the research sample in a variable (accuracy of the angle of shooting with a free throw).

Conclusions
1. The results of the pre and post tests showed an improvement in all research variables and for all groups.
2. The first and second groups, which used the educational curriculum according to the right and left half brain control, showed a positive effect on the development of basketball scoring skills.
3. The traditional method used with the control group influenced the development of the research variables, but in less proportions than the experimental groups.

Conflict of interest
The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Appendix (1)

T	Ferries	Marking
1	* I like to read a detailed (discussion) explanation of the things to be done. * I like to explain things to me in a practical way.	
2	* I am skilled at interpreting signs and body expressions. * I prefer to say what I'm thinking and rely on what people say.	
3	* Enjoy the decisions or lessons in which he listened to the teacher. * Enjoy the courses or lessons in which I move around and try things.	
4	- * I tend to solve problems in a non-serious way (the foreplay method). * I tend to solve problems in a serious (honestly) way, such as: a businessman.	
5	- * Use any appropriate information to perform the required work. * Use any information available to me to perform the work required of me.	
6	* I like specific lessons or works, in which I know exactly what is required of me. * I like lessons or non-partisan works, which give me opportunities to change as I progress in their performance.	
7	* I like to use guesswork. * I don't like guesswork	
8	* I like to express my feelings (and emotions) in clear and direct language. * I love expressing my feelings (and emotions) in poetry, singing or painting.	
9	* I love to learn things that are known and are certain of them (which prove their validity and cannot tolerate controversy). * I love learning mysterious things.	
10	* I like breaking into ideas in order to think about each of them separately. * I like putting a lot of ideas together	
11	* I am skilled at using logic in solving problems. * I am skilled at using exploration to solve problems.	
12	* I like to see and imagine things when solving problems. * I love to analyze problems by reading and having fun with the teachers who know them.	
13	* Learn easily from teachers who use words in their explanations. * Learn easily from teachers who use movements and representations in their discussion.	
14	*I Successfully use words when remembering or thinking about something. * I am successful in using pictures and imagination when remembering or thinking about something.	
15	- * I like seeing things finished or complete. * I like organizing and completing imperfect things.	
16	* I am smart. * I am an explorer (innovative).	
17	- * I am successful in learning details and facts. * I am successful at learning from the working idea or the big picture	
18	* I learn and remember the things I studied. * I learn and remember the details and facts that I come to know about what is happening around me.	
19	* I like reading real stories. * I like reading fairy tales.	
20	- * Enjoy planning what I'm going to do. * Enjoy dreaming and imagining what I'm going to do.	
21	- * I like to enjoy music while reading or studying. * I like finishing quickly with reading and studying.	
22	- * Enjoy refining (copying) and completing details. * Enjoy drawing my thoughts and imaginations	
23	- * It excites me (I am happy) to invent something. * It excites me (I am happy) to do something better.	
24	* Learn well by exploring. * I learn well by examination or experimentation.	
25	- * I like to present ideas in an orderly manner. * I like to present ideas through their relationship with each other	
26	* I am successful at remembering linguistic things. * I am successful at remembering sounds and tones.	
27	* My mind often wanders when thinking about something. * Almost no mental wandering.	
28	* Enjoy summarizing. * Enjoy planning (draft).	