

# Skillful Thinking According To The Preference Of Cerebral Sovereignty And Its Relationship To Some Of The Basic Skills Of Tennis

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**Abstract:** *The great scientific progress is a great fruit for scientists and specialists in the various fields of science. It is important to record the areas of physical education that require a lot of references and scientific works to observe this rapid scientific development in the fields of physical education and the sciences that are entrusted with it. This has been clearly reflected in sporting achievements Which appeared in the international and Olympic tournaments in the high level of sports players in both the collective and individual games and in the destruction of figures on a continuous basis, especially in individual games and the game of tennis ground is one of the sports that have seen remarkable development using the correct scientific application. This development was not coincidental, but was the result of the adoption of scientific methods in education and training and the dependence of the dependence on applied science and other human related such as anatomy and physiology and science and movement and education and the science of breathing and other sciences. The basic skills are one of the components of the game of tennis ground over physical fitness and play plans and psychological and educational, which improves the performance level if he without the skill of the player skills can not implement the basic plans or fully focused duties so it requires attention to the skill preparation in addition to To psychological preparation Which is concerned with developing the thinking abilities of the players. The philosophical and educational schools were concerned with the development of thought and thinking so that the individual becomes better able to cope with the difficulties and problems that he experiences in different situations of play if the mental side plays a key role in influencing the motor performance and trying to overcome any negative failure to perform. Mahari Here comes the importance of sovereignty in the identification of the role of the mental side of the dominance of the midterm brain and its role in the manner of performance of some basic skills and whether there is an answer to the question about the type of relationship Link mental and mental side of the skill aspect of the game of tennis Either the search problem There is no doubt that intelligence as an important factor and mental ability necessary to be owned by players of different classifications be their mental behavior in the cases of different players according to the studied and planned models and not just reactions resulting from physical experience and skill only that the player must perform the duties that It is assigned through the training units to be programmed for the times of competition and with high accuracy and for the continuation of mental control, for example, thinking of appropriate motor responses to the opponent's skills within the fast and variable gameplay become a basic requirement for players in the abilities of motor compatibility And the dynamic associated with mental activity creative appropriate to the expected*

*change and unexpected in the game, a problem that is overlooked by many of the players themselves and those responsible for their training and especially what we know today by our search for players of tennis ground and what requires the player from the positions of play and performance of skilled and successful in addition to accuracy And physical abilities that help to play the game for the last moments and in a way that aspires the mechanism of trainers and specialists in this game of attention to the performance of the motor (physical, motor, mental) From an important role that post-tests the course of the match, linking the mental aspect and the physical side, not focusing on the physical training units to reach the level of the player to the level of thinking and according to their mental abilities and brain responses to match the type of position imposed by the competition and the course of the game during the game. The objective of the research is to identify the intelligent thinking according to the preference of cerebral dominance in the research sample and to know the level of performance of some of the basic skills of the tennis game also to identify the relationship between intelligent thinking and according to the preference of cerebral sovereignty and some basic skills of tennis. There is a statistically significant correlation between some basic skills and intelligent thinking according to the superiority of brain in the tennis players. Areas of research Human field: - Students of the third stage \ College of Physical Education and Sports Sciences \ University of Diyala and the time domain: - 30 \ 11 \ 2017 - 11/4/2018 Spatial field: - Tennis outdoor stadium / College of Physical Education and Sports Sciences / University of Diyala.*

**Key word:** *intelligent thinking, mastery of the knot, basic skills in tennis*

## **1. RESEARCH METHODOLOGY:**

Each research has an appropriate methodology used for the purpose of communicating to know the specifics of that. Research, the scientific method of research "is the way that depends on inductive and deductive thinking that uses the methods of scientific observation and imposes experimental hypotheses to solve an educational problem and reach a specific result" (Wajibah, 2011, p. 242). ) Because it "seeks all data from members of society and attempts to post-test the current state of society in a certain variable or certain variables" (Muhammad, 1999, p.140). The descriptive approach is the most appropriate approach to the nature of the problem and the objectives of the research that the researcher developed.

The research sample:

The community is defined as "the group of elements and individuals who are interested in a particular study, or a group of observations or measurements that are gathered from that elements." The research community included the third-stage students of the College of Physical Education and Sports Sciences at Diyala University, who are (11) students representing the community The original research was chosen by the researcher intentionally. As for the members of the sample, the researcher was chosen by a random method. They number (11) students, who formed a percentage (28%) of the original community.

Means, devices and tools used in the research:

- 1- Arab and foreign sources and references
- 2- The forms presented to a group of experts
- 3- Hand Calculator (SCIENTIFIC CASIO)
- 4- Stopwatch (CASLI) type
- 5- Computer
- 6- SONE Noh Camera for Photography
- 7- Tennis balls

- 8- Cords
- 9- Metal tape measure (10m)
- 10- Adhesive tape
- 11- 2 stick
- 12- Tennis court
- 13- Tennis rackets
- 14- A person measuring weight device made in Germany

Post-test used in the research:

After reviewing the sources and references that serve the goals of the research, and after presenting a group of skill tests to measure some soccer skills to a group of experts, and after taking into consideration the bad agreement, 60% agreed that the appropriate tests for each skill were post-test, as will be mentioned later.

Tests used in the research.

Skilled thinking scale:

In this research, the researcher relied on the smart thinking scale which was built by Basma Naim Mohsen (1)

As it was based on building this scale on (eleven traits) of the characteristics of smart (intelligent) thinking, and these traits (components) are:

- 1- Determination and perseverance
- 2- Reducing stress and excitement
- 3- Listening to others and cooperating in (smart, social) thinking
- 4- Flexibility in thinking
- 5- Thinking about thinking (metacognition)
- 6- Investigating accuracy and correctness
- 7- Presentation of the problem
- 8- Previous experience and its application in new situations
- 9- Spirit of adventure
- 10- Originality, clairvoyance and creativity

The key to the smart thinking scale:

The scale consists of (50) items, and in front of each paragraph there are five (5) alternatives, and these alternatives are. (It applies to me always, applies to me often, applies to me sometimes, and applies to me rarely, does not apply to me) and the degrees of correction descending (5-4-3-2-1) respectively for positive paragraphs and grades (1-2-3-4- 5) For negative paragraphs.

Hermann's Scale of Brain Dominance:

The researcher relied on the scale prepared by Hermann after being translated by the researcher (Dia Ibrahim Muhammad), who applied it to a sample of students from Diyala University (11-2-2012). He proved the validity, reliability and objectivity of this scale. This scale was used in the next research which is this scale (20) Paragraph as shown in Appendices No. (3) each phrase has a score limited to (1-5) in light of the test key and the total score obtained by students and values as follows from (zero to 33) weak sovereignty from (34-66) sovereignty Medium and from (67- and above) strong sovereignty, after the researcher classifies the sample and divides it in the light of the aforementioned grades, then conducting skill tests, each according to the type of brain dominance that the results showed, so that the students are weak within a group and those with moderate sovereignty within another group and those with strong sovereignty within a group Others too.

Skill tests:

- 2- Transmission

The first test: - Choosing the skill of sending (Zafer, 2000, p.64).

Objective of the test: To measure the accuracy of the transmission in tennis.

-After the preparation period, the tester stands behind the baseline assigned to serve for individual play and then grants five test attempts and after their execution, each player is allocated ten serving attempts, at which point the ball must fall within the boundaries of the service area with specific corrective degrees of (1-6) degrees and as in the numbers ( 1-2-3-4-5-6) that represent values indicating the transmission area.

The number (1) refers to a rectangle (15 x 13.5) feet.

The number (2) refers to a rectangle (6 x 10.6) feet.

Numbers 3-4-5-6 refer to rectangles each of which is 5.1 by 3 feet.

The same numbers (1-2-3-4-5-6) indicate the degrees assigned to each of the areas where the ball falls, provided that it passes between the net and the rope.

- Balls that touch the rope or net are not counted and are replayed again

- The ball that passes the top of the rope counts as a bid and gives a score of zero even if it falls on any correct position.

- The score is calculated in the correct area on which the ball falls.

- A player's score is the set of points obtained from the ten attempts.

Front and rear ground strikes

The second test: - The front and back ground hits: -

Test name: - Measuring the accuracy of the front and back ground strikes - This test is conducted on a regular tennis court with rackets, tennis balls, a registration form, and a fixed rope as in Figure (2), explaining the laboratory's standing areas, how the test is conducted, and the orthodontic marks (Zafer, 2000, p.65). A rope is installed on two columns in the legs of the net and parallel to it, at a height of (7) feet from the ground and (4) feet from the net, a km in figure (2)

Three parallel lines are drawn between the transmission line and the base line, so that the distance between the lines is (4.5) feet.

- The player stands on the center mark, which is located in the middle of the baseline, and gives five test attempts to find out the performance of the test after giving instructions by the teacher, provided that the ball is tossed directly behind the service line by the ball thrower, if any, or by the teacher in charge, and the player begins trying to return the ball with his bat Using a forehand or a backhand, each player is assigned ten attempts at a front kick and ten attempts at a backhand. The player's score is the sum of the points.

#### *Exploratory experience:*

In order to find the best way to implement the field research procedures, the researcher conducted an exploratory experiment, which is a practical training for the researcher to find out the negatives and positives that he encounters while conducting tests to avoid them. The third of the 23 students who practice the game within the curriculum scheduled on Thursday 18/1/2018 to find out the most important obstacles and the work of the assisting team and the method of applying the test to ensure that mistakes that may be encountered by the researcher in his main experiment are avoided.

#### *Field research procedures:*

After conducting the exploratory experiment, the researcher carried out the basic procedures for the basic experiment where he applied the tests to the research sample in two stages, the first included answering the questionnaire forms submitted by the researcher and the special in the Hermann scale of brain mastery and the skillful thinking scale, then giving a rest period to the individuals of the sample and then applying the aforementioned skill tests, It included the transmission, the front strike and the backhand after arranging the special tools, with all the tests and with the help of the auxiliary team \* as the researcher conducted all the tests on Thursday 25/1/2018 at exactly ten in the morning.

Statistical means:

After collecting the data for each test and identifying it in the forms, the researcher treated the scores of each test statistically using the Statistical Package (SPSS) and extracted the following.

3- Presentation, analysis and discussion of results:

Display the arithmetic mean results and standard deviations of the variables under study for those with strong brain dominance of the research sample and analyze it.

Table (1) shows the arithmetic mean and standard deviations of the research variables for those with strong brain dominance and some basic skills.		
Statistical description / variables	The arithmetic mean	standard deviation
Subtle thinking	86 , 189	22,81
Forward strike	4	1,63
Background strike	20,71	2,30
Transmitter	15,57	3,36

Analysis of the results:

Table (1) shows in the skillful thinking test of those with strong sovereignty that the amount of the arithmetic mean reached (189.86) and a standard deviation of (22.81). As for the percentage of the front strike skill, the arithmetic mean reached (4) with a standard deviation (1.63 As for the backhand skill, it reached the arithmetic mean of (20.71) and a standard deviation (20.30). As for the serving skill, the arithmetic mean percentage was (15.57) with a standard deviation of (3.36).

Table (2): The relationship between the skillful thinking of those with strong sovereignty and the basic skills.				
Statistical description / variables	The calculated value (R)	temperature	The level of significance	Type of significance
Dexterous Thinking - Forward Strike	0,018	5	0,97	NON-SIGN
Dexterous Thinking - Back Strike	0,035	5	0,94	NON-SIGN
Subtle thinking - transmitter	0,86	5	0,888	SIGN

Analysis of the results:

Table (2) shows the relationship between the variables, the skillful thinking of those with strong brain dominance, a non-significant correlation with the forehand test, as the value of the correlation coefficient reached (0.018) and at the level of significance (0.67) and the degree of freedom (5) as well as there is a non-significant correlation relationship between Skilled thinking test and backhand skill with the value of a correlation coefficient of (0,035) and at the level of significance (0.94) and the degree of freedom (5). We also note that the value of the correlation coefficient is the semantic of skilled thinking with the skill of sending with a value of (0,86) and at a level of significance (0,888). The degree of freedom (5).

Presenting the results of the arithmetic mean and the standard deviations of the variables under study for those with moderate brain dominance of the research sample and analyzing it.

Table (3) shows the arithmetic mean and standard deviations of the research variables for those with moderate brain dominance and some basic skills.		
Statistical description / variables	The arithmetic mean	standard deviation
Subtle thinking	182,75	16,64
Forward strike	4,5	2,08
Background strike	17,83	8,25
Transmitter	15,75	3,95

Analysis of the results:

Table (3) in the skillful thinking test of those with strong sovereignty shows that the mean of the arithmetic reached the amount of (182.75) and a standard deviation of (16.64). 8) As for the backhand skill, the mean was (17.83) with a standard deviation (8,25). As for the serving skill, the arithmetic mean percentage was (15.75) with a standard deviation (3.95).

Table (4) shows the values of the correlation coefficient between (medium sovereignty) and (basic skills)				
Statistical description / variables	The calculated value (R)	temperature	The level of significance	Type of significance
Dexterous Thinking - Forward Strike	0,986 -	2	0,014	SIGN
Dexterous Thinking - Back Strike	0,310 -	2	0,690	NON-SIGN
Subtle thinking - transmitter	0,123	2	0.877	NON-SIGN

## 2. DISCUSS THE RESULTS:

Through the results that were presented and analyzed in Tables (1), (2), (3) and (4), the correlation between the results, the measure of skillful thinking for those with cerebral sovereignty, and the students' tennis skill tests, between us the moral link was in the first backhand In favor of those with an intermediate brain dominance between thinking and the skill of the front strike, then followed by those with strong brain mastery and the transmission test for the research sample, and the researcher attributes that the reason for these moral differences is the way the brain deals with it during thinking and the processing of information formation associated with one of the two hemispheres of the brain, meaning that each He individualized his way and his approach to dealing with information. Basma Naim explained on (Nishizaw) (1996) that each individual has half of the brain specializing in certain activities and their treatment, which makes the individual depend on half of the brain more clearly than the other half. Whenever it processes information, it uses a specific method to process it. It also tends to use a specific method of teaching and thinking that is linked in one way or another to one or the two halves of the brain together.

Here we see that those with middle brain masters had the ability to process special information, the skill forward strike, and the nature of the distribution of information from the individual (the player) depends on the importance and preference of the required tasks that dominate the thinking of the player, including improving performance, and this is why we see that the skill is the backhand and the transmission A secondary sequence was taken in

proportion to the subtle thinking of the sample members, which affected the accuracy of the skill's performance of the skills, and therefore the correlation coefficient here is not strong in the subtle thinking. As for those with strong sovereignty, the moral correlation with the skill of sending is due to the fact that the components of intelligent thinking are distributed on two sides of the brain, except for the right or the left. Each aspect includes several basic operations, and for each process there are two groups of intelligent behavior that give the player a high ability to process information and thus improve performance and achievement. If the work is done in an integrated manner, the two hemispheres of the brain become possible to distribute the tasks or the topic in two halves together, which would improve performance and achievement, and this is consistent with the study (Jerrlery 1980). Sample method in processing information Use a specific method in learning and thinking related in one way or another to one of the two hemispheres of the brain, and these activities are without a significant association with thinking. Individuals of the sample, despite the mathematical correlation shown by the previous tables.

### **3. CONCLUSION:**

In light of the researcher's findings, it was concluded that players with strong brain mastery are able to perform transmission tests better than those with medium brain dominance. This either chose the strong relationship with the choice of subtle thinking, and the result of the relationship was skillful thinking according to the average brain dominance and a strong relationship with the skill of the strike The forehand, while the members of this sample did not achieve a strong correlation with the tests of the two backstroke and service skills, and that the subjects of the research sample possessed subtle thinking and had a good degree according to the brain dominance with the choice of the transmission. Whereas, the recommendations were to focus on the functions of the two hemispheres of the brain together because of their important role in the approved mental processes and the interest in developing educational curricula and organizing them with programs to develop the capabilities of the players, especially the skillful thinking in the stages of general preparation, because thinking comes as a result of training and experience.

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