

# Vertical and inverted vertical learning transmission effect with some educational tutorials to learn the skills of the forehand and backhand tennis

<sup>1</sup> Asst. Prof. Ammar Jabbar Abbas

## **Abstract**

*require proces learning Use better Software educational followed and implement them shape the correct to guarantee Access to me Target From the operation educational the lowest an effort and faster time, and became Game tennis from Materials the basic that Studied in faculties Education So must We finding better roads and educational aids that Aims to me hurry up From proces learning and access to me higher Degree From mastering skills sports, and what that education at university system seasons And it depends on me Number hours van there time specific to reach to me Degree perfection in skill or Effectiveness educated or get over it From Without mastering, so Complete Then moving in to me skill the other And that to have Number a certain From skills course learn it During Period temporal specified for every Season, and what that transition Effect learning one the conditions the basic in the operation educational, From over here Originated Problem shorter time to learn, Where no Can teacher Stop or addition Lots From lessons extra And that to narrow the time, Therefore It was must From Use Techniques educational acceleration From proces learning From During Help learner on me link his thoughts his thoughts and his experiences Previous in the present laxative and speeding for operation learning, like that Use means educational for his condition Play Real which help on me knowledge learner all variables the performance that face it learner during The competition, and given to say it research that headed to me area ranking start learn skills the basic tennis From easy to me Difficult and vice versa And by on me Use educational aids, So i want researcher start with this step to study transition Effect learning vertical and vertical inverted using some means educational in Learn Skill forehand and the background tennis*

**Keyword:** *transmission Effect learning vertical, and vertical inverted, means educational, hit front and rear tennis*

## **Introduction**

make up progress Scientific Great fruit big for scientists and specialists in fields Sciences different, We care in this maqam that we record fields Education sports need to me Lots From the reviewer and literature Scientific to pursue this Development Scientific fast in fields Education sports and science associated out has mirror that clearly on me Achievements sports that appeared in Championships and competitions

---

<sup>1</sup>University of Dyala/ College of physical Education and Sport sciences

International and Olympic in the level the athlete higher for players whether in the games Collective and individual and in Smashing Numbers picture ongoing especially in the games individual. this In addition to me Properties learner We Exploit Properties learning in the operation educational, Such as transition Effect learning that Prepare From phenomena the mission in learning picture General and learning kinesthetic on me Face special And who Complete with it transition Effect Learn Skill kinetics other, And who Can From through it investment the time and effort the performers From Before standing on me the operation educational especially in condition similarity the performance kinesthetic for skills own in the game or in shapes the performance kinesthetic for the same skill, And as he is adverb in the hit tennis background, and to be Benefit From transition Effect learning picture positive Requires Access learn performance skill first to me level Good until Move Effect learn it to me skill the other.

Research goal:

1- The transition of the effect of vertical learning using educational aids from the easy task to the difficult task and vice versa in learning the skill of the forehand and the background with tennis.

2- The differences between the two research groups for the transmission of the effect of vertical and inverted learning

Using educational aids in Learn Skill forehand and the background with tennis.

Identify on me priority the differences by effect between My group search that adopted transition Effect learning vertical and vertical inverted using some means educational in Learn Skill forehand and the background tennis.

The research hypotheses were:

there Effect positive for the means educational in Learn Skill forehand and the background with tennis.

there Effect positive transition Effect learning vertical and vertical inverted using some means educational in Learn Skill forehand and the background with tennis.

there differences morale for the group that adopted transition Effect learning vertical using some means educational on me the group that adopted transition Effect learning vertical inverted in the exams dimensionality.

As for areas Search:

the field Human: students stage the third in College Education Physical and Sports Sciences - University Diyala

the field Timeline: 25/2/2018 until 30/4/2018

3- Domain Location: tennis courts in College Education physical and science Sports - University Diyala.

Method search and its procedures field

2-1 Curriculum Search:

use researcher curriculum demo by design the two groups equivalents self the test tribal and dimensional to fit it nature the problem and achieve Goals search. The experimental method was used to suit the nature of the research.

2-2 community search and appointed him

represent Community search with students stage the third Division (C) of the year Academic year (2018 - 2019) and adult Their number is (30), and they were divided into two equal groups, one control and the other experimental, with (15) students per group, and parity was achieved between the two research groups in the variables (age, height, mass and some elements of physical and kinetic fitness). The researcher

(questionnaire, test, measurement and simple scientific observation) are means of data collection. An educational program was prepared for a period of (5) weeks, with an average of (2) educational units for each group per week, and the time of the educational unit was (90) minutes to teach the skill of crushing hitting of all kinds in volleyball according to the transmission of the effect of vertical and inverted learning. Technical performance in the post test of backhand skill, and the arithmetic mean, standard deviation, and t-test were used as means to statistically process the data, and the researcher concluded the following:

1- The control group that started with the easy task and then the difficult task (vertical) and coupled with educational means achieved the best positive transition in Learn Skill the hit front and back in tennis compared with the experimental group and in all criteria of the transmission of the effect of learning.

The experimental group that started with the difficult task and then the easy task (inverted vertical) and coupled with educational means achieved the greatest negative transition in Learn Skill the hit front and back In tennis and in all standards of transmission of the impact of learning.

3- There are significant differences between the two research groups and in favor of the control group, which started with the easy task and then the difficult task (vertical).

#### It shows the homogeneity of the research sample

T	Variables	Measuring method	$\bar{Q}$	$p \pm$	$\bar{and}$	skew * value	modulus
1	height	cm	167,95	7,92	167.5	0,170	
2	weight	kg	63,4	7,24	61	0,994	
3	the age	year	14,5	2,10	th15	0,714 -	

\* The value of the skewness coefficient between  $\pm 3$  is that the sample is homogeneous and is located under the equilibrium curve.

#### 2-3 Tools and devices used in the research:

- 1- Tennis court (2).
- 2- Tennis rackets (20).
- 3- Tennis balls (40).
- 4- colored ribbon
- 5- tape measure.
- 6- Erexon stopwatch, number (3).
- 7- Figures (15).
- 8- Tennis court net number (2).
- One (1) SONY camera to document the experiment.
- 10- (5) DVD discs to document the experience.

#### 2-4 Determine the most important tests for basic skills in tennis and the specifications of the tests in question:

After the researcher reviewed some sources and research related to tennis skills tests,"Louay Ghanem Al-Sumaidaie and others" (2010) (Louay, 2021, p. 218) After taking into account the level of the sample as beginners, he chose the 2010 International Tennis Federation tests (serving, forehand, and backhand). \ The following is the procedure for carrying out these tests:-

Adequate warm-up and players are ready to start the tests.

The player has the right to play (4 balls) not counted for each test.

The player has the right to reject the ball sent in a way that does not suit him, by not returning it or touching it, but in the case of touching the ball, an attempt is counted for him.

If the ball falls on a line separating two zones, the higher zone score is calculated.

Points are recorded in the registration form after each attempt, and the test taker is the person responsible for the final decision in calculating the points.

Balance groups with forehand skill

conducted the pre - test on the basic skills in tennis on those included in the research experiment, and the equivalence of the groups was calculated with the skill of the forehand, and using the analysis of variance test between the test group, it was less than the calculated (F) value (0.674) and the (F) value tabulated) 2.46) at the level of significance (0.05.) and T- Freedom score (4, 95), and this indicates that the significant difference does not exist, as in Table (1):

**Table (1)**

**Shows the evenness of groups with the skill of the forehand**

Contrast source	sum of squares	degree of freedom	square difference	(F) computed value	(F) tabular value	Statistical significance at the 0.05. level
between groups	6.260	4	1.565	0.674	2.46	not significant
within groups	220.700	95	2.323			
total summation	226.960	99				

Balance groups with backhand skill

The researcher conducted a pre-test on the basic skills in tennis on those included in the research experiment, and the equivalence of the groups was calculated with the backhand skill, and using the analysis of variance test between the test group, it was less than the calculated (F) value (0.286) and the tabulated (F) value (2.46). At the level of significance (0.05) and two degrees of freedom (4, 95), and this indicates that the significant difference does not exist, as in Table (2):

**Table (2)**

**Shows group parity with backhand skill I**

Contrast source	sum of squares	degree of freedom	square difference	(F) computed value	(F) tabular value	Statistical significance at the 0.05. level
between groups	2.360	4	0.590	0.286	2.46	not significant

<b>within groups</b>	<b>196,000</b>	<b>95</b>	<b>2.063</b>			
<b>total summation</b>	<b>198.360</b>	<b>99</b>				

2-5 Specifications for testing the skills of the forehand and backhand:

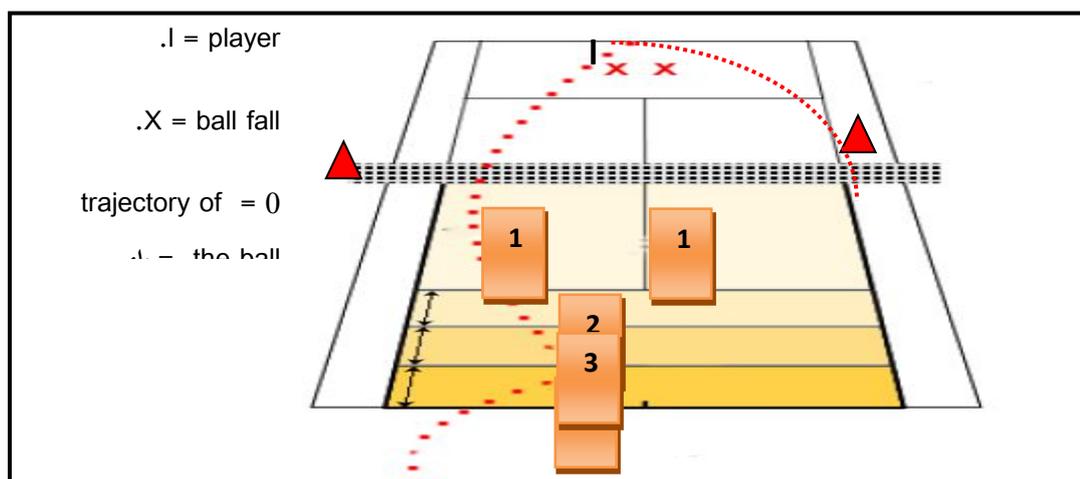
The International Tennis Federation relied on the tests prepared in 2010 to measure tennis skills, which were distributed to all federations of the member countries of the International Tennis Federation, which bears the name ITN On Court Assessment. The Federation indicates that these tests are very easy to suit all players in different countries of the world, regardless of their level, especially Beginners and players who do not participate in tournaments and competitions periodically to be an effective tool in evaluating the level of performance of players (2) (itftennis.com).

the test:

Ground Strike Skill Test (Forehand).

The purpose of the test: Measurement and control of ground strokes (forward).

Equipment used: 1 tennis racket, 10 tennis balls.



**Shape (1)**

The forehand test

Performance method:

Stands behind the base line in the middle, ready to hit the balls.

The thrower stands at the center service line on the side of the laboratory and, after instructing, throws the ball into the area between the service area line and the base line.

The recorder observes the performance and scores points.

The tester (10 balls) hits one front and the other back, alternately.

Register:

Balls that fall outside the individual court will be awarded a score of zero.

For balls that fall within Zone No. 1, one point is awarded.

Two points are awarded for balls that fall within area No. (2).

Three points are counted for balls that fall within Zone No. (3).

Four points are counted for balls that fall within area No. (4).

**2-6 Experimental Experiment: -**

The researcher conducted the exploratory experiment for a sample of students who are not the research sample, who numbered (8) students, for the purpose of knowing the difficulties and problems facing the researcher during the implementation of the tests, and knowing the time that the tests take, as well as the efficiency of the assistant work team, on Sunday, 8 / 4 / 2018.

**2 - 7 tribal tests: -**

on the research groups on 4/15/2018, testing the two experimental groups.

**2 - 8 Determining the exercises for each of the skills in question:**

After reviewing the Arab and foreign sources related to tennis, he chose a set of exercises for each skill (\*), then presented them to experts and specialists for the purpose of surveying their opinions, observations and suggestions about modifying, adding or deleting these exercises to determine their validity. As shown in Table (3).

**Table (3)**  
**It shows the identification of some exercises for the proposed front and back blow for the research**

Forehand				backhand			
Tamri_n	approved experts	chi square	validity	the exercise	approved experts	chi square	validity
1	10	10	✓	1	10	10	✓
2	10	10	✓	2	10	10	✓
3	10	10	✓	3	10	10	✓
4	10	10	✓	4	10	10	✓
5	10	10	✓	5	10	10	✓
6	10	10	✓	6	10	10	✓
7	10	10	✓	7	10	10	✓
8	10	10	✓	8	10	10	✓
9	10	10	✓	9	10	10	✓
10	10	10	✓	10	10	10	✓
11	10	10	✓	11	10	10	✓
12	10	10	✓	12	10	10	✓
13	10	10	✓	13	10	10	✓
14	10	10	✓	14	10	10	✓
th15	10	10	✓	th15	10	10	✓

2 - 9 Discuss consequences the test tribal and dimensional for my group search in the exams skill.

attribute researcher morale the difference between the test tribal and the test dimensional for the group Experimental first and the second, to me exercises used in units educational and use modalities Learn and methods exercise fit with Type skill educated, as such that Aids in Model units educational and organize it and method Tab That units educational From Where time allotted to her From During Continuation her performance and quality mission and duties miscellaneous accompanying to perform as such that for strategy learning with this method came harmonious and increase progressive for total Attempts and use attitudes changing with the ball or without a ball And from sites fixed and variable and by means competitive miscellaneous and within Possibility and capabilities players, has (Linda, 1997) confirmed that (style Use Helps for games he is Approach fan For beginners to solve errands and connect coherent between Learn skills and aids and this is get close to teach and development skills he is Move beginner within steps gradient learn it How Practice Play, and that the aim From Use this style he is development performance beginners in Play and interaction to unite perception and implement skill) and this What Assist player on me has evolved the performance skills From During a plus pedigree Success Attempts During Play, Than led to me acquisition the good for skill And therefore has evolved Ability skill and control and accuracy the performance I have learner And therefore so diversification exercises and her movements and its tasks came positively, so increased From capacity the performance and gave learner expertise And the control and control similar for real Play Real and this is Goal wish in it All Coach and teacher in that moving in From Stage practice to me Stage The competition less Number From mistakes.

2-11 Statistical means:

The statistical bag (spss) was used to analyze the research data, as follows:

Arithmetic mean - standard deviation - percentage - Ka-test - 2 T - test for independent samples and correlated samples - Learning effect transmission equation

3.3 Presenting and analyzing the results of the learning effect transmission

3-1 Presenting the results of the transmission of the effect of vertical learning from the backhand of the first experimental group.

**Table (2)**

**shows the arithmetic means, standard deviations, the calculated and tabular (t) value and their statistical significance for the pre and post test of the skills under study for the experimental group.**

T	Statistic al processors skills	pretest		post test		s	q <sup>2</sup> h	Calculat ed value	T * tabula r value	Statistical significan ce
		s	±	s	±					
2	Forehand	19.9	2.91	38.5	4.12	18.6	5380.1	2.40	26.2	moral
3	backhand	15.5	1.43	36.3	2.68	20.8	6345.7	2.47		moral

\* The tabular value of (T) is (2.26) at the significance level (0.05) and the degree of freedom

### 3.2 Discuss the results of the transfer of learning effect

It is clear from the two tables (2) that there is a transfer of the effect of learning from the skill of the forehand (vertical transfer), as well as the transmission of the effect of learning from the skill of the backhand (reversed vertical transfer), but the preference for moving from the skill of the forehand strike.

The researcher attributes the learning effect to:

First: The great similarity in the technical performance of the two strokes in terms of the components, as "whenever there are common factors between one subject and another, the effect of exercise or training in one of them on the speed of learning in the other" (Mustafa, 1984), as well as the stimulus and response, and this provides an important condition for the transfer of learning effect. As for the similarity to the stimulus, it can be clarified through the theory of similarity, where "experiments have shown that when a person learns to perform a specific response in relation to the situation of its stimulus, he tends to perform the same response in relation to a similar stimulus" (Aqil, 1986).

Second: The time period that separates the previous learning from the new learning, as the time period was short between learning the skills of the forehand and the backhand. The educational program included the two skills (the forehand strike and the backhand). Once the learning of the forehand skill was completed, the move was made to learning the skill of the backhand. Transmission groups have the effect of vertical learning.

Third: The effectiveness of the learning method or method in motivating the student towards achieving the desired, and this is what was included in the educational program through the use of educational aids.

As for the preference of the group transferring the effect of learning from the skill of the forehand to the backhand, they attribute the researcher to the reason for that being a broader environment in performance in terms of displaying variable and critical situations and in using different strengths, distances and different directions, in addition to the fact that the skill of the forehand strike is an interesting skill and an enhanced state of success and has more motivation To perform the backhand skill.

### Conclusion

From most important Conclusions that reach to her researcher:

1. The educational aids have had a positive effect in learning the skills of the drop kick and the forehand smash hit for students in badminton. There is a transfer of the learning effect in both vertical and inverted vertical methods. The transfer of the learning effect from the skill of the dropped strike to the skill of the forehand (vertical) has a better effect on learning and more than it is from the skill of the backhand (inverted vertical).

### From most important Recommendations that recommend out researcher:

1. The need to rely on educational aids to help learn basic tennis skills. It is necessary to introduce learning the skill of the forehand and learning the skill of the backhand in tennis according to a distinctive and moderately educational style and pattern in order to reach the mechanical stage of performance. Conducting similar research on different skills and samples.

## References

1. A, say, learning and its theories. 6th edition, Beirut, Dar Al-Ilm for Millions, 1986.
2. Amin El Khouly, Flying Feather 3rd floor, Cairo: University Student Library, 2001
3. Ann Batman, Tennis, translated by Qassem Lazam, Baghdad, Dar Al-Hakam, 1991
4. Mazen Hadi Kazar, The effect of presentation and direct and delayed execution on learning some badminton skills and its effect on some tennis skills, PhD thesis, Babylon University, College of Physical Education, 2018.
5. Mostafa Fahmy, The Psychology of Learning, Cairo, Egypt for Printing, 1984
6. Muntazer Majeed, The effect of using tactical approaches exercises in learning and retaining some tennis skills and developing playing performance, PhD thesis, University of Baghdad, College of Physical Education, 2006
7. Nahda Abd Zaid Al- Dulaimi, Basics of Movement Learning, 1st Edition, Najaf, Dar Al-Diaa for Printing, 2008.
8. Najah Mahdi Shalash and Mazen Abdel Hadi, Principles of Kinetic Learning, Baghdad, Dar Alwan Press, 2006
9. Raja Mahmoud Abu Allam, Learning: Its Foundations and Applications. 2nd floor, Amman, Dar Al Masirah for Publishing and Distribution, 2010
10. Saleh Muhammad Ali Abu Jado, Educational Psychology, Dar Al Masirah for Publishing, Distribution and Printing, 2nd Edition, Amman: Jordan, 2000
11. Samer Youssef Miteb and Wissam Salah Abdel-Hussein, Kinetic Learning and its Applications in Physical and Sports Education, Lebanon: Dar Al-Kutub Al-Ilmia - Beirut, 2014
12. Talha Hussein Hossam El-Din (and others), Learning and Motor Control: Principles, Theories, Applications, 1st Edition, Cairo, Al -Kitab Center for Publishing, 2006
13. The Badge of Salah Abdul-Hussein, Flying Feather between practice and competition, Amman, Dar Al - Radwan 13-20
14. Yarub Khayoun, Kinetic Learning between Principle and Application, Baghdad, Al- Sakhrah Office for Printing, 2002, p. 180.