

THE IMPACT OF EDUCATION IN ACCORDANCE WITH THE STRATEGIC KNOWLEDGE BEYOND THE COGNITIVE LEARNING IN THE DEPTH OF THE TWO STRIKES FRONT AND BEHIND BY TENNIS

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Abstract

The game of tennis is one of the competitive gaming, which took pride of place in many countries of the world, evolved from the game to spend leisure time to the Olympics which needs the requirements of high physical and tactical skills and depends on the basic skills as a base task embraced by this game to progress in the level of performance, so the strategic use of knowledge beyond the perceptual and cognitive style associated with them, can have a significant role in learning and mastering these basic skills.

The two Research hypotheses: There were statistically significant differences for the effect of education in accordance with the strategic knowledge beyond the cognitive tests before and after for the two sets of control and experimental research in learning the skills of the depth of the two strikes front and rear of tennis.

The researcher was able to reach the conclusions. The emergence of a clear improvement in learning two sets of research (experimental and control groups) to the two main skills. The superiority of the experimental group that used the style of education in accordance with the strategy of learning beyond the cognition in amount of learning upon the control group that used the traditional method of learning.

KEYWORDS: IMPACT. ACCORDANCE. COGNITIVE LEARNING. STRIKE. TENNIS.

1. INTRODUCTION

Witness our modern scientific revolution and Informatics exceeded what preceded the revolutions over the centuries, and this revolution requires the presence of a strong scientific base of the foundation of any human being that they need to be a creative and innovative human. So requires access to high levels of learning, modern and sophisticated competencies and strategies teaching from which learners will be able to acquire information that benefit them in the face of new situations, and in the change of ideas and passing of sentences and the generation of new ideas, and thus be able to achieve the different goals of learning.

The strategy of knowledge beyond the cognitive process considered one of the strategies of modern teaching and that help learners to take charge of their thinking and raise their awareness to the extent that it leads to a goal, and is achieved through a series of actions carried out by the learner as knowledge and awareness activities and mental processes that are used before, during and after the learning process and enables them to Article educated and therefore will accelerate their learning "(1:21). as the strategy of knowledge beyond the cognitive processes

considered one of special processes for directing attention during learning, planning and implementation of the learning process, and monitor, review and evaluate the learning process "(3:43).

The game of tennis is one of the competitive gaming, which took pride of place in many countries of the world, evolved from the game to spend leisure time to the Olympics which needs the requirements of high physical and tactical skills and depends on the basic skills as a base task embraced by this game to progress in the level of performance, so the strategic use of knowledge beyond the perceptual and cognitive style associated with them, can have a significant role in learning and mastering these basic skills.

From the foregoing, the importance of this research lies in identifying the impact of strategic knowledge beyond the cognitive process in learning the depth of the two skills of the two aircraft strikes front and rear of tennis, for compatibility and effectiveness for applications that deal in the field of individual differences among learners with the help of a thrower balls. This is called the researcher to do experimental research in contribution to the development and enrichment of the educational process in finding ways to irritator the learner's brain, which helps to acquire information, storage them and retrieval, and thus learning skills which are mentioned on the desired form .

2. RESEARCH PROBLEM

the researcher noted (being a former player and teaching a substance tennis in college) that the curriculum used in the teaching of this article is not fraught with strategic knowledge beyond the cognitive process , through which the educated is a vital component and active in the learning process, as is the adoption of the methods of traditional learning based on pumping information in a declamation manner by the teacher, and that lack stimuli that arouse the attention of the learners as well as foot-dragging and lack of follow-up about the teacher's attention of cognitive methods that deal with individual differences of the learners, especially cognitive style.

So the researcher used a strategy of knowledge beyond the cognition to see an active role and importance in the educational process as well as the positive role that can bring this strategy to help learners to modify their style of cognitive manner guidance and learning the optimal performance of the depth of the two skills of the strikes front and rear of tennis for beginners students.

3. RESEARCH HYPOTHESES

The two Research hypotheses:

1. There were statistically significant differences for the effect of education in accordance with the strategic knowledge beyond the cognitive tests before and after for the two sets of control and experimental research in learning the skills of the depth of the two strikes front and rear of tennis.
2. There were statistically significant differences for the effect of education in accordance with the strategic knowledge beyond the cognitive tests in the two sets of dimensional control and experimental research in learning the skills of the depth of the two strikes foreground and background in tennis and in favor of the experimental group.

4. TERMS IDENTIFICATIONS

Strategy: A set of techniques or methods used in the positions of learning, teaching and guiding the actions of the teacher in his quest to organize classroom learning experiences and achieve outcomes observed (1) .

Knowledge beyond the cognition: These are control operations their function is planning, monitoring and evaluation of the performance of the individual to solve the problem, a different thinking skills to solve the problem of public administration and one of the components of the smart performance or information processing (6:26)

Method of knowledge : Is a hypothetical concept designed to interpret the processes of moderation between the stimulus and response, and these operations symbolize the style of the individual relatively hard in cognition and memory, thinking and imagination, as well as in the way of understanding, conservation and use of information and analysis (4: 90)

5. RESEARCH METHODOLOGY

The researcher used the experimental method of two group's style system for suitability to the nature of the research problem.

6. RESEARCH SAMPLE

Researcher selected the research community and the students, who represent the third stage in the Faculty of Physical Education - University of Diyala, totaling 278 student. The research sample totaling (20) student as a control group and (20) as an experimental group. The ratio of the sample to the origin community (39, 14%).

Where the experimental Group has applied the learning method according to the strategy behind cognition by using balls thrower as a educational assistant and the control group applied an approach taken in college, a traditional method (Prince), and has been excluded the collage team of tennis and table

Homogeneity was conducted for the entire sample (40 students) according to the following equation:

$$Q * 100 (5:160) / \text{Coefficient of variation} = p$$

Where the coefficient of variation is a measure of the dispersion relative to see fragmentation within the same group. Where he stated (Wadih Yassin Mohammed) The coefficient of variation as a result of the closer (1%) is high homogeneity and if increased (30%) means that the sample is not homogeneous.

Table1: Shows circles of calculations and standard deviations for length, mass and age of the sample

	homogeneity recipe	research sample	Coefficient of variation
Length(cm)	162	4.88	%3.01
Age (years)	21	2.31	%11
Mass (kg)	61	5.2	%8.66

7. RESEARCH TEST

Test the depth of the plane strikes (Volley Stroke depth)

The aim of the test

The ability to assess the depth of aircraft strikes the front and rear

Procedures

1. Should make sure at the beginning of the test that participants had completed the warm-up and ready for testing
2. the Player should hit (8) balls aircraft from both sides the one aircraft is frontal and other aircraft is rear, and so on until the sequel (8) balls
3. Evaluation points are calculated according to the place that the ball fall in Reversion to the depth of the first aircraft strike
4. The assistant player should throw the ball to the hitter player among high hip area and the shoulder and the assistant player and the striker player can refuse the irregular ball that fall and outside the right region, and return it

CALCULATION POINTS OF ASSESSMENT OF THE DEPTH OF THE AIRCRAFT STRIKES :

1. Single point in any region of the transmission, as shown in Figure 1 .
2. Two Points in the first section after the transmission area, as shown in Figure 1 .
3. Three points in the second section after the transmission area, as shown in Figure 1 .
4. Four points in the third section after the transmission area, as shown in Figure 1 .
5. Recorded to the player all the points that snap.
6. The total points aircraft strikes the front and rear in depth does not exceed (32) points.

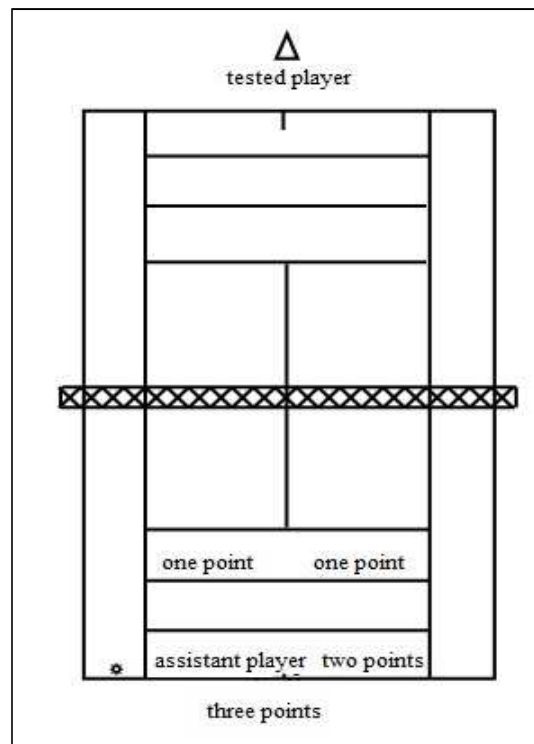


Figure (1). Diagram of a test to measure the ability of the depth of skill aircraft strikes Front and rear in tennis.

PRE-TESTS

The researcher conducted a pre-tests to evaluate the technical performance of the research sample of the skills included in the study on Monday day on 14.10.2013, as follows (at nine in the morning the Third Division A of the experimental group and at the eleventh hour the Third Division b of the control group) and under the supervision

of a researcher, teacher and team assistant and was given two units before the test in order to define the educated beginner skills required under discussion. Has taken into account the researcher as much as possible set of variables in terms of time, place and team assistant for survival itself in the post tests, were conducted process equivalence between control and experimental groups in tests of tribal order to attribute the researcher difference in the level of learning to the independent variable accompanied by learning tool (thrower balls)

LEARNING UNITS

The researcher has to implement (14) and educational unit and over (14) a week before the week testing a posteriori and by educational unit once a week with a time of 90 minutes per unit and both the experimental and control groups. Where the experimental group used the method of education in accordance with the strategic knowledge beyond the cognition by using balls thrower as the assistant while the control group used the traditional method used in college and for the same vocabulary of the experimental group and without the use of a thrower balls

POST TESTS

Poste tests were conducted on a sample search at nine in the morning of the day on Monday 20/01/2014 and the researcher creating conditions similar to the conditions of the pre-test and all aspects of the temporal and spatial and staff assistant in order to identify the extent of development that took place on the skills under study

STATISTICAL METHODS

The researcher used the statistical system of the bag (spss) to extract percentages, circles calculations, and standard deviations, and coefficient of sprains, t-test samples of asymmetric and symmetric

8. RESULTS, ANALYSIS AND DISCUSSION

This section deals with the results of the tests show that the two groups have undergone research (experimental and control), and also addresses the analysis and discussion of the results that have been reached to achieve the goal and the two hypotheses of the research. It could be argued that the two sets of research equal level through what is shown in the table below

SHOWING AND ANALYZE THE RESULTS OF TESTS OF THE TWO EARTH STRIKES FRONT AND REAR:

The table (2) shows the statistical results to evaluate the level of learning for the control and experimental groups in the pre and post- tests of the ability of the skill of the depth of the aircraft strikes the front and rear.

Table (2) *. Shows the equality of the two sets of research in the tribal tests

Tests	The control group		The experimental group		calculated(t) value	tabulated(t) value	result
Frontal aircraft strike	0.13	0.21	0.17	0.37	0.22	2.02	Not significant

background	0.29	0.27	0.37	0.17	1.19	2.02	Not significant
aircraft strike							

***Degree of freedom (38) and confidence limits (95%)**

Table 3 explains the results of pre and post tests for learning the extent of the depth of the skills of the two strikes front and rear and both sets of control and experimental research. It was the results of the arithmetic mean and standard deviation of the control group in the pretest of the skill of the frontal aircraft strike (0.21) and (0.13) and for the posttest (3.22) and (0.14) and the value of the calculated (t) test to see significant differences in calculations circles between pre and post tests (40.44), which is greater than the tabular value (1.73) and the degree of freedom (19) and confidence limit (0.95), which indicates the presence of significant differences for the post test.

Table 3 explains the results of pre and post tests for learning the extent of the depth of the skills of the two strikes front and rear.

skill	the group	pretest	posttest	calculated (t) value	tabulated (t) value	result
frontal aircraft strike	control	0.21 0.13	3.22 0.14	40.44	1.73	Significant
	Experimental	0.37 0.17	4.14 0.21	55.31	1.73	significant
background aircraft strikes	control	0.27 0.29	2.16 0.31	4.22	1.73	significant
	Experimental	0.17 0.32	4.66 0.44	9.41	1.73	significant

The results of the arithmetic mean and standard deviation of the experimental group, which has put the vocabulary of education-style strategy of learning beyond the cognitive using balls thrower in the pretest to the skill of the depth of the strike frontal plane (0.37) and (0.17) and to test the dimensional (4.14) and (0.21) and the value of the test (d.) calculated to see significant differences in circles computational between pre and post tests (55.31), which is greater than the tabular value (1.73) and the degree of freedom (19) and confidence limit (0.95), which indicates the existence of differences of significance for the post test

The results of the arithmetic mean and standard deviation of the experimental group, which has put the vocabulary of education-style strategy of learning beyond the cognition using balls thrower in the pretest of the skill of the depth of the frontal aircraft strike (0.37) and (0.17) and to post test (4.14) and (0.21) and the value of the calculated (t) to see significant differences in calculation circles between pre and post tests (55.31), which is greater

than the tabular value of (1.73) and the degree of freedom (19) and confidence limit (0.95), which indicates the existence of differences of significance for the post test

The results of the arithmetic mean and standard deviation of the control group in the pretest the skill of background aircraft strike (0.27) and (0.29) and to the post test (2.16) and (0.31) and the value of the calculated (t) test to know the significant differences in circles computational between pre and post tests (4.22), which is greater than the tabular value of \$ (1.73) and the degree of freedom (19) and confidence limit (0.95) which indicates the presence of significant differences for the post test

The results of the arithmetic mean and standard deviation of the experimental group, which has put the vocabulary of education-style strategy of learning beyond the cognition using balls thrower in the pretest of the skill of the depth of background aircraft strike (0.17) and (0.32) and of the post test (4.66) and (0.44) and the value of the calculated (t) test to see significant differences in calculation circles between pre and post tests (9.41), which is greater than the tabular value (1.73) and the degree of freedom (19) and confidence limit (0.95), which indicates the existence of differences of significance for the post test

Table (4). Shows the results of post-tests of both control and experimental groups to test the depth of the two aircraft strikes front and rear

Skill	experimental post test	control post test	calculated(t) value	tabulated(t) value	result
Frontal aircraft strike	0.21 3.44	0.35 4.33	13.11	2.02	significant
Background aircraft strike	3.58 0.41	0.55 4.19	6.44	2.02	significant

To learn the best of the two groups control and experimental in learning the depth of the skills of the two strikes front and rear prescribed by the table (4) above, the researcher used the t-test to determine significant differences between them

The results show that the value of the calculated (T) test between the two groups in the post tests for them in the skill of deep aircraft strike front of (13.11) which is greater than the tabular value of adult (2.02) and the degree of freedom (38) and confidence limit (0.95), which indicates the existence of differences significantly between them and in favor of the post- test and the experimental group

The results of the calculated(T) between the control and experimental groups in the post tests between them and in the skill of deep rear aircraft strike has reached (6.44) which is greater than the tabular value (2.02) and the degree of freedom (38) and confidence limit (0.95), which indicates the existence of differences significantly between them and in favor of the post -test and the experimental group

Discussion of the results of tests of the earth strikes front and rear :

When discussing the results that have been presented and analyzed in tables (2) and (3) and (4) of the pre and post- tests of the two groups control and experimental show that there is a significant effect in learning the depth of the skills of the two aircraft strikes front and rear for the two groups, and this shows that the two approaches educational practice and the proposal has led both are to get in the evolution of the level of performance of the two groups, and researcher attribute it to the adequacy and implementation of educational units to invest time learning vocabulary and repetitive attempts and feedback harmonious and positive side to demonstrate appropriate to the nature of the research sample. The results showed that the group that exercised in accordance with the strategic knowledge of education beyond the cognition by using balls thrower have been implemented curriculum vocabulary exercises practical and competitive on a variety of situations. It should be noted here that the depth of learning these skills was in a gradual and easier to learn other skills in tennis such as the transmission, as the evolution of learning every skill depends on the (degree of difficulty of that skill and perimeter performance). Note that "aircraft strikes front and rear are skills open and blow transmitter is a skill closed somewhat. Results were statistically significant in favor of the experimental group in the depth of the skills of the two aircraft strikes front and rear on both and it was due to the effectiveness of the influence of the style of education in accordance with the strategic knowledge beyond the cognition by using balls thrower during the implementation of the vocabulary modules and practical exercises that led learners to the excitement and motivation and provide an atmosphere fun and activating the educational process by involving them in, have been learning these skills mentioned high accuracy in two important ways and are focusing on the performance of the two skills (strictly fall of the balls in affecting areas as much as possible in places variety of angles and in the opponent's court) and focus on correction by feedback

The skills of knowledge beyond cognition that the researcher included it in his research for the education of the experimental group were comprises three main categories:

(Planning, monitoring and assessment) and includes each category a number of sub-skills (awareness and planning, monitoring and review and alignment), the researcher attribute that to the development of the experimental group which came as a result of the application of these skills with learners by using the successful educational and enjoyable method, but give these skills series is the so-called skills knowledge beyond cognition and which were appropriate for the students of the third stage in tennis, which led to their development in a positive and quick with rush of love and accompanied by members of the experimental group towards the application of this method of education

9. CONCLUSIONS

Through the presentation of the results of the tests and analyzed and discussed, the researcher was able to reach the following conclusions:

1. The emergence of a clear improvement in learning two sets of research (experimental and control groups) to the two main skills (the depth of aircraft skills the front the rear).
2. The superiority of the experimental group that used the style of education in accordance with the strategy of learning beyond the cognition in amount of learning upon the control group that used the traditional method of learning (Prince) in the two core skills (the frontal aircraft strike and the rear aircraft strike).
3. The superiority of the experimental group that used the style of education in accordance with the strategy of learning beyond the cognition using balls thrower in learning upon the control group, which used the method of traditional learning (Prince) and without the use of style mentioned with ejector balls for the two core skills (frontal aircraft strike and rear aircraft strike)

10. RECOMMENDATIONS

Through the conclusions reached by the researcher we can put the following recommendations:

1. Emphasis on the use of education in accordance with the strategy of learning beyond the cognition by using balls thrower in learning the basic skills of tennis, especially the depth of two skills (aircraft strikes front and rear) for positive impact in the learning process, especially with beginners
2. Emphasis on the use of education in accordance with the strategy of learning beyond the cognition by using balls thrower in learning the basic skills of tennis as a teaching aid, especially the depth of my skills (the aircraft strikes , front and background) because the balls thrower is a positive learning tool for beginners
3. Emphasis on the use of education in accordance with the strategy of learning beyond the cognition thrower by using balls thrower in learning the basic skills in tennis centers and clubs, schools and colleges for their importance in the learning and mastery of motor skills to a large degree and serves all ages of beginners
4. To conduct similar researches by using other methods in learning, as well as using a variety of teaching aids and other skills in tennis which serve the educational process

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APPENDIGES

Appendix1: Model of orientation unit of strategic knowledge beyond the cognition

Article: Tennis / Thread: giving the concept of strategic knowledge beyond the cognition for the two main aircraft strikes in tennis

Stage: Third / time: 90 minutes

Behavioral objectives

Students are expected after this module to be able to:

- To learn about the concept of strategic knowledge beyond the cognition
- To learn about the goals and procedures of the curriculum prepared in accordance with the strategic knowledge beyond the cognition
- To know the reasons that call for the adoption of this strategy and the importance of implementation
- to know how to apply the strategy of knowledge by using learning mission through the beyond the cognitive task learning through paper to be designed by the researcher
- To describe educational activities that will achieve the goals

- To be ready to use (student guide to learn the basic skills in tennis), which prepared for them to ask for help during the application of strategic knowledge beyond the cognition

Tools and devices

Tennis court - tennis balls - smooth wall - ropes - chalk - duct tape width (5 cm) - whistle - stopwatch, enlarged illustrating photo for the paper

Preparatory Section

- Introduction (3): d take the absences and prepare tools
- In warm-6 (d): It includes a set of physical exercises to prepare the muscles and joints of the body

A special warm-6 (d): a special warm-up by ball-

The main section (65) min:

Clarify the vocabulary of tennis substance over a period of research to enable the students to know the prepared educational units and duties to be carried out

Educational aspect (15) min:

- Explain the concept of strategic knowledge beyond cognition
- Statement of the reasons that let to teach this strategy (illustrate the use of any strategy knowledge beyond the cognition and its applied interest in educational and practical situations
- Explain and clarify the sub-strategies for knowledge beyond the cognition (awareness, planning, monitoring, review, alignment)

The practical side (50) min:

through This unit thee will be an application of the strategic of knowledge beyond the cognition in a paper of practice by the students through forms of exercises in the guide of the student by using a balls thrower

Final section (10) min:

- Assigning students to prepare and study the skills of the two aircraft strikes front and rear, which will be the subject of the first module
- Return tools to their place and then instruct to go away

Appendix2 : Illustrations showing the balls thrower device



Picture 1



picture 2



Picture 3



picture 4

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