RESEARCH ARTICLE

The Impact of A Computerized Educational Program in Learning the Skill of the Accuracy of the Rectal Transmitter in Land Tennis for 10 Years Ages

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Abstract
The purpose of this paper is to lies in determining the impact of the computerized educational instructions   in learning the skill of accurate straight serve in ground tennis for students aged 10 years. The use of a computerized educational program is one of the important things used to improve the level of performance in learning skills faster among students. The use of advanced equipment also contributes to making the educational process interesting and attracting learners to exercises in a pleasant and exciting way. The use of this computerized educational method also has an effective impact on scientific research because the world is now considered developed and fast, and keeping pace with development puts us at the global level. If you do not keep pace with development, learners will not obtain high-quality results. In addition, a heartbeat, it will put them at the bottom of the rankings, especially since the target age group in the research is students. Their use of advanced educational devices and programs will have a positive impact during their academic subjects. The sample of the current study was a group of students from Al-Jawahiri Primary School. The researchers have employed the experimental method via specifying the experimental and control groups with after and before tests. The research sample was divided into (7) students for each group, and the computerized educational program was conducted on the research sample. The researchers concluded that the outcomes of the experimental group have been better than the results of the "control group".

Keywords
Computerized Educational Program, Kinetic Learning, Straight Serve, Ground Tennis

INTRODUCTION

Actually the skill of tennis is the cornerstone , key to offensive play and striking power in the modern game of tennis. The skill of accurate straight serve is considered one of the important skills in the game of tennis. It is widely used due to its importance in playing the game. If students do not learn this skill, they will lose winning points in sports matches and competitions. The use of a computerized educational program is one of the important things used to improve the level of performance in learning skills faster among students. The use of advanced equipment also contributes to making the educational process interesting and attracting learners to exercises in a pleasant and exciting way (Moneim, 2020). The use of this computerized educational method also has an effective impact on scientific research because the world is now considered developed and fast, and keeping pace with development puts us at the global level (Al-Dulaimi and Al-Shammari , 2018) .   If you do not keep pace with development, learners will not obtain high-quality results, and therefore; it will put them at the bottom of the rankings, especially since the target age group in the research are students, and their use of advanced educational devices and programs

will have a positive impact on them during the academic subjects. The significance of the paper is to know the effect of the computerized educational program in learning the skill of accurate straight serve in ground tennis for students aged 10 years (Hussein, 2022). The impact of designing an e-learning program. The Ruffini model, with various educational methods in the most important mental processes and learning some tennis skills for female students , have been employed. Dissertation PhD. Mustansiriya University. College of Basic Education, Department of Physical Education. The paper's goals lies in designing an electronic educational program by employing the Ruffini model, with diverse educational methods in the most important mental processes and learning some tennis skills for female students. And specify the impact of employing the accompanying electronic educational design program with diverse educational methods about the most important mental processes for female tennis students. The researcher has employed the experimental method by designing (two equal groups with pre-test and post-test) in a way that suits the problem's nature and fulfills the paper's aim. The researcher has employed the experimental method by designing (two equal groups with pre-test and post-test) in a way that suits the nature of the problem and achieves the goal of the research.

Through field visits to schools and observing students, as the researchers are teachers, it was noted that there is a problem in learning the skill of straight serve for students in tennis, so the researchers decided to shed light and attention to find a solution to this problem.

The researchers have employed the experimental method with design of the experimental and control groups with before and after tests for suiting the nature of the problem to be solved.

MATERIALS AND METHODS

The researchers have employed the experimental method with design of the experimental and control groups with before and after tests for suiting the nature of the problem to be solved.

Participant

The research community was identified as a group of students in the fifth stage of primary school, numbering (90 students) aged 10 years. The research sample was chosen as (18 students) by determining the sample percentage in a random manner, and after (4 students) were excluded for the exploratory experiment, the number of the sample became (14 students), split into two parts (7 students, an experimental group, and 7 other students, a control group). Then the researchers determined the sample percentage of the population (15.55).

This study followed ethical standards and received approval from the University of Baghdad College of Physical Education and Sports Sciences for Woman Ethics Committee Commission Date: 25.12.2023 Issue / Decision No: 2023/11. Participant provided informed consent, with the volunteer form covering research details, risks, benefits, confidentiality, and participant rights. The research strictly adhered to the ethical principles of the Declaration of Helsinki, prioritizing participant's rights and well-being in design, procedures, and confidentiality measures.

Description of tests
Accuracy test for straight serve skill

In evaluating the level of accuracy of the straight serve in tennis, the researchers relied on the White test, which measures the accuracy of the serve in tennis, according to the researchers' experience.

Aim of the test: to know the serve accuracy "Description of the performance": The tested student stands behind the server base, then serves ten consecutive balls at the targets specified in the opposite half of the court, provided that all the balls pass between the net and the rope, so that the player tries to obtain the highest score.

Register

1- Balls that touch the net or rope are not counted as a try and must be repeated again.

2- Balls that pass over the rope are counted as an attempt and a score of zero is awarded, even if they fall into any of the goals.

3- Every correct ball has a score value in the area where the player's score falls, which is the sum of the points he obtains from the ten attempts.

The highest score for the test is 60.

Exploratory experiment

The researchers conducted a reconnaissance experiment on October 5, 2023, corresponding to Thursday, on a sample of the original research population, which numbered (4) students. The aim of conducting the exploratory experiment was to

identify the sample members' understanding of vocabulary and tests, and to know the propriety of the test for the research sample members as well as obstacles facing the researcher when implementing his main experiment, and to clarify the research goal for the sample.

Scientific foundations of tests

Validity of tests: It scales with sufficient accuracy the phenomenon it was placed to scale , but it never scales anything instead of it. Besides , the researcher used content validity to extract validity of the tests by presenting them to a group of experts and specialists who agreed on the validity of the tests.

Reliability of tests

The Test Reliability means the test gives same results if the test is repeated on negative individuals in the same circumstances. The test-retest method has been employed to find the reliability coefficient and time difference of one week, as the tests were applied to the exploratory experiment sample. Then it was repeated with a time difference of one week on 10/12/2023, corresponding to (Thursday), as that indicated below

Table 1. Shows test parameters

Tests	Stability coefficient (R)	Validity factor $\sqrt{R}$	Error level
Accuracy of straight test	0.948	0.973	0.001

At a degree of freedom (9) and a significance level of (05.0)

The method of giving the proposed exercises to the students and corrective information after each repetition by help of a team under the supervision of the researchers.

Field procedures
Pre- tests

After completing the exploratory experiment, the given team, under the researchers' supervision , conducted pre-tests on Friday, October 14, 2023, on the selected sample.

Main experience

The assistant team implemented the proposed exercises under the supervision of the researchers to members of the research sample on (Sunday), corresponding to (16/7/2023). The educational program (from the main section of the educational unit) was conducted with two educational units every week for five weeks . The time the educational unit took has been sixty minutes according to the sports activity of the selected sample. The proposed exercises were applied to the research sample at a rate of two educational units per week. The research sample was a group of students from Al-Jawahiri Primary School, fifth stage, aged 11 years. The research was conducted at the University of Baghdad stadium, and the research period was from 9/5/2023 to 9/7/2023, and the work was done as follows:

Computerized educational programme
Preparation of the computerized programme

After conducting pre-tests on the sample, the researcher used video models (skill exercises) in the game of tennis and inserted the video models into the electronic devices (Device No. 1) to make the videos the optimal performance for the selected sample. Electronic devices were placed near the players in the main experiment, and the players begin by looking at (optimal performance) and then apply what they see. Then the player will come to watch his performance himself on (Device No. 3) and compare his performance with the optimal performance. In order for the assisting team to correct the player's mistakes, the player's performance was filmed in real time using (Device No. 2) from the player's side axis. It was connected to (electronic computer No. 3) and through the Internet and a special program to record and display the performance in real time.

(Lets View) Thus, the footage on device (device No. 2) is broadcast (to device No. 3) and the player's performance is displayed (on electronic computer device No. 3) for the player so that he can see his performance for himself and compare his performance with the typical performance, and the student's mistakes are corrected under supervision Trainer. See Figure (1)
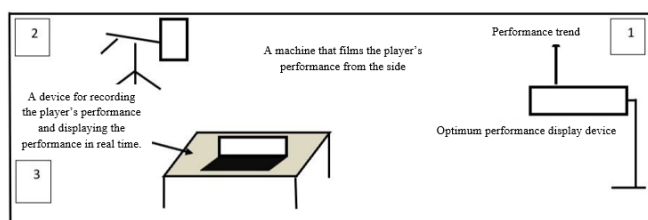

Figure 1. Shows the mechanism of action in the main experiment.
1- Performance trend.
Optimum performance display device.
2- A machine that films the player's performance from the side.

3- A device for recording the player's performance and displaying the performance in real time.

The exercises were completed on November 19, 2023, Sunday.

Post-tests

The posttests were conducted on the research sample on Sunday, November 20, 2023, under the same conditions as the pretests.

Exercises used

Model presentation/computer skill presentation

- the ball must pass until it reaches the throat at centers (1 and 5).
- Players serve and try to pass the ball from within the four sequential rings (1, 2, 3, and 4).

Figure 2. Shows the performance of exercises in the specified areas.

- The players stand in the form of two opposite trailers behind the attack line facing the net and begin serving to a teammate.
- The same previous exercise is repeated with the rings placed at a height, and the player is asked to serve from within these rings to the teammate.
- The players serve to the ring placed in the center (1 and 5).
- Players perform the same exercise above, placing ropes at different heights over which

Statistical methods

A statistical program was used in the statistical analysis of the data obtained. Arithmetic mean, standard deviation, frequency, minimum and maximum values were used in statistical representations of the data. In the normality testing of the data, kurtosis and skewness values of ±1.5 were taken into consideration. Independent Samples T-test were used in the analysis of normally distributed data.
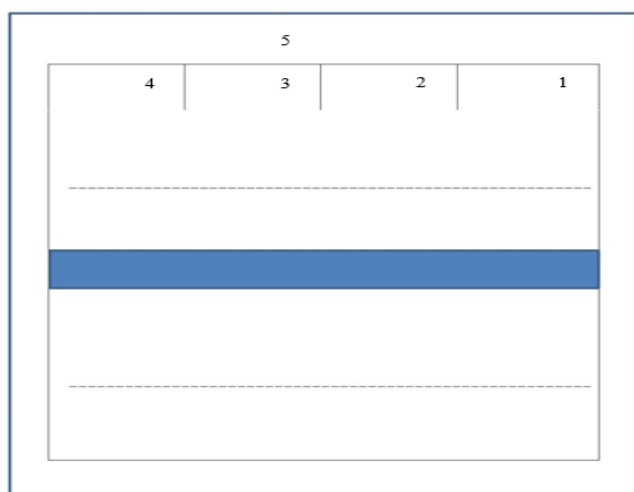
RESULTS

Presentation, analysis of the results" for the control group to test the accuracy of the straight serve skill. Shows the outcomes of (arithmetic means), (th standard deviations), calculated (t) value, the difference of the means, the deviations, the importance , the percentage of error, and the degree of freedom for the control group sample.

Table 2. The accuracy test for the straight serve skill.

Statistical features	Pre-test		Post-test		Mistake Percentage	Connotation
	S	A	S	A		
Control group	4.11	0.83	5.33	1.83	0.03	
Difference rates	1.22	Deviation difference 0.55		Calculated (t) value -2.34		Moral

By degree of freedom (7) and a probability of error (0.05).

From Table (2), it is clear that the "arithmetic mean" of the before the has been (4.11) with a "standard deviation" of (0.83). "The arithmetic mean" of the post-test has been (5.33) with a "standard deviation" of (1.83). As for the calculated (t) value (-2.34), the dissimilarity of means has been (1.22), the dissimilarity of standard deviations has been (0.55), and the error

percentage at (0.03) in degree of freedom (7) and a significance level at (0.05) which shows that there are essential dissimilarities between after the test and before the test.

Presentation and analysis of the results of the research sample for the pre- and post-test of the experimental group sample to test the accuracy of the straight serve skill.

Table 3. Shows the results of the research sample for the pre- and post-test of the experimental group sample to test the accuracy of the straight serve skill.

Statistical features	Pre-test		Post-test		Mistake Percentage	Connotation
	S	A	S	A		
Experimental group	5.27	0.88	5.33	1.88	0.01	
Difference rates	1.12	Deviation difference 0	Calculated (t) value -1.87			Moral

* in a degree of freedom (7) and a probability of error (0.05).

From Table (3), it is clear that the arithmetic mean of the pre-test was (5.27) with a standard deviation of (0.88). "The arithmetic mean" of the post-test was (5.33) with a "standard deviation" of (0.88), while the calculated (t) value was (-1.87), the difference of means was (1.12) and the difference of standard deviations was (1). The error rate was (0.01) at a degree of freedom (7) and a significance level (0.05), which shows that there are essential dissimilarities between after the test and before the test.

DISCUSSION

The outcomes were presented in Table (2) and (3) for the experimental and control groups before and after the test , and the outcomes of the experimental group have been better than the results of the control group. The researchers attribute that the educational program had a positive impact on learning the accuracy of the serve in tennis, and that the use of advanced technology contributed to attracting the attention of the learners. It also contributed to making the educational environment exciting and exciting for learning, and the method used was liked by the students since the students were young. They expected that researchers would like the method because it contains animated images and videos. Therefore, the educational program had good effects on the students, and this study agrees with the study (Sha'lan & Almaaitah, 2023), that showed the surpassing of the experimental group over the control group in learning the accuracy of the straight serve in ground tennis for students. It was found that there have been statistically essential dissimilarities at (a ≤ 0.05) in learning the accuracy of transmission between the experimental group and the control group for the post-tests. The researchers attributed the surpassing of the experimental group over the control group in respect to the video exercises in the educational program used for the experimental group. This study is appropriate with the study of (Ameen & Fadhil, 2023; Muhammad, 2021) , where the most significant goals of the paper has been the preparation of an educational program by empoying the EISENKRAFT example in the accuracy of serving and shooting in volleyball for students. The similarities of the study were the category of students and the preparation of an educational program, and the effect of the educational program was positive on the results of the study. This study is consistent with the study of (Hussein & Radi, 2023; Shukr, 2016) , as it adopted the investigation of the teaching and learning processes by presenting the educational material in an organized manner, basing its work on modern sources for displaying snapshots, video films, audio, and written texts. The researchers concluded by confirming the educational program having a positive impact on the experimental group. The researchers concluded the results of the experimental group were better than the control group, and this proves the credibility of the program used.

Conflict of Interest:
There is no personal or financial conflict of interest within the scope of the study.
Ethics Committee
Board Name: College of Physical Education and Sports Sciences for Woman / University of Baghdad, Iraq. Social Sciences Ethics Committee Commission Date: 25.12.2023 Issue / Decision No: 2023/11.

Author Contributions

Study Design: MSR, AJS, TSK; Data Collection: MSR, AJS, Statistical Analysis: MSR; Data Interpretation: MSR, AJS, TSK; Manuscript Preparation: MSR, AJS, TSK; Literature Search: MSR, AJS, TSK. All authors have read and agreed to the published version of the manuscript.

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