The Impact of the Educational Program Using Teaching Aids in Teaching the Skills of Service Receiving and Court Defending for the Students the Volleyball

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Abstract

The coaches and experts interested in preparing the volleyball teams from the physical, skill, planning and psychological aspects of their teams, on a set of bases, the most important of which are the basic skills which vary in level of complexity and complexity from one game to another. Based on this sense of importance of these skills, which reduces efforts, shortens time and material possibilities, and makes early learning processes a little more erroneous because errors at these stages, if developed, are difficult to correct. And through the researcher's practice of this game found that these skills are still taught in traditional ways, and educational curricula in the general sphere of volleyball lacks the use of aids and devices that help to accelerate and stabilize the processes of education and consolidate the differences between these skills, the use of traditional methods of learning, which It is not possible to arrive at a precise description or measurement of learning, and non-objective evaluation is accompanied by many errors in accurate monitoring of the movement parts.

The research objects:

- Find educational aids to teach students the skills of service receiving and paying volleyball students.
- Learning about the impact of the learning program using some educational aids in teaching the skills of service receiving and paying students with volleyball.

The researchers used the experimental method in the style of equal groups to suit the problem. The research society determines the students of the second stage in the Faculty of Physical Education and Sports Sciences at the University of Karbala for the academic year 2016-2017 Division (A, B, C) and the number of (82) (24) students, divided into two groups of each group (12) students.

The most important conclusions were:

- The proposed learning program using innovative teaching methods has a positive impact on teaching service receiving skills.
- The proposed learning program using innovative teaching aids has a positive impact on the teaching of court defending skill.

Keywords: Educational program, Teaching aids, Receiver service and defending of pitch skills.

Introduction

The progress of scientific day by day takes a wide range in various fields and sciences, and this progress is not limited to one area, but all areas of contemporary life, and that the field of sports education from those areas that develop very rapidly, which focuses on the means and devices used in the process of training and education alike, all in order to obtain better results and greater development in the physical qualities to be developed or skills which is very important to occur learning and development in a manner that achieves the economy with effort and time and material possibilities, And that these means vary depending on the quality of the effectiveness or game to be developed for them and depending on the specificity of skills of those games, volleyball is one of those games that are characterized by basic and important skills [1].

Most of these skills are mechanically based, especially in service receiving and court defending skills. These skills are no less
important than offensive skills, taking the appropriate and correct situation is one of the most important requirements for successful performance [2]. The situation is the moment of contact, which is the first situation (readiness), which is the cornerstone in mastering these skills and volleyball of the collective games, which are characterized by their skills with high compatibility and accuracy.

Both in exercise and games, especially in service receiving and court defending skills, which appear to be similar, especially among non-practitioners or specialists in volleyball.

The state of development in such skills is difficult to be measured by one means only, it may not be evidence of development and that the delivery of the ball to a certain point for one period, but there must be another measure that reflects the extent of change or development of the learners.

It is necessary to use another method, which is to follow that development through the kinetic analysis of the skill and the evolution of the fact that the observation of the movement simply does not give the ability on the calendar accurately and for the speed of movement and the time it takes to perform [3].

This research is important in the researcher's attempt to contribute in finding educational aids that teach these two important skills and thus the economy with the effort and time that may be long if the education of these skills on the basis of the wrong and may be a useful tool in the hands of our trainers Who supervise the training of junior teams and school teachers and colleges in volleyball and the contribution of research in finding a base for volleyball players in Iraq.[4]

Research Problem

The trainers and those interested in preparing the volleyball teams from the physical, skill, planning and psychological aspects of their teams, on a set of bases, the most important of which are the basic skills which vary in level of complexity and complexity from one game to another.

Based on this sense of importance of these skills, which reduce efforts and shorten time and material possibilities, and it makes the first education processes a few mistakes because the errors in these stages, if developed, it becomes difficult to correct them.

And through the researcher's practice of this game found that these skills are still taught in traditional ways and educational curricula in the general sphere of volleyball lacks the use of aids and devices that help to accelerate and stabilize the processes of education and consolidate the differences between these skills, the use of traditional methods of learning, which It is not possible to arrive at a precise description or measurement of learning, and non-objective evaluation is accompanied by many errors in accurate monitoring of the movement parts.

Research Objectives

- Find educational aids to teach the skills of service receiving and paying student's volleyball.
- To identify the impact of the learning program using some educational aids to help teach the skills of service receiving and paying students volleyball.

Research Hypotheses

- The educational learning program use of some educational means have a positive impact in learning the skills of service receiving and paying students with volleyball.

Material and Methodology

Community and Sample Research

The research community determines the second stage students in the Faculty of Physical Education and Sports Sciences at the University of Karbala for the academic year 2016-2017 Division (A, B, C), the number of (82) students were randomly selected sample of the number of (24) students, divided into two groups including.

Each group (12) students, the researcher took care of their choice of students who are not practicing volleyball.

The researcher conducted the equivalence between the two groups and showed that the two groups are equal in weight and length variables and the technical tests and calculated values (t) less of the original value of (1.71) under the degree of freedom (22) and the level of significance (0.05) as shown in Tables (1) (2).
Table 1: Shows the mean, standard deviations, coefficient of variation, and value (t) calculated for the weight and length of the sample

<table>
<thead>
<tr>
<th>Variables</th>
<th>First group</th>
<th>Second group</th>
<th>(t) calculate*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>Mean</td>
<td>STD.EV.</td>
<td>coefficient of variation</td>
</tr>
<tr>
<td></td>
<td>67.4</td>
<td>6.11</td>
<td>9.065</td>
</tr>
<tr>
<td>Tall</td>
<td>171</td>
<td>5</td>
<td>2.92</td>
</tr>
</tbody>
</table>

*Tabular value under degree of freedom (22) and significance level 0.05 = 1.71

Table 2: Shows the mean, standard deviations, coefficient of variation, and the value of (t).

<table>
<thead>
<tr>
<th>Tests</th>
<th>First group</th>
<th>Second group</th>
<th>(t) calculate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>STD.EV.</td>
<td>coefficient of variation</td>
</tr>
<tr>
<td>Test court defending</td>
<td>33.400</td>
<td>9.41</td>
<td>28.17</td>
</tr>
<tr>
<td>accuracy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test court defending</td>
<td>27.9</td>
<td>7.12</td>
<td>25.51</td>
</tr>
<tr>
<td>accuracy</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Tabular value under degree of freedom (22) and significance level 0.05 = 1.71

Instruments and Tools Used in Research

- Note.
- Questionnaire
- Tests and measurements used
- Sony Video Camera - 950 x.
- Medical balance (kg) .3- Measuring tape (cm).
- Legal Aircraft Balls (Number-6).
- A legal volleyball court.
- Electronic Calculator
- Adhesive tape.
- Metric measuring tape.

Basic Skills of Volleyball

The researcher used the basic skills in the course of the first course of the second stage in the Faculty of Physical Education and Sports Sciences Karbala University.

Identification of Tests for Studied Skills

The researcher used two tests: a reception test and a test to defend the stadium for the volleyball players. The tests were presented to experts and specialists in volleyball, and the ratio was 100%.

Pilot Study

The experiment was conducted at 10 am on 15/10/2016 on a sample of the students of the second phase (5) students and the experiment was returned after (7) days to the individuals themselves on 22/10/2016 the purpose was to identify the obstacles that will face study the work of the devices and how to use them and learn how to apply the educational means used as well as the application of the tests in order to verify the validity of the test.

Scientific Processes for Testing

Validation of the Test

In order to confirm the validity of the test and its relevance to the level of the research sample, the researcher used the honesty of the content by presenting the tests to a group of experts and specialists. The researchers used the Pearson correlation coefficient to determine the stability of the tests and found that the value of (t) in the results of the tests was greater than the value of the tests (0.87), this shows that the tests are consistent and Table (3) shows the results of the stability of the two tests.

Table 3: Shows the values of the mean, the standard deviations and the correlation coefficient value of the results of the re-test of service receiving and court defending

<table>
<thead>
<tr>
<th>Variables</th>
<th>First test</th>
<th>Second test</th>
<th>(r) value*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service reception</td>
<td>Mean</td>
<td>STD.EV.</td>
<td>Mean</td>
</tr>
<tr>
<td></td>
<td>63.4</td>
<td>10.21</td>
<td>3.62</td>
</tr>
<tr>
<td>Defending the pitch</td>
<td>55.8</td>
<td>9.54</td>
<td>57.6</td>
</tr>
</tbody>
</table>

*The value (t) of the grandmother under degree of freedom 3 and the level of significance (0.05) = 0.87
Objectivity Testing

For the purpose of verifying the objectivity of the test, the researcher presented the test performed by the group practicing the arbitrators. The two arbitrators gave results for each performance and for the objective knowledge of the test; the researcher applied the Pearson correlation coefficient and Table (4)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Result of first refer</th>
<th>Result of second refer</th>
<th>(r) value*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service reception</td>
<td>Mean  63.5, STD.EV. 73-9</td>
<td>Mean  62.8, STD.EV. 9.88</td>
<td>0.96</td>
</tr>
<tr>
<td>Defending the pitch</td>
<td>Mean  56.8, STD.EV. 64-8</td>
<td>Mean  55.4, STD.EV. 15.15</td>
<td>0.94</td>
</tr>
</tbody>
</table>

*The value (t) of the grandmother under degree of freedom 3 and the level of significance (0.05) = 0.87

Innovative Means (Educational Devices Used)

Due to the importance of the angle of the knee joint, which determines the height of the center of the weight of the volleyball player's body, according to the angle of the fall of the ball over the net so the researcher worked to develop a means to determine the angle of that detailed by the exact situation and the correct form during the process of teaching skills subject to the search, To those angles in the mind of the learner, the researcher used a range of educational aids to help teach the skills of court defending and service receiving as follows:

Chairs with Moving Joints

It is a chair that the researcher put the joints of the posterior (dorsal) by making it a front or rear movement and thus determines the angle of the hip joint for the user. And the lists of this chair can be shortened and lengthened by a special closure placed on it designed to control the height of that chair from the ground and thus control the angle of the knee joint for the learner, the researcher used these chairs in the early stages of the learning program as the learner used in the stages of learning movement of stability or Stand, and Figure (1).

Knee Joint Determination Tools

For the purpose of maintaining the knee angle is fixed to a certain degree during the performance of the skills of movement, the researcher designed this tool, which works to determine the angle of the knee joint at the angle required even while running or performing other skills without any hindrance to the movement of the learner. This tool is made of the knee protectors, which are usually used by volleyball players to protect the knee placed in front of them.

The researcher placed a mass of foam material, a safe and harmless material placed inside the condom behind the knee joint where this block works between the thigh bones And the leg obstructing the flexion of the knee joint to greater than the required limit. The researcher used a larger mass in the receiving skill than in the push skill, and Figure 2 shows the knee joint determination tool.
Torsion around the Elbow Joint

It is a corset made of a rubber cloth placed around the elbow joint. This brace prevents the elbow joint from bending due to the pressure it causes on the joint, and its position itself alerts the learner to the need to extend the arms completely.

Pretests

The researchers conducted this test at 10 am on (29/10/2016) on the sample of the research (24) students.

Learning Program

The learning program is composed of twenty units of education lasting 10 weeks and two units per week. Each unit has duration of 50 minutes. As shown in Table 5, after the learning program was presented to the specialized experts in the field of physical education to rectify it, the learning program was launched on 1/11/2016. Two educational modules were applied before the tribal test and tribal photography so that the learners could absorb the skill initially, which is not a crude learning of the movement, and these units were to prepare the sample for testing. Control cannot be applied the learning program was applied by the experimental group using innovative teaching methods, while the control group used the learning program using the traditional means of teaching these two skills. The learning program was completed on 17/1/2017. The researcher took into account the use of public and private methods in the teaching of motor skills, taking into account the principle of
gradualization in the educational process from easy to difficult and simple to complex, in addition to stimulating motivation and love of learning in the sample, Educational Dah based subject that the school has the educational unit was divided into three sections depending on some sources.[5] The time was twenty units during the implementation of the educational learning program for a period of twenty-week (1000) minutes, divided into educational units sections.[6]

Table 5: Shows the divisions of the program (per minute)

<table>
<thead>
<tr>
<th>Sections of the unit</th>
<th>Educational share per minute</th>
<th>Total units per minute</th>
<th>percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>First: Preparatory Section</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Record attendance</td>
<td>15 Min.</td>
<td>300 Min.</td>
<td>30%</td>
</tr>
<tr>
<td>B. Physical exercises</td>
<td>2 Min.</td>
<td>40 Min.</td>
<td>4%</td>
</tr>
<tr>
<td>Second: Main Section</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Educational activity</td>
<td>30 Min.</td>
<td>600 Min.</td>
<td>60%</td>
</tr>
<tr>
<td>- The theoretical part</td>
<td>7 Min.</td>
<td>140 Min.</td>
<td>14%</td>
</tr>
<tr>
<td>- Practical part</td>
<td>2 Min.</td>
<td>40 Min.</td>
<td>4%</td>
</tr>
<tr>
<td>B. The applied part</td>
<td>5 Min.</td>
<td>100 Min.</td>
<td>10%</td>
</tr>
<tr>
<td>Third: The final section</td>
<td>23 Min.</td>
<td>460 Min.</td>
<td>46%</td>
</tr>
<tr>
<td>Total</td>
<td>5 Min.</td>
<td>100 Min.</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td>50 Min.</td>
<td>1000 Min.</td>
<td>100%</td>
</tr>
</tbody>
</table>

Posttest

This test was conducted at 10 am in the College of Physical Education and Sports Sciences hall on 18/1/2017 for the sample of the research (24) students.

Results and Discussion

Table 6: Shows the mean, standard deviations and the value of (t) calculated for the experimental and control groups between the pre and posttests of service receiving skill

<table>
<thead>
<tr>
<th>Groups</th>
<th>Pretest</th>
<th>Posttest</th>
<th>(t) value*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>STD.EV.</td>
<td>Mean</td>
</tr>
<tr>
<td>Experimental</td>
<td>33.4</td>
<td>9.41</td>
<td>63.9</td>
</tr>
<tr>
<td>Control</td>
<td>32.2</td>
<td>8.51</td>
<td>52.8</td>
</tr>
</tbody>
</table>

* The value of the (t) tabulator under degree of freedom level (11) and the significance level (0.05) = 1.97

Table (6), which represents the results of the pre and posttest of the experimental and control groups of the service receiving skill, shows that the mean mean of the experimental test results of the experimental group was (33.4) and a standard deviation of (9.41), (9.9). In order to identify the differences between the results of the tribal and remote test, the researcher conducted a (t) test for the interrelated samples and the value of (t) calculated (12.7), which is greater than the value of (1.79) (0.05). We note that there is a difference in the results of the test back to the value of a Tribal test for this group (experimental), which means improvement and development in the level of performance skills in the court defending.

The researchers attribute this to the fact that the experimental group used the proposed teaching methods during the application of the educational program, which led to this development. The application of the exercises correctly and scientifically, according to a method based on method and material accurately leads to good results in the learning process. Which is used in the implementation of teaching methods that shorten the time and thus give better results, in many studies conducted it was found that the use of teaching aids helped to shorten the time required, compared to conventional methods.[7] The table also shows that the value of the medium (32.2) with a standard deviation of (8.51).The mathematical mean for the results of the post test of the control group (52.8) and the standard deviation of (10.84).

In order to determine the differences between the results of the tribal and remote tests, the law of (T) was applied for the interrelated groups. The calculated value of (4.67) was greater than the (1.79) Indicates that the control group develops its performance in service receiving skill. This development is due to its application to the new program, which was prepared and implemented according to the appropriate teaching methods and the use of the selected...
educational exercises and accompanying the implementation of the program from feedback to modify and adjust the performance and correct errors, Yahrob Khayun say "learned the same skills using nutrition External feedback accelerates the learning rate, and the trainer and training devices provide the learner with substantial external feedback for the purpose of improving performance[8].

Progress shows that the development of the experimental group was at a greater level as shown by the use of educational methods based on mechanical; it identifies the knee and hip angles that are the most important characteristics of this skill. Identifying these angles is an aid that leads to the direction of the muscular action towards the target of the movement. This reduces the accompanying movements or movements in which the learner exaggerates during performance. What aids the devices of the case of the adoption of the adoption of correct and appropriate angles and remember that the elimination of excess movements and associated with performance means that the learner has acquired skill at a certain level.

**Presentation and Discussion of the Posttest between the Experimental and Control Groups of Service Receiving Skill:**

Table (7) shows the result of the mean of the test results for the experimental group was (63.9) and by a standard deviation of (9.09). The mean of the results of the test for the control group (52.80) and the standard deviation of (10.84) between the experimental and control groups, the t-test was used for the non-interrelated samples. The calculated value of (t) was (2.48), which is greater than the value of (1.72) for the grand total (1.72) under the freedom degree (22) and the significance level (0.05) From the table, there are significant differences in the test results between the experimental group and the group.

The researchers attribute this difference to the researcher's use of the educational program, which was used in the course of its application as it works to install the skill better and faster than the program, which does not contain educational means, which confirms Wajih Mabjoo, "Educational means have an important role And active in the delivery of scientific material to learners, and the psychological aspect that plays a great importance in creating motivation in the work to achieve good performance "]9].

Table (8) shows that the value of the mean of the test results for the experimental skill of the experimental group reached (27.90) with a standard deviation of (7.12) and the mathematical mean of the test for the same skill of the experimental group (62.50) and the standard deviation of (12.14) (9.63), which is greater than the value of (1.79) of the grand total (1.79) under freedom level (11) and the level of significance (0.05). The mean of the test results of the control group in the skill of court defending (28.7) 5.77). In the test of the control group, the mean (50.30) and the standard deviation of (18.92) (9.63), which is greater than the value of the (1.79) grand total under the freedom level (11) and the level of significance (0.05).

We note that there are significant differences between the results of the tribal test and the post- The two groups are due to the use of the control and experimental groups of the program and the use of public and private methods to deliver the material to learners, and the motivational effects and love of learning among learners has a significant impact on the progress of skill level.

The process of learning paid through the needs of the learner and his motivation to acquire this skill and competition among peers to develop, and the acquisition of greater grades in the calendar that accompanies the program affects the educational process, especially since this program was applied outside the lecture time, "The program emphasizes the skillful performance that has taken a large share of the time of the program.
This is confirmed by Mohammed Mahmoud Al-Haila. The quality of the teaching method and its procedures has a clear impact on the development of skill performance. Period of performance skill and many number of specialized exercises to develop specific skill learning ratio significantly increased"[10]

Table (9) shows that the computational mean of the results of the post-test of the experimental group in the court defending skill was (62.5) and the standard deviation of (12.24). The mean of the results of the post-test of the control group (50.20) and the standard deviation of (8.92) For the differences between the results of the two groups, the value of (t) calculated (2.54) was greater than the tabular value of (1.71) under the freedom level (22) and the significance level (0.05).

It is noteworthy that there are significant differences between the results of the control group and experimental and for the benefit of the experimental group, due to the development of educational means used during the application of the program and the accompanying use of learners of suspense and motivation and shorten the time spent, if used within the program is considered the importance of specific means Is not the means by itself, but the achievement of these means of specific behavioral objectives provided that they are an integrated part of the systematic plan serialized by the teacher or coach to achieve the objectives of the lesson or educational unit.[11]

Table 9: Show the mean and the standard deviations and the value (t) calculated for the results of the test between the experimental and control groups in the skill of court defending

<table>
<thead>
<tr>
<th>Experimental group</th>
<th>Mean</th>
<th>STD.EV.</th>
<th>Control group</th>
<th>Mean</th>
<th>STD.EV.</th>
<th>(t) value*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>62.5</td>
<td>12.24</td>
<td></td>
<td>50.20</td>
<td>8.92</td>
<td>2.54</td>
</tr>
</tbody>
</table>

* The value of the (t) tabulated under the degree of freedom (22) and the level of significance (05.0) = 1.71

Conclusions

- The proposed program using innovative teaching methods has a positive impact on teaching service receiving skills
- There were differences in the results of the remote tests of the control and experimental group in the results of the court defending test and for the benefit of the experimental group, as a result of the use of innovative teaching methods that adopted the mechanical side including the application of the optimal angles of the main joints.
- The proposed program using innovative teaching aids has a positive impact on the teaching of court defending skill
- There were differences in the results of remote tests of the control and experimental group in the results of the test skill court defending and for the benefit of the experimental group as a result of the use of innovative teaching methods that adopted the mechanical side including the application of the optimal angles of the joints of the main.

References