The effect of Appleton's constructivist model on learning the skills of spiking and blocking in volleyball for students

Alaa Hassan Hatam [1] , Prof. Dr. Hayder Salman Mohseen [2] , Assist. Prof. Dr. Ebtighaa Mohammed Qasim [3]

[1] Master. Student. Faculty of Physical Education and Sports Sciences / University of Kerbala, Iraq.
[2] Faculty of Physical Education and Sports Sciences / University of Kerbala, Iraq.
[3] Faculty of Physical Education and Sports Sciences / University of Kerbala, Iraq.
laa691038@gmail.com , haydersalman@uokerbala.edu.iq , EbtighaaMohammed@uokerbala.edu.iq

Abstract:

The purpose of this paper is to learning the skills of spiking and blocking in volleyball for second-stage students in the Faculty of Physical Education and Sports Sciences, University of Kerbala by preparing educational units according to Appleton's constructivist model to know the effect of Appleton's constructivist model on the research sample under study, and identifying the preference of the control and experimental groups in learning the skills of spiking and blocking Volleyball for students. The researchers used the experimental method for its suitability to the nature of the research problem to be solved and the design of equal groups, control and experimental, with pre and post-tests, and the research community included students of the second stage in the Faculty of Physical Education and Sports Sciences - University of Kerbala for the academic year (2022-221), totaling (164) students Divided into six study divisions, namely (A, B, C, E, F, D), and two divisions were chosen by random (lot) to represent the main research sample, which is (A,C), as division (C) represented the experimental group and division (C). A) The control group. (30) students were selected, including a sample for research and (15) in the experimental group and the same in the control group, and (10) students of an exploratory sample also using the simple random method, and the percentage of the main sample was (17.24%) from the original population, and the appropriate tests were conducted To study and reach the results that were treated statistically by the statistical package (SPSS).The study reached a set of results, including that Appleton's's constructive model has a positive effect on the superiority and raising of the level of the experimental group students in learning the skills of spiking and blocking in volleyball.The researchers recommended relying on the teaching models that the student is the main focus in order to achieve the best results and conducting studies to compare between the Appleton's model and other modern teaching models to know the level of development of skill performance in volleyball and other games, in addition to the necessity of introducing different visual means in the physical education lesson from In order to see the parts of the movement in detail, as well as its importance in linking the sense of hearing with sight, and this in turn leads to the acceleration of learning motor skills.

Introduction:

Many educational theorists believe that today's learner differs from yesterday's learner through his mental abilities, which have greatly developed in recent years due to technical and electronic openness, which poses a challenge to those in the educational process and to learners in creating educational models that agree with their mental abilities more actively and effectively so that they can keep pace with this The rapid progress and control over the rapid changes of life and its increasing requirements in an effort to urge learners to think and research to reach the desired stage, so the role of the teacher is no longer limited to communicating information only, but more than that, as he became responsible for building the learners' personality with the expansion of their horizons self, and perhaps the most prominent These models are the constructivist models, including the Appleton model, which is one of the active constructive educational

models that help learners to solve problems and control their thinking and encourage them to search, investigate and question to find solutions by exploiting their mental abilities to think about the problem, which develops their various skills, especially the skills of learners, especially in making decisions and solving problems. This is achieved through a number of steps, which are (Sorting the ideas that the learner has, processing information, mining information, the societal context), to find solutions and to take the appropriate decision to solve them, and thus access to effective learning. And given that volleyball in the Faculty of Physical Education and Sports Sciences depends on learning basic skills as an important base on which this game is built to advance in the level of performance, so attention must be directed to the stages of learning and improving its performance with the help of students and their learning by posing educational problems and trying to find solutions to them, they need To make a lot of effort and practice in order to master it, so it requires searching for new strategies, models and methods such as Appleton's's constructivist model in the teaching process in order to contribute to facilitating the correct learning process, and thus it has a major role in learning the skills under study. Through the foregoing, the importance of the research lies in the use and testing of a new educational constructivist model in the field of physical education in general and in the field of learning volleyball skills in particular, as a serious scientific attempt to test a model that may give more space for learning in a participatory manner as well as giving a greater role for the student in stimulating his mental processes as an attempt To make learners more effective in learning the skills of spiking and blocking in volleyball for students. This prompted the researchers to conduct an experimental study to find out the effect of Appleton's constructivist model in learning the skills of spiking and blocking in volleyball for students.

Research problem:

The research problem is represented by the fluctuation in the level of learning some basic skills in volleyball among students of the second stage in the Faculty of Physical Education and Sports Sciences - University of Kerbala, and through the researcher's follow-up to the results of the students, especially in the practical aspect, and his observation of some practical lessons, it turns out that there are some difficulties that the learners encounter when learning my spiking skills and blocking volleyball despite the attempts and efforts made by the subject teacher to lead them towards better learning, so the researcher believes that the volleyball skills under study need to focus the teaching staff on finding more than one interactive educational model that makes students contribute to solving the problems facing their education process effectively .

Therefore, the researchers decided to shed light on a constructive educational model, the Appleton model, and employ it to know its impact on the research sample, as a scientific attempt to bring about a change in the form of performance to good (ideal) performance through educational units to increase the activity of learners towards learning and make them a major focus for getting out of the method. Followed to another method that is more effective and interesting.

Research objective:

- Preparing educational units with Appleton's constructivist model to learn the skills of spiking and blocking in volleyball for students.
- Recognizing the effect of Appleton's constructivist model in learning the skills of spiking and blocking in volleyball for students.
- Recognizing the superiority of the experimental and control groups in learning the skills of spiking and blocking in volleyball for students.

Research hypotheses:

- There are statistically significant differences between the pre-and post-tests for the experimental and control groups and in favor of the experimental group in learning the skills of spiking and blocking in volleyball for students.
- There are statistically significant differences between the post-tests of the experimental and control groups in learning the skills of spiking and blocking in volleyball for students.

Research fields:

- Human field: Students of the second stage in the Faculty of Physical Education and Sports Sciences - University of Kerbala for the academic year 2021-2022
- Time field: (25/11/2021) to (14/5/2022)
- Spatial field: The gymnasium in the Faculty of Physical Education and Sports Sciences - University of Kerbala.

Research methodology and field procedures:

Research Methodology:

The researchers used the experimental method, designed the two equal experimental, and control groups with pre and post-tests in order to suit the objectives and form of the research.

Community and sample research:

The research community was represented by students of the second stage in the Faculty of Physical Education and Sports Sciences - University of Kerbala for the academic year (2022-2021), numbering (164) students divided into six study divisions (A, B, C, D, E, F), and they were chosen Two of them by random method (lot) to represent the main research sample, which is (A,C), as the (C) section represented the experimental group and the (A) section the control group with (30) students, which represents a percentage of (18.29%) of the population. The research, as (15) students from Division (C) represented the experimental group that will be taught using the Appleton's constructivist model, while (15) students from Division (A) represented the control group that would be taught using the teaching mechanism used by the teacher. (10) Students were selected from Division (B) to represent the exploratory sample.

Homogeneity of the research sample:

The researchers resorted to verifying the homogeneity of the research sample in the variables related to anthropometric measurements (height, mass, and chronological age) and by finding the torsion coefficient as shown in Table (1)

Table (1) shows the homogeneity of the research sample in the physical variables (height, mass, chronological age)

Variables	Measuring unit	Mean	Median	Std. Deviations	Skew ness	number of sample
length	Cm	175.1	175	943.499	0,000	30
mass	Kg	725.69	70,000	7.799	0,184	

chronological age	Year	725.20	21,000	0.784	0,538	

Table (1) shows that the closer the value of the skew coefficient is to zero, the more homogeneous the sample.

Means, devices and tools used in the research:

In order to obtain accurate results in the tests, the researcher needs devices, tools and means to help him complete his research, through which he can collect data, solve the problem and achieve the research objectives.

Means of collecting information:

- Arab and foreign scientific sources and references.
- Direct observation.
- Tests and measurements.
- A form for evaluating the accuracy of the performance of the skills of spiking and blocking in volleyball.
- Technical performance evaluation form for spiking in volleyball.

Equipment and tools used:

- The researcher used the appropriate devices and tools to apply his experiment.

Field Research Procedures:

Identification of the tests used in the research:

Description of the tests adopted by the researcher in the research:

First: Measuring the accuracy of diagonal spiking skill (Nassif. 2000)

- Purpose of the test: - To measure the accuracy of the diagonal spiking skill for specific areas of the playing field.
- Tools used: - The legal volleyball court and planned as in the following figure, and the performance evaluation form, volleyballs number (6). Method of performance: - The player performs the skill of diagonal spiking with (6) balls and the total scores are calculated for him in the areas where the ball is located, which is in area A 3 degrees, in area B one degree, and in area C 5 degrees, outside these areas (zero) of degrees.
- Registration: The scores obtained by the laboratory from the six attempts are calculated, bearing in mind that the total score for the test is (30).

Second: The technical performance evaluation test for diagonal spiking skill (technic)

- Spiking skill test (Majeed. 2000):
- Purpose of the test: to evaluate the technical performance of the spiking skill through its apparent form and its three sections (preparatory, main, and final).
- Tools used a legal volleyball court, (6) legal volleyballs, and a performance evaluation form. Performance specifications: The tested student performs spiking from center (4), so that the teacher prepares the ball for him from center (3), and the laboratory student performs the spiking skill, trying to drop the ball into the opposite court.
- Performance conditions: Each student has (3) consecutive attempts, and the performing student gets a (zero) in the event the ball touches the net and falls inside the court (the performing student's court) or in the case of illegal spiking.
- Registration: Three experts evaluate the three attempts for each performing student, with experience and expertise, for evaluating them. Each student is given three attempts according to the chosen division with a total of (10) marks, (3)

marks for the preparatory section, and (4) Grades for the main section and (3) a score for the final section, after which the best score for each component is selected and by extracting the arithmetic mean of the best three degrees, the final score is calculated for each laboratory student,

Third: The blocking skill test (Majeed. 2000):

- Purpose of the test is to measure the accuracy of the individual blocking skill from the center (2).
- Tools used: The volleyball court is divided as in Figure (5) a tape measure (10) volleyballs. Performance Specifications / The coach performs spiking and the tester stands at a distance of (25) cm from the net and performs it from the center (2).
- Registration conditions / for the laboratory (3) Attempts of the highest score (12) Points are calculated according to where the ball falls as follows: (4) Points for each attempt inside Area A, (3) Points for each attempt inside Area B, (2) Points for each attempt inside Area C, (1) Point for each attempt inside Area D, (zero) for a fall The ball is outside these areas, and when the ball falls on a common line between two areas, the higher area score is calculated and the attempt is canceled in case the laboratory commits a legal error.

Pre-tests:

Pre-tests were conducted for the members of the research sample (the control and experimental groups) on Tuesday, 1/3/2022 at ten o'clock in the morning, and on Thursday, on 3/3/2022 at ten o'clock in the volleyball court at the Faculty of Physical Education and Sports Sciences - University of Kerbala. The tests were carried out with the help of the auxiliary work team.

Equivalence of the two research groups:

The equivalence was made for the two research groups in the dependent variables, and before starting the implementation of the educational units on the main research sample, the researchers found that the members of the two groups (controller and experimental) were equal, as shown in Table (2).

Table (2) shows the process of equivalence between the two groups (control and experimental) in the studied variables

Variables	Groups	Arithmetic mean	Standard deviation	T value	Level sig	Type sig
Spiking performance accuracy	Experimental	6.7333	1.53375	.124	.902	Non sig
	Control	6.6667	1.39728			
Technical performance evaluation of spiking	Experimental	1.5333	.51640	-.727	.473	Non sig
	Control	1.6667	.48795			
Blocking performance accuracy	Experimental	1.5333	.51640	-.357	.724	Non sig
	Control	1.6000	.50709			

Technical performance evaluation of blocking	Experimental	1.4667	.51640	-.714	.481	Non sig
	Control	1.6000	.50709			

Preparing educational units according to the (Appleton's) model for the experimental group:

The educational units were prepared using Appleton's constructivist model to learn the blocking and spiking skills of the experimental group, with (9) units of (see appendix. (1)). these units were distributed with (4) educational units to learn the skill of spiking and (4) educational units to learn the blocking skill for a period. (4) Weeks, with two educational units per week, and an educational unit for both skills together. The time of the educational unit was set at a time of (90) minutes, and the division of this time was as follows (the time of the middle section (15 minutes) and includes (the introduction 5 minutes - general and private warm-up 10 minutes) The time of the main section was (70 minutes), and it includes (the educational side (15 minutes) and the practical side (55 minutes), and the time of the closing section was (5 minutes), and the main section of the educational unit (the educational portion, the applied portion) was chosen through which to apply The four stages of the model.

Main section: 70 minutes

1- The educational part: 15 minutes / This aspect included the first stage of the model, which is: The first stage: (sorting the ideas that the learner has)
2- Practical part: 55 minutes / This aspect included the other three stages of the model, namely (the second stage of information processing, the third stage of information exploration, the fourth stage of the societal context).

After completing the preparation of the educational units according to Appleton's constructivist model, they were presented to a group of experts and specialists in the field of (volleyball, teaching methods, kinetic learning) to solicit their opinions (Appendix 2). In order to control all the variables that may affect the results of the research, the same educational vocabulary was given to the experimental and control groups through the same teacher, with the difference of using Appleton's constructivist model with the experimental group only.

Designing the presentation aids used in the educational units of the experimental group:

The educational units prepared according to the constructivist Appleton's model included the introduction of (visual) educational aids to help in learning, improving and developing their level of skill performance in volleyball. Included on the following: (poster) education (Nassif. 2000) believe that educational posters are one of the most prominent means that can be used effectively in refining and evaluating the behavior of learners and communicating important information in a concise manner. Therefore, a special educational poster was designed for each educational unit. Data Show and educational films (videos): Here, videos for each educational unit are shown according to the topic and goal, and they are discussed. The video time ranges from (three minutes to

five minutes) and the researchers took into account that the educational film should be produced in an easy way, so (5) was shown Educational films for the skills in question.

Implementation of the educational units prepared according to Appleton's's constructivist model to learn the skills of spiking and blocking:

Before starting the implementation of the prepared educational units, two educational and introductory units were given regarding spiking and blocking according to the Appleton model for the students of the experimental group, on Thursday (3/3/2022) at exactly ten o'clock in the morning, in order to introduce them to the new working mechanism Represented by the Appleton's constructivist model, the implementation of the educational units began on Thursday (15/3/2022) at exactly ten o'clock in the morning, and the last educational unit was on Thursday (12/4/2022), and the instructional units for the experimental group were taken on Thursday of every week at ten in the morning, while the units of the control group were taken on Thursday of each week at twelve o'clock.

Post-tests:

After completing the implementation of the educational units according to the Appleton's model on the experimental group, and with the help of the auxiliary work team, they conducted post-tests for the experimental and control groups for the variables under study on Thursday (21/4/2202). The researchers were keen to create the same conditions in which the tribal tests were conducted.

Statistical methods: The search data was processed through the Statistical Package for the Social Sciences (SPSS).

Results and discussion:

Presentation and analysis of the differences between the results of the pre and post-tests of the experimental group in the variables under research, analysis and discussion:

Table (3) shows the arithmetic means, standard deviations, and (T) value of the pre and post-test for the experimental group

variables	tests	Arithmetic mean	Standard deviation	Difference between arithmetic mean	Difference between standard deviations	T value	Level sig	Type sig
Spiking performance accuracy	Pre-test	6.7333	1.53375	-16.06667	38380.	-41.862	000.	sig
	Post-test	22.8000	1.08233					
Blocking performance accuracy	Pre-test	1.5333	.51640	- 7.53333	. 23637	- 31.870	.000	sig
	Post-test	9.0667	.79881					

Technical performance evaluation of spiking	Pre-test	1.5333	51640.	- 5.86667	19190.	- 30.572	000.	sig
	Post-test	7.4000	50709.					

Table (3) shows the results of the pre and post-tests for the experimental group for the following tests:

1- Testing the accuracy of the diagonal spiking skill performance: When inferring the significance of the differences between the two arithmetic means, the calculated (T) value reached (- 1.8624), which is greater than the tabular under the significance level (0.05) and with a degree of freedom (14), and this indicates the existence of a significant difference Between the pre and post-tests and in favor of the post test.

2- The blocking performance accuracy test: when inferring the significance of the differences between the two arithmetic means, the calculated (T) value reached (- 31,870), which is greater than the tabular under the significance level (0.05) and with a degree of freedom (14), and this indicates a significant difference between the pre and post-tests, and in favor of the post test.

3- Technical performance evaluation of diagonal spiking: when inferring the significance of the differences between the two arithmetic means, the calculated (T) value reached (- 30.572) which is greater than the tabular under the significance level (0.05) and the degree of freedom (14), and this indicates There is a significant difference between the pre and post-tests in favor of the post measurement as shows in the Figure (1).

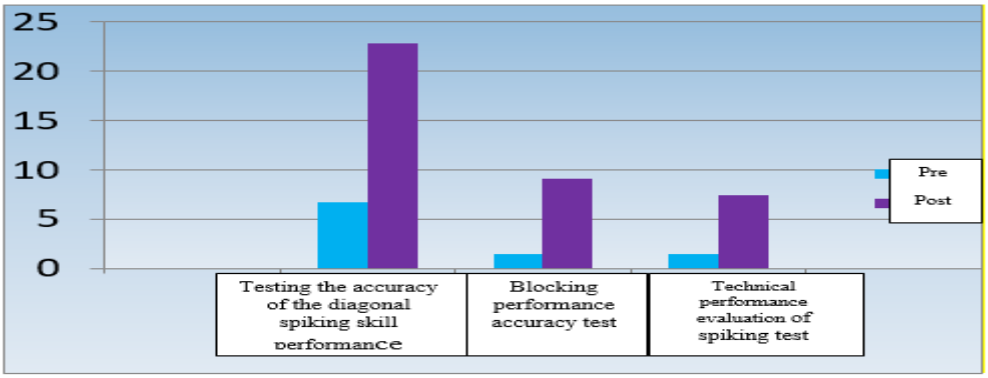


Figure (1) shows the values of the arithmetic means and the standard deviations of the pre and post-tests of the skills required for the experimental group

The results showed in Table (3) that there are significant differences between the results of the pre- and post-test in favor of the post-test of the experimental group in the variables under study (the accuracy of Diagonal spiking performance, the technical performance evaluation test for Diagonal spiking, the accuracy of blocking from center 2, and the performance evaluation test technical blocking), and these significant differences are attributed to the positive effect of the Appleton's model that the researchers applied to the experimental group; This is done by making the educational material arranged, organized and sequential according to the four stages of the model, as each of these stages included a set of procedures and stages carried out by the student or teacher in order to

achieve its own goals (Hassan. 2005),Teaching according to this model included the use of visual presentation methods represented in displaying educational posters for each unit, and displaying educational films in its stages as a means of presenting this information and ideas, which makes the lesson more exciting and interesting and takes away boredom and boredom from students so that it gives the student enough space for individual work And collectively to solve problems and overcome them, and this agrees with what was emphasized , "The method in which modern educational aids are used and the various possibilities it contains can increase the effectiveness of the educational method used and also increase the student's positivity towards the lesson, suspense and excitement among learners and motivate them to Gaining experiences and knowledge more effectively, as it makes the lesson more vital and thus is reflected on the learners in the form of different and accumulated experiences" (Zagloul and et al, 2001).

Also, the teaching of the experimental group using the Appleton's model made the students the main focus around which the educational process revolves, as well as active participants in it, and that their application of the exercises in the four stages of the model, namely (sorting the information in the possession of the students, then processing the new information and experiences presented in the lesson, and then excavating the information and the societal context).Independently, it is an encouraging factor in increasing students' motivation towards performance, and freedom in the practical application of activities, which made them feel independent, which leads to enhancing self-confidence and improving their view of themselves. Provide a better level of performance, and this agrees, with what was confirmed, "Caring for the learner and making him the focus of the educational process and the center of activity, respecting his opinions and abilities, and inundating him with kindness, acceptance and encouragement is a basic factor that helps in learning."(Hassan. 2005)."Through the foregoing, we conclude that all these factors and procedures led to the development of the level of the experimental group students in the post-tests, which confirms that Appleton's model has a positive impact in learning the skills of spiking and blocking in volleyball for students, thus achieving the goal of the study and this was confirmed" (Zagloul and et al, 2001).

Presentation of the results of the pre and post-tests of the control group in the variables under research, analysis and discussion:

Table (4) shows the means, standard deviations, and (T) value of the pre and post-test for the control group.

variables	tests	Arithmetic mean	Standard deviation	Difference between arithmetic mean	Difference between standard deviations	T value	Level sig	Type sig
Spiking performance accuracy	Pre-test	6.6667	1.39728	-10.73333	52975.	- 20.261	000.	sig
	Post-test	17.4000	1.24212					
Blocking performan	Pre-test	1.6000	.50709	- 4.40000	.28950	- 15.199	.000	sig

ce accuracy	Post-test	6.0000	1.00000					
Technical performance evaluation of spiking	Pre-test	1.6667	48795.	-2.33333	25198.	-9.260	000.	sig
	Post-test	4.0000	84515.					

The results of Table (4) show the differences and discrepancies in the values of the arithmetic means and the standard deviations between the tribal and remote tests of the variables investigated among the students of the control group in the two measurements, before and after:

1- Testing the accuracy of the diagonal spiking skill performance: the results showed the calculated value (t) of (-20.261) which is greater than its tabular value at the level of significance (0.05) and the degree of freedom (14), and this indicates the significant differences between the tribal and remote measurements and in favor of the dimensional measurement in Country Spiking Performance Accuracy Test.

2-The blocking performance accuracy test: the results showed the calculated (t) value of (15.199-), which is greater than the tabular and below the significance level (0.05) and with a degree of freedom (14), and this indicates the existence of a significant difference between the pre- and post-tests and in favor of the post-test In the blocking skill accuracy test from Center 2.

3- Technical performance evaluation of diagonal spiking: the results showed the calculated value (t) of (-9.260), which is greater than its tabular value at the level of significance (0.05) and the degree of freedom (14), and this indicates the significant differences between the two measurements before and after, and in favor of the measurement Post-test in the technical performance evaluation test for Diagonal spiking skill.

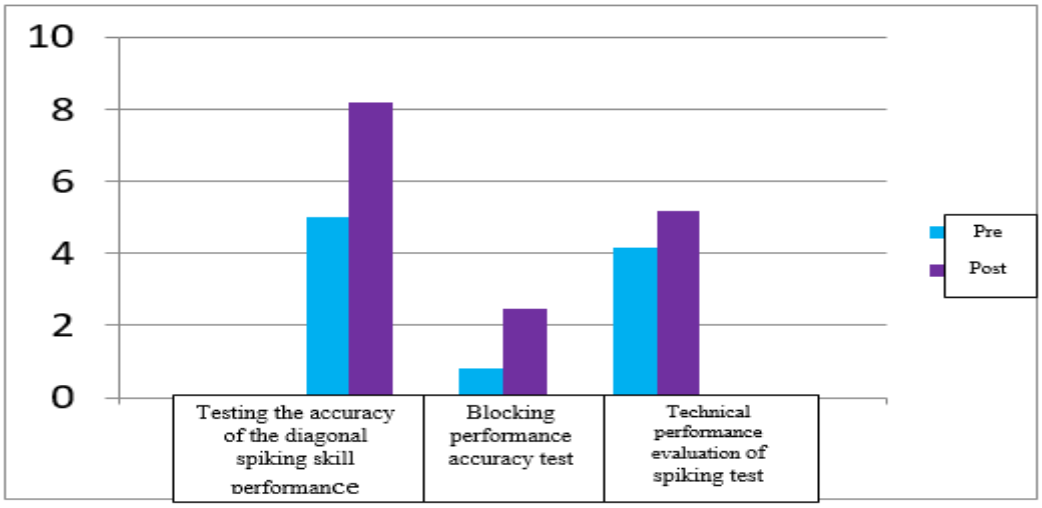


Figure (2) shows the values of the arithmetic means and standard deviations of the pre and post-tests in learning the skills of spiking and blocking in volleyball for the control group

The results showed through Table (4) that there are significant differences between the pre- and post-test for the control group and in favor of the post-test. This development for the students of the control group is attributed to the teaching mechanism used by the teacher in learning the skills of spiking and blocking in volleyball; This is through his theoretical information, explanations and presentations for the educational material, the application of special exercises to develop the variables under consideration, and the use of all the tools and means available to him during the educational units. This agrees with what was mentioned that "giving organized and scientific exercises has a great impact on developing performance" (Nassif. 2000) and implementing all that is required of them during the units, as repetition and practice also contribute to obtaining a good amount of development, which contributed to the development of the students of the control group, but at a lesser rate than the experimental group in the dimensional measurement, and this is logical because the method followed by the subject teacher, whatever its kind, certainly has a positive role in developing the level of students, even if the method depends on the teacher more than The student, meaning that the teacher gives ideas and topics complete and ready for students, and they do not have to explain and analyze, but only apply.

Presentation, analysis and discussion of the results of the post-tests of the experimental and control groups:

Table (5) shows the arithmetic means, standard deviations, the calculated (T) value, and the statistical significance of the dimensional tests of the experimental and control samples.

Variables	Groups	Arithmetic mean	Standard deviation	T value	Level sig	Type sig
Spiking performance accuracy	Experimental	22.8000	1.08233	12.694	000.	sig
	Control	17.4000	1.24212			
Blocking performance accuracy	Experimental	9.0667	.79881	9.280	.000	sig
	Control	6.0000	1.00000			
Technical performance evaluation of spiking	Experimental	7.4000	50709.	13.360	000.	sig
	Control	4.0000	84515.			

Table (5) shows differences and discrepancies in the values of the arithmetic means and standard deviations in the post-tests between the students of the experimental group that used Appleton's constructivist model and the control group that used the mechanism used by the teacher, so when inferring about the significance of the differences between the two arithmetic means through the use of (t-test) For independent and equal samples, the results showed that the calculated (t) value of (12.694) is greater than its tabular value at the level of significance (0.05) and the degree of freedom (28), and this indicates that there is a significant difference in the post-tests

between the students of the two groups and in favor of the experimental group in the Accuracy of country spiking performance.

As for testing the accuracy of blocking skill performance from Center 2, the calculated (T) value reached (9.280), which is greater than the tabular under the level of significance (0.05) and with a degree of freedom (28), and this indicates the existence of a significant difference between the pre and post-tests in favor of the post-test This indicates that there is a significant difference in the post-tests between the students of the two groups and in favor of the experimental group.

As well as for (Technical performance evaluation of diagonal spiking), when inferring the significance of the differences between the two arithmetic means through the use of the (t) test for independent and equal samples, the results showed that the calculated (t) value (13.360) is greater than its tabular value at the level of significance (0.05) and a degree of freedom (28), and this indicates that there is a significant difference in the post-tests between the students of the two groups and in favor of the experimental group in the technical performance evaluation test for spiking skill.

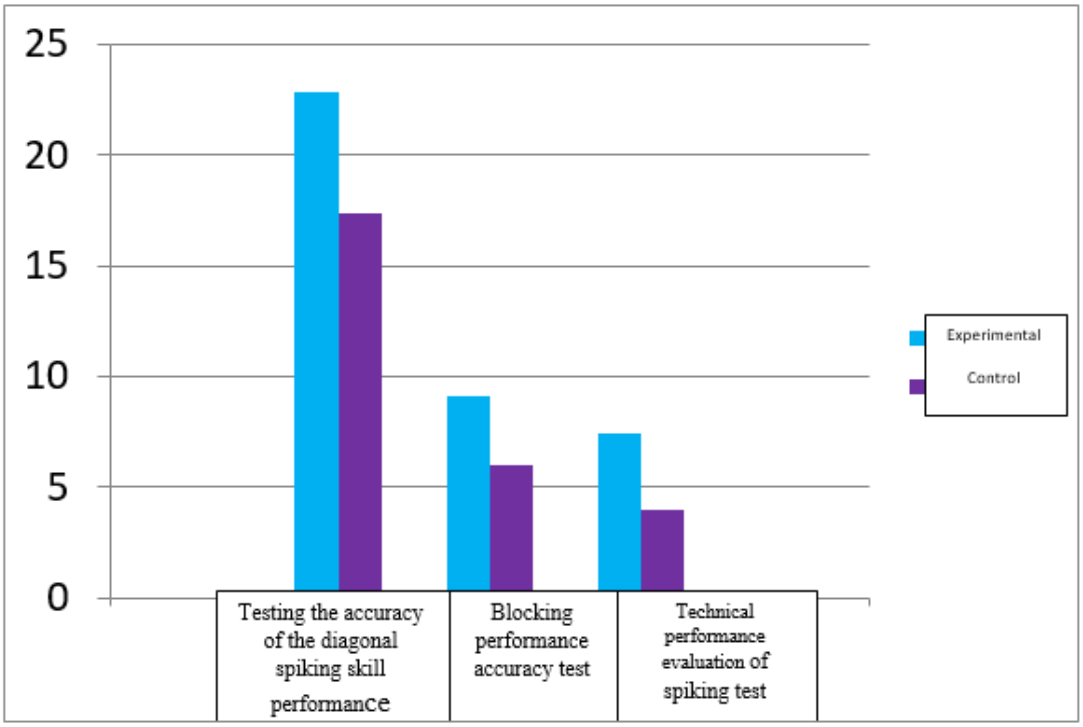


Figure (3) shows the values of the arithmetic means and standard deviations in learning the skills of spiking and blocking in volleyball between the control and experimental groups.

The results showed through Table (5) that there are significant differences between the results of the post-test for the two experimental and control groups and in favor of the experimental group in the variables under consideration, as this model has clearly invested in the process of organizing and searching for solutions and ideas significantly and contributed to achieving progress in the tests dimensionality, as well as practice, repetition, and the use of various teaching aids contributed to the emergence of sound and sequential performance, and in this d. Completely freely, as the student at this stage of study needs to be given the opportunity to practice and criticize playing situations, and analyze them to reach ideas that can be implemented independently,

which led to the development of a sense of confidence and a sense of responsibility through the enthusiasm that appeared on them during the application of exercises for the two skills, This is consistent with what was indicated “that giving students the opportunity to learn, express their opinion and reveal their abilities gives them an opportunity to develop themselves and increase their experiences in deepening the subject, idea or skill, and understanding the existing relationships between Its parts, as the researcher attributes the reason for the superiority of the experimental group in the post-test in the four stages of the model, which calls for finding solutions and answers issued by the students“ (Amayreh. 2000) . as well as this was confirmed, "The understanding of movement and its performance is very necessary in learning and developing skills, especially if this perception is linked to the intellectual aspect resulting from the explanation and clarification of motor skills." (Majeed. 2000)

Conclusions and Recommendations:

Conclusions:

- Appleton's model has a positive effect on the superiority and raising the level of the experimental group students in learning and skills of spiking and blocking in volleyball.

Recommendations:

- Necessity of relying on the teaching models in which the student is the main focus in order to achieve the best results and conducting studies to compare between the Appleton's model and other modern teaching models to know the level of development of skill performance in volleyball and to get rid of the traditional methods that focus on the teacher, which does not give a role to express The opinion.
- Emphasizing the importance of conducting a similar study using the Appleton's model on other sports and other samples because of its good features and characteristics that are useful in the educational process.

References:

Ahmed Abdel Karim Amayreh. 2000.The effect of the learning cycle and concept maps on reflective thinking and achievement among tenth graders in national and ranked education, (PhD thesis, unpublished, Faculty of Education, Yarmouk University, Jordan).

Al-Moussawi, Abdullah Hassan. 2005. The Guide to Practical Education, (Irbid, Modern Book World).

Marwan Abdul Majeed. 2000. Foundations of Kinesiology in the Sports Field, 1st Edition: (Amman, Al-Warraq Foundation).

Mohsen Ali Nassif. 2000. A suggested training curriculum for developing some special physical traits in the Cooper test for soccer referees, (Master’s thesis, University of Baghdad, Faculty of Physical Education.

Muhammad Saad Zagloul and et al,. 2001. Educational technology and its methods in physical education, 1st edition, (Al-Kitab Publishing Cente).

Appendix (1)

The first educational unit with Appleton's constructivist model to learn the skill of spiking

Group: Experimental

Stage: Second

Number of students: 15 students Unit time: 90 minutes

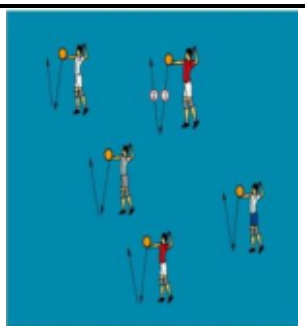
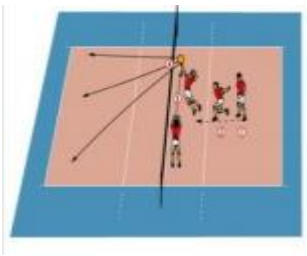
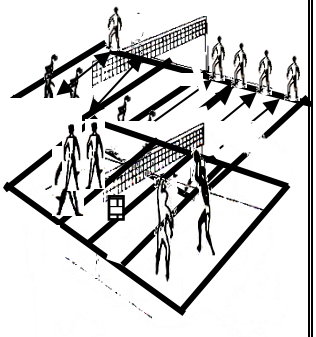
Educational objective: Learn the skill of spiking.

Educational goal: To spread the spirit of cooperation and teamwork among students

Equipment and tools: flying balls, educational poster (2*2 m), wooden box, blackboard and pens, balls collection basket.

Section	Time (nim)	details	Organizing and directing	Notes
Preparatory section	15			
Introduction	5	Stand in a row, take the audience, and give a loud sports salute.	********** *	Emphasis on students standing regularly.
General and private warm-up	15	Warm up all parts of the body and prepare it for the lesson. Warm up the arms and legs well.	********** * **********	Emphasis on warming up the arms and legs in particular.
main section	75			

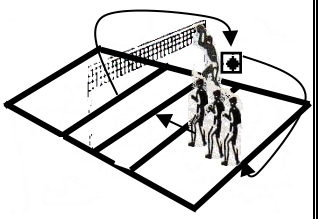
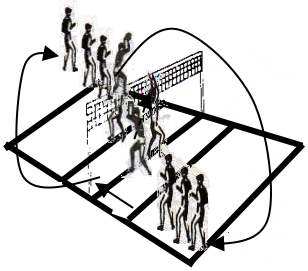
educational aspect The first stage Sort the information in the learner's possession	15	-Students gather in a square minus a side in front of the educational poster. -Determine the skill (spiking) and write it on the board. The teacher reveals the ideas that the learners have by asking probing questions about the Qatari spiking skill before starting to present the educational content in the lesson for the purpose of knowing what information they possess about the skill to be studied. Through the students' answers, the teacher is able to determine the true level of the students, their understanding of the subject and the extent to which they use the information they have in order to give feedback.		Examples of questions What are the types of spiking? What are the stages of spiking? - The most common mistakes during the implementation of spiking? Helping students analyze new knowledge and ideas and compare them with their old concepts and ideas by realizing the similarities and interdependence between them. - It is concerned with the task of preparing and preparing the minds of students to receive new knowledge and information.
applied side	55			
The second stage is information processing	15	Providing new information through personal interviews with students or survey questions		Emphasis on everyone's participation.

Introduction in the lesson third level Information mining		Students are asked to apply what they have learned by linking previous information they have with new information and to find an explanation for common mistakes they make when spiking with his steps. - Students are asked to divide the skill spiking into sections and they have to carry out each section and link it to the next section. No Faults (Deep Behaviours) - The player catches the volleyball and the movement of the striking arm is trained for the skill of spiking without errors (superficial behaviors) - Learners perform the stages of technical performance without a ball.	   	Emphasis on giving feedback and correcting errors at this stage. - Ensure that the height of the net is appropriate to the physical capabilities of the students as well as their height. Forming a general idea from partial ideas and moving from examples to general rules. The teacher leaves the task of formulating these ideas and conclusions to the students in their own style. Emphasis on giving exercises that help to stabilize and assess performance

		- The student takes a step or two approaching, then jumps and hits the ball from above the upper edge of the net, and the hitter tries to direct the ball to different places on the court. - The students stand in two lines along the side lines of the court. The player catches the ball with his non-hitting hand and throws it up and then hits it (a crush) towards the ground towards the student opposite him. - Some students were not able to perform the skill correctly, so the teacher gives hints or information (scaffolding) to help, such as (displaying posters with pictures of the required skill) that helps the student to reach answers to performance errors spiking. The students stand in line after the offensive line and the teacher stands on a wooden box on the opposite side and holds the ball over		

		the net. The student performs the approximate steps, jumping and hitting the ball. -Providing new information through personal interviews with students or survey questions Students are asked to apply what they have learned by linking previous information they have with new information and to find an explanation for common mistakes they make when spiking with his steps. - Students are asked to divide the skill spiking into sections and they have to carry out each section and link it to the next section. No Faults (Deep Behaviours) - The player catches the volleyball and the movement of the striking arm is trained for the skill of spiking without		

		errors (superficial behaviors) - Learners perform the stages of technical performance without a ball. - The student takes a step or two approaching, then jumps and hits the ball from above the upper edge of the net, and the hitter tries to direct the ball to different places on the court. - The students stand in two lines along the side lines of the court. The player catches the ball with his non-hitting hand and throws it up and then hits it (a crush) towards the ground towards the student opposite him. - Some students were not able to perform the skill correctly, so the teacher gives hints or information (scaffolding) to help, such as (displaying posters with pictures		

		of the required skill) that helps the student to reach answers to performance errors spiking. The students stand in line after the offensive line and the teacher stands on a wooden box on the opposite side and holds the ball over the net. The student performs the approximate steps, jumping and hitting the ball.		
The fourth stage is the societal context	31	-. The teacher helps the students to apply the concepts and skills they acquired in the previous stages. This stage is characterized by giving enough time for students to apply what they have learned in different situations. Apply the following exercises at this stage 1- The students stand in line in the center (3) and the teacher stands in the center (2) and counts the ball to the center (3) for the student to spiking.	* * * * * * * * * * * * *  	Emphasis on performing the skill correctly. Emphasis on swinging the arm before spiking. - Emphasis on the performance of the approximate steps. Emphasis on providing feedback at this stage. The rules and generalizations reached are applied to new

		2- The students are divided into two halves, one half on each side of the playground in the center (4) and the two teachers stand in the center (3) to prepare the ball for the students to implement. The teacher corrects errors during implementation.		examples, situations and problems.
Final section	5	Calming and relaxing exercises. Allow space to ask questions. - Leave.	**********	Emphasis on listening to the questions posed by the students.