The effect of an educational curriculum according to the Dunn and Dunn model in learning the skill of long serve in badminton for female students.

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Abstract:

The purpose of this paper is to preparing the effect of an educational curriculum according to Dunn's model in learning the skill of long serve in badminton for female students, and identifying the effect of an educational curriculum according to Dunn and Dunn model in learning the skill of long serve by badminton for female students. The researchers used the experimental method by designing two equal groups with a pre and post-test, which is the closest and most honest to solve many scientific problems practically and theoretically and is commensurate with the nature of the research problem. The research community was determined by the students of the second stage - College of Physical Education and Sports Sciences / University of Karbala for the academic year (2020-2021 AD), and their number is (70) students, divided into (6) study divisions (A-B-C-D-H-W), noting that two divisions are combined together during one unit of instruction. (20) Female students were adopted as the research community, and the research sample was selected by dividing them into two groups by lottery method (10) students as an experimental group and (10) as a control group, while (10) were selected as exploratory experiment sample. One of the most important results reached by the researcher is that: The use of the educational curriculum according to the Dunn and Dunn model has achieved a clear improvement in the development of visual tracking, cognitive achievement and basic badminton skills for female students, the education based on the (Dun and Dunn) model attracts female students to learn because the model takes care of the female students' tendencies and gives them the appropriate freedom, and learning according to the Dunn and Dunn model is more effective, as the model designs an organized method according to steps, by defining an appropriate learning environment for the students' desires. One of the most important recommendations recommended by the researchers is that: Necessity of using the Dunn and Dunn model as an important and successful teaching method in various fields of the educational process, adopting the Dunn and Dunn model in teaching students basic badminton skills, and necessity of adopting educational curricula according to learners' patterns to achieve faster and better learning.

Introduction:

Learning enhances the confidence of the students in general and contributes to the formation of the personality, as it makes the individual more confident in himself and his abilities. Learning styles are seen as an aspect of individual differences, and this model is distinguished from other models in that it focuses on learners' preferences for their learning methods. Each learner has a set of biological characteristics and developmental characteristics that are unique to him from others and the educational process must be designed in a way that exploits the learner's centers of power.

Therefore, the importance of the research lies in the researcher's serious attempt to prepare an educational curriculum that includes various exercises based on the concept of Dunn and Dunn model of learning patterns. The student who learns best, the sport of badminton is the sport of the right moment and the ability to control the movement of the hand with the movement of the body, as it is called the sport of calm and strong nerves during play and training.

Research problem:

Badminton skills are among the skills in a diverse environment that require the learner to perform the skills at a high speed and a good level to obtain points, and this is what makes the learners suffer from difficulty in controlling these skills and performing them smoothly, and through the presence of the researcher for most educational units and applied lectures being a practice For this game, note the lack of use of educational models that take into account the various learning styles during the educational unit, and the difficulty of the second stage students in learning the skill as it is one of the difficult and complex movements of several stages, in addition to the students' fear of injury due to jumping, lack of understanding of the parts of the movement, weak ability to connect the movement and lack of The regularity of motor coordination and an increase in effort and time, which led to a lack of motivation, arousal and negative reactions.

Therefore, the researchers decided to find a solution to these problems by applying an educational curriculum according to the model that includes special exercises to learn the correct performance of the technical stages of skills performance with the use of advanced aids according to the steps of the (Dunn and Dunn) model and the paragraphs it contains commensurate with the abilities and capabilities of the students.

Research objective:

1- Preparing the effect of an educational curriculum according to Dunn's model in learning the skill of long serve in badminton for female students.

2- Recognizing the effect of an educational curriculum according to Dunn and Dunn's model in learning the skill of long serve by badminton for female students.

Research hypotheses:

- There is a positive effect of the educational curriculum according to the Dunn and Dunn model in learning the skill of long serve in badminton for female students.

Research fields:

- Human field: Students of the second stage in the Faculty of Physical Education and Sports Sciences - University of Kerbala.
- Time field: (2/12/2021) to (14/5/2022)
- Spatial field: The closed hall 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 by designing two equal groups with a pre and post-test, which is the closest and most honest to solve many scientific problems practically and theoretically and is commensurate with the nature of the research problem.

Community and sample research:

The research community was determined by the students of the second stage - College of Physical Education and Sports Sciences / University of Karbala for the academic year (2020-2021 AD), and their number is (70) students, divided into (6) study divisions (A-B-C-D-H-W), noting that two divisions are combined together during one unit of instruction. (20) Female students were adopted as the research community, and the

research sample was selected by dividing them into two groups by lottery method (10) students as an experimental group and (10) as a control group, while (10) were selected as a pilot experiment sample.

Harmonization and equivalence procedures:

For the purpose of ensuring the homogeneity and equivalence of the research sample, the researcher processed the tribal results of the sample members in the long serve skill by using the Levin test, which showed the homogeneity of the research sample and the T-test and the equivalence of the two groups, according to the results shown in Table (1). Table (1) shows the homogeneity and equivalence of the research sample (experimental and control) for the skill of long serve.

skill	Levine's test	Level sig	Experimental		Control		T value	Level sig	Type sig
			Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation			
skill of long serve	0.21	0,06	10,4	1,57	10,8	1,68	0,45	0,73	Non sig

n1 = n2 = below significance level (0.05)

Through the results that were presented during conducting the process of homogeneity and equivalence, where the results showed that there were no significant differences within and between the experimental and control groups, where the significance level for all tests was greater than (0.05), and this indicates the absence of significant differences, which confirms the homogeneity and parity among them.

Means, tools and devices used in the research:

Data collection methods:

- Note.
- A questionnaire form.
- Experts and specialists.
- Arabic sources and references.
- Personal interviews.

Devices, tools and devices that were used in the research:

- dell computer
- Badminton courts (2)
- Badminton rackets (20) yonex rackets
- yonex feather nets, number (1)
- 3 feather columns
- Colored plastic feathers (20) cans, each capacity (6) yonex feathers
- Columns of different heights (1-3 m) number (3)
- tape measure
- Pigments and chalk
- colored masking tape
- Rubber ropes
- black cloth, 2 meters high
- stopwatch number (3)

Field Research Procedures:
Determining the research variables:
skill of the long serve

Description of the tests used in the research:

Long serve test (Abdel-Hussein. 2007):

- Test purpose: to measure the accuracy of the skill of the long serve
- Equipment need: badminton court, badminton rackets, feathers, tape measure, masking tape, information form, grade markers, rope attached to poles, table for placing the blades.
- Performance description:
  - After the test has been explained to the testers, the testers are given an appropriate time to warm up, and then each laboratory is given (5) trial attempts.
  - The laboratory stands in the area marked with (X).
  - The laboratory servers high and long so that the feather crosses over the net and then over the rope trying to drop it in the area specified in the points.
  - The laboratory is given (12) attempts, and only the best (10) attempts are calculated for him.
- Performance evaluation :
  - The tester is given (5) points in the event that the shuttlecock falls in the specified area at a distance of (4.5 cm) outside the limits of the back court, in excess of (40 cm) inside the limits of the court directly after the back line of the court.
  - The lab is given points (4,3,2) in the event that the feather falls in the specified areas with a distance of (40 cm), respectively, after the area specified in it (5) points.
  - The tester (1) is given a point in case the feather falls in the specified area at a distance of (175 cm), which starts from the end of area 2 and to the imaginary line under the rope.
  - One point is subtracted for each attempt in which the shuttlecock does not cross over the rope.
  - In the event that the shuttlecock falls on a line between two regions, the highest score is given.
  - A shuttlecock that goes outside the court (other than the designated area) or gets caught in the net is not awarded any point.
  - The maximum number of points that the tester can score in the best (10) attempts is (50) points.

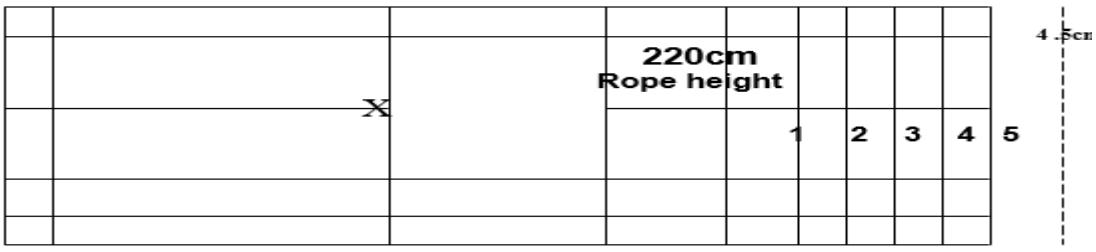

Fig. (1) Shows badminton court layout for serve long test

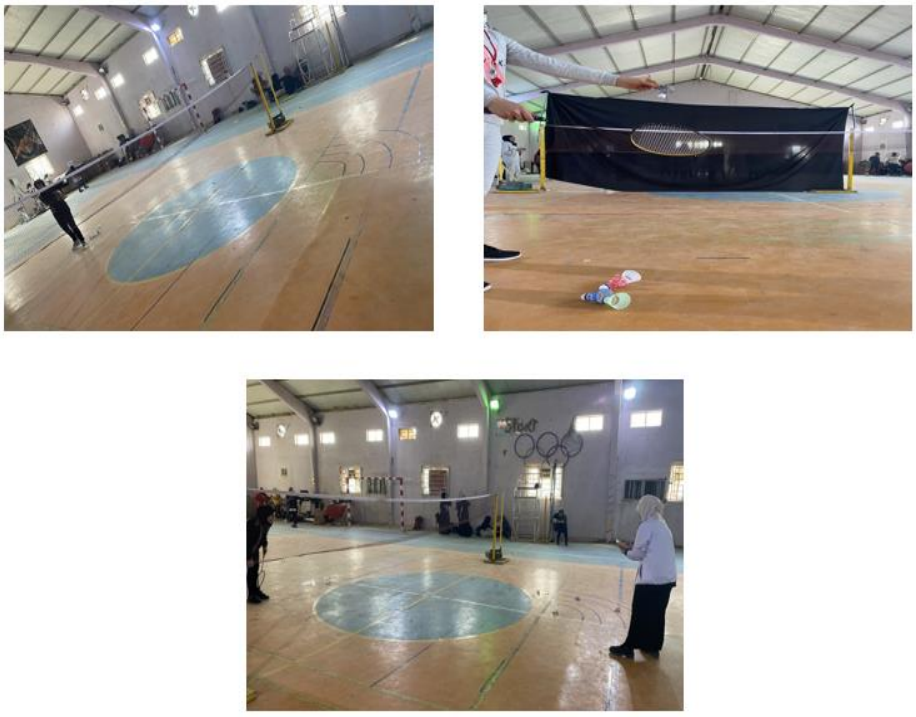

Figure (2) shows the long serve skill test

Exploratory experience:

The researcher conducted the exploratory experiment in the closed hall at the College of Physical Education and Sports Sciences - University of Karbala for the academic year (2021-2022) on a sample of the research community consisting of (20) female students, the selection was done randomly from among the members of the research community on (16/1 /2022) with the aim of identifying the difficulties and obstacles that the researcher may face, through which several purposes were verified, namely:-

- To identify the difficulties and obstacles that may occur during the application of the main experience and to develop appropriate solutions to them.
- Knowing the suitability of the tests to the research sample
- Ensure the adequacy and validity of the equipment and tools used in the research
- Introducing the assistant work team to the nature of the tests and knowing the extent of their competencies.
- Knowing the time required to take the original exams
- Finding the scientific basis for the tests used
- Knowing the appropriateness of the exercises used in the educational unit for the skill research sample for the game.

Pre-test:

The pre-tests of the research sample were conducted on Thursday (3/3/2022) at exactly nine o'clock in the morning and in the classrooms and sports halls of the University of Karbala, Faculty of Physical Education and Sports Sciences, where the long serve skill was tested and all the requirements and conditions were set and appropriate for the success of the tests, and the use of With an assistant work team and direct supervision of the researcher.

Curriculum

Through reviewing scientific sources, previous studies, ongoing discussions with supervisors and the researcher's field experience in the field of badminton, an educational curriculum was prepared according to the tendencies and desires of the learners and within the privacy of the methods of the Dunn and Dunn model. The curriculum included a set of educational exercises for learning the long serve skill, in addition to Organizing these exercises within the educational unit, repetition and practice of one skill were also adopted and then moving to the other skill, and the principle of pairing and overlapping between the stages of the Dunn and Dunn model was adopted, and questions and exercises were given to suit the tendencies and preferences of the students, in addition to the use of posters and videos with the continuous presentation during the unit Also, appropriate exercises were given for the long serve skill, according to the Dunn and Dunn model, and the number of educational units for the long serve skill was (2) educational units. The implementation of the curriculum took two weeks, with an educational unit per week, and the time of each educational unit took (90) minutes, as the researcher used a set of skill exercises that were aimed at learning and mastering skills through diversity in their forms. The curriculum was started on Thursday, (3/3 /2022) and was completed on Tuesday (10/3/2022).

Post-test

The post-tests of the research sample were conducted on Thursday (28/4/2022) at exactly ten o'clock in the morning and in the classrooms and sports halls of the University of Karbala, the Faculty of Physical Education and Sports Sciences, and on all members of the main experiment sample from the experimental and control groups with the same conditions and specifications, the pre-test and obtain The data was recorded and recorded in forms in preparation for its statistical processing. The skill performance was evaluated in the same way as the evaluation used in the pre-tests.

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

Results and discussion:

Presenting the results of the differences between the pre and post-test in learning the skill of serve in badminton and for the two research groups (experimental and control):

For the purpose of achieving the objective of the study, which included identifying the effect of the educational curriculum according to the Dunn and Dunn model on the skill of serving the long badminton for female students to the members of the research sample, and for the purpose of describing the results of the sample members, the researcher processed the data obtained statistically by using the arithmetic mean and standard deviation, and for the purpose of knowing the significant differences between the two tribal tests And the dimensional and for the two research groups and the (t) test for the interconnected samples, as shown in Tables (2) and (3).

Table (2) shows the difference between the pre and post-tests of the experimental group members of the skill serve

Test	Pre-test		Post-test		Post-test	T value	level Sig
	Mean	standard deviation	Mean	standard deviation			
skill of long serve	10,4	1,57	22,60	2.27	22,875	0،000	Sig

n1 = 9 below the significance level (0.05)

Through Table (2), it is clear that there is a discrepancy and difference between the values of the arithmetic mean and the standard deviation in the pre and post-tests. The post-test amounted to (22,60) (2,27), and this indicates that there is a discrepancy and difference between the two arithmetic means, as the results showed that the calculated (T) value of (22,875) and the level of significance (0.000), which means that there are significant differences between The two tests.

With regard to the results of the control group in the pre and post-test of the long serve skills, Table (3) shows a description of the results of the group to know the significance of the pre and post-tests.

Table (3) shows the difference between the pre and post-tests for the members of the control group for the skill of long serve

Test	Pre-test		Post-test		T value	level Sig	Type Sig
	Mean	standard deviation	Mean	standard deviation			
skill of long serve	10,8	1,68	18,4	1,95	7,583	0،000	Sig

n1 = 9 below the significance level (0.05)

Through table (3) it is clear that there is a discrepancy and a difference between the values of the arithmetic mean and the standard deviation of the long serve skill variable among the members of the control group in the pre and post tests, as the value of the arithmetic mean and the standard deviation of the long serve skill reached in the pre-test, respectively (10,8) and (1,68). As for the value of the arithmetic mean and standard deviation in the post-test (18,4) and (1.95), and when inferring the significance of the difference between the two arithmetic means through the (t) test of the interconnected samples, the results showed that the calculated (t) value reached (7,583) and the level of Significance (0.000) and this confirms the existence of significant differences between the two tests.

Discussing the results of the differences between the pre-and post-test in learning the skill of long serve in badminton for the two research groups (experimental and control):

By presenting and analyzing the results of the pre and post-tests in learning the long serve skill in badminton and for the two research groups (experimental and control), which were clarified through tables (2) and (3), it was found that there are differences in both groups, as for the differences in the results of the experimental group between the

two tests Before and after, the researcher attributes this to the effectiveness of the Dunn and Dunn model that was applied to the experimental group. The moral differences in favor of the experimental group were due to the use of the curriculum prepared by the researcher according to the Dunn and Dunn model, as this model includes various activities that help the student acquire the concept, emphasizes the interaction between the student and the school, and makes the student a positive aspect in the educational process, unlike the usual method, which the school plays a major role in the educational process (Owais. 1999).

Presenting the results of the differences in the post-tests experimental and control groups in learning the skill of long serve in badminton:

To achieve the goal of the study, the researcher sought to extract the values of the mean and standard deviation of the data of the members of the experimental and control groups in the post-test and use the (t) test for independent and equal samples as a statistical means to achieve this purpose and extract the calculated (t) value that is the test of judgment in the significance of the tests, as shown in table (4)

Table (4) shows the difference the post-tests between experimental and control groups of the skill serve

Test	Experimental		Control		T value	level Sig	Type Sig
	Mean	standard deviation	Mean	standard deviation			
skill of long serve	22,6	2,270	18,4	1,955	4,433	0‹000	Sig

n1 = n2= 9 below the significance level (0.05)

Table (4) shows that there is a discrepancy between the mean and standard deviation values in the post-tests between the experimental group and the control group. The arithmetic mean and standard deviation to evaluate the performance of the long serve skill reached the members of the experimental group and respectively (22.6) (2,270),

While the values of the arithmetic mean and the standard deviation to evaluate the performance of the long serve skill for the members of the control group, respectively (18,4) (1,955), where the results showed that the calculated (t) value of (4,433) and the significance level (0.00), and this indicates that there is a significant difference In the post-tests for the benefit of the experimental group.

Discussing the results of the post-tests between the experimental and control group in learning the skill of long serve in badminton:

By presenting and analyzing the results of the post-tests of the skill of long serve in badminton, which was clarified through Table (4), it was found that there are significant differences between the two research groups and in favor of the experimental group, the researcher attributes these differences to the effect of the exercises that she set came as a result of organizing and preparing the educational curriculum according to the Dun and Dunn model Which helped the members of the experimental group to excel, as the curriculum included educational units according to this model, which helped the

members of the experimental group to cognitive integration and benefits from the functions of the two hemispheres of the brain, and this is what the model aims at.The nature of the questions presented to the students and the nature of the exercises helped the members of this group to visually track the actual performance of the student and the exemplary performance of the skill, as well as the response of the experimental sample members to the exercises and their ability to successfully timing the performance of skills with body movements and linking them with the goal of the exercise and vice versa, as well as the commitment of the sample members Conditions through performance instructions. There is an important point in the emergence of these differences, which is the diversification of exercises, and therefore the student will have many solutions ."Diversification in performance cases has increased the development of the learner's motor performance due to the diversification of the methods of exercises, which made her able to confront most of the learner's variables that were presented to her during the educational units, and that these various exercises have a greater impact in following stability and stability in one place" (Ismail. 2000).

Conclusions and Recommendations:

Conclusions:

After viewing, analyzing and discussing the tables, and in light of the results obtained by the researcher, the researcher reached the following conclusions:

- The use of the educational curriculum according to the Dunn and Dunn model has achieved a clear improvement in the development of visual tracking, cognitive achievement and basic badminton skills for female students.
- The education based on the (Dun and Dunn) model attracts female students to learn because the model takes care of the female students' tendencies and gives them the appropriate freedom.
- Learning according to the Dunn and Dunn model is more effective, as the model designs an organized method according to steps, by defining an appropriate learning environment for the students' desires.

Recommendations:

Under the results and conclusions obtained by the researcher, the researcher recommends the following:

- Necessity of using the Dunn and Dunn model as an important and successful teaching method in various fields of the educational process.
- Adopting the Dunn and Dunn model in teaching students basic badminton skills.
- Necessity of adopting educational curricula according to learners’ patterns to achieve faster and better learning.
- Necessity to pay attention to the cognitive aspect within the educational unit that helps to develop higher mental processes.
- Necessity of using educational models that address the two hemispheres of the brain and try to take advantage of the energies stored within the human mind.

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