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The impact of live modeling strategy in learning the skill of near and far serve in badminton for students

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Abstract

The problem of this study came through the researchers' work in the teaching field for not short period. As I noticed that there is not enough interest in conveying skills to learners for several reasons, including the short of time and the lack of sufficient means for learning. The study also aimed to identify the effect of the live modeling strategy in learning to serve with badminton for students. As for the research hypothesis, there are statistical differences between the pre- and post-tests of the two research groups in learning to serve with badminton for students. In the research methodology, the researchers adopted the experimental method which is appropriate the nature of the research then, to reach the best results. The researchers concluded the possibility of benefiting from the live modeling strategy for students in identifying the correct performance of the skill under study. In addition to the effectiveness of teaching using live modeling if we want to achieve good qualitative achievement. As for the recommendations, the researchers recommended...

Working to include this method from other teaching methods within the vocabulary of teacher preparation curricula in the College of Religious Education and Sports Sciences.

1.Definition of the research

1.1 Introduction to the research and its importance

Given what we are experiencing today of the scientific speed and technological progress and the great expansion in all fields of knowledge, including the sports field, which has outpaced time and has become competing with other areas of life, but rather exceeds them and has become an important resource for developed countries that have taken sports as a gain for them and a resource for the state and its citizens, and from the above comes the importance that the curricula followed in education and teaching are not traditional, but must go beyond it to prepare learners psychologically and materially and provide them with the necessary scientific competencies, and since it is known in the faculties of physical education and sports sciences that the model constitutes a main basis for the learner, teachers realize the importance of this model and presenting the types of smart and desirable behavior in front of the students, as the teacher is one of the most successful and effective learning methods when combined with explanations or comments provided by the model while performing the work "Therefore, the modeling strategy emerged that works to provide the student with motor, behavioral and cognitive patterns by observing the performance of appropriate models, as the general concept of modeling is the individual's learning of a specific behavior through observing it" (Abdul (Al-Sattar, Nabil Ibrahim 2012) and seeing its consequences. “Modeling as a strategy is a combination of the behavioral concept of learning and the cognitive concept. The behavioral school: is based on the individual performing a certain behavior. If he receives reinforcement, the rate of repeating this behavior increases. If he receives punishment or extinction (ignoring), the probability of repeating this behavior decreases. As for the cognitive school, it explains that learning is based on cognitive processes occurring in the human mind, such as: thinking, perception, analysis, and synthesis. In the educational school context, the modeling strategy is defined as a

learning method in which the teacher explains how to perform a specific skill, by describing each step and providing a visual and verbal model presentation of what is expected" (Al-Razihi, Ali Hassan 2012). There are many types of modeling, including direct, implicit, and participatory. Live modeling was used in this research because of its importance in the process of motor learning, as it deals with different models, which leads to addressing distinctions and differences. Within this strategy, skills are conveyed in an easy and correct manner, which helps in learning correctly and with high motivation. Badminton is one of the games that It has received great attention globally in the last ten years, and has become widely known, so its skills are complex skills that require great attention and giving different learning methods in order for the student or learner to obtain a distinctive acquisition of skills. The importance of research has emerged through keeping pace with the scientific development in methods and approaches through the use of the modeling strategy using the live model method in the learning process. This strategy allows the skills to be conveyed to the learner correctly and well through the live model in order to identify the best movement path for the skill, observe errors, and enrich the scientific library with the study.

2.The problem statement

Through the researchers' work in the teaching field for a not-so-short period, they noticed that there is not enough interest in adequately conveying skills during the lesson. As the lesson is given without there being a model capable of correctly displaying the skills in all the activities required in the physical education lesson curriculum. The inability to display the skill correctly is due to several reasons, including the physical condition that does not help the teacher to display the skill correctly, as well as sometimes the teacher's lack of good knowledge of the skill. So, the problem occurs through the use of some strategies that address this problem,

including the live modeling strategy, which provides the possibility of learning the skill better.

The researchers believe that using this strategy helps the possibility of using a good model to display the skill correctly. Thus positively reflects on conveying the skill correctly and forming the correct motor path. Also when the model is a role model, it helps motivate learners to learn and overcome mistakes which leads to improving the process of learning the skills used.

1.3. Research objectives

•Identify the effect of the live modeling strategy in learning the skill of near and far serve in badminton for students.

1.4. Research hypotheses:

•There are statistical differences between the pre- and post-tests of the two research groups in learning near and far serve in badminton for students.

1.5 Research areas

1.5.1 Human field: Third-stage students, College of Physical Education and Sports Sciences / University of Masan 2023-2024.

1.5.2 Temporal field: The period extending from 10/1/2023 to 4/1/2024.

1.5.3 Spatial field: Closed hall / College of Physical Education and Sports Sciences / University of Masan

3.Research methodology and field procedures:-

3.1 Research methodology

The researchers used the experimental method which is appropriate for the research to reach the best results.

3.2 Research community and sample

The research community represents third-year students / College of Physical Education and Sports Sciences / University of Masan, academic year (2023-2024), numbering (40) students in the Applied Sciences Department. As for the research

sample, it was selected randomly (lottery) to be two groups, each group consisting of (10) students representing the experimental group that uses the live model, (10) students were selected to represent the control group.

3.3 Methods, tools and devices used in the research

3.3.1. Scientific research methods

- Arab and foreign sources
- The International Information Network (Internet)
- Personal interviews with professors, experts and specialists.
- Supporting work team.

3.3.2 Devices, tools and methods used in the research

- Video camera (2)
- Legal field of play
- 6 sets of feathers
- 40 feather rackets
- Dell calculator
- Auxiliary sports tools

3.4 Field research procedures:

3.4.1 Method of applying the modeling strategy:

1. 1. Providing a solved example of the question or problem. this type is the simplest form of modeling.

2. Providing instructions in an illustrated manner that represents the steps of performing the task (sending skill)

3. Displaying an illustrated video showing how to perform (sending skill). What distinguishes the availability of a video to perform the task is the student's ability to stop the shot or watch it again. Then, to learn the best performance that he was unable to understand.

4. Analyzing the tasks into small parts, repeating the student's training repeatedly, so that the student can learn and master it. Here we notice the similarity of the modeling strategy with the task analysis strategy. As both methods intersect in their implementation, both aim to teach the student a skill or concept in a simplified and procedural way. This simplification or analysis contributes to reducing the cognitive load on working memory.

5. Providing students with various learning materials: picture cards, colors, models, and video clips, which support student learning.

6. One of the basic modeling strategy pillars is how the teacher to analyze the tasks, prepare learning tools and means, in addition to using the thinking

3.4.2 Determining the research variables

According to the researchers' observations in the research problem, the research variables that dealt with the near and far serve in badminton were determined.

First: Short serve test (Don.R.Kilkendoll, Joseph: 1987-213)

Purpose of the test: Measuring the accuracy of the short serve skill.

Test application: Applied to a sample of both sexes from institutes and colleges.

Test evaluation: The degree of reliability reached (0.85) and objectivity (0.77)

Required tools: Badminton rackets, shuttlecock, rubber rope, and a court planned with the test design as in Figure (1)

13,40 Court length **5.18 Court width for singles**
6,10 Court width for doubles

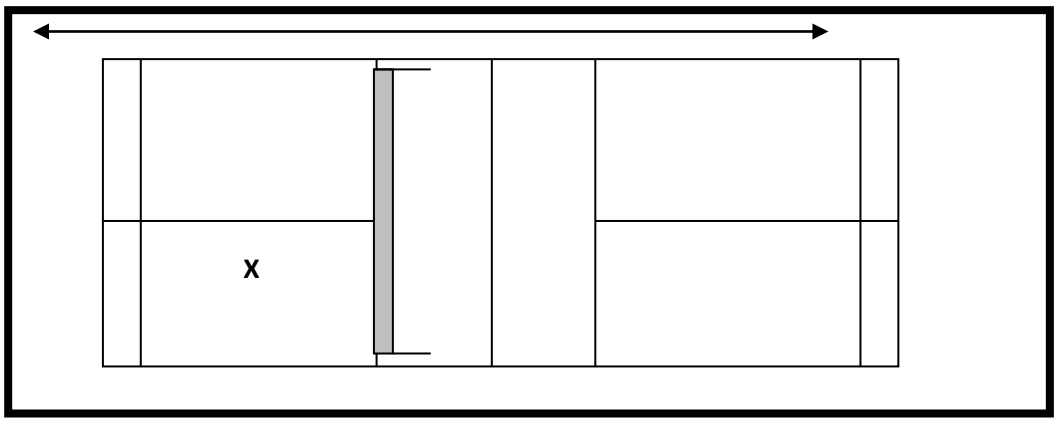


Figure (1)

(shows the layout of the badminton court for the short serve test)

 Each region is measured as follows: Region ((5) degrees of radius 55.8 cm) from the center, ((4) degrees 67 cm), ((3) degrees 96.5), ((2) degrees 117 cm), ((1) degree of the rest of the region)

 Test implementation method:

 The sender stands at the sending location (X) and sends (20) attempts in two groups so that the shuttlecock passes between the net and the rope that is (51 cm) above the net, trying to drop the shuttlecock in the area with the highest

 Points calculation:

 The score is given according to where the shuttlecock falls. The shuttlecock that falls on a line between two areas is given the highest score, the serve that does not pass between the rope and the net does not fall on one of the areas is given zero, the serve that hits the rope is repeated again, and the final score is the sum of the twenty attempts.

First: Long transmission test (Ray Collins and Patrick Hadyes:1987-48)

 Test name: Long transmission test.

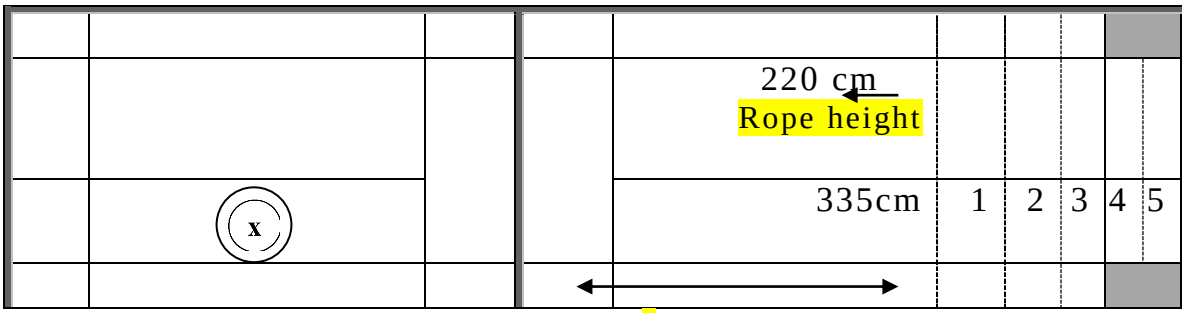
 Test objective: Measure the accuracy of long transmission performance

 Test evaluation: The degree of reliability reached (0.87), and objectivity (0.78)

 Test implementation:

1. Preparation and tools: A- Illustration

2. 40 40 40 40 175 CM



(Figure 2)

Shows the layout of the badminton court for the long serve test (near and far)

Tools:

- Badminton court
- Three new shuttlecocks
- New shuttlecocks
- Measuring tape
- Adhesive tape.
- Information form.
- Marks to indicate grades.
- Rope fixed to poles
- Table to place shuttlecocks.

2. Test:

A- After the test is explained to the test takers, the test takers are given a suitable time to warm up, then each test taker is given (5) trial attempts.

B- The test taker stands in the area marked with points.

C- The test taker sends high and long so that the shuttlecock passes over the net then over the rope trying to drop it in the area marked with points.

D- The test taker is given (12) attempts, of which only the best (10) attempts are counted.

Calculating test points:

A- The examiner is given (5) points if the shuttlecock falls in the designated area at a distance of (4.5) cm outside the back boundaries of the court more than (40) cm inside the court's boundaries directly after the back line.

B- The examiner is given points (4.3.2) if the shuttlecock falls in the designated areas at a distance of (40) cm in a row after the designated area (5) points.

C- The examiner is given (1) point if the shuttlecock falls in the designated area at a distance of (175) cm starting from the end of area 2 to the imaginary line below the rope.

D- One point is subtracted for each attempt in which the shuttlecock does not cross over the rope.

E- If the shuttlecock falls on a line between two areas, the highest score is given.

F- A shuttlecock that goes outside the court's boundaries (except the designated area) or gets stuck in the net is not given any points.

G- The maximum number of points that the examiner can score in the best (10) attempts is (50) points.

3.4.3 Exploratory experiment

The exploratory experiment was conducted on Wednesday 1/11/2023 at exactly ten o'clock morning on a sample (10) ten players from third-year students from outside the research sample for the purpose of determining

1.The extent of the devices and tools used's safety and efficiency.

2. Overcoming errors and obstacles that accompany the experiment.

3. Knowing the sufficient time to perform and repeat these skills.

3.4.4 Pre-tests

The pre-test was conducted on the sample members (the two research groups) before starting to implement the educational curriculum. The test was applied using the live modeling strategy with the skill of near and far transmission on the students of the experimental and control research groups numbering (20) students. The time of this test was on Monday 11/6/2023 at exactly (9) in the morning with video and photo filming using a video camera (camera). The conditions for both applying the strategy near and far transmission were fixed for the purpose of repeating them in the post-tests.

3.4.5 Main experiment (use of the strategy)

After completing the exploratory experiment and conducting the pre-tests. The main research experiment was applied, as the implementation of the main research experiment began on Thursday 11/9/2023 ended on Thursday 11/1/2024 by implementing the research experiment / main and its duration was (6) weeks with (12) educational units.

It will be at a rate of one educational unit per week, the duration of the educational unit is (40) minutes. The research sample was divided into two groups, an experimental group using the live model strategy and a control group using the curriculum followed by the teacher.

3.4.6 Educational method

To achieve the research objectives, the research sample was divided into:

Experimental group: It learns according to the live modeling strategy after the subject teacher explains the skill within the main section, the educational part, the live model performs the near and far sending skill correctly several times for the students to learn the correct movement path of the movement as well as displaying errors in performance. The live modeling group learns (12) educational units with a total time of (480) minutes.

Control group: It learns according to the followed method which is the imperative method to learn the skills after the teacher explains the skill. The control group learns (12) educational units with a total time of (480) minutes.

3.4.6. Post-tests: -

After the implementation period completion, the educational units for the experimental and control groups. The post-tests were conducted on Sunday (14/1/2023) in the closed hall of the College of Physical Education and Sports Sciences / University of Masan to measure the extent in which students learned the sending skill under study,

using the same tests that were used in the pre-tests under the same conditions, under the supervision of the researcher and the assistant work team.

3.4.7Statistical methods:

The researchers verified the results using the statistical package system (SPSS).

4. Presentation and discussion of the results

4.1 The results' presentation of the pre- and post-tests the experimental and control groups in the performance of the close-sending skill.

shows the difference in means, standard error, calculated (t) value, error percentage, and significance level in the pre- and post-tests of the experimental and control groups for the skill of close serve in badminton.

Significance	Sig value	Caluculated value (t)	Post-test		Pre-test		Measurement unit	Variables
			A	S	A	s		
morale	0.000	9.412	1.156	41	1.431	28.92	Degree	Experimental group
morale	0.000	6.203	1.232	37.8	1.232	25.2	Degree	Control group

Table (2)

shows the difference in means, standard error, calculated (t) value, error percentage, and significance level in the pre- and post-tests of the experimental and control groups for the skill of far serve in badminton.

Significance	Sig value	Calculated value (t)	Post-test		Pre-test		Measurement unit	Variables
			A	S	A	S		
morale	0.000	7.217	0.939	44	1.147	29.8	degree	Experimental group

morale	0.015	4.003	0.113	38.5	1.330	30.2	degree	Control group

4.2Discussion of the results

The results presented tables (1) and (2) for testing the accuracy of the near and far transmission skill related the control and experimental groups showed significant differences between the pre- and post-tests in favor of the post-test. It achieves the study hypothesis regarding the control group. There is also a development in the post-test's group. The researcher attributes the significance of these differences to the use the live modeling strategy. This development in the post-tests of the near and far transmission skill with the superiority of the experimental group over the control group did not come by chance. The researchers attribute the progress of the experimental group that used the live modeling over the control group to the importance of the live modeling strategy that is based on the importance of the model. As people tend to imitate others and the role model is a personality with high capabilities or social potential. It leads to the desire of learners to imitate this personality. This is considered one of the factors that influence learning as there is a tendency to imitate them more than others who do not have such qualities. Within the scope of the section or class, the students who are very popular, others tend to imitate them more than those who do not have such popularity and imitate individuals who are similar in the same interests and backgrounds to each other. Therefore, living models are much better than direct or indirect models. (Haider Abdul Razzaq and Haider Taha: 2024, p. 15)

By observing the results of the near and far sending skills, there was a difference between the pre- and post-tests and the control and experimental groups. The

members of the experimental group excelled in the cardiac test for both skills. This reflected the work and application of the strategy which showed the features of its members' superiority over the members of the control group. As the live modeling strategy helped simplify the learning process and present the skill in a simple and correct manner led to the learner receiving this skill in an easy way and identifying difficulties and errors in a scientific manner. As well as getting rid of the wrong abandonment that the learner may fall into due to his depiction of a specific movement path as a result of what the subject teacher explained.

Modeling is based on forming a mental image of the relationships that link things, phenomena, or events using representations or forms of simulation that facilitate their explanation, interpretation, and prediction. Holiday, Wiliam: 2001))

In addition, interaction with the live model provided an environment of understanding and self-development for learners removed the embarrassment of performing the movement's fear of incorrectly. This will happen when the teacher asks students to perform the movement for others, thus reducing embarrassment in the event of poor performance. (Hussein bin Mansour: 2018, p. 634)

Exposure to the models' behavior and the processes of interaction with others results in learning multiple behavioral patterns such as skills, habits, practices and words that are not in the individual's behavioral collection. The likelihood of this type of learning increases with increased opportunities for interaction with others (Bigge, M.L, Shermis: 1999)

5. Conclusions and Recommendations

5.1 Conclusions

Based on the research results, the researchers made the following conclusions:

1. The effectiveness of teaching using live modeling if we want to achieve good qualitative achievement.

2. The live modeling strategy helped students identify the skill correct performance of close and far serve in badminton.

3. The live modeling strategy helped students identify the difficulties and errors that accompany the performance of the skill.

5.2 Recommendations

Based on the research results, the researchers made the following recommendations:

1. Training teachers and instructors during service to be a good model or to use a model that performs the skill well, easily and correctly.

2.Working on including this method from other teaching methods within the vocabulary of teacher preparation curricula in the College of Physical Education.

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