

The Effectiveness of Using Play Positions in Learning the Motor Performance of The Skill of The Front Foot Badminton

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Abstract

The study aimed to:

- Preparing play situations to learn the motor performance of the skill of the front blow badminton for fifth grade students.
- Detecting the effect of playing situations on learning the motor performance of the forehand in badminton.
- Identify the differences between the use of play positions in learning motor performance badminton and the method used in learning performance by teachers of the subject.

The researchers prepared play positions to learn the motor performance of the front blow badminton where the experimental group was applied in its work (play positions) The control group has used (traditional method) followed by the teacher and included work (6) weeks and by (2) units per week and the time of each educational unit (40) minutes, then conducted post-tests for the experimental and control groups after the completion of the implementation of educational units in the same conditions in which the tribal tests were conducted in terms of conditions, times and tools, I use The researchers in collecting data are the following means (Arab and foreign sources, the Internet, performance evaluation questionnaire form, tests and measurement, as for statistical treatments, the statistical program (SPSS) was used to extract the required results that serve the study.

The researchers reached the following conclusions:

- The use of playing positions has an effective effect on learning motor performance Badminton forehand.
- outperformed the pupils of the experimental group in the post-test on the pupils of the control group in learning motor performance front blow badminton.
- The use of activities, sports, tools and playing situations had an impact on learning the kinetic performance of the front blow with badminton.
- The diversity in the playing situations had a clear impact on learning the kinetic performance of the badminton front strike, and this means that the playing situations are greatly superior to the path followed by the teacher.

Keywords: playing positions, motor performance, skill, forehand, badminton

1-1 Research Introduction and Significance:

Badminton is an individual sport that requires the players to perform highly skilled movements. Both players and students are subject to rules that enable them to execute these movements or technical skills correctly, based on the requirements and characteristics of each fundamental skill. Therefore, badminton is considered a fundamental sport rich in effective situations that directly impact the movement or skill

performance. This sport has gained significant attention and popularity across various segments of society due to its simplicity and low requirements. Tournaments and competitions have been organized worldwide, and it is evident that outstanding achievements and smooth performances in the high-level badminton players' movement are not mere coincidences. Instead, they rely on the latest educational foundations, which stem from learning process planning. Mastering these fundamental skills in badminton is achieved through the efforts of motor and muscular groups acquired by students, enabling them to perform these movements or skills correctly.

As a result, numerous research studies have taken serious scientific steps to teach a good level of motor performance to students when performing these skills. The educational situations play a fundamental role in the learning and mastery process of motor performance through implementing play situations and gradually progressing in the play situations for the purpose of learning. Thus, several modern methods, situations, and exercises have emerged towards enhancing the teaching style, making the learning process one of the most important educational operations that require a sound scientific plan to achieve its objectives. This process aims to deliver skill information to students in the best possible way, and motor learning relies on the effectiveness of the play situations used in learning fundamental skills to reach an acceptable level of motor performance within a specified learning time. Therefore, the importance of this research is highlighted through the use of play situations that enhance the level of learning motor performance in the forehand stroke in badminton.

1-2 Research Problem:

The researchers, who work as lecturers in elementary schools, observed a weakness in learning the motor performance of fundamental skills in badminton, specifically the forehand stroke. This weakness is related to the requirements of learning and performing these skills within physical education classes. The conventional learning methods and the lack of diversity in play situations, as well as the limited use of modern teaching tools, have negatively impacted motor performance. This led the researchers to question the effectiveness of using play situations in learning the forehand stroke in badminton.

1-3 Research Objectives:

1. Develop play situations for learning the motor performance of the forehand stroke in badminton for fifth-grade elementary students.
2. Investigate the impact of play situations on learning the motor performance of the forehand stroke in badminton.
3. Identify the differences between using play situations in learning the motor performance of the forehand stroke in badminton and the conventional learning methods adopted by the subject teachers.

1-4 Research Hypotheses:

1. There are statistically significant differences between the pretest and posttest in learning the motor performance of the forehand stroke in badminton for fifth-grade elementary students.
2. There are statistically significant differences between the posttests of the experimental and control groups in learning the motor performance of the forehand stroke in badminton for fifth-grade elementary students.

1-5 Research Scope:

- Participants: Fifth-grade students at Al-Sanadid Elementary School, affiliated with the Education Department in Tikrit.

- Timeframe: February 22, 2023, to April 17, 2023.

- Location: Al-Sanadid Elementary School Hall in Salah al-Din Governorate, Tikrit.

1-6 Definitions:

- Play Situations: These are instructional states that simulate play scenarios. The goal is to teach students how to perform in play situations, which require a combination of awareness, comprehension, perception of strategic knowledge, and skill execution (1).

- This is a case of directing vocational education in a manner similar to play scenarios, with the aim of teaching students to perform tasks that require combining awareness, comprehension, and perception of structured knowledge and skill execution (1). The researchers argue that play situations are those that resemble real-life situations in various conditions that occur during a game. They require combining awareness, comprehension, perception, and skill execution for elementary school students. Play situations are considered effective methods in the learning process, as they contain elements of competition, fun, and a gradual increase in difficulty.

Mohammed Mahmoud points out that play situations are one of the methods that actively engage students in the lesson to achieve educational objectives. This method relies on the element of competition, guided by a set of rules established by the teacher during game design, which has a significant impact on learning and skill retention through practical practice. Furthermore, this method provides learners with more realistic experiences compared to other methods because it engages students positively and actively in the learning process (2)

Zuhair Al-Khashab and others, in 1999, define play situations as a means of consolidating basic skill performance under conditions resembling those of a real match, where the coach uses exercises similar to those used in the actual game (3).

2- Theoretical Studies:

2-1 Play Situations:

Play situations are instructional states that simulate play scenarios, aiming to teach students how to perform in play-like situations. These situations require a combination of awareness, comprehension, perception of strategic knowledge, and skill execution (1). The researchers believe that play situations refer to those situations that resemble real-life scenarios under various conditions that occur during a match. They require a combination of awareness, comprehension, perception, and skill execution for elementary school students. Play situations are considered effective methods in the learning process to achieve goals due to their competitive and enjoyable nature, as well as their progressive difficulty. Zuhair Al-Khashab and others (1999) define play situations as fixing the performance of fundamental skills under conditions similar to what happens during a match, where the coach uses exercises similar to those in the actual match.

3- Research Methodology and Procedures:

3-1 Research Method:

The researchers used an experimental approach with an experimental design for the experimental and control groups to suit the research problem's nature.

3-2 Research Population and Sample:

The research population was deliberately selected from fifth-grade students at Al-Sanadid Elementary School, affiliated with the Education Department in Tikrit, for the academic year 2022/2023, with a total of 147 students. This school was chosen for the following reasons:

1. The school administration cooperated in allocating time in the schedule for the researchers to perform their work.
2. The school provided a hall for playing badminton and the necessary equipment.
3. The research sample was available.

The research sample consisted of 24 students randomly selected from the fifth-grade students. Four students were excluded as they represented the survey experimental sample, resulting in a final sample size of 20 students. They were randomly divided into two groups using a lottery method.

The first group (experimental group that used playing positions) was prepared by the researchers and the second group (control group that used the traditional method) was followed by the teacher.

Table (1) Research community and sample size

No	Sample size	Survey experiment	Search sample	Number of samples	Method followed	Percentage
1	24	4	Experimental group	10	Playing positions	13%
2			Control group	10	School method followed	

3- Homogeneity and equality of research sample:

Before starting the educational program, the researchers resorted to verifying the homogeneity of the research groups (the researchers should form at least equal groups regarding the variables related to the research) (4).

3-3-1 Homogeneity of the research sample:

The researchers conducted homogeneity among the research sample individuals for variables (age, height, body mass), and it was taken into consideration that all students fall within the normal distribution by calculating the skewness coefficient, which falls within (± 1). Table (2) shows the homogeneity procedures for the research sample.

Table (2) the homogeneity procedures for the research sample.

Statistical values Research variables	Measurement unit	Mean	Standard deviation	Median	Skewness coefficient
Age	Year	11.200	0.421	11.000	0.475
Height	cm	133.100	1.969	133.500	0.203
Mass	Kg	33.700	2.162	33.500	0.092

From Table (2), it is clear that the skewness coefficient values range between $\pm (1)$, indicating the normal distribution of the sample, i.e., there are no significant differences between the two research groups in terms of variables (age, height, and body mass), which led to their homogeneity

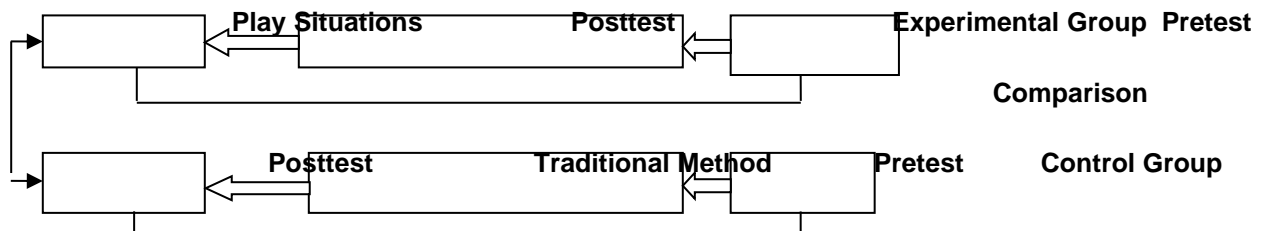
3-3-2 Equality of the two research groups:

The researchers should form equivalent groups so that differences between the results can be attributed to the independent variables under study. Therefore, the two groups (experimental and control) must be completely equivalent in all conditions and variables except for the experimental variable that affects the experimental group without the control group. Table (3) shows this.

Table (3) The equivalence of the experimental and control research groups Test Group

Test	Group	Mean	Standard Deviation	Calculated t-value	Significance Level (sig)
Frontal hit	Experimental	2.522	0.135	1.245	0.230
	Control	2.434	0.177		

Table (3) shows that the significance level values are greater than the value of (0.05), indicating that there are no significant differences between the two research groups, experimental and control, and this is evidence of the equality of the research sample.



3-5 Methods of Collecting Information and Data:

The researchers utilized several methods to gather information and data, which included sources and scientific references, personal interviews, and questionnaires.

3-5-1 Analysis of Content from Arabic and Foreign Sources and References:

The researchers conducted an analysis of the content from various Arabic and foreign sources and references.

3-5-2 Personal Interviews:

The researchers conducted personal interviews with experts and specialists in the field of physical education and sports science to benefit from their opinions regarding the subject matter of the current study.

3-5-3 Questionnaire Form:

3-5-3-1 Survey Questionnaire to Determine the Core Skills of Badminton:

After reviewing the scientific sources and references, the researchers prepared a questionnaire to ascertain the opinions of experts in order to identify the core skills of badminton. The experts' selection of the most important skills is presented in Table (4).

Table (4): Illustrates the most important skills selected by the experts.

No.	Skill	Number of Approvals	Number of Rejects	Percentage
1	Front punch	3	0	100%

3-5-3-2 Expert and Specialist Opinion Poll Form to Determine the Validity of Play Positions for the Educational Program:

A survey form was prepared to collect expert and specialist opinions on the validity of play positions for the educational program. The form was presented to a number of experts and specialists. The results showed the percentage of agreement on the required play positions to be determined, and from these results, positions that achieved a high level of agreement were selected for each play position under study. A minimum agreement rate of 75% or higher was adopted for each position to be included in the current study. Bloom et al. suggest that researchers should aim to obtain an agreement rate of 75% or more from referees' opinions (1).

Table (5): Determining the Validity of Play Positions for the Educational Program.

No.	Play Positions	Number of Approvals	Number of Rejects	Agreement Percentage
1	First step	3	0	95%
2	Side step	3	0	90%
3	Jump kick	3	0	85%
4	Cross step	0	3	%
5	Follow-up step	0	3	%
6	Consecutive step	0	3	%
7	Forward push step	0	3	%
8	Double leg jump	0	3	%

3-5-3-3 Form to Determine the Degree of Each Part of the Visible Motor Structure of the Frontal Stroke in Badminton:

The researchers (*) prepared a questionnaire form and presented it to a number of experts and specialists in the field of motor learning. The purpose was to determine the degree of each part of the visible motor structure of the frontal stroke in badminton. The total score for the three sections of the skill was set to be out of 100, using one of the following two methods:

Method 1: Performance of the movement and evaluation by experts or an expert through observation with recording.

Method 2: Performance of the movement and evaluation after recording it visually using film or video, then displaying it through known projection devices for analysis by experts and specialists. The researchers used the second method above to evaluate the visible form of the movements under study. They utilized video recording and compiled it on a Compact Disc (CD) to assess the motor performance of the research sample by three evaluators experienced and specialized in the game of badminton. Additionally, the evaluators themselves conducted the evaluation of motor performance in the preliminary tests using specific forms. They deducted points from the movement according to the occurrence of errors in each part of the student's body. Each part was evaluated by assigning a score to the student out of a total of 10 points. The arithmetic mean was then calculated for each student, representing their performance score for the skill or movement. The researchers used a specific form to input the data.

Table (6) The degree of kinetic construction sections

No.	Skill	Preparatory Section	Main Section	Final Section	Total Grade
1	Front kick	35%	40%	25%	100%
2	Kick	35%	40%	25%	100%

3-6. Scientific Foundations of the Experiments:

3-6-1 Validity:

The researchers obtained face validity by presenting the situations to a group of experts in the field to ensure the validity of the tests. They also calculated the self-validity, which is the square root of stability, as the self-validity achieved high accuracy.

3-6-2 Reliability:

The reliability of the test refers to its ability to yield consistent results when repeated on the same individuals under the same conditions (1). To establish test reliability, the researchers applied the tests to a sample of the research community, consisting of four students, on February 22, 2023. The same tests were then reapplied to the same research sample after a week under the same conditions as the first test. The researchers used this method because it is one of the best and most common ways to calculate test reliability. They calculated the simple correlation coefficient (Pearson) between the first and second tests, and obtained the reliability of the tests.

3-7 Instruments and Tools Used in the Study:

3-7-1 Used Instruments:

1. Laptop device (DELL).
2. Camera and its accessories (Canon).
3. Medical scale for weight measurement.

3-7-2 Used Tools:

1. Equipped badminton court and layout.
2. 20 badminton rackets.
3. 20 boxes of Yonex shuttlecocks.
4. Students' height measuring tape.
5. Badminton net.
6. Stopwatch.

3-8 Variable Control:

One of the characteristics of experimental work is to deliberately manipulate certain factors under controlled conditions to understand how a condition or incident occurs and identify the reasons behind it (5).

3-8-1 Independent Variables:

The independent variable is the one that influences the dependent variable without being affected by it (6). In the current research, the effectiveness of using play positions represents the independent variable.

3-8-2 Dependent Variables:

The dependent variable is the one that changes and is influenced due to the impact of the independent variable (7). It includes the learning of the frontal stroke in badminton.

3-8-3 Extraneous (Non-Experimental) Variables:

When conducting an experiment, certain extraneous variables should be taken into consideration and isolated to ensure that changes in the dependent variable are attributed to the impact of the independent variable. Adjusting extraneous variables is one of the crucial procedures in experimental research to maintain the experimental design's validity (8).

It is agreed that the soundness of the experimental design has two aspects: internal, which relates to the validity of the experimental treatment, and external, which relates to the generalization of the results (9).

The most important variables that threaten the internal and external soundness of the research are as follows:

1. Conditions of the experiment: Throughout the experiment, the researchers did not encounter any incidents that affected the experiment's execution.
2. Maturation processes: These refer to biological and psychological growth variables that individuals of the sample undergo, which can affect their responses (10). All students in both groups (experimental and control) were homogeneous in age, meaning they experienced the same growth processes, reducing the extraneous variable's effect on the dependent variable.
3. Measurement instruments: The researchers controlled this factor by using the same questionnaire, devices, and tools for both the experimental and control groups under the same conditions.
4. Differences in group selection: To avoid this variable, the researchers used the random distribution method for the two groups participating in the experiment, ensuring their comparability.
5. Experimental mortality: This refers to the effect resulting from discontinuation or exclusion of some students from the experimental sample, which may affect the students' performance level. This did not occur in the preliminary tests, throughout the experiment, or even in the post-tests.

External Soundness:

External soundness is achieved when the researchers can generalize the research results beyond the research sample and in similar experimental situations (10). To ensure external soundness, the researchers need to avoid the following errors:

1. Interaction of experimental conditions with treatment arrangements: This interaction readiness becomes more apparent if individuals feel they are under observation during the experiment. Individuals are usually eager to perform well in new situations, but without repetition of these situations, their interest and interaction decrease.
2. Interference of experimental situations: The research participants were not exposed to other experiments during the time of conducting the research.
3. Effect of experimental procedures: The researchers did not inform the students about the research objectives or idea, which might affect the flow of teaching units. The researchers attended all the teaching units as supervisors alongside the teacher, thus eliminating the effect of this variable. Additionally, several other factors related to research procedures were adjusted to maintain the experimental design.

4. Educational material: The researchers prepared the play positions in the main part within the applied part and presented them to a number of experts to support the correct scientific method and demonstrate the validity of this educational program, and receive scientific comments about it.

5. Teacher: The teacher (*) taught both the experimental and control groups after being informed about the educational curriculum specific to the experimental group (play positions) and receiving feedback from the researchers. Thus, the teaching factor was isolated as an influencing factor in the results.

6. Duration of the experiment: The researchers controlled this variable by subjecting both the experimental and control groups to a uniform period of education, with 12 teaching units and 40 minutes for each teaching unit, taking six weeks with two teaching units per week for each group.

7. Location of conducting the experiment: The educational units were applied in the same place, which was the hall of Sanadeed Elementary School, consecutively, which facilitated overcoming differences in location and lighting that might affect the experiment's progress.

Evaluators (Experts):

The experts conducted the evaluation of the students' performance in the preliminary and post-tests and were the same evaluators mentioned earlier.

3-9 Administrative and Organizational Procedures:

3-9-1 Administrative Procedures:

To facilitate the research process and ease the task of the researchers, relevant authorities were approached to obtain official approvals for conducting the research.

3-9-2 Organizational Procedures:

The researchers conducted an introductory lecture for the subject teacher, the assisting team, and the fifth-grade students on Sunday, 5/3/2023, at 9:00 AM. The lecture for the subject teacher included an explanation of how the educational units are conducted, the learning method used, the studied movements, and the objectives and contents of the educational units.

The lecture for the students included the following points:

- The commitment to the educational units and not to be absent to understand the effectiveness of the educational play situations.
- Emphasizing the execution and completion of all tasks assigned during the educational unit.
- Complying with the sports requirements during the educational unit.
- Stressing the students' benefit from learning the specialized play situations for movements in a new way.
- Organizing the classroom according to the requirements of the educational units.

Additionally, the researchers provided an introductory unit before starting the application of the learning method for some play situations for fifth-grade students. This was done to familiarize the students with the

play situations before conducting the preliminary tests. The researchers implemented various organizational procedures to adapt to the educational process and apply the program. These procedures were as follows:

- Preparing lists with the names of the research samples (experimental and control groups).
- Preparing the tools and equipment required for applying the program.
- Ensuring the students' health and safety conditions.
- Preparing the assisting team.

3-10 Survey Experiments:

3-10-1 First Survey Experiment:

The researchers conducted the first survey experiment on Monday, 22/2/2023, involving four students from outside the research sample. This was done to obtain accurate results before implementing the educational program)11). The survey experiment aims to:

1. Evaluate the suitability of the educational play situations for final application.
2. Assess the suitability of the time allocated for the educational units for the research sample.
3. Determine the teacher's ability to apply the play situations.
4. Evaluate the effectiveness of the devices and tools used.
5. Check the smoothness of work and organization of the students in the classroom.
6. Ensure the safety conditions for the students' well-being.
7. Ensure the ease of performance of the play situations within the specified time.
8. Assess the students' ability to apply the play situations.
9. Identify any obstacles faced by the teacher and students to avoid errors.
10. Evaluate the ability of the assisting team to execute their tasks accurately.
11. Determine the time and repetitions for each exercise.
12. Form a clear picture of the nature of the work and its application.

3-10-2 Second Survey Experiment:

The researchers conducted the second survey experiment to:

1. Adjust the factors affecting the movement performance recording, including camera positioning, height, and angle to ensure clarity of body movement during the execution.

Table (7): illustrates the duration of the educational curriculum.

Number of Units	Number of Weeks	Unit Time	Time in Minutes per Week	Total Time in Minutes
12	6 weeks	40 minutes	80 minutes per week	480 minutes

Table (8): shows the sections and content of the educational unit, along with the time allocated for each section.

Educational Sections	Unit	Time	Activities
Preparatory		5 min	Administrative activity, special warm-up
Main-Educational and Applied Part		30 min	Simplified explanation of the concept to be learned, application of the concept through educational assignments
Final		5 min	Calming exercises

3-11-3 Post-tests:

The post-tests for the research sample were conducted after the completion of the educational program, which began on 6/3/2023 and ended on Tuesday, 18/4/2023. The post-tests were administered on Thursday, 19/4/2023, at 2:00 PM in the hall of Al-Sanadeed Elementary School, using a recording device. The forehand stroke performance of both the experimental and control groups was recorded under the same conditions as the pre-tests, including the location, equipment, tools, implementation method, and staff.

3-12 Motor Performance Evaluation:

After conducting the pre-tests and post-tests for both the experimental and control groups, the researchers sent the video recordings to experienced specialists in the field. The recordings were provided on a CD along with a motor performance evaluation form for the forehand stroke in badminton. The experts evaluated the motor performance, and after collecting the evaluation forms, the data were processed using a specific data entry form.

3-13 Statistical Methods:

The Statistical Package for the Social Sciences (SPSS) version 20 was used to process the research data. The statistical methods applied include(12):

- Mean
- Standard deviation
- Weighted mean (to calculate relative importance)
- Coefficient of skewness
- T-test for paired and independent samples with equal variances
- Significance of differences for paired and independent samples with equal variances.

4- Presentation, Analysis, and Discussion of Results:

-41 Presentation, Analysis, and Discussion of t-test Results between Pre-tests and Post-tests for the Experimental and Control Groups in Evaluating the Forehand Stroke Performance in Badminton for Fifth-Grade Students.

4-1-1 Presentation, Analysis, and Discussion of t-test Results between Pre-tests and Post-tests for the Experimental Group in Evaluating the Forehand Stroke Performance in Badminton for Fifth-Grade Students.

4-1-1-1 Presentation and Analysis of t-test Results between Pre-tests and Post-tests for the Experimental Group in Evaluating the Forehand Stroke Performance in Badminton for Fifth-Grade Students.

Table (9): standard deviation, T-values, and significance level (sig) between the pre-tests and post-tests for the experimental group in evaluating the forehand stroke performance in badminton for fifth-grade students.

No.	Variables	Unit of Measurement	Before	After	Value (t)	Significance Level (sig)
1	Front kick	Degree	2.522	0.135	7.081	0.504

* Statistically significant: If the significance level (sig) is > (0.05).

From Table (9), it is evident that the mean of the forehand stroke in the pre-test for the experimental group was (2.522) with a standard deviation of (0.135). In contrast, the mean in the post-test was (7.081) with a standard deviation of (0.504), and the t-value was (27.496). Notably, the significance level (sig) was (0.000), indicating a statistically significant difference between the pre-test and post-test results in favor of the post-test.

4-1-1-2 Discussion of Motor Performance Evaluation Results:

Upon presenting and analyzing the pre-test and post-test results for the experimental group in the previous sections, it is evident from Table (9) that there are statistically significant differences between the pre-test and post-test for the experimental group in evaluating the motor performance of the forehand stroke in badminton. The researchers attribute this to the implementation of various gameplay situations by the students in the experimental group, which directly influenced the speed of motor performance improvement through motor learning (details are subject to further research). According to Mahjoub (1987), one of the necessary conditions for successful learning is practising the skill (13).

The researchers found that this motor behaviour had a positive effect on learning and performing the movement accurately by the students. Consequently, the motor performance was good and more accurate in the post-tests compared to the pre-tests, indicating the effectiveness of the post-tests. Mustafa Mohammed Jeneidi points out that having diverse exercises, represented by gameplay situations similar to match requirements, allows players to choose the best positions and solutions, enhancing their ability to manoeuvre and execute these movements in various playing positions and directions (14).

4-1-2 Presentation, Analysis, and Discussion of T-test Results between Pre-tests and Post-tests for the Control Group in Evaluating the Forehand Stroke Performance in Badminton for Fifth-Grade Students.

4-1-2-1 Presentation and Analysis of T-test Results between Pre-tests and Post-tests for the Control Group in Evaluating the Forehand Stroke Performance in Badminton for Fifth-Grade Students.

Table (10): presents the mean, standard deviation, t-values, and significance level (sig) between the pre-tests and post-tests for the control group in evaluating the forehand stroke performance in badminton for fifth-grade students.

Significance Level (sig)	(t) Value	Post-Test		Pre-Test		Measurement Unit	Variables	No
		ع	س	ع	س			
0,000	27,496	0,504	7,081	0,135	2,522	Degree	Frontal Stroke	1

* Statistically, if the significance level (sig) > (0.05).

From Table (10), it is evident that the mean of the frontal stroke in the pre-test for the control group was (2.434) with a standard deviation of (0.177), while in the post-test, it was (4.309) with a standard deviation of (0.368). The value of (t) was (17.380), and the significance level (sig) was (0.000), which is less than (0.05). This indicates that there are significant differences between the pre-test and post-test results in favor of the post-test.

4-1-2-2 Discussion of the Differences between Pre-Test and Post-Test for Control Group's Motor Performance Evaluation:

After presenting and analyzing the pre-test and post-test results for the control group's motor performance evaluation of the frontal stroke in badminton, it is evident from Table (10) that there are significant differences between the two tests. The post-test results showed a significantly improved motor performance compared to the pre-test.

The researchers attribute this improvement to the learning that took place during the experimental period, as the control group also underwent training from the subject teacher within the designated time for the main experiment. Additionally, continuous practice following the curriculum by the students contributed to the observed improvement. The enhanced repetition (exercise) helps players master the sub-movements required for the skill, ensuring coherence between these movements, resulting in accurate and timely performance (15).

4-2 Presentation, Analysis, and Discussion of Differences (t) between Post-Tests for Experimental and Control Groups in Evaluating Frontal Stroke Performance in Badminton for Fifth-grade Students:

4-2-1 Presentation and Analysis of Differences (t) between Post-Tests for Experimental and Control Groups in Evaluating Frontal Stroke Performance in Badminton for Fifth-grade Students:

Table (11) Means, Standard Deviations, (t) Values, and Significance Levels (sig) for Frontal Stroke Skill in Badminton for Post-Tests of Experimental and Control Groups.

Significance Level (sig)	(t) Value	Post-Test		Pre-Test		Measurement Unit	Variables	No
		ع	س	ع	س			
0,000	17,380	0,368	4,309	0,177	2,434	Degree	Frontal Stroke	1

* Statistically, if the significance level (sig) > (0.05).

From Table (11), it is evident that the mean of the frontal stroke for the experimental group was (7.081) with a standard deviation of (0.504), while for the control group, it was (4.309) with a standard deviation of (0.368). The value of (t) was (14.032), and the significance level (sig) was (0.000), which is less than (0.05). This indicates that there are significant differences between the two groups in favor of the experimental group.

4-2-2 Discussion of the Differences between Post-Tests for Experimental and Control Groups in Evaluating Motor Performance:

Based on our observations from Table 11, the experimental group showed superiority over the control group between the two post-tests in evaluating the motor performance of the forehand stroke in badminton, with the post-test favoring the experimental group. The researchers attribute the reason for these differences to the effectiveness of play situations used by the researchers with the experimental group, which contributed to learning and improving motor performance skills compared to the control group, which relied on the conventional method used by the teacher. Ibrahim and Aziz (2004) suggest that modern methods offer learners diverse experiences that help them deduce facts and scientific instructions, facilitating the acquisition of skills that are more easily transferred to new learning activities (16)

The play situations prepared by the researchers for the experimental group contributed to increasing the learners' awareness and experiences, resulting in learning the correct motor performance for each movement. This was evident in their performance with competence and high skill. In light of the discussion, the play situations used with the experimental group significantly improved the motor performance of the skills (under investigation). By employing these situations, the learners were able to execute the motor performance accurately, and the variety and transitions between different skills within play situations eliminated boredom during the performance. This increased the enjoyment of the students and helped them reach a learning level in motor performance skills. Abdulrahman Adas and Mohy Eldin state that learning similar and symmetrical movements, in terms of repetition, leads to a positive transfer to the maximum level of learning(17).

The researchers attribute this to the play situations used in the main part of the study, which aimed to teach motor performance in an engaging manner. They find that these play situations are one of the methods used in learning, and careful selection is required to ensure their similarity, compatibility, and alignment with the type of movement being practiced. Qasim Lazam Sabr., points out that practical application of progressive motor performance is one of the best educational methods when learning any motor skill(18). These play situations served as specialized tools that the teacher relied on to expedite progress and ensure the achievement of the objective of the educational units. Therefore, approaching the form and method of performance is a fundamental aspect of the learning process.

Additionally, the students' regularity in applying the use of play situations, including various and diverse activities, as well as using similar tools to those used in the primary activity, along with the planning and design of these situations following scientific methods, made them more effective in sustaining learning. It is considered a fundamental principle for the development of physical and motor variables specific to the

practiced activity, as well as for guiding the educational process in an organized scientific framework. This is confirmed by the remarks of Nahida Abdul Zaid that repetition of motor performance is a fundamental requirement for athletes to achieve a high level of motor performance (19).

The researchers also attribute the learning in motor performance to the regularity of using the play situations, which had a significant impact on increasing the students' ability to perform and subsequently improved their motor performance. Zidan also indicates that the learners' positive orientation towards learning the subject matter strengthens their motivation for achievement. Careful consideration of material and human resources during planning was also taken into account, aiming to comply with scientific rules and principles, leading to improved motor performance levels for movements (skills)(20).

5- Conclusions and Recommendations

5-1 Conclusions:

The researchers have reached several conclusions, including:

1. Play situations have a significant impact on improving the motor performance learning process of the frontal stroke skill in badminton.
2. The use of activities, sports, tools, and play situations had a positive effect on learning the motor performance of the frontal stroke skill in badminton.
3. Diverse play situations significantly contributed to the learning of the motor performance of the frontal stroke skill in badminton, indicating their superiority over the traditional approach followed by the teacher.

5-2 Recommendations:

1. It is essential to incorporate play situations in the process of enhancing the motor performance learning of the frontal stroke skill in badminton.
2. When designing educational curricula, it is recommended to consider the procedures used in this study.
3. The researchers suggest adopting the results of play situations in the learning of motor performance for the frontal stroke skill in badminton.
4. Conducting further studies on play situations in motor performance learning for the frontal stroke skill in badminton on different samples based on gender, age, and group.
5. Specialists should focus on the quality and level of difficulty in designing play situations to make them more engaging and similar to real gameplay, ensuring diversity and excitement in the game.
6. Encourage professionals in this field to integrate play situations into educational curricula, considering their effective role in developing learners' educational experience while maintaining enjoyment and pleasure factors.

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