

THE EFFECT OF EXERCISES WITH INTERACTIVE TOOLS IN LEARNING PASSING AND SCORING SKILLS OF FUTSAL FOR STUDENTS

Bsc. Raad Ali Hussein, Prof. Dr. Haitham Mohammed Kadhim

Assist. Prof. Dr. Taher Yahya Ibrahim

University Of Babylon, College Of Physical Education And Sports Sciences, Iraq.

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Abstract:

The futsal game is distinguished by its peculiarity because it possesses the elements of excitement and suspense, the principle adopted by researchers in developing the learning process through exercises with interactive tools that are in the form of stations independent from each other in which skill exercises are given that develop the skills of passing and scoring in the game of futsal and these tools have a clear effect in The learning process raises the two sides of suspense, excitement, gaining time, and performing the skillful duty interactively, and after applying exercises to the research sample, the results of the research came in an encouraging way in favor of the experimental group and the level of performance developed in a clear manner compared to the control group. The researchers recommended the necessity of adopting interactive tools in learning for its great role in increasing suspense, excitement and simulation.

Introduction:

The futsal game is considered one of the activities adopted in the current educational activities and curricula, and it is one of the popular games widely spread in various countries of the world. A lot of stability, consistency and know-how in performance when implementing basic skills, and one of these skills is my skill (passing - scoring).

And the futsal game has a specificity in its possession of the elements of excitement, suspense and motivation, the principle adopted by the researchers in obtaining the process of

effective active learning through exercises with interactive tools in the form of independent stations in which skills exercises are given that develop the skills of passing and scoring in the game of futsal and with interactive tools Variety has a clear impact in the learning process and the principle of suspense, excitement, gaining time, and performing the skillful duty interactively.¹

The importance of the research lies in choosing exercises with an interactive feature, with interactive tools designed that indicate an increase in the desire to perform and raise the factors of boredom from the practice, which would contribute to the development of learning among students who practice futsal.

Research problem:

It was noted that there is a dearth in the involvement of interactive tools that help in the learning process due to its lack or lack of readiness, if any, and the absence of the suspense and motivation aspects for learning and the reliance on traditional learning methods and strategies that lack dialogue and interaction and with the specificity of the current health condition and the current working mechanism that is characterized by reducing the attendance hours and days in all educational institutions Which exacerbated the nature of the problem.

Accordingly, the researchers decided to work by developing exercises with interactive tools to find appropriate solutions by stimulating aspects of desire and willingness to learn, and the nature of these exercises works to accelerate the process of acquiring information or skill, stabilizing and mastering it by responding to the application of basic skills in the futsal game under study (passing - scoring) in an exciting and competitive entertainment way. And to achieve the learning process faster, more accurately and more consistently.

Research objectives:

1. Knowing the reality of the skills performance of female students (the first stage in the College of Physical Education and Sports Sciences, University of Babylon for the academic year 2020-2021)
2. Designing interactive tools and preparing skill exercises to learn my skills (passing - scoring) with futsal football.
3. Knowing the effect of interactive exercises and tools on the performance of my skills (passing - scoring) for female students.

Research hypotheses:

1. There is an effect of interactive exercises and tools in learning my skills (passing and scoring) for female students.
2. There is a preference for the experimental group over the control group between the standards before and after and for the experimental group and for the post test.

Research fields:

- The human field: female students of the first stage in the College of Physical Education and Sports Sciences at the University of Babylon for the academic year 2020-2021.
- Time : the period from 12/03/2020 until 03/03/2021
- Spatial field: the indoor sports hall in the Faculty of Physical Education and Sports Sciences at the University of Babylon.

Research Methodology:

The experimental method was used to design the two equivalent groups of pre and posttests, as shown in Table (1).

Table 1 : Shows the experimental design for the research sample groups

Groups	Pretest	Prepared program	Posttest
Control group	Performing passing and scoring skills	Apply the usual teacher program (the method used by the teacher)	Performing passing and scoring skills
Experimental group	Performing passing and scoring skills	Application of exercises prepared with interactive tools	Performing passing and scoring skills

Research community:

The research population of (24) female students was selected and divided randomly, with (12) female students for each group.

Homogeneity of the sample

The sample is basically homogeneous in terms of age and school stage.²

Means of collecting information, devices and tools used in the research:

1. Observation.
2. A questionnaire form to choose the most appropriate test to measure basic futsal skills.
3. Two (2) laptop computers of Chinese origin.
4. Video Camera (SONY), Chinese origin.
5. Various interactive auxiliary training tools (a wooden platform – a bench for bouncing the ball – rubber ropes – colored curtains – an interactive suspense target – a multi-use learning rectangle).
6. Small number (18).

Field procedures for research:

To achieve the desired goals and find effective solutions to the research problem, the following was done:³

1. Determining the skills to be learned in the futsal game, which are consistent with the teaching program, accredited by the College of Physical Education and Sports Sciences / University of Babylon.
2. Selecting the most appropriate skill tests to measure my skills (passing - scoring) by presenting a group of tests to experts and specialists to choose the most appropriate.
3. Designing exercises and interactive tools to assist in the learning process of passing and scoring skills.

Defining and selecting skill tests for passing and scoring skills:

The researchers prepared a questionnaire containing a set of skill tests related to my skills (passing and scoring) in futsal football and presented it to a group of (10) experts with experience and competence in light of the opinions gathered,⁴ the tests shown in Table (2) were determined.

Table 2 : Show tests determined by experts for passing and scoring skills in futsal

Skills	Accepter s	The percentage of agreement	The name of the test	Indicatio n level
Passin g skill	0	0%	1- The pass test towards the futsal goal is 20 meters away	No sig.
	10	100%	2- Passing the side line in (4) seconds	Sig.
	0	0%	3- Passing test towards a small target at a distance of (10 meters)	No sig.
Scorin g skill	9	90%	1- The scoring test for a goal is divided into squares numbered on both sides	Sig.
	1	10%	2- Foot scoring test on the rectangles overlapping the wall	No sig.
	0	0%	3-Scoring test after moving between brackets,	No sig.

For the purpose of evaluating the performance of the skills of passing and scoring, the researchers prepared a performance evaluation form that they submitted to the residents to adopt their opinions and record it, noting that the final evaluation score is (10) scores for each skill.

Specifications of skill tests for passing and scoring skills in futsal⁵:

1. Passing skill test: passing on the sideline in (4) seconds (1), The aim of the test learning the passing skill.
 - The tools used: Futsal, count (5), a whistle, a stopwatch, a tape measure, and (12) signs.
 - Method of performance: The student stands behind the side line and the ball is placed over a marker indicating where the ball will be passed, and in front of this mark (3) the stations of each station consist of (4) signs, two large with a height of (60 cm) and two small ones with a height of (40 cm) and the distance between the two characters. The two large (150 cm), while the distance between each of the two small figures from the two large (50 cm), and the stations are in a diagonal, and that the distance between each station and the pass mark is (6 m).

gives an instruction to the student, for example (1) represents the first station or (2) represents the second station or (3) and represents the third station, and within (4) seconds the student must pass the ball to the desired station, noting that the instruction is not sequentially but rather random.⁶

- The attempt is considered unsuccessful if it exceeds (4) seconds.
- If the ball touches the person and enters the station, the score is calculated according to its entry.
- No score is taken for the student if the ball rises higher than the signs.
- Gives the student (5) attempts.
- Registration: Five attempts are evaluated for each student, and the mean is taken for the five attempts, noting that the final evaluation score for technical performance is (10) marks.

2. Scoring skill test⁷:

- Scoring a goal divided into squares numbered on both sides (1)
- The objective of the test: To learn the skill of scoring
- Tools used: Futsal ball count (5), tape to set the scoring area for testing, soccer goal for halls, football field for halls.
- Description of the performance: (5) balls are placed in different places at a distance of (6 meters) from the goal, as the student scores in the areas indicated in the test according to their importance and difficulty, and the balls are played sequentially one after the other and the distance between one ball and another is (50) cm.
- Performance conditions: The test starts with ball (1) and ends with ball (5).
- Registration: Five attempts are evaluated for each student, and the mean of the five attempts is taken, noting that the final evaluation score for technical performance is (10) marks.

The exploratory experience of the skill tests for my skills (passing and scoring)

In order to identify the clarity of the test instructions and the mechanism for implementing its attempts, the detection of unclear attempts, the identification of the most important obstacles that may accompany the performance, and for the statistical analysis of the test items.⁸

The researchers conducted their exploratory experiment on Thursday 7/1/2021 on a sample consisting of (6) female students of the first stage in the College of Physical Education and Sports Sciences at the University of Qadisiyah, who were randomly selected. The side during (4 seconds), which was calculated by recording the time of the first student who finished the test and it was (15 seconds) and the time of the last student who finished the test, which was (19 seconds) so that the average time spent was (17 seconds) for the five attempts, as well as knowing the average time taken to perform a skill test The scoring, which was calculated by recording the time of the first student who completed the test and was (16 seconds) and the time of the last student who finished the test and was (20 seconds) so that the average time taken was (18 seconds) for the five attempts, the researchers confirmed that the examination instructions and paragraphs are clear to the students.⁹

Psychometric characteristics of skill tests for passing and scoring skills:

1. **Validity:** The researchers used expert validity to verify the validity of the tests, by presenting them to a group of experts and specialists in the field of football and futsal football.¹⁰
2. **Stability:** The researchers used the test method and re-conduct it, as the test was applied on Thursday 7/1/2021 and repeated after six days, and on Tuesday 12/1/2021 on the same sample to find out the reliability of the test using the Pearson statistical law, and the value of the correlation coefficient appeared for the passing skill is (0.92) and (0.88) for scoring skill,¹¹ as in Table (3).

Table 3 : Shows the stability of skill tests for passing and scoring skills.

Skill tests	Stability coefficient
Passing	0.92
Scoring	0.88

- 3. Objectivity:** One of the qualities of a good test is that it be objective. The objective of the test means “agreement in performing more than one judgment in order to arrange or evaluate individuals during the test and to avoid self-evaluation.”¹² The tests that were used in the research are far from self-evaluation and bias, as they are clear and it is understood by the members of the sample and depends on clear measuring tools, because the results of the tests were evaluated by the two arbitrators.

Designing the educational field and interactive tools:

To achieve the objectives of the research, the researchers designed interactive exercises and tools to be applied to the experimental research sample for a period of six weeks and by twelve educational units.¹³

Note that the method used to perform the exercises inside the field is the sequential (organized) method, meaning that the students must move from the first station to the second station, then the third according to the sequence with adherence to the time of the station and the time of the exercise and the performance shall be as fast as possible with sufficient breaks taken by the students between one station and another, either. Regarding the organization of educational stations, a part has been assigned to each station that includes one station exercises.¹⁴

Educational field application:

The exercises with interactive tools were applied on 01/13/2021 on the experimental group within an educational program with twelve educational units and a time of (90) minutes per educational unit, preceded by two introductory units. The main part of the educational unit included the application of educational exercises with interactive tools and its duration (60) minutes, the control group applied the educational program followed by the teacher.

Interactive tool design:

The teacher or teacher must search for feasible solutions, simple and economical alternatives, and not rely on balls only as basic tools in implementing the lesson and learning the skill. School stores, for example, contain a lot of abandoned materials that have expired for use, such as trips, wooden chairs, blackboards, tubes, wires, etc. Some alternative tools that are available in abundance, such as car tires, bicycles, plastic boxes, wood and ropes, which are all inexpensive and can be used in the best way to make use of them and have faith in all the above, and strive hard to implement them with a little thought. Effectively in the lesson, and the importance of these interactive auxiliary tools lies in contributing to the development of the student's skill and cognitive abilities, as it is one of the elements of suspense, pleasure, activity, joy, excitement and positive participation in the lesson and in the process of learning to perform basic skills in the futsal game, including my skills (passing and scoring).

Prepare exercises according to the learning of passing and scoring skills in the game of futsal:

After the researchers looked at many Arab and foreign scientific sources, took the opinions of experts and specialists who were interviewed with them, and worked under the direction of the supervisors, the researchers began preparing skill exercises according to learning the performance of passing and scoring skills in futsal football to include a set of exercises distributed on (12) educational units with three exercises Skills for each educational unit, and the researchers emphasized taking into account the following important points in the process of preparing exercises:

1. The prepared exercises should be appropriate to the sample level.
2. That there be a gradation in the level of difficulty of prepared exercises and work on the principle of graduation in the level difficulty in exercises and moving from easy to difficult gradually in one educational unit and in all educational units.
3. That the exercises used achieve their purpose.
4. To take into account the use of interactive tools in preparing exercises, increasing motivation and suspense, and consolidating information to learn the performance of passing and scoring skills in the futsal game.

Main experiment procedures:

The researchers conducted two introductory lectures for the three research groups before starting the pre-exams in the presence of subject teachers, supervisors and auxiliary work team. In the first lecture that was held on Thursday 7/1/2021 in the classroom of the College of Physical Education and Sports Sciences at the University of Babylon, the sample was identified (sample Research) and clarification and explanation of the basics of the futsal game with an explanation of the importance of learning motivation in achieving learning, while the second introductory lecture that was held in the sports hall of the Faculty of Physical Education and Sports Sciences at the University of Babylon on Sunday 10/1/2012 included a statement and clarification of the basic skills of the game of football The halls, including my skills (passing and scoring) are under study with a statement and clarification of the required tests, how to divide the experimental groups and the work of each group and the mechanism for applying the educational units in the field in its various formats, including the use of interactive tools with a simple explanation of the work plan for the educational units throughout the education period.

Pre-tests:

The researchers conducted pre-tests on the members of the sample for the two experimental groups before starting the implementation of the educational program to determine and know the level of skill performance of the skills of passing and scoring in the futsal game of the research sample, where the pre-test was conducted to measure the performance of the skills of passing and scoring at the end of nine o'clock in the morning on Wednesday, the 13th. / 1/2021. The tribal tests were filmed and documented, with the help of the assisting work team, and collected and stored them accurately and in an arrangement on CD-ROM in order for the researcher to refer to them and use them in subsequent research procedures.

Apply the educational program:

The educational program was applied in its educational units and the implementation and performance of exercises for the program prepared during the first course of the academic year 2020-2021 in the closed hall of the College of Physical Education and Sports Sciences and the time of one educational unit was (90) minutes distributed among its main departments (preparatory section - main section - final section).

The preparatory section is one for the two groups, while the difference is in the application of the main and final section, as shown below in Table (4).

Table 4 : Shows the departments, times and percentages of the educational unit during the educational program for the control and experimental groups

S	Sections of the educational unit	Time during the educational unit / Min.	Time during the educational program / Min	Percentage
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1	Preparatory department	20Min	240 Min	22.22%
A	Introduction	3Min	36Min	3.33%
B	General warm-up	9Min	108Min	10%
C	Your warming up	8Min	96Min	8.88%
2	Main section	60 Min	720Min	66.66%
A	The educational part	15Min	180 Min	16.66%
B	Application part	45Min	540Min	50%
3	The closing section	10 Min	120 Min	11.11%
Total		90Min	2040Min	

Posttests:

After completing the implementation of the educational units on their dates and in conditions corresponding to the conditions of the pre-exams, the researchers conducted the post tests on the two groups on Monday, February 15/2021 in the sports hall of the Faculty of Physical Education and Sports Sciences at the University of Babylon to determine the level of performance of passing and scoring skills in futsal For female students, and comparing them with the pre-tests that were conducted on 1/13/2021, the post-tests were carried out under the supervision of the researchers and the assistance of the assisting work team.

Results and discussions:

Table 5 : Shows the mean, standard deviations, and the value (t) calculated for the control group in the pre and posttests for the tests of passing and scoring the futsal football for female students

Group	Skills	Pre-test		Post test		Mean diff.	SD diff.	(t) calculated	Statistical significance
		Mean	SD	Mean	SD				
Control group	Passing skill	2.33	0.2527	3.425	0.1530	1.09	0.465	8.13	Sig.
	Scoring skill	2.61	0.2229	4.125	0.4043	1.50	0.151	34.88	Sig.

The researchers attribute this development to the fact that the control group relied mainly on the educational contexts approved by the teacher and that the role of the student according to these contexts is the role of the recipient who strives to apply the performance within the directions and instructions in a traditional manner, which creates a state of simple learning for skill performance, "It is important for individuals to be motivated to learn motor tasks for the purpose of obtaining maximum learning. If the learner views the task as not meaningful or not preferable, then learning over skill will be limited."¹⁵

Table 6 : Shows the means, standard deviations, and the value (t) calculated for the experimental group in the pre and posttests for the tests of passing and scoring the futsal football for female students

Group	Skills	Pre-test		Post test		Mean diff.	SD diff.	(t) calculated	Statistical significance
		Mean	SD	Mean	SD				
Experimental group	Passing skill	2.3	0.1816	5.166	0.2779	2.85	0.3919	25.22	Sig.
	Scoring skill	2.76	0.18866	5.26	0.2613	2.5	0.1857	47.16	Sig.

Returning to the vocabulary of the previous table, we found an improvement in the level of performance of the students, and the researchers attribute it to the effect of the educational field with the interactive tools that the teacher invested with guidance and counseling, as the experimental group relied on the use of the educational field that included interactive tools, which contributed to the increase and acceleration of the learning process and earned it something of pleasure, excitement, suspense and motivation. As these tools contributed to creating a state of competition for learning among students and applying the correct performance, "that the best learning for the learner is through his interaction."¹⁶

Table 7 : Shows the results of the dimensional tests for the two research samples

Skills	Control group		Experimental group		(t) calculated	df	Mean diff.	(t) tabulated	Statistical significance
	Mean	SD	Mean	SD					
Passing skill	3.425	0.1530	5.166	0.2779	16.398	22	1.742	2.074	Sig.
Scoring skill	4.125	0.4043	5.26	0.2613	8.281		1.142		Sig.

From the data of Table (7) it was found that there is a preference between the control and experimental samples in the post test and in favor of the experimental group, which is what the researchers see that these differences that appeared as a result of the exercises prepared with interactive tools and their contribution to increasing the level of performance of the students and that they help to know the information and communicate it with something Thrill and excitement, and the teacher uses it to improve the learning process and shorten its duration. The importance of the interactive auxiliary tools is that they play a major role in helping the learner to accept the exercises, as focusing on performing specific exercises in the traditional way that usually generates boredom and lack of desire to perform or learn. The learning process, in addition to developing performance in terms of technical and planning, so the teacher is able, through interactive assistive tools, to raise the student's performance level in learning and developing motor skills and increasing the speed of learning with the possibility of performing in a more positive manner. "That the educational process is based on the participation of the learner and the teacher, and that the educational position exists between the two parties in a joint way. This leads to the effective acquisition of information and skills for the learner, in addition to their staying for a long time in the learner's memory."¹⁷

The researchers find that the way in which there is excitement and the interactive learning style helps the teacher or teacher to take the role of a mentor and supervisor instead of the role of the instructor, which leads to the emergence of a positive impact on the learner and the level of education and this is also confirmed (Abdullah et al. 2015) (1) The teacher's role in effective learning, as the instructor is no longer the only source of information. Rather, he has

become the wave, guide and procession of learning. Also, giving feedback continuously and promptly during the learning stages helped the students in the continuous correction of performance, which leads to the formation of new, refined and revised movement programs in the brain about the technique of each skill, which led to an increase in the level of learning to perform the skills of passing and scoring under study and "The learner's knowledge of the results of his responses is one of the important principles for the occurrence of learning. After completing any activity, there is a need for feedback that informs the learner of the results of his activities in order to stimulate his motivation and motivate him to continue learning."¹⁸

Conclusions:

1. The exercises with interactive tools contributed to the development of the students' learning level.
2. The skill exercises affected by interactive tools and a method of transferring between educational stations and the gradation from easy to difficult in increasing and raising the level of performance of the skills of passing and scoring the futsal football for female students.
3. The performance of the experimental group was distinguished by interaction and cooperation and the desire for continuity, repetition and competition for the best performance among the students.

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