

The Effect Of Educational Stations With Competitive Games In Learning The Art Of Skilled Performance Of Scoring In Futsal

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Abstract

The The study aimed to:

- Designing educational stations with competitive games in learning the art of skilled performance of scoring in futsal.
- Recognizing the impact of educational stations with competitive games on learning the art of skilled performance of scoring in futsal.

The researchers used the experimental method given its suitability for the nature of the research. The researchers adopted this method by designing two equal experimental and control groups on second-grade intermediate students at Tariq An-Najah Private School for Boys in Salah al-Din Governorate / Tikrit, for the academic year 2021-2022, the number of which is (24) students, who were chosen deliberately. Dividing them into two equal groups by random method representing (60%) of the research community, where the researchers prepared and designed competitive exercises according to educational stations. The researchers adopted performance evaluation tests for the selected skills. After the trial was completed, the results were processed with the Statistical package System (SPSS).

The researchers reached the following most important conclusions:

- 1- The educational stations with competitive games have an effective and positive impact on learning the art of skilled performance of scoring in futsal.
- 2- The suitability of the competitive exercises used for the ages of the research sample contributed to their application correctly and appropriately. This greatly helped in the process of learning the art of skilled performance of scoring in futsal.
- 3- The students of the experimental group who were taught by the method of educational stations with competitive games have outperformed the students of the control group who were taught by the traditional method followed in the educational curriculum.

Keywords: Stations, Competitive Games, Performance Art, Scoring, Futsal

1. INTRODUCTION

1.1 Introduction and importance of the research

The broad scientific progress in the field of learning the means and method of performing the skill of any sports game came as a result of studies and modern means of communication that led to the rapid development of methods and means that lead to this purpose, the correct learning leads to the creation of

distinguished athletes to achieve championships. Learning that is built in sequential steps and scientific rigour is not limited to a certain stage. Rather, it is an ongoing process of acquiring knowledge through repeated practice as any process associated with learning produces great results in mastering any skill.

The educational stations help to implement and learn the skills of futsal and develop motor abilities and learn skills. One of the most prominent educational

methods that has emerged in the last decade is the process of designing educational stations with competitive games small space. This is because they need few educational tools and accommodate a large number of learners. It is also because of the fact that they require dividing learners into groups with each group performs its own work for a specified period of time and this group moves to perform these exercises alternately and with specific repetitions. Hence the importance of research lies in the use of educational stations with competitive games football halls as it is a basic game taught in high and middle schools and in the College of Physical Education and Sports Sciences. These stations contribute to the investment of time and effort and perform more frequently for the learner.

1.2 Research Problem

Many sports teachers use traditional exercises which do not attract the student and do not instill the spirit of competition. The researchers found that this method is the dominant one in most schools of the province. For this reason, the researchers decided to find an educational method that helps attract the student and increase his/her motivation towards sports subject in schools through the use with competitive games in the form of educational exercises. Hence, the problem of research lies in answering the following question:

- Does the use with competitive games play a role in learning the art of skilled performance for the skill of scoring in futsal among intermediary school students?

1.3 Research Objectives

The research aims to:

- Designing educational stations with competitive games in learning the art of skilled performance of scoring in futsal.
- Recognizing the impact of educational stations in competitive games on learning the art of skilled performance of scoring in futsal.

1.4 Research hypotheses

- There are statistically significant differences between the results of the pre and post tests for the control and experimental groups.

- There are statistically significant differences between the results of the post-tests in the research variables between the control and experimental groups.

1.5 Research Areas:

1.5.1 Human Field: Students of Tariq Al-Najah National School for Boys.

1-5-2 Temporal Field: 22/11/2021-12/1/2022 AD.

1-5-3 Spatial Area: Tariq Al-Najah National School Square for Boys / Tikrit City.

3. Research methodology and field procedures:

3.1 Research Methodology:

The researchers used the experimental method given its suitability for the nature of the research.

3.2 The research community and Research sample:

The research community was represented by students of the intermediate stage of the Tariq Al-Najah National School for Boys. The research community to be studied was selected from the original research community.

The research community was chosen in a deliberate manner for the following reasons:

- The availability of a football field with halls.
- The availability of the necessary tools in undertaking the experiment.
- The availability of teaching staff and regularity of school.
- The obtaining of the approval of parents as well as approval of the school administration and the Tikrit Education Department/Salah al-Din Education Directorate based on the official document of facilitating the task issued by Tikrit University/ Faculty of Physical Education and Sports Sciences.

The researchers selected a research sample from the second grade intermediary school students from Tariq Al-Najah Private School for Boys, according to the curriculum of the Ministry of Education. The sample consisted of (50) students from the research community, and the research sample for the experiment consisted of (30) students representing a percentage of (60%) of the original population were chosen randomly. These were divided by lottery into two control and experimental groups with (12) students for each group. (6) students were selected from the original research community for the

exploratory experiments and thus were excluded. Table (1) illustrates these details:

Table 1: the research community and research sample

Research Community	Total number	exploratory experience	The number of the sample	groups	Percentage
50 students from the second grade average	30	6	Control Group	12	60%
			Experimental Group	12	

3.3 Experimental Design:

The researchers used the experimental design called "the design of equal groups, randomly selected, with well-controlled pre- and post-tests".¹⁾It consists of two groups, a control and an experimental group, as shown in Figure (1) below (Allawi & Ratib, 1999):

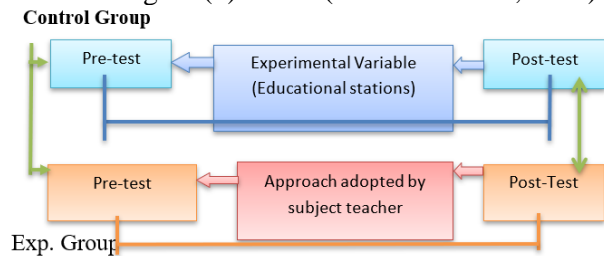


Figure (1): the experimental design

Figure 1: the experimental design

3.4 Homogeneity and equivalence of the research sample:

3.4.1 Homogeneity of the research sample:

Homogeneity was carried out among the members of the research sample in terms of (age, height, mass) and as shown in Table (2):

Table 2: The homogeneity of the research sample

Statistical values of research variables	Measuring unit	standard deviation	Arithmetic mean	Median	Skewness coefficient
age	Month	6,085	163,583	163,000	0,562
Height	Cm	6,375	165,041	165,500	0.263-
Mass	Kg	5,748	65,208	66,500	0.279-

From the table, it was found that the values of the skew coefficient were limited between (-1 and +1), which indicates the homogeneity of the research sample in the aforementioned variables.

3.4.2 Equality of the research sample:

The process of equivalence between the control and experimental groups in the physical and motor abilities and scoring skill in futsal, with the help of the assistant team, was conducted, and it was represented by the following variables:

Table (3): the equivalence of the two research groups in the performance of basic football skills

Test	Group	Arithmetic mean	standard deviation	Calculated T-value	significance level (sig)	Sig.
Scoring	Experimental	36,722	2,809	0,184	1,372	Non-significant
	Control	35,083	3,035			

Table (3) shows that the calculated (T-values) amounted to (1,372), and the value of significance was (0.184), which is greater than the significance level (0.05). This indicates that there are no significant differences between the two research

groups. This indicates the parity of the two groups in the test.

3.5 Devices, tools and means of data collection used in the research:

To achieve the purposes of the field research, devices, tools and aids were used. These are "the means or methods by which the researcher can solve a problem, whatever those tools, data, samples, devices, ... etc." (M. R. Alyan & Ghoneim, 2010).

3.5.1 Devices used in the research:

- Video camera type (Nikon): Number of items: (2).
- computer (lap top) type (DELL) . Number of items: (1).
- medical scale . Number of items: (1).
- electronic stopwatch (FOX) . Number of items: (1).

3.5.2 Tools used in the research:

- 24 soccer balls.
- 24 cones
- DVD-CD
- tape measure
- whistle
- small goals
- vests (24).

3.5.3 Means of data collection used in the research:

- Personal interviews.
- questionnaire forms.
- performance evaluation forms.
- Tests and measurements.
- statistical laws.
- Arab and foreign sources.

3.5.4 Personal interviews:

The researchers conducted a number of interviews with a number of specialists in the field of physical education and sports sciences, in order to take advantage of their opinions regarding information about the current study.

3.5.5 Questionnaires:

The researchers prepared different questionnaires and as follows:

- Questionnaire of experts' opinions on determining some of the physical and kinetic

elements affecting learning the art of performing the skill of scoring in futsal.

- Questionnaire of the experts' opinions on the nomination of tests of influential physical fitness elements and their validity for futsal scoring skill.
- Questionnaire of expert opinions on determining competitive skill exercises and their validity.
- Questionnaire of experts' opinions on determining the degree of the virtual kinetic construction sections of the skill performance art of the skill of scoring in futsal.
- Skill performance evaluation form of scoring skill in futsal.
- Questionnaire of expert opinions on determining the validity of the proposed educational program.

3.6 Defining the variables:

Questionnaire forms were used to obtain the following information:

3.6.1 Determining tests of the skill of scoring in futsal and the method of evaluation:

Personal interviews were conducted with the experts, to choose the evaluation method. After taking into account the observations of the experts, the method of evaluating the appearance of performance was chosen. Then, a group of skill tests under study were nominated by a questionnaire and one test for skill was selected.

Table (4) shows the agreed skill test and the percentage of agreement (Al-Mandalawi, 1990).

Table (5): tests of some basic skills agreed upon by specialists and the percentage of agreement

Kinetic skills	Number of specialists		Tests	measuring unit	agreement percent age
	Agree	Total			
Scoring	5	5	Scoring zigzag with the ball 10m	Degree	100%

3.6.3 Determining the degree of virtual kinetic construction sections for the under-study art of skilled performance of scoring in futsal:

The researchers designed a questionnaire form to determine the degree of virtual kinetic construction sections for the under-study art of skilled performance of scoring in futsal. This was presented to some of the specialists in the field of (kinesthetic learning - football) in order to determine the degrees of the virtual construction departments included (the preparatory department, the main section, the final section (providing that the total score is of (100) degrees. After processing the questionnaires, the researchers obtained an agreement percentage of (90%) and giving a score for each skill section as shown in the Table 6.

Table (6): the degree of virtual kinetic construction sections for the under-study art of skilled performance of scoring in futsal

skill	The degree of the virtual kinetic building sections of the skill			Total marks
	Final	Main	preparatory	
Scoring)	20	60	20	degree (100)

3.6.4 Identification of the skill exercises under study:

The two researchers reviewed football exercises in previous studies and some foreign sources. A number of suggested exercises were nominated for the purpose of placing them in educational stations and in the form with competitive games to learn the art of skillful performance. These exercises totalled (11) in number, and were presented to a group of experts and specialists in the field to indicate the validity of these skill exercises and add, delete or modify in proportion to the current study. The experts agreed to approve (9) skill exercises for the current study, and as shown in Table (7).

Table (7): Percentages of agreement on competitive skill exercises

exercise number	The number of those who agree	number of experts	agreement percentage
1, 2, 3, 4, 6, 7, 8, 9, 11	7	7	100%
5, 10	3		42.85%

3.6.5 Determining the opinions of experts and specialists about determining the validity of the proposed educational program in learning the art of skilled performance of scoring in futsal:

After examining the scientific sources and some previous studies, including the study (Farhan, 2020) and a study by (Hussein, 2019) an educational program was prepared using educational stations with competitive games for the experimental research group. The program was presented in its proposed form to a group of specialists in the field of sports. This is to indicate their opinion on the validity of the proposed educational program and to modify or add what they deem appropriate in terms of the duration of the program, the number of educational units, the distribution of skills under study, periods of practice and rest and the validity of exercises used in the form with competitive games.

3.6.7 Skill performance evaluation questionnaire for futsal scoring skill

The researchers designed a skill performance evaluation form for the skill of scoring in futsal for the control and experimental research groups. So, the researchers used the second method, the video imaging method, and prepared it on a (CD) to assess the skill performance of the research sample by five evaluators with experience and specialization in the game of futsal. In addition, the evaluation process was conducted by the evaluators themselves to assess the skill performance of pre and post tests, each using a special form in which students' performance was assessed and marked for each part of the virtual kinetic construction.

3.6.8 The method of evaluating the skill performance of the futsal soccer scoring skill under study:

The two researchers conducted an evaluation of the apparent kinetic construction of the skill under study, where the control and experimental groups were filmed performing the art of skilled performance of

the futsal scoring skill. A video camera type (Nikon) number (2) were used for this purpose.

It was installed on the stand and placed vertically on the performance field and at a distance (5.30 m) and at a height (1.25 m). After the completion of the filming, the researchers copied it on CD and presented it to the experts for the purpose of evaluating virtual motor construction and inserting grades into a pre-prepared form to evaluate performance and proven grades of virtual kinetic construction sections, as the evaluation method chose the best attempt out of three attempts to evaluate from (100) degrees.

3.7 Scientific bases for physical and skill tests:

3-7-1 Reliability Coefficient:

The tests (virtual reliability) were gained by presenting them to a group of experts in the field of sports, and to ensure the validity of the tests were found (self-reliability) by calculating the square root of the test stability factor, as the values ranged from (0.941-0.993), indicating the acquisition of skill tests under study for reliability.

3.7.2 Stability coefficient:

The (test and retest) method was used to obtain the reliability coefficient, as the skill test was applied to a sample of the research community of (24) students on 10/11/2021 and reapplied on 11/18/2021. The simple correlation coefficient (Pearson) was found between the two tests, which reached a value of (0.988) indicating the extent of clarity and understanding of the exercises by the sample and their understanding of them. The following table shows that:

Table (8): the scientific basis of the tests

Test	Group	Aritmetic mean	standard deviation	Correlation coefficient (reliability coefficient)	reliability	Sig.
Scoring	first application	36, 334	1,9 42	0,9 64	0,9 81	Non-signi

	second application	36, 266	2,2 54			significant
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3.8 Research variables and how to adjust them:

One of the characteristics of the experimental work is that the researchers process certain factors under strictly controlled conditions for the purpose of obtaining accurate results, and the control of variables" means excluding all variables except the independent variable (experimental variable)" (Al-Mansi, 2011).

3.8.1 The independent variable in the study:

The independent variable is the variable that affects the dependent variable and is not affected by it. (M. Alyan, 2008).

It is "the factor to measure the extent of its impact on the situation, and it is called the experimental variable." Addis, 1999, p. 125).

The independent variable in the research is educational stations in competitive games.

3.8.2 The dependent variable in the study:

The dependent variable is the variable that changes and is affected by the effect of the independent variable (Kashrood, 2007).

The dependent variable in the research was learning the art of skilled performance of scoring in futsal, which was chosen according to the curriculum of the Ministry of Education.

3.9 The educational program (educational stations):

The researchers designed educational stations in the form with competitive games, which aim to develop and determine the research variables for the experimental research sample. This is done by relying on the analysis and review of a large number of sources, references and scientific research the educational curricula of which seek to instill learning in a new and different way. It has been presented to experts and Specialists in order to determine the validity of the tools used and help to learn some basic skills in the game of futsal under study. Therefore, the opinions of the specialists about some of the proposed modifications were taken. It was agreed on the final version of the educational program and its

applicability to the control and experimental research groups. These groups included the impact of educational stations in competitive games in learning the art of skilled performance of scoring in futsal.

3.10 Time plan for the educational program (educational stations):

The mechanism for implementing the educational program was adopted in the following items:

- The duration of the educational program (12) educational units for the experimental group.
- The implementation of the educational program took (6) weeks at a rate of (2) educational units per week.
- The skill exercises were distributed to the educational units by (3) exercises for each unit, and each exercise was repeated (3) times during the educational units.
- The exercises in the educational units were sequenced according to their order in learning the art of performing the skill of scoring.

3.10.1 Sections and content of educational units:

After reviewing the scientific sources and some previous studies, the sections and content of the educational units were prepared and presented to specialists in the field of sports to express their opinion on the extent of validity and modification of what they deem appropriate. In addition, the educational unit included three sections, the preparatory section, which includes the general warm-up and the special warm-up with a time of (10) minutes, and the second section, which is the main section consisted of two educational and applied activities. This includes an explanation and presentation of the exercises and their implementation in the form with competitive educational stations with a time of (30) minutes. The last section is the final section, which includes calming and relaxation exercises with a time of (5) minutes, and Table (9) illustrates this.

Table (9): the sections and content of the educational unit

Sections	Time	Events
Intermediary school	(10) m.	Public and private warm-up *
main section Educational activity -	(30) m.	- Explanation and

practical activity		presentation of the exercise - Performing skill exercises
Final section	(5) m.	Calming and relaxation exercises

3.11 Experimental Experiments:

The researchers conducted three exploratory experiments and as follows:

3.11.1 The first Pilot experiment:

The first pilot experiment was conducted on a sample of the research community. This sample consisted of (6) players at 10am on Sunday and Monday, 24-25/10/2021, and in Tariq Al-Najah National School for Boys in the city of Tikrit. This experiment is for tools and the assistant team and for getting to know the ability of the sample members to apply the program.

3.11.2 The second Pilot experiment:

The first exploratory experiment was conducted on a sample of the research community, which consisted of (6) players at 10 am on Wednesday and Thursday, corresponding to 27-28/10/2021 in Tariq Al-Najah Private School for Boys in the city of Tikrit. This experience is specific to educational stations and exercise times at each station.

3.11.3 The third exploratory experiment related to the filming process of the skilled performance of the basic futsal skills under study:

With the help of the assistant team, the researchers conducted a special reconnaissance experiment to identify the difficulties that the team may face in the process of video shooting the technical performance of all the exercises for the skill of scoring football lounges through tests and the implementation of the tutorial, which was done at (10) a.m. on Sunday, 31/10/2021.

This was carried out in Tariq Al-Najah national school for boys in Tikrit, and for the purpose of identifying the dimensions and height of the camera used, determining the efficiency of the camera and its storage capacity, the time needed to perform skills, the efficiency of the assistant team.

3.12 Field procedures

3.12.1 Pre-tests

The pre-tests for the control and experimental groups were conducted at (10:30 am) on Monday 15/11/2021, and on the yard of Tariq Al-Najah National School for Boys in the city of Tikrit, with the help of the assistant team and the subject teacher. The pre-tests were filmed using a camera (Nikon) and presented it to the evaluators for the purpose of evaluating the art of skilled performance of scoring in futsal.

3.12.2 The main experience:

The implementation of the main experiment of the educational program began on Sunday, 22 /11/ 2021, taking into account that the educational exercises range from easy to hard and in the form with competitive games within each of the educational stations on the main research sample. The program included (12) educational units for the experimental research group, with two educational units per week, and the time of one educational unit was 45 minutes. The main experiment ended on 12/1/2022, and was carried out by the teacher of the sport subject(*).

3.12.3 Post-tests:

The post-tests for the experimental and control groups were conducted at exactly 10:30 am on Monday 19/1/2022, using the same scientific procedures for the pre-tests.

3.13 Statistical means:

The researchers used the statistical package (SPSS) in processing statistical results using the following: (Arithmetic mean, standard deviation, mode, skewness coefficient, Simple Correlation Coefficient (Pearson),T-test for related samples, percentage, evolution rate (Yassin & Mohamed, 1999).

4. Presentation, analysis and discussion of the results:

4.1 Presentation and analysis of the results:

4.1.1 Presentation and analysis of the results of the pre and post tests of the experimental group in evaluating the skill performance of some basic skills in futsal for the study variables:

Table (10): arithmetic means, standard deviations, t-values, and level of significance (sig) to assess the skill performance of the pre and post tests of the experimental group.

physical variables	measuring unit	value (t)	Post-Test		Pre-Test		significance level (sig)	Sig.
			p	s	p	s		
Scoring	Degree	-31,012	2,254	6,110	2,809	3,672	0.000	Significant*

* Significant if the level of significance (sig) ≤ (0,05).

It can be seen from Table (12) that the arithmetic mean of the scoring skill in the pre-test was (3 .).6,720) with a standard deviation of (2)809). The arithmetic mean of the scoring skill in the post-test was (6 .)5,110) with a standard deviation of 2.254. The T-value is (-31,012) and the significance level value is (0.000). This indicates that there are significant differences between the results of the pre- and post-test and in favor of the post-test for the experimental group.

Table (11): The percentage of development in the skill performance of the pre and post tests of the experimental group

physical variables	Post-Test		Pre-test		evolution rate
	p	s	p	s	
Scoring	2,254	65,110	2,809	36,720	77,315 .%

4.1.2 Presenting the results of the pre- and post-tests of the control group and assessing the performance of the scoring skill in futsal:

Table (12): Arithmetic means, standard deviations, t-values, and level of significance (sig) for the skilled performance of the pre and post tests of the control group.

moral variable	Measuring unit	value (t)	Post-test		Pre-test		significance level	physical variable
			p	s	p	s		

	g unit						1 (sig)	abl es
Sc ori ng	D eg re e	- 1 0 , 1 2 5	2 , 4 0 1 1	4 , 6 1 1	3 , 0 3 5	3 , 5 0 8 3	0.00 0	Sig nifi can t

* Significant if the level of significance (sig) ≤ (0,05).

The table shows that the arithmetic mean of the scoring skill in the pre-test reached (35,083) with standard deviation of (3,035). The arithmetic mean of the scoring skill in the post-test was (46,110) with standard deviation of (2,401). It should be noted that the t-value is (-10,125) and significance level value (sig) (0.000). This indicates the existence of significant differences in favor of the post-test for the control group.

Table (13): The percentage of development in the skilled performance of the pre and post tests of the control group.

physic al variab les	Post-Test		Pre-test		evoluti on rate
	p	s	p	s	
Scorin g	2,4 01	46,1 10	3,0 35	35,0 83	31,431 .%

4.1.3 Discussing the results of the pre and post tests for the experimental and control groups to assess the skilled performance art of scoring in futsal:

With reference to the results presented in the tables (14 and 15), it turns out that the second-grade students are average from the experimental and control groups that there is an improvement in the level of evaluation of the art of skilled performance of scoring and in favor of the two groups in the post-tests. Table (14) shows that there is a clear improvement for the experimental group in the post test of the art of performing the scoring skill.

The researchers attributed this result to the application of the educational stations in the physical education lesson, which helped match the competitive exercises according to the educational stations.

4.2 Presenting, analyzing and discussion the results of the post-tests of the experimental and control group for the skill of scoring in futsal:

4.2.1 Presentation and analysis of the results of the two post tests of the experimental and control group for the skill of scoring in futsal

Table (14): Arithmetic means, standard deviations, t-values, and level of significance (sig) for the skilled performance of the post-tests of the experimental and control groups

Sk ill	me asu rin g uni t	va lu e (t)	control group		experi mental group		sign ific anc e leve l (sig)	Sig,
			p	s	p	s		
S c o r i n g	D e g r e e	1 , 9 , 9 8 1	2 , 4 6 1 1 0	4 , 6 1 1 1 0	2 , 6 2 5 1 4 1 0	0.0 00	sig nifi cant*	

* Significant if the level of significance (sig) ≤ (0,05).

It seems from Table (16) that the arithmetic mean of the scoring skill for the experimental group was (6 .).5,110) with a standard deviation of (2)254), while the arithmetic mean of the scoring skill for the control group (46,110) with standard deviation of (2,401). The t-value is (19,981) and significance level value (sig) (0.000), which indicates a significant difference in favor of the experimental group.

4.2.2 Discussing the results of the differences between the post-tests of the two groups (experimental and control) to evaluate the art of skilled performance of scoring in futsal:

Referring to the results of Table 16, it is clear that students educated in the experimental and control research groups have an improvement in the level of learning the skill of scoring in futsal in the post-tests from what they were in pre-tests. It shows the superiority of learners in the experimental group over those in the control group in the post-tests to evaluate the art of skilled performance in futsal.

The researchers attribute this result to the optimal and scientific choice in employing competitive exercises according to the proposed educational stations, which helped improve the level of technical performance of the skill. This is done by dividing the station exercises designed by the researchers with an educational curriculum based on taking into account the privacy of the learner, which contains kinetic information that matches the kinetic programs on how to perform skills and their accuracy.

5. Conclusions and recommendations

5.1 Conclusions:

In light of the findings of the researchers, the following was concluded:

1. The educational stations with competitive games have an effective and positive impact on learning the art of skilled performance of scoring in futsal.
2. The suitability of the competitive exercises used for the ages of the research sample contributed to their application correctly and appropriately, which greatly helped in the process of learning the art of skilled performance of scoring in futsal.
3. The development of the control group is the result of adopting the methodological lessons, which contain exercises that help in developing relative kinetic and skill abilities.
4. The students of the experimental group who were taught by the method of educational stations with competitive games have outperformed the students of the control group who were taught by the traditional method followed in the educational curriculum.

5.2 Recommendations:

1. To complete the research conclusions, the researchers recommend the following:
2. Using educational stations with competitive games to learn basic skills in the intermediary school curriculum.

3. Emphasizing the use of educational stations with competitive games in learning the basic skills of other team games, as they are more influential in the various stages of learning and are an essential part of the curriculum content.

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