



Impact of a Peer Curriculum to Learn Some Basic Futsal Skills

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Abstract

Objectives. The current study aimed to develop a peer-based curriculum for futsal skills for first-year students and to identify the impact of a peer-based curriculum on learning some basic futsal skills for students.

Materials and Methods. where the experimental approach was used to suit the current research, and the research community consisted of the players of first-year students in the College of Physical Education and Sports Sciences at the University of Basra for the academic year (2023-2024). The sample was randomly selected by lottery from the Applied Sciences Department. The researcher selected the experimental group, which used the peer-based method, and the control group, which used the method used by the teacher. The sample consisted of (33) students. The researcher then excluded injured and absent students, numbering (6). Thus, the sample constitutes 78.78% of the original population.

Results. The results showed that the use of the reciprocal method achieved improvement and development in basic skills (rolling and dribbling) in football. The educational curriculum was then implemented according to the peer-based method, and post-tests were conducted to obtain data and compare them with the data for the tests. The pre-test was analyzed and statistically processed using the SPSS statistical program. The results were obtained, presented, and discussed.

Conclusion. The use of the reciprocal method as a teaching and training method by specialists in the field of sports. The researcher recommends the use of modern methods (modern technology) in the process of conveying information to develop the theoretical and practical aspects of students' learning. Similar studies and research in this field should be conducted for other sports.

Keywords : Peer Curriculum, Basic Skills, Futsal.

Introduction

Physical education is one of the important human sciences, and its field is broad. It is one of the fields of education that has developed, like other sciences, because it has become a measure of cultural progress among nations. Its meaning is not limited to the practice of physical activity alone. The process of teaching skills has occupied a broad scope in the field of education, which has led to interest in teaching these skills from a cognitive and performance perspective. (Majid, 2016)

The development of the educational process has enabled the emergence of various methods that allow the teacher to choose the best methods that enable him to succeed in achieving the educational objectives of his desired idea. Therefore, the teacher must

take into account the compatibility between the learner's tendencies and desires and the application of modern methods to make the material more interesting and lively, and to create interaction between the teacher, the learner, and the curriculum or method. (Hall & Holt, 2023)

Therefore, it is important for the student to master his own style. Through this, the researcher decided to use the reciprocal method, which is one of the methods used in teaching physical education. This is done by dividing students into pairs, with each individual being given a specific role. One of them performs (the performer), while the other plays the role of observer. Exchange between them. (Gustian et al., 2024)

In the modern era, the training and education process is an educational process preceded by organized planning, and many countries of the world keep pace with the scientific development of educational and training methods and teaching methods, which they seek as a goal to provide modern and influential knowledge and concepts in the educational process and achieve their desired goals in various team and individual sports, which are built on scientific foundations, the goal of which is to reach a high and integrated level of performance for the player, as the high level of performance in football as a team game reflects the interest in modern, effective and influential methods of performance through the training process. (Borges et al., 2022)

From here, the importance of the research is evident, as it is a serious attempt by the researcher, especially that game, to develop a curriculum that contains conditions for performance according to some of the skills under study according to the reciprocal method, which the curriculum aims to improve correct and effective performance in serving the team according to the rules of its movements, and the player must adhere to them and adopt them in the future, as well as the player's knowledge of the level of improvement in skill performance according to the duty card through the reciprocal method, which is used by the player to evaluate his performance, as well as the training staff to develop immediate and future solutions through the stages of performance according to the established curriculum. (Nikander et al., 2022)

Teaching basic football skills is a priority for researchers and specialists. It has begun to occupy a prominent place and has become a purposeful and planned process that impacts the learner's or player's performance. (Oliinyk et al., 2021)

This process determines the learner's behavior and performance that we desire to achieve the goal in this performance. This is achieved by providing an appropriate environment for implementing and developing performance. (Fujii, 2021)

Given the emerging student's need for quick solutions in performance, to be skilled in all aspects of performance, and to adhere to specific conditions for skill performance, many students suffer from difficulties in learning the basic skills of indoor football using traditional methods, which affects their level of athletic performance. (McCalman et al., 2022)

Hence, the research problem arises in the need to investigate the impact of using a peer-based educational curriculum to determine its effectiveness in improving the learning of these basic skills. Hence, the researcher has adopted the development of a skills curriculum using the peer-based method in football.

The current study aims to:

- 1- Develop a peer-based curriculum for futsal skills for first-year students.
- 2- Identify the impact of a peer-based curriculum on students' learning of some basic futsal skills.

The study hypothesizes the following:

- 1- The proposed curriculum has a positive impact on the level of performance of soccer skills using the peer method.
- 2- There are statistically significant differences in the pre- and post-tests, in favor of the post-tests for the two research groups, depending on the curriculum.
- 3- There are statistically significant differences in the post-tests, in favor of the group that used the peer method for the skills under study.

Research Methodology

Choosing the appropriate methodology to investigate a scientific problem is one of the most important steps in any research project. Therefore, the researcher used the experimental method because it is appropriate for the nature and objectives of the research. This method is considered one of the most efficient means of obtaining reliable knowledge.

In light of the above, a randomized group was designed with a pre-test and post-test, which is called a controlled experimental design.

"The research sample should truly and honestly represent the original community. When the researcher collects data and information, this can only be done from the entire community or from a sample representative of that community".(Qutaiba Younus, 2021) The research population consisted of first-year students in the College of Physical Education and Sports Sciences at the University of Basra for the academic year (2023-2024). The sample was randomly selected by lottery from the Applied Sciences Department. The researcher selected the experimental group, which used the peer method, and the control group, which used the method used by the teacher. The group consisted of (33) students. The injured and absent students were excluded, totaling (6) students. Thus, the sample constitutes 78.78% of the original community.

Table 1.

Shows the details of the sample size for the application.

Research community and samples	Sample members	Percentage
Research Community	30	
Exploratory Sample	6	20%
Experimental Sample	12	40%
Control Sample	12	40%
Main Experimental Sample	24	80%

Sample Equivalence:

Table 2.

Shows the equivalence of the pre-test results for the experimental and control groups on the research variables.

Statistical Coefficients Test Name	Measurement Unit	Experimental group		Control group		Calculated T value	Sig. value	Sig. level
		Mean	St.d	Mean	St.d			
Ball control	Degree	1.874	0.752	1.822	0.823	2.506	0.617	Insig.
Dribbling	Second	10.251	1.152	9.298	0.650	2.440	0.663	Insig.
Scoring	Degree	4.313	1.580	4.010	1.381	2.411	0.621	Insig.

Below the significance level (0.05)

Defining the basic football skills used in the research

The researcher prepared a questionnaire that included the most important basic football skills. It was presented to a group of (14) experts and specialists in the fields of football training, teaching methods, testing, and measurement. Using statistical analysis of the experts' questionnaire, the agreed-upon basic skills were identified using the law of relative importance.

Table 3.

Shows the relative importance of basic football skills according to the opinions of the experts and specialists.

No.	Basic Skills	Agreed	Percentage
1	Passing	6	38,57%
2	Dribbling	14	100%
3	Scoring	14	100%
4	Suppression	12	94,28%
5	Ball Control	6	38,57%
6	Running with the ball	6	37,14%
7	Heading	4	24,28%
8	Side throw	5	21,42%
9	Tackling	4	20%
10	Sliding	3	12,85%
11	Support and Balance	4	18,57%

After identifying the basic skills in football that will be included in the research, which are (Dribbling, Ball Control, and scoring), the researcher reviewed scientific sources and previous studies that dealt with the most important tests for basic skills in football. The tests under research were chosen (Dribbling, Ball Control, and scoring).

Pilot Experiment

It is essential for the researcher to conduct a pilot experiment before conducting the main experiment. It is considered "a miniature experiment of the main experiment, the purpose of which is either to reveal some scientific facts, to test the work to identify obstacles and drawbacks facing the implementation of the main experiment, or to train some of the supporting staff on the work".(Jabbar et al., 2025) The researcher conducted the pilot experiments as follows:

The researcher conducted the first pilot experiment, which involved skill tests, at 9:00 AM on Monday, November 18, 2024, on a sample of (4) first-year students from outside the research sample, and on an outdoor field. The purpose of this experiment was to:

- Identify the devices and tools used in the tests and their suitability for the test.
- Determine the appropriate time and place for administering the test.
- Inform the supporting staff on how to administer and document the tests.
- Identify the most significant obstacles facing the researcher and the supporting staff when conducting the test, in order to reduce errors during the main experiment.

Scientific Foundations

The researcher must verify the tests before conducting the main experiment through a pilot experiment on a sample of subjects.(de Oliveira et al., 2024) Therefore, the researcher sought to adopt scientific foundations in the standardization process for the tests, despite them being standardized tests, for the purpose of determining the scientific validity, reliability, and objectivity of these selected tests according to scientific sources.

Test Reliability

Test reliability is "the consistency of results. A test is considered reliable if we obtain the same results when it is re-administered to the same individuals under the same conditions".(García-Buendía et al., 2024) To calculate the test stability coefficient, the researcher relied on the retest method. He applied all the tests to the exploratory experiment sample, which numbered (4) players, on Monday, November 18, 2024. The same tests were repeated after (7) days had passed, on Monday, November 25, 2024. In this regard, (Parraca) mentions that to know the test stability, it needs to be reapplied after seven days have passed since the first test.(Parraca et al., 2022) After that, the data that the researcher obtained from the two tests were processed by calculating the simple Pearson correlation coefficient between the scores of each two tests. The calculated correlation results showed that there is a high correlation relationship. Among most tests, the closer the reliability coefficient is to ± 1 , the stronger it is, as Table (4) shows.

Test Validity

Test validity is "the degree of accuracy with which we measure the test's validity relative to what we want to measure".(Van der Woude et al., 2022) To ensure the validity of tests, the self-validity coefficient was used, which is "the validity of the experimental scores relative to the actual scores, free from the impurities of chance

errors. Thus, the actual scores of the test are the criterion to which the test's validity is attributed".(Wilk et al., 2024) Self-validity is measured by calculating the square root of the test's reliability coefficient, as shown in Table (4).

Objectivity

"A test is considered objective if it yields the same scores in all cases, regardless of who marks it".(García-Buendía et al., 2024) Furthermore, objectivity has a close relationship with the reliability coefficient, as when the reliability scores are high, the objectivity coefficient is achieved. "A high reliability coefficient corresponds to a high objectivity coefficient ".(Huang et al., 2021)

Table 4.

Shows the values associated with the reliability, subjective validity, and objectivity coefficients

No	Variables	Measurement Unit	Reliability Degree	Self-Honesty	Objectivity
1	Ball control	Degree	0.833	0.913	0.935
2	Dribbling	Second	0.820	0.906	0.923
3	Scoring	Degree	0.951	0.891	0.911

* Significant at the 0.05 level

Pre-tests

The researcher and the assistant staff conducted pre-tests on the research sample on Tuesday, November 26, 2024, at 9:00 AM. The researcher then divided the sample into two groups: a control group, which used the teacher's method and curriculum, and an experimental group, which used the peer-to-peer method (curriculum) prepared by the researcher. Each group consisted of 12 sample members.

Implementing the Curriculum

The researcher developed an educational curriculum that included a set of exercises for basic skills, consistent with the requirements of the scientific research. The researcher presented the educational curriculum to a group of experts and specialists in the field of teaching methods and football, to express their valuable opinions on the prepared curriculum. They expressed their approval of the curriculum's validity and the skills contained in the program. Implementation of the educational curriculum began on November 27, 2024, and continued until January 14, 2025, for a period of six weeks. Each week, there was one educational unit, according to the objectives of the educational unit. The duration of the educational unit was (90 minutes), according to the peer-to-peer method. The researcher often worked with the main section of the unit, and dealing with the skills aspect of the educational unit required a significant amount of time during implementation. The researcher worked on the time of the main section (60 minutes), while the remaining time (30 minutes) was distributed between the preparatory section and the final section. The performance of the experimental group of the sample in the preparatory and final section is similar to the work of the rest of the group that works with the teacher's curriculum, but the difference is in the main section where the experimental group works with the peer method.

Peer Sampling Method

- 1- Divide the sample into (6) pairs of players.
- 2- Identify a student performer and a student observer.
- 3- Give the student observer the task sheet for performing the skill.
- 4- The student performer begins the skill performance.
- 5- The student observer monitors the student performer and records observations according to the criterion card.
- 6- The two students switch roles and begin the same role.
- 7- The student observer provides feedback on the performance of the student performer according to the task card.
- 8- The teacher serves as the supervisor of the process performed by all sample members through directives.

Post-tests:

On Tuesday, January 15, 2025, at 9:00 AM, the researcher conducted post-tests on the basic skills of futsal (Ball control, dribbling, and scoring) for both the experimental and control groups. The tests were conducted under the same spatial and temporal conditions, with the same tools and support staff, and under the same scientific testing conditions.

Statistical Methods:

The researcher used statistical methods and the statistical package (SPSS) to process the statistical data.

Results and Discussion

Presentation and discussion of the pre- and post-test results of the futsal research tests for the experimental and control groups:

The researcher presented the research results in the form of tables the researcher presents the tables and selects them according to the requirements of the results. This was done to determine the extent to which the research objectives and hypotheses matched the results and to determine the significance of the differences between the pre- and post-tests of the control and experimental groups through analysis and discussion, as shown in Table (5).

Table 5.

Shows the results of the pre- and post-tests of the experimental group on the research variables

Statistical Coefficients Test Name	Measurement Unit	Pre-test		Post-test		Calculated T value	Sig. value	Sig. level
		Mean	St.d	Mean	St.d			

Ball control	Degree	1.874	0.752	3.655	0.744	5.599	0.002	Sig.
Dribbling	Second	10.251	1.152	9.298	0.650	3.272	0.006	Sig.
Scoring	Degree	4.313	1.580	7.538	0.909	6.103	0.000	Sig.

At a significance level of (0.05) and with a degree of freedom of (11).

Table 6.

Shows the results of the pre- and post-tests for the control group on the research variables.

Statistical Coefficients Test Name	Measurement Unit	Pre-test		Post-test		Calculated T value	Sig. value	Sig. level
		Mean	St.d	Mean	St.d			
Ball control	Degree	1.822	0.823	2.512	0.756	14.534	0.002	Sig.
Dribbling	Second	9.298	0.650	8.276	0.684	5.533	0.00	Sig.
Scoring	Degree	3.788	1.091	5.050	0.967	4.912	0.000	Sig.

At a significance level of (0.05) and with a degree of freedom of (11).

We note from what was presented in Table (5,6) that there are significant differences for the control and experimental groups between the pre- and post-tests in favor of the post-tests for the research variables for both the rolling and dampening skills, as the researcher attributes the reason for this to the effect of the teacher following the curriculum for the control and experimental groups, as well as the effect of the program prepared by the researcher using the reciprocal method for the experimental group that worked with this method.

The researcher believes that the development and improvement of the basic skills occurred through the use of the method with the members of the experimental sample, as the researcher gave the player freedom to act and make decisions during the performance and find quick solutions during some situations in the performance in the main section of the educational unit or competition through the use of the indirect method, which shareef refer to, “in which the effect of the student’s behavior is clear, as these methods are organized in light of who makes the lesson decisions during the performance”.(shareef, 2020)

The researcher believes that using new methods with students by making them responsible for choosing the performance and making the decision without referring to the teacher or coach gives these students or players a great opportunity to feel

responsible for the task placed on their shoulders, so they try to prove their existence through diligence and trying to prove themselves to the teacher and others, so they perform what is required of them through self-monitoring with a distinguished performance with unprecedented self-creativity and bringing out their latent energies that the student or player may not use while performing in the usual or commanded manner, because he may consider the matter a specific duty that he performs in any way without paying attention to the quality and level of performance.

This is supported by (Qutaiba) that “the student individually bears the responsibility of starting this method and expresses his readiness to perform a series of activities or teaching units or manage them”.(Qutaiba, 2021) that what the student player has gained in experience came as a result of the continuous work of the coach and the players’ regularity in training and keenness to perform the duties required of them and perform them in the best possible way.(Vasileva & Chumakov, 2024)

The researcher also attributes this to the regular method of conducting educational units and repeating different playing situations through those units, and increasing these situations by increasing the duties required by those matches led to the development of the skill capabilities concerned in the study, and this is what was confirmed by (Marwan Abdel Hamid 2001) “that repeating playing in the fields specific to the type of sporting activity leads to the development of skill capabilities due to the multiplicity of situations and difficulties that accompany them during matches in those fields ”.(Daryanto & Effendi, 2023)

Presentation and discussion of the results of the post-tests of the studied variables for the control and experimental groups:

Table 7.

Shows the arithmetic means, standard deviations, calculated T value, and statistical significance of the post-test for the experimental research group.

Statistical Coefficients Test Name	Measurement Unit	Experimental group		Control group		Calculated T value	Sig. value	Sig. level
		Mean	St.d	Mean	St.d			
Ball control	Degree	3.655	0.744	2.512	0.756	5.06	0.000	Sig.
Dribbling	Second	9.298	0.650	8.276	0.684	5.11	0.044	Sig.
Scoring	Degree	7.538	0.909	5.050	0.967	8.912	0.000	Sig.

At a significance level of (0.05) and with a degree of freedom of (20).

Through the presented results of the skill variables of the research and the comparison between the results of the post-tests of the control and experimental groups, we note

the presence of significant differences (i.e., development) in favor of the experimental group. The researcher attributes the reason for this development to the presence of effective exercises in the educational curriculum prepared by the researcher according to scientific foundations, as Anversha indicates that “training programs have become an effective means of establishing and preparing the junior and raising their skill and technical level to accomplish the requirements of the game under all different performance conditions”. (Anversha et al., 2024)

The researcher also attributes that the development process among the sample members came through the use of a group of diverse exercises. The researcher also used feedback according to the reciprocal method through the homework sheet and providing information after performance and found that there was a great impact and response during performance by the members of the experimental sample. The researcher emphasizes giving him the opportunity to work, act, and develop solutions as he sees fit and give confidence to the student. All of this gave positive results during the work period, as the researcher gave the opportunity to all members of the group, not just one or two students, and to perform according to what the student sees as appropriate. And he is able to perform and develop it by his other colleagues, and the player also needs the process of making the appropriate and sudden decision to act quickly to find solutions, and this is what (Yang) confirmed: “There are many factors that affect the speed of decision-making, starting from the nature of the information about the stimulus to the type of movement required to be executed, and the accuracy of decision-making depends on the precise identification of the stimulus and diagnostic information and on the information stored in the memory ”.(Yang et al., 2022)

The researcher confirms that all of this leads to the student bearing responsibility for making decisions during performance on his own without referring to the teacher, and this is what was supported by (Karasievykh) “that the student bears all responsibility for starting, managing and directing teaching activities, meaning that the student takes the initiative and controls the reins of affairs in the lesson, and for the first time, pre-lesson decisions are transferred from the teacher to the student”.(Karasievykh et al., 2021)

Here, the researcher returns to the sample group and finds many new initiatives among them that he had never tried to perform before due to the student’s commitment to the prescribed curriculum or his determination of the task assigned to him during the competition. However, when the student or player found the freedom to express his opinion during the practical units and through the researcher’s use of the exchange method and listening to their points of view about some of the situations presented on the task sheet, which is a type of information and feedback that the researcher used, the researcher found real interaction and a great desire among all members of the group to participate in the dialogue and performance and develop solutions and transfer them directly to the ground through the educational units, especially in the skill aspect, where the performance was different and at a high level.(Hall & Holt, 2023)

Through a survey of the group’s opinions about this, they answered that the method of presentation and discussion had clarified many things to them, which made the player search for solutions and take the initiative to implement them under the supervision of the researcher and his emphasis on correcting mistakes and self-evaluation among

them using internal or external feedback. Here, Umamaheswari indicate that “feedback” means that the learner must confirm whether the results of performance are correct or need to be modified by receiving information. From the educational environment, any feedback helps learning within a short period if the students’ needs are taken into account in terms of motivation and response ”.(Umamaheswari, 2024)

This is to give them a real opportunity for self-creativity and to release all their energy and knowledge during performance to reach the highest level of performance and to achieve the desired goal as quickly as possible, while taking into account accuracy in correct performance. The researcher points out the above that this development and improvement in the performance of basic skills, which the results showed, did not come by chance, but was the result of regular training and correct application of the set of exercises prepared in the curriculum by the researcher, prior preparation of the followed curriculum, good preparation of educational units, availability of training requirements, knowledge and understanding of the duties required to develop the skill level of learners while performing the selected and set reciprocal roles according to clear and specific standards in the educational curriculum, in which individual errors are decided and defined, and the learner responsible for them feels that they are the result of their performance alone between the observer and the observed through the attention of each of them to the corrections and errors of the other and they cannot attribute it to others, and then the intervention of the subject teacher, and this in itself encourages both the observer and the observer to make more effort.(Melnyk et al., 2021)

This method, according to the educational model, is considered one of the most effective methods for providing internal and external feedback to learners, which contributes to correcting errors effectively and leads them to the required performance.

In addition, this model is an ideal opportunity to invest the lesson time allocated to learning teaching competencies according to the parts of the physical education lesson plan, as it made learners derive information from each other about their performance among themselves, which led to an increase in their interest in proving themselves through excellence in practical performance according to the curriculum prepared by the researcher, thus moving away from the state of indifference that could affect them during implementation if their colleague was significantly better than them, and reducing the state of lack of interest as well if the colleague was significantly lower in level, as each learner was allocated training a suitable number of times through its educational curriculum that includes the different lesson plan, a real opportunity commensurate with the abilities of each learner to reach the required performance for each movement required to be performed with his colleague through the exchange between the observer and the observer since they are in the same educational stage, in addition to the role of the teacher in controlling the learning channels in this method, and choosing the type of performance that is easy to evaluate immediately during and after performance. (Naser, 2019)

“It is necessary that learners have the opportunity to modify and correct their previous concepts. Of course, these concepts need modern teaching methods and strategies in order to acquire them. Learning is the result of the interaction between what they learn and their current ideas and concepts. Therefore, their structure in it determines their learning process. Learners come to the classroom with a quantity of prior

knowledge, misconceptions and beliefs, and the most important and influential factor is what learners already know”.(Ruiz-Navarro et al., 2023)

Conclusions

- 1- The use of the peer method resulted in improvement and development in basic soccer skills (dribbling and ball control).
- 2- The researcher proposes using the peer tutoring method by selecting a player with a good skill level to be a peer tutor for a fellow player with a low skill level. This will benefit from the application, guidance, and correction provided by external feedback from the peer.
- 3- There were significant differences in the pre- and post-tests of the research variables, and for the control and experimental groups, in favor of the post-test.
- 4- There were significant differences in the post-tests of the research variables, and for the control and experimental groups, in favor of the experimental group that used the peer method.

Recommendations

- 1- Use peer tutoring as a teaching and training method by sports professionals.
- 2- Use modern methods in the process of conveying information to develop students' theoretical and practical skills.
- 3- Conduct similar studies and research in this field for other sports.
- 4- Use educational tools and methods, as they play a positive role in developing and enhancing basic football skills.

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