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Realistic Model-Based Learning and Motor Satisfaction in Futsal Skills: Pembelajaran Berbasis Model Realistis dan Kepuasan Motorik dalam Keterampilan Futsal

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Background: Traditional teaching methods in physical education often fail to create meaningful learning experiences. Specific Background: The realistic model emphasizes contextual and experiential learning, allowing students to apply technical skills in game-like settings. Knowledge Gap: Few studies have examined how realistic model-based learning affects motor satisfaction and skill acquisition in futsal. Aims: This study aimed to evaluate the effect of educational units based on the realistic model on motor satisfaction and the learning of rolling and scoring skills among students. Results: Findings revealed significant improvements in both motor satisfaction and performance accuracy for the experimental group compared with the control group. Novelty: The study introduces the realistic model as an effective pedagogical framework for futsal education. Implications: Implementing this model can improve motivation, engagement, and technical learning outcomes in school-level physical education programs.

Highlights:

- Realistic model-based learning enhances students' motor satisfaction.
- Significant improvement was observed in rolling and scoring skills.
- The study supports experiential learning as a framework for sports education

Keywords: Realistic Model, Motor Satisfaction, Futsal, Skill Learning, Experiential Teaching

Introduction

Educational modules play a pivotal role in improving and developing students' motor and skill performance, especially in sports. Applying modern educational models, such as the realistic model, is an effective method that relies on students' interaction with realistic, life-related situations, contributing to enhancing their understanding and application of motor skills. In the context of futsal, dribbling and scoring skills are essential skills that directly impact player performance and require systematic and targeted training to achieve noticeable improvement.[1] The importance of this research lies in exploring the effect of educational modules designed using the realistic model on improving motor satisfaction and learning of futsal dribbling and scoring skills among students.[2] This helps provide more effective educational tools and methods that are more suited to students' needs. Furthermore, the research contributes to determining the extent to which the realistic educational model impacts skill performance, enhancing the status of sports education, increasing the effectiveness of modern teaching models, and encouraging the provision of educational solutions that contribute to achieving the goals of sports education and raising the level of sports training for students.

Research Problem:

Each sport has its own characteristics and skills, requiring diverse teaching and training methods to effectively develop learners' skills. In futsal, students face challenges in learning basic skills, such as dribbling and scoring, due to the lack of use of modern teaching methods appropriate to their skill abilities. Despite the importance of motor satisfaction in improving psychological and motor states, neglecting it leads to poor skill performance. Students learn information but find it difficult to retrieve and utilize it correctly. Many teachers still use teaching methods that do not rely primarily on motor-based psychological states, which can help enhance skill comprehension and facilitate information retrieval. This negatively impacts students' level of learning of the motor pathways for dribbling and scoring skills in futsal. Therefore, it has become necessary to adopt

modern and diverse models to develop students' sports skills.

Research Objectives:

1. Developing educational units based on a realistic model.
2. To identify the impact of educational units based on the realistic model on motor satisfaction and the learning of dribbling and scoring skills in futsal for students.
3. To identify the superiority of the two groups (experimental and control) in motor satisfaction and learning of dribbling and scoring skills in futsal for students.

Research Hypotheses:

1. Significant differences were observed between the pre-test and post-test outcomes of the experimental and control groups in both motor satisfaction and the acquisition of futsal skills.
2. Notable differences emerged in the post-test results of the two groups with respect to their motor satisfaction and their ability to learn and perform futsal skills.

Research Areas:

- Human Area: Second-grade middle school students at Al-Mithal Middle School for Boys, Diyala Governorate Education Department, for the 2024-2025 academic year.
- Time Area: From October 13, 2024, to January 15, 2025.
- Spatial Area: The planned outdoor area of the futsal field at Al-Mithal Middle School for Boys, Diyala Governorate Education Department.

Method

Research Methodology:

"The researcher used the experimental method to suit the nature of the research problem, its objectives, and its hypotheses. The experimental method is considered one of the best scientific research methods for solving problems in a practical manner. It is defined as the objective observation of a specific phenomenon occurring in a situation characterized by precise control of one or more diverse variables (factors), while holding the other variables (factors) constant. The experimental design was based on two independent groups of equal number."[3]

Design number	Groups	Steps				
		First	Second	Third	Fourth	Fifth
1	Experimental group	Pre-test of motor satisfaction and my dribbling and scoring skills with a soccer ball	Independent variable cognitive learning model	Post-test of motor satisfaction and soccer dribbling and scoring skills	The difference between the pre- and post-tests of motor satisfaction and the skills of dribbling and scoring in soccer	Differences between the two groups after the post-test for motor satisfaction
2	Control group	Pre-test for motor satisfaction and soccer dribbling and scoring skills	The method adopted by the subject teacher	Post-test of motor satisfaction and soccer dribbling and scoring skills	Differences between the two groups in motor satisfaction and the skills of dribbling and scoring in football	

Figure 1. Display experimental device

Research community and sample:

The research subjects were carefully selected and included the second-year middle school students with an ideal average level of male students from the Diyala Provincial Education Bureau in the 2024-2025 academic year. The subjects were divided into four classes, totaling 108 people. The research sample was selected by systematic random lottery. The experimental and control groups were determined as follows: "Class C was the experimental group, Class B was the control group, and Class A was the exploratory experimental group". The members of each group were confirmed (12 people), and the sample accounted for 22.22% of the total population of the original community. Table (1) shows the community and sample information.

Table 1. shows a description of the community and sample

S	Sample	Total number of students	classroom	Number of students in each group	The model followed for each group

Section 1	exploratory group	28	Q3	10	
Section B	control group	26	Q2	12	realistic model
Section C	experimental group	27	Q1	12	The method followed
Section D	_	27		_	
Total		108		34	

"Sample homogeneity and equivalence of the two research groups".

Sample homogeneity:

The researchers examined the homogeneity of the study sample on morphometric (height, weight, age) related variables, as shown in Table (2).

Table 2. The analysis presents estimates of the statistical parameters, including the mean, standard deviation, median, and skewness coefficient.

Number	Variables	Mean	SD	Median	Skewness
46	Student's Age	13,98	1.35	13.5	1.35
	Height (cm)	155.65	6.39	145.5	1.85
	Weight (kg)	49.8	8.46	48.5	1.76

The results showed that the skewness coefficient values for the above variables were less than (±3), indicating the normal distribution of individuals (the research sample), the homogeneity of the research sample in these variables, and its normal distribution.

Methods, Devices, and Tools Used:

1. Methods Used in the Research:
- The Internet.
- Motor Satisfaction Scale.
- Data Collection and Data Entry Form.
2. Devices Used in the Research:
- Laptop.
- Modern Camera.
- Medical Scale.
- Stopwatch.
3. Tools Used in the Research:
- Poster and Colored Tapes.
- Multi-colored training jersey.
- 8 conical markers and cones of varying heights.
- (10) legal Futsal balls.
- Futsal field.
- Whistle.
- Measuring tape.

Field Research Procedures:

1. **Skills Determination:** The soccer skills under study were selected based on the teacher's guide approved by the Ministry of Education for middle and secondary school. The skills identified were (scoring and dribbling).

2. **Tests Specific to the Two Skills:** The tests used by the researcher are standardized scientific tests that adhere to scientific criteria and have been applied in the Iraqi environment in recent years, to the same age group and a similar sample of students. The test validity rate reached 0.89, and the test reliability rate reached 0.88. As for The objectivity of the test, researchers relied on units of measurement to determine students' scores, avoiding interference or bias in the scores, as the tests have fixed units of measurement.

3. The identified skill tests:

- Straight and zigzag rolling test back and forth:[3]
- Scoring test: Test name: Scoring from a distance of (10 meters) .[4]

4. Exploratory Experiment:5

Researchers conducted an exploratory experiment to determine the test's applicability to students and effectiveness in work groups. He also identified the devices and tools the researcher needed to conduct the tests, as well as the time required to administer the tests. The exploratory experiment was conducted on 10 students from Section (A), outside the research sample and from the same community, on October 14, 2024.

5. Determining the Motor Satisfaction Scale:[6]

The researcher adopted a motor satisfaction scale. The researcher administered the Lekrd motor satisfaction scale, based on the Hamash Nassim thesis. The scale consisted of (18) items, with all items in the scale being positive. The highest score on the scale was (90). The middle score was (45), which did not reflect true motor satisfaction and thus impacted the scale. The sub-average score was negative.

6. Pre-tests:

The researcher conducted a pretest on the dependent variables of sports satisfaction and futsal skills for the experimental and control groups. The pretest on sports satisfaction, bowling and goal-scoring skills for the experimental group was conducted on October 28, 2024. The pretest on sports satisfaction, bowling and goal-scoring skills for the control group was conducted on October 29, 2024 at the school campus of the Junior High School of the Diyala Education Bureau. The results of the pretest showed the equivalence of the two study groups in terms of the studied dependent variables. Before starting the implementation of the teaching unit, "the equivalence of the two study groups was verified." The researcher attempted to verify "the equivalence of the two study groups" in terms of sports satisfaction and bowling and goal-scoring skills in futsal as shown in Table (3).

Table 3. the equivalence of the two research groups in motor satisfaction and rolling and scoring skills in futsal

S	Dependent Variable Test	Units	control group		experimental group		value of (t)	Significance level	Significance
			Mean	SD	Mean	SD			
1	Motor satisfaction	Degree	63.16	**2.32**	**61.58**	**1.88**	**1.82**	**0.081**	Not statistically significant
2	Rolling skill	Time	**12.23**	**0.32**	**12.42**	**0.49**	1.07	0.075	Not statistically significant
3	Goaling skill	Degree	**15.25**	**4.47**	**14.66**	**3.14**	**0.35**	0.096	Not statistically significant

7. Preparing Instructional Units According to the Realistic Model:

The researcher prepared an instructional unit based on the Realistic Model by reviewing the model's literature. The model's stages were distributed across the three lesson sections as follows:[7]

- The preparatory section for the lesson, 10 minutes (reality analysis), determines the nature of the content, teacher capabilities, and the reality of learning and the school. This section includes preparing and preparing students and following the administrative aspects, introduction, and physical exercises.
- The main section of the lesson, 30 minutes (lesson planning) or (preparation for teaching), is based on the educational activity. A written framework is defined for the lesson objectives, educational questions, and activities that enhance student motor satisfaction. Furthermore, the concept of motor satisfaction is linked to skill learning, explanation, and presentation of the lesson. In practical activities, the lesson implementation phase is carried out by dividing students and identifying skill-related exercises and student organization.
- The concluding section, 5 minutes, includes small games, cool-down exercises, and post-practice dialogue sessions.

8. Implementation of educational units:

The educational units included two units per week, each with a duration of 45 minutes, with a total of 20 educational units and a total duration of 900 minutes. The implementation of the educational

units began on 11/4/2024 and continued until 10/7/2025.

9. Post-test:

The researcher conducted the post-test over two days, on January 14, 2025, for the experimental group, on motor satisfaction, dribbling, and scoring skills, and on January 15, 2025, for the control group, on motor satisfaction, dribbling, and scoring skills in soccer. The researcher observed the same conditions as the pre-test.

10. Statistical Methods:

The researcher used statistical methods (SPSS package).

Results

- **Displaying the results of the tests (pre- and post-tests) to investigate the variable of motor satisfaction**

Table 4. Statistical results for comparing the results of the two tests (pre- and post-tests) for the experimental and control groups for the motor satisfaction variable

Groups	Units	Pre-test		Post-test		Mean diff.	SD diff.	Calculated value of (T)	Sig.	Significance of differences
		Mean	SD	Mean	SD					
Control	**Degree**	63.16	2.32	88.75	4.78	**25.58**	**5.43**	**16.30**	**0.00**	**Sig.**
Experimental	**Degree**	61.58	1.88	98.91	0.28	**37.33**	**2.015**	**64.179**	**0.00**	**Sig.**

- **Presentation and analysis of the post-test findings** of the control and experimental groups regarding the **motor satisfaction variable.**

Table 5. The post-test mean, standard deviation, calculated value and error percentage of the exercise satisfaction variable (t) of the control group and the experimental group and the post-test results are shown.

Groups	Units	Mean	SD	Calculated value of (T)	Sig.	Significance of differences
Control	**Degree**	88.75	4.78	7.341	0.00	**Sig.**
Experimental	**Degree**	98.91	0.28			

- **Present and analyze the pre-test and post-test results of the control group's scoring skills in futsal bowling.**

Table (6). Displays the mean, standard deviation, and calculated t-value for the control group Statistical Features

Statistical Features Skills	Units	Pre-test		Post-test		Calculated value of (T)	Significance of differences
		Mean	SD	Mean	SD		
Rolling Test	Second	12.23	0.32	11.8	0.45	3.75	**Sig.**
Scoring Test	Degree	15.25	4.47	16.91	2.59	4.58	**Sig.**

- **Presentation and analysis of the pre-test and post-test results of the experimental group concerning the dribbling and scoring skills in futsal.**

Table 7. Displays the mean, standard deviation, and calculated t-value of the experimental group

Statistical Features Skills	Units	Pre-test		Post-test		Calculated value of (T)	Significance of differences
		Mean	SD	Mean	SD		

Rolling Test	Second	12.42	0.49	10.92	0.66	8.15	**Sig.**
Scoring Test	Degree	14.66	3.14	19.91	4.80	5.51	**Sig.**

- **Presentation and analysis of the pre-test and post-test results for both the experimental and control groups with regard to the basic futsal skills.**

Table 8. shows the means, standard deviations, and the calculated t-value for the group between the two research groups in the post-tests.

Statistical Features Skills	**Units**	control group		experimental group		**Calculated value of (T)**	**Significance of differences**
		Mean	SD	Mean	SD		
Rolling Test	Second	11.8	0.45	10.92	0.66	2.21	**Sig.**
Scoring Test	Degree	16.91	2.59	19.91	4.80	2.43	**Sig.**

Result & Discussion

1. Discussion of the results of pre- and post-test on exercise satisfaction in the experimental and control groups.

The researcher attributes the improvement in students' performance in the post-test to the role of motor satisfaction in enhancing skill performance, as he links satisfaction to an individual's self-control and sense of confidence, which increases their motivation to improve their level. He emphasizes that good leadership contributes to creating a stimulating and comfortable environment that motivates students to achieve tangible successes, and that a sense of satisfaction is one of the essential factors that lead to the development of skill capabilities and increased self-confidence. "Therefore, it is necessary to provide appropriate teaching strategies to enhance motor satisfaction and achieve positive results in physical performance."[8] Satisfaction with motor performance constitutes an essential support for continuing to practice motor activities.

2. Discussion of the results of the post-tests for the experimental and control groups

The researcher attributes the remarkable development in the process of teaching futsal skills to the adoption of educational units based on a realistic model, which had a significant impact on the effectiveness of the educational process, especially during the three stages it encompassed: lesson preparation, lesson preparation, and practical implementation. The researcher emphasized the importance of organizing the lesson and dividing it into parts to ensure the full implementation of each part, especially in the practical aspect. Mustafa Al-Sayeh emphasized the importance of organizing time and reducing waste through well-structured educational situations, which positively impacted students' psychological and emotional progress and increased their self-satisfaction. "Encouraging learners to build their own knowledge and guiding them to use their own ideas enhances their effectiveness and motivates them to be creative."[9]

"The realistic model contributed to developing students' motor satisfaction, helped meet their psychological and skill needs, and increased their desire and satisfaction, leading to improved performance and increased readiness to engage in the activity and achieve success, as this satisfaction was linked to motivation and incentive."[10]

"Performance satisfaction is one of the fundamental factors that directly influence students' achievement and participation in sports activities."[11]

3. Discussion of the results of the pre- and post-tests for the experimental and control groups on basic skills in futsal.

The researcher attributes the success of the realistic model in teaching to the interaction between the teacher and the students, as repetition and variety of exercises contributed to improving performance and basic skills, while increasing integration and accurate explanation of the skills of the educational unit. The test results showed that the experimental group outperformed the group after implementation, due to the use of the realistic model and the enhancement of experiences through activities and practical experiments. "The realistic model focuses on activating the learner's role in acquiring knowledge and building skills through interaction and active participation, which contributes to improving educational outcomes and developing students' capabilities more quickly and effectively".[12]

4. Discussion of the post-test results for the experimental and control groups on basic futsal skills for students.

The researcher explained that the noticeable improvement in the experimental group's performance was due to the students' reliance on educational units based on a realistic model, which contributed to increasing the experience they gained through continuous repetition. This contributed to developing their skills and technical understanding, in addition to enhancing teamwork and the exchange of opinions and ideas among them. A realistic model was applied, focusing on teaching skills in a systematic and organized manner during the educational units. Appropriate exercises were selected to achieve the specified objectives, and the progression from easy to difficult helped effectively improve performance. The researcher emphasized that repetition plays a fundamental role in learning, as it allows students to accurately grasp skills and helps develop a technical understanding of performance and the ideal final

outcome. He also emphasized the importance of applying a realistic model that mimics real sports, as it contributes to increased psychological satisfaction and self-confidence, leading to improved dribbling and scoring skills in futsal. These learning units, based on experience and repetition, prepare students thoroughly, achieve a good level of technical performance, and achieve success in competitions through accuracy, speed, and mastery.

The realistic model is a modern teaching model that significantly contributes to improving students' motor satisfaction, as it gives them the opportunity to apply skills practically, which enhances self-confidence and increases their motivation to learn. "Realistic implementation allows students to better understand the skills to be developed and contributes to improving their performance through continuous repetition and correct application. This model also helps organize movement precisely, motivates students to focus, and increases their ability to control and coordinate different movements."[13]

"Visualizing real performance, which accompanies realistic teaching, gives students the opportunity to clearly understand skills and develop them in a flexible and effective manner. Through continuous processing and correction of errors, students notice a significant improvement in their performance"[14], which increases their motor satisfaction and motivates them to continue. Ultimately, the realistic model is a powerful means of developing motor skills and achieving outstanding performance, as it links technical understanding with practical implementation in an integrated and effective manner.[15]

Conclusion

1. The educational units based on the realistic model contributed to a significant improvement in students' motor satisfaction, which contributed to enhancing their self-confidence and increasing their motivation to practice futsal.
2. The improvement in students' dribbling and scoring skills was more effective when implementing the educational units based on the realistic model.
3. The realistic model achieves a balance between practical and theoretical performance, helping students connect theoretical concepts with practical application.
4. The improvement in students' motor satisfaction is positively related to learning the dribbling and scoring skills in futsal.
5. The feeling of satisfaction with motor performance enhances their motivation to continue practicing and developing skills, leading to an increase in their overall performance.

Recommendations:

1. Emphasize the application of the realistic model in teaching futsal skills to students.
2. Focus on the concept of motor satisfaction by providing an encouraging and supportive learning environment, which enhances students' desire to develop their dribbling and shooting skills.
3. Develop motivational strategies to enhance students' psychological well-being regarding their performance, such as providing positive feedback and setting achievable goals, with the aim of increasing confidence and engaging in training.
4. Conduct additional studies to investigate the psychological and social factors that influence motor satisfaction, and work to integrate them into training systems to accelerate the learning of sports skills and achieve better results.
5. Conduct similar research based on the real-world model, in other sports, and with samples of different genders.

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