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The Impact of an Educational Curriculum Utilizing Supportive Tools on Developing Cognitive Abilities and Football Goal-Scoring Skills in the Age Group of 13-14

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Abstract

Cognitive abilities play a crucial role in all sports, serving as the source through which all reactions to assigned tasks are manifested in the player. Excellence in cognitive abilities is the decisive factor in determining match outcomes, achieved through proper handling of stimuli present in the game. These stimuli may come from competing players, the ball, or teammates. Correct positioning, timing, and reaction are essential, and any deficiency in these abilities leads to a disruption in performance. Recognizing the importance of addressing these cognitive abilities, the researcher aimed to develop an educational curriculum using supportive methods to enhance the cognitive and scoring skills of football players aged 13-14. This is essential for achieving optimal performance and the main goal of the learning process. Attention must be given to a broad age group as a cornerstone for reaching the highest levels in football. The research problem emerged from the observation that, as both a football practitioner and coach, there was insufficient emphasis and time devoted by coaches to developing cognitive abilities. Thus, the researcher proposed a study to find a suitable solution, utilizing an educational approach with supportive methods tailored to the abilities of the research sample. The focus was on improving selected cognitive abilities and scoring in football to elevate the players' overall performance. Research objectives included developing supportive methods to enhance cognitive abilities and scoring in football for 13-14 year olds, creating an educational curriculum with supportive methods for these age groups, and identifying statistical differences between pre-test and post-test results for cognitive abilities and scoring in football for 13-14 year-olds. Additionally, the study aimed to identify statistical differences between the control and experimental groups in post-test results for cognitive abilities and scoring in football for 12-13 year olds. The research followed an experimental design with two equivalent groups (control and experimental). The research population included players from the specialized football school in Al-Nasiriya, aged 13-14 for the 2022-2023 season. The sample comprised six players for the pilot study and 20 players for the research sample, representing 71.14% of the original population. Key findings indicated that the educational interventions applied to both the control and experimental groups had a positive impact on developing cognitive abilities and basic skills in football.

Keywords: (Motor skill utilizing supportive tools, goal-scoring skills, cognitive abilities).

1-Definition of the Research

1-1 Introduction and Significance of the Research

The process of development requires an educational approach that includes specific exercises with various supportive tools to facilitate the learning process. The existence of such tools

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contributes to increasing educational capabilities, aids in learner development in a modern and effective manner. Their use enhances players' ability to learn and develop cognitive and scoring skills in football. Supportive tools stimulate players' auditory and visual senses, positively impacting cognitive abilities and goal-scoring performance in football. The presentation of educational content in a clear and engaging manner can reduce the time allocated for each age group. Supportive tools have become significantly important in influencing the learning and training processes in football. Cognitive abilities play a crucial role in all sports. They are the source of all reactions to tasks assigned to the player. Excellence in cognitive abilities is vital for determining match outcomes by correctly dealing with stimuli or excitations present in the game. Any deficiency in these abilities

1-2 Research Problem

There is no doubt that adopting a scientific approach to coaching young age groups is the foundation for reaching international sports levels. The improvisational approach yields limited progress initially but quickly reaches a plateau. This necessitates a focus on teaching and developing methods, requiring research into time and effort economy. Achieving proper performance for competitions and championships requires the application of an educational approach through diverse supportive tools.

Observations by the researcher, as both a practitioner and football coach, highlight a lack of emphasis and insufficient time allocated by coaches for developing cognitive abilities—the essence of skillful performance. Previous studies have shown that mentally adept players acquire skills quickly. Additionally, the lack of diversity in supportive tools, a fundamental pillar in the educational process, adds excitement and intrigue during instructional units. Therefore, the researcher chose to study this problem and find a suitable solution by using an educational approach with tailored supportive tools based on the capabilities and levels of the research sample.

1-3 Research Aims

1. Develop supportive tools to enhance cognitive abilities and goal-scoring skills in football players aged (13-14).
2. Design an educational curriculum with supportive tools to enhance cognitive abilities and goal-scoring skills in football players aged (13-14).
3. Identify statistical differences between pre-tests and post-tests for controlled and experimental groups in selected cognitive abilities and goal-scoring in football for ages (13-14).
4. Identify statistical differences between controlled and experimental groups in post-tests for selected cognitive abilities and goal-scoring in football for ages (12-13).

1-4 Research Hypotheses

1. There are statistically significant differences between pre-tests and post-tests for controlled and experimental groups in selected cognitive abilities and goal-scoring in football for ages (12-13), favoring the experimental group.
2. There are statistically significant differences between controlled and experimental groups in post-tests for selected cognitive abilities and goal-scoring in football for ages (12-13), favoring the experimental group.

1-5 Research Scope

1-5-1 Human Scope

Players from the specialized football center affiliated with the Directorate of Education in Thi Qar, aged (13-14) for the year 2023-2024.

1-5-2 Time Scope

May 3/ 2023 – October 25/2023.

1.5.3 Spatial Scope

Al-Muthanna Military District Stadium in Nasiriyah.

2- Research Methodology and Field Procedures

2-1 Research Design

The researcher adopted an experimental design with the creation of two equivalent groups (control and experimental). In this approach, two groups are used, with the condition of achieving equivalence between them in all variables that may affect the dependent variables in the experiment.

2-2 The Research Community and Sample

The research community was deliberately chosen, including players from the specialized school football team in the nasiriyah district, aged 13-14 for the season (2022-2023). These players represent the youth category, totaling 28 players. Six players were selected for the survey sample, and 20 players were chosen to represent the research sample, constituting 71.14% of the original community. The sample was divided into control and experimental groups deliberately to ensure the distribution of players based on height, weight, and playing positions. Each group contained 10 players, as shown in Table 2.

2-2-1 Sample Homogeneity

To achieve homogeneity within the research sample and avoid the influence of individual differences that may affect experimental results, the researcher conducted homogeneity tests on variables related to morphological measurements that could impact the experimental variable. These measurements included length, mass, and age. The homogeneity test was performed on the entire sample before dividing it into control and experimental groups.

Twisting coefficients were calculated using mean, standard deviation, and median for morphological measurements to ensure sample homogeneity. The values for all measurements were within ± 1 , indicating sample homogeneity. As the torsion coefficient of the balanced normal curve is zero and does not exceed ± 1 , the research sample is highly homogeneous in body measurements, as illustrated in Table 1.

Table (1): Demonstrates the Homogeneity of the Research Sample in (Length, Mass, Chronological Age) Using the Torsion Coefficient.

	Measurements	Unit of Measurement	Mean	Standard Deviation	Median	Torsion Coefficient
1	Length	Cm	153.400	6.435	152.500	0.347
2	Mass	Kg	46.650	6.659	44.500	0.512
3	Chronological Age	Years	13.450	0.510	13.000	0.218

The table illustrates the homogeneity of the research sample in terms of length, mass, and chronological age, utilizing the torsion coefficient.

2-2-2 Equality of the Research Groups

One of the crucial aspects that the researcher must adhere to is attributing differences to the experimental factor. Thus, the control and experimental groups must be equivalent in morphological measurements and in dependent variables related to some football learning tests (cognitive abilities and goal-scoring in football).

Statistical methods, including mean, standard deviation, and independent samples t-test, were employed to assess the significance level (sig) between the control and experimental groups in the pre-test before applying the methodology. Table (2) illustrates this.

Table (2): Displays Means, Standard Deviations, Calculated T-Values, and Significance Level (Sig) for the Control and Experimental Groups in the Pre-Test.

	Statistical Procedures	Variables	Unit of Measurement	Control Group	Experimental Group	t-value	Sig (p-value)	Statistical Significance
1	Length	Cm	151.400	6.168	155.400	1.269	0.236	Not Significant
2	Mass	Kg	46.000	5.477	47.300	0.429	0.687	Not Significant
3	Age	Years	13.500	0.527	13.400	0.429	0.678	Not Significant
4	Attention Concentration	Degree	9.703	1.210	9.328	0.684	0.503	Not Significant
5	Attention Switching	Degree	4.700	1.010	4.850	0.364	0.720	Not Significant
6	Motor Response Time	Seconds	3.869	0.681	3.819	0.162	0.873	Not Significant
7	Scoring Skill	Degree	7.438	1.907	7.201	0.301	0.767	Not Significant

This table demonstrates the calculated statistical values for the control and experimental groups in the pre-test, indicating the absence of statistical significance between the groups across various variables

2-3-1 Data Collection Methods

Observation Personal interviews. Tests and assessments. Arabic and foreign sources and references Analysis. International Information Network (Internet). Data transcription form Computer software and applications.

2-3-2 Used Devices and Tools

Medical scale for weight measurement, type (Chinese), quantity (1) Linen measuring tape, quantity (1) Office tools (papers, pens).

Colored papers, quantity (4) Japanese-made whistle. Video recording machine, type (SONY, Japanese-made. Electronic calculator, type (CLTON), Japanese-made) Laptop, type (HP), for data documentation, statistical processing, and printing. Legal football field. Legal footballs,

quantity (10).Adhesive tape with a width of (5) cm.Electronic timing clock Casio, quantity (4).Box with a height of 50 cm.Cones/markers, quantity (12).Barriers with a height of 60 cm, quantity (10)).Power generator, quantity (1).

2-3-3 Auxiliary Tools Used in the Research

Four-Colored Light Tool

A tool composed of four lights of different colors (red, yellow, green, blue) with a base or electrical point with four buttons, each button corresponding to a specific color. Optical lights are connected to the electrical base with electric wires, where each lamp has a 20-meter wire to the electrical base. There is also a 20-meter electric wire that acts as a connector between the electrical base with four buttons and the operating point. The tool is controlled by the coach or one of his assistants from a certain distance. This tool has various uses, including teaching and developing shooting, passing, rolling, as well as attention concentration, attention switching, and reaction.

Two-Sided Wooden Indicator (Blue-Red), Quantity (2)

A wooden indicator consisting of two sides, each side representing a specific color, either blue or red. It has a rectangular wooden base with a width of 40 cm, and a wooden column or stand with a height of 1.20 m. Attached to the base are colored squares measuring (35 cm in height * 24 cm in width). The goal of this tool is to teach and develop certain cognitive abilities such as attention concentration, switching, reaction, motor response, rolling skill, passing, and scoring.

Colored Boards

Consist of four different colors (red, yellow, green, blue), made of wood with colored plastic-coated paper, attached to a rectangular wooden board with a height of 31 cm and a width of 21 cm. The purpose is to develop rolling skills and some cognitive abilities (attention concentration, switching, reaction, and motor response).

2-4 Field Research Procedures

2-4-1 Determination of Cognitive Abilities Under Study

Some cognitive abilities were identified through a review of recent references and scientific sources in physical education and sports science. This was achieved by conducting personal interviews with experts and specialists in the fields of sports psychology, motor learning, and football.

Cognitive Abilities

1- Attention Concentration. 2- Attention Shifting. 3- Reaction Time.

2-4-2 Selection of Cognitive Tests and Soccer Scoring Test Under Study

Cognitive tests and the soccer scoring test were selected by the researcher through personal interviews with experts in motor learning, sports training, and testing and measurement in football.

2-4-3 Description of Cognitive Tests and Soccer Scoring Test Under Study

Firstly, Cognitive Abilities Tests: "Ali Fahmi and Ahmed Beyk: 1998 , p345-348 "

Borden-Inoue Test for Measuring Aspects of Attention: The researcher used the Borden-Inoue test to measure attention. This test is specifically designed for athletes and measures five aspects

of attention: intensity, stability, focus, distribution, and transformation. The test consists of a sheet with 31 lines of Arabic numbers arranged in groups, totaling 40 numbers per line. The numbers are intentionally arranged irregularly and unequally to prevent memorization.

Test Procedure for Attention Concentration: Upon hearing the word "start," the player turns the sheet when starting the timer and begins searching and crossing out the number 97, for example, line by line from left to right for one minute. Upon hearing the word "stop," the player marks vertically next to the numbers reached.

After the first minute, the test is repeated for another minute, but with correction instructions and scoring:

- A = Total numbers seen by the player from the start to the "stop" word.
- b = Number of structures the player should have crossed out.
- B = Total errors (incorrectly crossed out structures + correctly crossed out structures not marked).
- E = Coefficient of accuracy in test execution.

After the first minute, the test is repeated for another minute with audio-visual stimulation. The player responds to regular auditory signals and visual signals every five seconds. The correction and scoring process for the second minute is similar to the first.

The concentration of attention is then calculated using the formula: $K = u1 - u2$, where $u1$ and $u2$ are values derived from the test results.

Test 2: Attention Shift Test

The test duration is only two minutes, during which the digits (47, 96), for example, are crossed out as follows: Upon the start signal and starting the timer, the player begins searching and crossing out the number (47) for 30 seconds. Then, with the signal "switch," the player moves on to cross out the number (96) for another 30 seconds. Upon hearing the word "switch" again, the player returns to cross out the number (47) for 30 seconds. Finally, with the signal "switch," the player crosses out the number (96) for 30 seconds. This completes the two-minute test.

Scoring and Results Calculation Method: The following indicators are extracted:

- M: The difference in productivity between the first 30 seconds ($U1$) and the second ($U2$), where $M = U1 - U2$.
- H: The difference in productivity between ($U2$) and ($U3$), as $H = U2 - U3$.
- O: The difference in productivity between ($U3$) and ($U4$), where $O = U3 - U4$. Note that work productivity for 30 seconds (U) = $E \times A$.

Attention Shift Calculation: $M = U1 - U2$ $H = U2 - U3$
 $O = U3 - U4$

Test 3

Transitional Motor Response Test: Test Name: Nelson Test for Motor Response. Objective: Measure motor response. Tools: Clear obstacle-free space of 20 meters length and 2 meters width, measuring tape, timing clock. Performance Specifications: The examiner stands at one end of the midline facing the timer, which is placed at the other end of the line. Holding a timing clock in one hand, the examiner raises it high, then quickly moves the arm either to the left or right while starting the clock. Simultaneously, the examiner runs at maximum speed to the side indicated by the timer. The timer stops the clock when the examiner reaches the line 6.4 meters away.

Recording: Three attempts are given for both right and left directions with a 20-second rest between each attempt. The time is calculated as the sum of attempts divided by 6.

Test 4: Scoring Skill Test (1): "Atheer Abdul Ali Hadi 2019 ‘ p68"

Test Name: Targeted Scoring Test Toward a Goal Divided into Numbered Squares on Both Sides

Objective: Measure scoring accuracy. Tools: 5 footballs, tape to define the scoring area, football goal, football field. Performance Description: Place 5 footballs on the penalty area line, 16 meters from the goal. The player stands behind ball number 1 and, upon the start signal, scores in the indicated areas in sequence, each 50 cm apart, aiming for difficulty and importance. The test ends after scoring the fifth ball.

Scoring Conditions

- 4 points for scoring in area 4.
- 3 points for scoring in area 3.
- 2 points for scoring in area 2.
- 1 point for scoring in area 1.
- 0 points for scoring outside the scoring boundaries.
- One attempt is given.

2-4-4 Experiment

Survey Experiment: The researcher conducted the survey experiment on Saturday, May 6, 2023, at 5:00 PM at the Military Club's field, involving a sample of 6 specialized football players. The purpose was to assess the performance of devices, tools, and aids used, identify potential issues, and ensure the readiness for the main experiment.

Experiment 2-4-5: Scientific Principles of the Test

1. **Test Validity:** Content validity was ensured by presenting the tests to experts in football, testing, and sports training to select appropriate tests for each studied ability.
2. **Test Reliability:** The first test was conducted on Saturday, May 6, 2023, and repeated on Saturday, May 13, 2023. Pearson correlation coefficients indicated high reliability.
3. **Objectivity:** Objectivity was confirmed by obtaining high correlation coefficients between the two assessors during the pilot test.

Scientific Foundations of the Test

1. **Test Validity:** The researcher emphasizes the importance of the content validity of the tests. The tests were presented to experts in football, testing, measurement, motor learning, and sports training. The tests were chosen based on their validity and reliability.
2. **Test Reliability:** The researcher conducted the first test on a group of players and repeated it a week later. The correlation coefficient (Pearson) between the two sets of results was calculated to assess reliability. The tests demonstrated high reliability.

Objectivity: Objective tests are those where there is little variation in the opinions of evaluators. The researcher assessed objectivity by calculating the correlation coefficient between the results of two evaluators. The high correlation coefficients indicate the objectivity of the tests. "Mohammed Jasim Al-Yasiri: 2010 ‘ p77".

The Arbitrators

1. **Dr. Ali Jasim Suwadi - Ph.D. in Football**
2. **Dr. Ahmed Hussein Abdul - Ph.D. in Football**

Table (3): Illustrating Stability and Objectivity Coefficients for the Studied Tests.

Test No.	Test Name	Stability Coefficient	Sig Value	Objectivity Coefficient	Sig Value
1	Attention Concentration	0.88	0.000	0.93	0.000
2	Attention Conversion	0.87	0.000	0.94	0.000
4	Motor Response	0.89	0.000	0.91	0.000
5	Scoring	0.88	0.000	0.92	0.000

The table presents the stability and objectivity coefficients for the tests under study. The values indicate the correlation between the results of different test administrations and the objectivity of the tests, respectively. The "Sig Value" represents the significance level of the correlation coefficients.

Main Experiment

1. **Pre-test for the Research Sample:** The researcher conducted preliminary tests for both control and experimental groups before implementing the educational curriculum with assistive means.
2. **Educational Curriculum with Assistive Means:** The researcher implemented a curriculum aimed at developing attention, reaction time, motor skills, coordination, balance, agility, and football scoring for players aged 13-14.
3. **Post-tests for the Research Sample:** After the educational intervention, the researcher conducted post-tests, including cognitive ability tests and football scoring tests.

Statistical Methods: IBM SPSS Statistics 24 was used for statistical analysis, presumably to process and analyze the research data.

The content discusses the research methodology, the educational intervention, and the statistical methods used for analysis. If you have specific questions or need further clarification on any part, feel free to ask.

3- Presentation, Analysis, and Discussion of Results

3-1 Presentation, Analysis, and Discussion of Results:

3-1-1 Presentation and Analysis of Pre and Post Test Results for Cognitive and Scoring Abilities for the Control Group:

Table (4): This Table Illustrates the Mean Values, Standard Deviations, T-values, and Significance Levels (Sig) for Some Cognitive Abilities in the Pre and Post-tests for the Control Group.

No.	Variables	Unit of Measurement	Pre-Test Mean \pm SD	Post-Test Mean \pm SD	t-Value	Sig. Level
1	Attention Concentration	Degrees	9.703 \pm 1.210	12.137 \pm 1.439	2.434	0.001
2	Attention Shift	Degrees	4.700 \pm 1.010	6.275 \pm 0.658	1.575	0.001
3	Reaction Time	Seconds	3.821 \pm 0.781	2.984 \pm 0.612	0.837	0.041
4	Scoring Skill	Degrees	7.438 \pm 1.907	12.880 \pm 1.666	5.442	0.000

From Table (4), the results of pre and post-tests for the control group are presented and statistically processed using the paired-sample t-test. The table shows significant differences between pre and post-tests in favor of post-tests, with a significance level less than 0.05.

3-1-2 Presentation and Analysis of Pre and Post Test Results for Cognitive and Scoring Abilities for the Experimental Group

Table (5): This Table Presents the Mean Values, Standard Deviations, T-values, and Significance Levels (Sig) for Some Cognitive Abilities in the Pre and Post-tests for the Experimental Group.

No.	Variables	Unit of Measurement	Pre-Test Mean \pm SD	Post-Test Mean \pm SD	t-Value	Sig. Level
1	Attention Concentration	Degrees	9.328 \pm 1.241	15.307 \pm 1.387	5.979	0.000
2	Attention Shift	Degrees	4.850 \pm 0.820	7.509 \pm 0.869	2.659	0.000
3	Reaction Time	Seconds	3.834 \pm 0.779	2.210 \pm 0.380	1.624	0.000
4	Scoring Skill	Degrees	7.201 \pm 1.603	16.290 \pm 1.638	9.089	0.000

In Table (5), the results of pre and post-tests for the experimental group are presented and statistically processed using the paired-sample t-test. The table reveals significant differences between pre and post-tests in favor of post-tests, with a significance level less than 0.05.

3-1-3 Presentation and Analysis of Differences in Post-Test Cognitive Abilities Between Control and Experimental Groups

Table (6): This Table Displays the Mean Values, Standard Deviations, T-values, and Significance Levels (Sig) for Differences in Post-test Cognitive Abilities Between the Control and Experimental Groups.

No.	Variables	Unit of Measurement	Control Group Mean \pm SD	Experimental Group Mean \pm SD	t-Value	Sig. Level
1	Attention Concentration	Degrees	12.137 \pm 1.439	15.307 \pm 1.387	5.014	0.000
2	Attention Shift	Degrees	6.275 \pm 0.658	7.509 \pm 0.869	3.578	0.002
3	Reaction Time	Seconds	2.984 \pm 0.612	2.210 \pm 0.380	3.392	0.003
4	Scoring Skill	Degrees	12.880 \pm 1.666	16.290 \pm 1.638	4.164	0.000

Table (6) illustrates significant differences in post-test cognitive abilities between the control and experimental groups, favoring the experimental group, with a significance level less than 0.05.

The researcher attributes the observed improvement in motor skills for the experimental group to the effectiveness of the educational methodology employed during the experimental period. This methodology incorporates scientifically selected exercises and teaching tools, executed with precision and consistency. The researcher-designed educational program includes motor exercises aimed at enhancing these skills. Continuous learning, training, and scientifically sound repetitions played a significant role in developing motor skills, as emphasized by Saad Mohsen (1996), who asserts that an educational and training program, built on a scientific foundation, organizes the training process, considers individual differences, employs effective repetitions, and incorporates appropriate rest intervals. "Saad Mohsen Ismail :1996, p98"

The evolution in motor skill levels results from the meticulously planned exercises and the careful selection of these exercises within the educational curriculum. The exercises were executed with exceptional precision, adhering to specified time frames for each exercise. The emphasis on repetition, proper rest, and the use of auxiliary means optimized the learning process, fostering a positive impact on skill development. "Nahida Abdul Zaid Al-Dulaimi: 2016, p177-178 "

The efficacy of auxiliary means in motor skill exercises significantly influenced the utilization of players' capabilities, enhancing performance in agility, balance, and flexibility exercises. These factors contributed to speedy, accurate, and focused performance. The use of auxiliary means also accelerated the acquisition of motor skills under study, providing excitement and effectiveness in achieving the desired development for each skill. "Maher Abdulilah Abdul Sattar: 2007, p38".

The concentration on motor exercises, coupled with their early introduction in the primary section during the instructional units, yielded outstanding results in developing motor abilities. According to experts, motor abilities are acquired and developed through scientific training and practice. Therefore, early training on agility, balance, and other motor skills is essential for players to reach their optimal levels. "Essam Abdelkhalek: 1999, p188".

The number of suitable repetitions accompanying the instructional units, coupled with a continuous progression in difficulty levels, ensured participation from all participants. The researcher's integration of both motor and skill exercises, such as combining running with coordination, balance, rolling, and targeting in the zigzag exercise, had a significant impact on overall performance and accelerated the development of motor and skill capabilities.

The careful connection between motor capabilities and basic skills indicates a strong correlation between motor abilities and skill performance. The observed significant difference in the experimental group compared to the control group can be attributed to the effectiveness of the exercises developed within the educational methodology. These exercises, designed with a scientific approach, played a crucial role in the observed improvement.

4- Conclusions and Recommendations

4-1 Conclusions

1. The educational units used on individuals in both groups (control and experimental) had a positive impact on the development of certain cognitive abilities and fundamental skills in football.
2. Members of the experimental group, which implemented the educational units prepared by the researcher (educational methodology with assistive means), outperformed the control group in post-tests in all cognitive abilities and fundamental skills in football.
3. The use of the educational methodology with assistive means has significant benefits for learning and learners by providing ample learning opportunities through creating enjoyment, eliminating boredom, and fostering genuine motivation to develop cognitive abilities and fundamental skills in football.
4. Employing appropriate educational aids for each learning outcome and incorporating them into preliminary games contributes to creating a conducive learning environment, positively impacting the achievement of positive results for all learning outcomes in football skills development.

5. Organization and arrangement in preparing preliminary games and using suitable means within each game made the vocabulary of the educational units easy to apply for both the coach and players, directly contributing to the development of all learning outcomes for the experimental group.

4-2 Recommendations

1. Adopt the use of educational units with preliminary games and assistive means, as prepared by the researcher, to enhance the learning outcomes of beginner football players.
2. Emphasize the importance of cognitive, motor, and physical learning outcomes during educational units, as they play a significant role in learning basic football skills.
3. Conduct educational and training courses for physical education teachers in schools and coaches for age-specific groups in specialized centers, highlighting the importance of diversity and the use of preliminary games with or without assistive means for learning sports skills.
4. Conduct further research and studies to investigate the impact of preliminary games on different academic levels and age groups in football and other sports, for both genders.
5. Seriously consider innovating more preliminary games using assistive means, as they serve as a magic wand to overcome challenges affecting performance levels. They confirm the practical difference between a successful teacher or coach and another's failure lies in their ability to make their educational or training unit enjoyable for trainees of different types and age or developmental stages.
6. Conduct additional studies on different levels (novice or advanced) using preliminary games with assistive means.
7. Conduct similar studies for other individual and team sports.

Resources

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