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The effect of the task model on developing some indoor football skills and future thinking among intermediate school students in Diwaniyah

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Abstract

The research adopted the experimental approach due to its suitability to the nature of the research. A sample of second-grade middle school students at Al Nahda Intermediate School for Boys was selected and divided into two groups: an experimental group according to the TASK model, and a control group using the traditional method. The students underwent pre- and post-tests that included handling, rolling, and scoring skills, in addition to a future thinking test. An eight-week, sixteen-unit educational program was implemented, designed to allow students to work in groups, freely express their ideas, participate in decision-making, and collaborate in problem-solving. The results showed statistically significant differences in favor of the experimental group in all tests, indicating that the TASK model effectively contributed to improving technical performance in soccer, in addition to enhancing future thinking. The researcher attributed these results to the nature of the model, which combines cooperative learning, critical thinking, and practical experimentation, and provides students with ample space for interaction and dialogue, which enhanced their self-confidence and developed their ability to plan and innovate.

Keywords: Task model, indoor football skills, future thinking, intermediate school students, cooperative learning, critical thinking, experimental study, Diwaniyah

1. Introduction

1.1 Research Introduction and Importance

Football is a recreational and competitive activity at the local and international levels. It requires financial and academic resources, and the responsibility of specialists with academic and technical qualifications and experience in dealing with learners. Football for students is one of the games that helps develop other skills, as football skills can be relied upon by individuals in their interactions with others during various life situations. It is a medium for interacting with external stimuli and experiences, and it is also a means of communicating with society.

The success or failure of students in dealing with the problems and obstacles they face is due to their way of thinking. Each individual has a way of thinking more than their abilities and potential. Futures thinking allows us to explore the future and see its endless possibilities. It helps us predict it by extrapolating the past and present to focus on the individual's skills and abilities to achieve specific goals, which paves the way for reaching them.

Students at this age need special support in all aspects: educational, psychological, social, and health-related. They cannot be taught using the same methods used for middle school or university students. Therefore, we had to choose new methods and approaches to develop football skills for middle school students. The importance of this research lies in using the TASK model to develop certain skills and future thinking in football.

1.2 Research Problem

Through the researcher's observation, as a physical education teacher, he observed that some of the teachers in charge of the educational process do not invest in innovative methods, but rather rely mostly on the established and traditional methods of explaining and delivering the

Corresponding Author: Dr. Abdmunaf Hashim Mohammed General Directorate of material orally. Therefore, he was keen to use the TASK model to develop some skills in football and future thinking.

1.3 Research Objectives

The research aims to prepare a curriculum based on the TASK model and identify its impact on developing some football skills for middle school students.

1.4 Research Hypotheses

There are significant differences between the pre-test and post-test of the two groups in favor of the experimental group.

2. The TASC Model

The TASC model is based on Vygotsky's theory (1978), which argues that the development of thinking skills is based on social interaction. Vygotsky was one of the first researchers to emphasize that interaction with others, especially adults, plays a fundamental role in shaping mental structure and determining how it functions. He believes that higher mental functions are gradually formed through a series of social interactions. Therefore, the main theme of Vygotsky's theoretical framework is defined by two features: First, social interaction plays a fundamental role in developing cognition. It demonstrates the extent of an individual's cultural development at two levels: the first at the social level and later the individual level. This depends on voluntary attention, logical memory, and the formation of higher concepts and functions that arise as individual relationships.

The second feature is that the cognitive development of the individual depends on the central zone of proximal development. This zone of development represents the space that lies between what the learner can do on his own and what he does through his interaction with another learner in the classroom. The level of development advances in children when they interact with the surrounding community, meaning that development requires complete social interaction, and the extent of the skill that the child achieves under the guidance of an adult (teacher) or peer cooperation exceeds what he can accomplish alone (Kearsley). Based on Vygotskies and Sternberg, the researcher Wallace, in collaboration with the researcher Adams, issued the TASC model (Active Thinking in a Social Context) in 2024. From here, we find that these two theories have greatly supported the TASC model through its steps that were prepared based on the principles of these two theories. Social (Luisa, et. Al, 2010: 128) [7].

Teaching Steps According to the TASC Model

Teaching according to the TASC model involves the following steps: (Luisa *et al.*, 2010:16-17) [7]

- Gathering and Organizing Information: In this stage, the problem, question, or topic of study is identified, and students' previous knowledge about the topic is gathered and organized.
- Identifying and Differentiating: In this stage, the tasks that students must complete for understanding are identified
- Gathering and Generating Ideas: This stage represents a brainstorming exercise to generate ideas that will solve the problems, tasks, or questions posed.
- **Decision-Making:** In this stage, the best idea is selected from the ideas gathered in the previous stage, which seems likely to lead to solving the questions and achieving the objectives.
- **Implementation:** In this stage, the idea identified in the decision-making stage is implemented.
- **Evaluation:** In this stage, the degree of success in completing the tasks and achieving the objectives is evaluated, by asking questions such as: Have we achieved the objectives we set?

Task Objectives (according to Yasser, C. Maker, and Shirley Schaefer, 2011, p. 371) [3]

- 1. Improving responses and motivation to generalize.
- 2. Improving student learning and achievement.
- Providing opportunities for students to learn decisionmaking.
- 4. Helping students confront and solve problems.
- 5. Preparing successful students in a society undergoing rapid and profound changes in the future.
- 6. Improving student self-esteem.

The researcher found in the TASK model that it gives students a large space to express their decisions, generate their ideas, and how to cooperate with each other freely without restrictions, and thus they can deal with the desired goals more smoothly and quickly, and this is the essence of the modern educational process.

Components of the TASK Model

- **Reflection:** Effective thinking, stemming from individual self-efficacy and self-regulation, is essential for learning.
- **Activity:** This includes freedom to learn, so that students play more active roles in decision-making about how to learn.
- **Social:** Ideas become practical when communicated to others in an atmosphere of interaction, participation, and collaboration.
- Context: Reflection always occurs within a context connected to real life.

(C. Maker & Shirley Schaefer, 2011, p. 387) [3] Belle, W., Alessio, B., Clare, M. & Clare,

2.1 Future Thinking

Interest in future thinking from a cognitive perspective began with the work of Tulving through his theory called the "mental time journey" model. He argued that there are three types of thinking based on the three-dimensional time orientation: the present, the past, and the future. He argued that both the past and the present constitute a mental representation of the immediate time period. Individuals utilize this structure of events and objects in their interactions with others and the world more broadly. These individuals have the ability to remember events related to their past experiences, as past events are combined with each other over a single period of time to achieve mental time journeys. Tulving called this ability episodic memory, representing the ability to remember events that occurred in the past, which contributes to understanding and developing future decisionmaking skills and developing the skill of planning subsequent mental actions.

3. Research Methodology and Field Procedures

3.1 Research Methodology

The researcher used the experimental method to achieve the research objectives, as experimentation is one of the means for achieving research goals.

3.2 Research Sample

The researcher deliberately selected the research sample, which consisted of (95) second-grade middle school students at Al-Nahda Middle School for Boys. The sample consisted of three classes (A, B, and C). Class (B), consisting of (32) students, was randomly selected as the experimental group. A lottery was used to select (25) students, while Class (A),

consisting of (30) students, was selected as the control group. A lottery was used to select (25) students, resulting in a total of (50) students. This resulted in excluding absent students and those with illnesses that prevented them from exercising.

The sample was homogenized using variables such as height, age, weight, handling, rolling, and scoring. Equivalence was then used between the two groups, as shown in Table (1).

Table 1: Homogeneity and equivalence of the two samples in the variables of height, weight, age, and skill tests under study

		Contro	ol Group		Experimental Group			
Variables	t-value	Mean Diff	(SD σ)	(M)	Experimental Group			
					Mean Diff	(SD σ)	(M)	
Height (cm)	0.72	7.00	0.16	1.60	4.79	0.06	1.50	
Weight (kg)	1.23	2.12	0.95	47.00	1.67	0.75	45.50	
Age (years)	1.44	6.06	0.80	14.90	4.88	0.70	14.50	
Passing (score)	1.15	2.45	0.15	2.09	2.92	0.07	2.06	
Rolling (time)	1.27	8.74	2.85	31.09	8.71	2.76	30.90	
Shooting (score)	1.57	5.22	0.096	1.59	20.22	0.35	1.69	

^{*}Tabular value (t) at degree of freedom (48) and significance level (0.05) = 2.05

Table (1) shows that the values of the coefficient of variation are less than 30%, which indicates the homogeneity of the two samples. The table also shows that the calculated (t) value is less than the tabular (t) value, which means that the differences are random between the two groups, i.e. the two groups are equivalent.

3.3 Tests Used in the Research

• Future Thinking Test

The validity, reliability, and objectivity of the Future Thinking Test, prepared by researcher Walaa Dakhel Katfan (2020) [8], were verified. The standardization was performed on second-grade students at Al Nahda Intermediate School.

1. Scoring Accuracy Test (Kazem, 2004, 19) [4]

- **Tools used:** A measuring tape, a soccer ball, and a divided target.
- **Performance**: The tester is (11) meters from the target, and at the whistle, the tester scores.
- **Recording:** The tester is given (3) attempts, and points are recorded according to location.

2. Handling Accuracy Test (Kamel, 1998, p. 23) [5]

- **Tools used:** (3) markers, a soccer ball, a measuring tape, and a small target (120 cm wide and 68 cm high).
- **Performance Method:** The subject is placed (16) m from the designated target. The ball is placed (10) m in front of them. The first marker is placed (1.5) m from the ball. The distance between each marker is (1.5) m. The last marker is (1.5) m from the starting line.
- Scoring: Each subject is given three attempts. Two
 points are awarded for a successful attempt, one point for
 an attempt that touches the small target, and zero for a
 failed attempt.

3. Rolling Test: Roll the ball between (6) markers and shoot at the goal (Mahmoud, 2007, p. 19).

- **Purpose of the Test:** To measure the ability to control the ball.
- Equipment needed: 5 balls, (6) markers, a field, a stopwatch, a measuring tape. Performance description: We place (5) balls at the starting point, which is (10) m from the middle of the field. The balls are rolled between (6) markers in front of the penalty arc. After crossing the last marker and before reaching the penalty line, the player scores on goal. Then, they return directly to the starting line with the second ball, and so on for the remaining (5) balls. The time specified for the test

includes the time completed plus a bonus time and a penalty time, which are added to the total time. A bonus of (3) seconds is given, deducted from the total time for each goal scored, and a penalty of (3) seconds is added for each missed shot. Points are calculated as follows: (75-80) seconds - (81-85) (4 points) - (86-90) (3 points). (91-95) (2 points). (96-100) (1 point).

3.4 Conducting Research Tests 3.4.1 Pretest

The pretests were conducted on November 1, 2024, in the middle school playground to test some five-a-side football skills (handling, dribbling, and scoring) for both the experimental and control groups. All test conditions were limited in terms of time, playground, other tools, and implementation method, in order to create the same conditions for the posttest. The researcher's work was facilitated by an assistant staff and the school administration, who were trained on how to conduct and implement the tests.

3.4.2 Proposed Curriculum

The program included (16) educational units, which took (8) weeks to implement, with (2) educational units, each lasting (40) minutes. The educational units included three main sections (preparatory, main, and final). Each section had a goal that connected it to the other sections and reinforced its achievement. The preparatory section lasted (10) minutes and included warm-ups and physical exercises. The main section of the program lasted (25) minutes, with a total of (400) minutes, representing (62.5%) of the total. It included a set of small games that developed some five-a-side football skills. Each unit included a small game and a task-based study. The first experimental group studied using this method, while the second control group studied using the method followed according to their curriculum. The implementation was carried out as follows:

The main section of the experimental group: This group was taught using the task method. The main section was divided into several stages, as follows:

- The first stage: In this stage, students gather what they know about the skills and organize them into a mental image. The teacher opens the door for students to ask questions they wish to know. The students then work with their teacher to form multiple groups, with the teacher serving as their guide and source of information.
- Phase Two: Here, the problems to be solved are

identified by asking, "What am I trying to do to develop these skills, and what are the obstacles they face?" This gives students a greater opportunity to express their opinions and identify difficulties. The teacher serves as the observer and monitors the groups.

Phase Three: The learners brainstorm with others about several possible ways to solve the problem. The teacher must help them develop their ideas and find a way to develop skills such as rolling, aiming, and others, without judging their value or opposing any of them.

Phase Four: This represents the stage of thinking and planning for the learners. The students visually sketch the steps they have deduced, record them as private notes, and present them to the rest of the learner groups for them to use in the situations they encounter. This helps them to be useful in various learning situations while performing the skills specified by the teacher.

The concluding section, which lasts (5) minutes, includes cool-down exercises.

3.4.4 Post-test: After completing the curriculum on Wednesday, January 3, 2024, the two groups were tested. Dimensionality.

3.6 Statistical Methods: (Appropriate statistical methods were used using Excel.)

4. Presentation and Discussion of Results

4.1 Presentation of the Results of the Pre- and Post-Skills Tests for the Experimental Group

The researcher administered the Future Thinking Test to the experimental and control groups. After correcting, collecting, and analyzing the data, and using an independent samples t-test, he found a statistically significant difference in favor of the experimental group.

Table 2: Means and variances for the experimental and control groups

Group	Number	Mean	Variance	T- Value		Significance
Experimental	25	13.25	18.21	Calculated	Tabulated	Cionificant
Controlling	25	12.58	11.25	3.52	2	Significant

The researcher noted that the experimental group, which studied using the TASK model, had an impact on the change that occurred in future thinking through:

- Giving students greater freedom to express their ideas and opinions and how to share them with others.
- Collaboration among the individual groups within the experimental group, which was structured as groups.
- Individual participation in decision-making, which places responsibility on them for the work.

Table 3: Means, Standard Deviations, and Calculated t-value for Pre- and Post-Tests of the Group that Used the Task Model for the Research Sample

Sr. No.	Tests	Pre-Test (M)	Pre-Test (SD)	Post-Test (M)	Post-Test (SD)	Calculated t-value	Significance
1	Passing / score	2.05	0.06	3.95	0.51	4.85	Significant
2	Rolling / time	30.55	2.86	25.45	1.33	4.18	Significant
3	Shooting / score	10.53	0.42	13.82	0.42	6.22	Significant

Tabular t-value at significance level (0.05) and df (24) = 2.18

Table (3) shows the results of the skill tests (handling, rolling, and scoring). The calculated t-value is greater than the tabulated t-value. This indicates a clear significance between the results of the pre- and post-tests, as well as the post-test results for the TASK model group.

The researcher found a difference and variation in the students' results in the post-tests for the group that used the TASK model. The researcher attributes this to several justifications, the most important of which is that the curriculum implemented the TASK model using small games and tools to implement this model. The use of new methods and exploration by teachers in teaching students develops their skills and achieves their levels (Al-Rawi, 1988, p. 33) [2]. The stages the researcher used in this model, which were in the form of groups, increased and diversified the ideas presented, and thus may produce ideas and solutions that may seem worthless to their author, but in reality, they may be good, especially if other students use them as an introduction or stimulus to another idea, making it more profound than the first. (Al-Diwan, 2009, p. 121) [1] Therefore, the TASK model

helped. During small groups, developing the skills under study succeeded. These stages encouraged students to think seriously and attempt to innovate new movements to carry out the required tasks in these skills, leading to ideal motor performance. This means a high level of communication and interconnection between mental and motor creative abilities to achieve the desired outcome. Students made numerous attempts, and various ideas were presented, adding to and modifying them to contribute to innovation and achieving the desired level. Students were able to practice mental processes by utilizing the TASC model, observing and interpreting skills, classifying them, and linking them. This was a result of the participation and cooperation that prevailed in the educational environment through verbal communication, social interaction, discussion, dialogue, and the exchange of opinions and ideas. This contributed to developing skills by allowing students the freedom to express their ideas and present many possibilities and hypotheses in their performance (Luisa et al., 2010) [10].

Table 4: Means, Standard Deviations, and Calculated t-value for Pre- and Post-Tests of the Control Group of the Research Sample

No.	Tests	Pre-Test (M)	Pre-Test (SD)	Post-Test (M)	Post-Test (SD)	Calculated t-value	Significance
1	Passing / score	2.018	0.07	3.22	0.08	4.59	Significant
2	Rolling / time	30.09	2.85	28.57	2.22	5.04	Significant
3	Shooting / score	1.69	0.079	2.85	1.41	4.95	Significant

Tabular t-value at significance level (0.05) and df (14) = 2.14

The results of the table above showed a discrepancy in skills in the post-tests for the control group. This can be attributed to several factors, most notably the imperative approach, which involves increasing the repetition of games and providing opportunities for performance, while decreasing the opportunity for required repetition. This serves and develops performance. Wageeh Mahjoub (1982) [7] points out that frequent practice of a game is important, and without it, it cannot be performed properly. (Mahjoub and Al-Talib, 1982, p. 58) [7]

Also, increasing the duration of game practice (repetition and repetition) and using feedback leads to skill development, especially since students have a love and passion for the game. (Mahjoub and Al-Talib, 1982, p. 51) [7]

Since students are accustomed to the imperative approach in physical education, as well as other subjects, they are accustomed to the normative approach. This was evident after reviewing the results of the post-test for the control group.

5 Conclusion and Recommendations

5.1 Conclusion

 The TASK model has proven to play a significant role in increasing students' ability to develop their selected skills compared to the traditional method. The TASK model plays a fundamental role in developing capabilities and promoting independence through discussion and positive dialogue to achieve goals and maximize time and effort.

5.2. Recommendations

- Train teaching staff to use the TASK model in their teaching of the subject.
- Conduct a similar study on the mathematical skills included in the curriculum for middle and secondary schools.

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Sequential Drills (according to TASC)

Exercise (1): Dual Short Passing

Group: 4 students (2 passers + 1 spotter + 1 pointer).

Area: 10 x 8 m.

Description: Each player facing each other (5-7 m) passes the ball using the inside of their foot. The spotter records the number of correct and incorrect passes.

Exercise (2): Passing in a Triangle

Group: 4 students (3 players + 1 spotter).

Area: A 6 m triangle.

Description: The 3 players execute passes within the triangle, constantly moving after the pass (*pass and move to third place*). The spotter counts the time they hold the ball and the number of successful passes.

Indicator: 12 consecutive successful passes.

Exercise (3): Handling under Pressure (2 vs. 1)

Group: 3 players (2 attackers + 1 defender) + 1 spotter.

Area: 8 x 8 m.

Description: Two players maintain a continuous passing pattern facing one defender. After losing the ball, the roles change. Indicator: Maintaining 6 passes before intercepting the ball.

Exercise (4): Mini-game (3 vs. 3)

Group: 6 players + a referee.

Area: 20 x 15 m with two small goals.

(3 halves x 3 minutes + 1 minute break).

Description: A mini-game requiring 3 passes before shooting. The referee records each player's passing accuracy percentages.

Indication: Increase in the number of successful passes from the first to the third halves.

Exercise (5): Group Assessment (TASC - Assessment and Communication Phase)

Group: Same small teams.

Description: Each group presents its results (pass accuracy percentage - number of passes before shooting - common errors).

Indication: Formulating a simple improvement plan for the next round (e.g., changing the reception angle, shortening the distance).

Method progression and implementation

- 1. From an easy drill (short and two-on-one).
- 2. To a simple tactical organization (triangle).
- 3. Then adding defensive pressure.
- 4. Integrating the skill into a mini-game.
- Evaluation and communication according to the stages of the TASK strategy.