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Interactive Thinking and Its Relationship to the Shooting Skills of Jumping Forward and Handling Over the Head in Handball for Female Students

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Abstract

The research aimed to identify the degree of interactive thinking and the performance of the shooting skills of jumping forward and handling over the head with handball for second-year female students in the College of Physical Education and Sports Sciences for Women/University of Baghdad, as well as identifying the extent to which interactive thinking is related to the performance of the two skills under study among the research sample. The researchers relied on The descriptive approach using the method of correlational relationships on a sample of female students in the second stage of divisions (C and D), numbering (39) students. As for the problem of the research, it emerged through the researchers' follow-up of the students' results, especially in the practical aspect. It was found that there are some difficulties faced by the second-year students in the College of Physical Education and Sports Sciences for Women when learning the shooting skills of jumping forward and handling overhead with handball, despite the attempts and efforts they make. The subject teacher leads them towards better learning. After applying the research tool and analyzing the data statistically, it was found that there is a positive correlation between interactive thinking and the skills of handling from above the head and aiming from jumping forward. Based on these results, the two researchers concluded that the female students enjoy a degree of positive interactive thinking, individually or collectively, between themselves and the teaching staff, and there is also a moral correlation relationship. Between interactive thinking and the aiming skills of jumping forward and handling from above the head, the researchers presented some recommendations, the most important of which is to constantly use the interactive thinking scale to find appropriate solutions and to know the students' abilities in thinking, innovation and exploration to improve the level of performance. and this achieves one of the sustainable development goals of the United Nations in Iraq which is (Quality Education).

Keywords | **interactive thinking – handball**

Introduction:

Recently, there has been interest in developing the learner's thinking, especially in the sports field, which contributes greatly to developing the learner's abilities, as thinking is considered a skill that any individual can acquire and learn through the learner's attempt to perceive things more clearly and comprehensively and develop a deeper creative outlook in solving problems. Therefore, the role of the teacher is no longer limited to conveying information only, but rather goes beyond that, as he has become responsible for forming the learner's personality by expanding their horizons by taking control of their thinking and encouraging them to research, investigate and question, using their mental abilities to think about the problem and find appropriate solutions that lead to the development

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of their skills. Especially interactive thinking skills for learners, as interactive thinking helps organize knowledge and facilitates the process of processing information and arriving at a solution to their problems and thus achieving their goals.
Defined by Hammoud: "The individual's intellectual interaction with others, coexistence with them, and work to find appropriate solutions to their problems through reciprocal intellectual strategies." (3)
Because the game of handball in the College of Physical Education and Sports Sciences depends on learning basic skills that serve as an important basis for improving the level of performance for this game, therefore, attention must be paid to the stages of learning it and improving its level of performance by helping the students and their learning, by presenting educational problems and trying to find solutions to them. In a group interactive way, because this game is not an individual game, but rather a group game that requires interaction with members of the same team. From the above, the importance of the research lies in the role of interactive thinking in the field of physical education in general and in the field of learning handball skills in particular, which serves as a stimulation of the mental processes of the learner, especially in the skills of aiming and overhead handling for students of the College of Physical Education and Sports Sciences for Girls. It also provides the learner with the opportunity to advance and improve motor performance and act intelligently when faced with a situation or problem. Interactive thinking stimulates the mind of learners and makes them more active, which helps facilitate the acquisition of information, storage and retrieval, and finding reasons for problems and solutions as well. As for the problem of the research, it emerged through the two researchers' follow-up of the students' results, especially in the practical aspect, and their experience in the field of teaching, as well as the consultation of some professors in the field of specialization. It was found that there are some difficulties faced by the second-year students in the College of Physical Education and Sports Sciences for Girls when learning the shooting skills of forward jumping and handling. Over the head with a handball, despite the attempts and efforts made by the subject teacher to lead them towards better learning. Therefore, the two researchers decided to use interactive thinking to find out its relationship to the shooting skills of forward jumping and overhead handling for female students of the College of Physical Education and Sports Sciences for Women / University of Baghdad. The research aims to identify the degree of interactive thinking and the shooting skills of jumping forward and handling over the head with a handball among the research sample, and to identify the relationship between interactive thinking and the performance of the two skills under study among the research sample. The researchers assume that there is a statistically significant correlation between interactive thinking and the shooting skills of jumping forward and handling overhead among the research sample.

Fields of Research:

-Human field: Second-year students at the College of Physical Education and Sports Sciences for Women / University of Baghdad
-Time range: from 2/15/2023 to 5/30/2023
-Spatial area: Stadium of the College of Physical Education and Sports Sciences for Women /University of Baghdad

Method and Procedures:

The method means "following certain logical steps in dealing with problems or phenomena and dealing with scientific issues in order to reach the discovery of the truth" (Al-Kandari and Al-Dayem) (6), and this means that each research has a special method that is followed to solve its problem, and the two researchers used the descriptive method in the manner of relationships. Correlation due to its suitability to the nature of the research problem.

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The research population was determined by the female students of the second stage in the College of Physical Education and Sports Sciences for Women / University of Baghdad for the academic year (2022-2023), who numbered (71) students, divided into four sections (A, B, C, D). The research sample was chosen randomly. By lottery method to represent:

-The exploratory experiment sample: (9) female students from Division (A), with a percentage of (12.67%)

-Sample numbers: They numbered (40) female students from Divisions (C-D). The number of female students in Division (C) was 20, and the number of female students in Division (D) was 20, with a percentage of (56.33%).

-Application sample: It is (22) female students from Divisions (A-B), with a percentage of (30.98%), for the purpose of obtaining. Required information and data. To solve the research problem, the two researchers used many methods and tools, namely (Arab and foreign sources - the International Information Network - the Iraqi Virtual Library - forms for recording and transcribing data - an interactive thinking scale - skill tests - a personal computer (Dell).

The researchers used the following tests and scales:

-Interactive thinking scale:

1- After reviewing the standards prepared in this field, the two researchers decided to use the interactive thinking scale prepared by the researcher (Alaa Hassan Hatem) (7) and modify it to suit the game of handball. The researchers presented the scale to the experts, as the scale consists of (30) items and (3) Alternatives to the answer are (always, sometimes, never), and the correction key for this scale is (3-2-1), and the highest score for this scale is (90), and the lowest possible total score is (30), with a hypothetical mean (60).

2-Testing the accuracy of aiming by jumping in front: (Ghufran and Widad) (8)

Test name: Shooting from a forward jump

Tools: Handball court, 6 legal handballs, two squares (60 x 60) cm suspended in the goal.

Performance method: Shooting is done from a point located at a right angle to the middle of the goal line and 10 meters away from it for males and 9 meters for females, provided that the shooting is preceded by preparation for running in a two- and three-man rhythm, noting that the shot is made at two specific targets placed in the upper corners of the goal so that their dimensions are (60 x 60 cm).

Conditions: It is not permissible to exceed the limited point for shooting.

-Shooting is done once at the right target and once at the left target.

-Shooting is done by jumping in front.

-Each player has 3 attempts (for each pending goal).

Scoring: The shot is considered valid when the ball hits the target if it collides with its borders. That is, the total number of balls that hit the target and its borders is counted from a total of 6 attempts.

-Handling and receiving on the wall for a distance of (3) meters (return) (2) 3

Purpose of the test: - To measure the skill of handling and receiving

Tools: handball, stop watch, flat wall

Performance specifications: The player stands behind the line drawn on the ground at a distance of (3) m so that he does not touch it during the test. The player passes the ball to the wall, receives it, and continues passing and receiving for as many times as possible in the specified time.

Recording: The number of passes and receipts is counted within 30 seconds

The two researchers conducted the exploratory experiment on a sample of (9) female students on (2/19/2023) by applying skill tests and the interactive thinking scale for the purpose of preparing the reasons for success when applying the main test to the research sample and to ensure that the sample understood the test and scale, and in order to avoid any errors or difficulties when

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conducting the test and distributing the scale to the application sample in order to avoid and avoid them, and training the assistant work team on how to apply the tests and the scale and knowing the time needed to take the test and the time it takes to answer the scale. Among the results of this experiment were that all the tests were understandable to the students and that the answer instructions were clear. The average time to answer the scale was about (10 minutes).

The main experiment was conducted for each of (Interactive thinking - aiming from jumping forward and handling from above the head) on the application sample, which numbered (39) female students on (20-21/2/2023). The interactive thinking scale was applied and distributed to the research sample in the halls. Academic data was then collected in special forms, with each student having her own grade for the purpose of being treated statistically. The two researchers also conducted skill tests for the skills under study on the outdoor handball court, and the data was recorded and transcribed into special forms for statistical processing. The two researchers used the statistical package (SPSS) to extract their results.

Results:

Table (1)
It shows the results of the interactive thinking scale and the shooting skills of forward jumping and overhead handling in handball.

variable	measuring unit	S	A	Calculated t value	Error level	Statistical significance
Interactive thinking	degree	82,461	8,812	58,565	0,000	significance
Ability to shoot from jumping forward	degree	4,564	1,333	21,372	0,000	significance
Over-the-head handling skill	time	18,128	3,262	34,705	0,000	significance

Table (2)
It shows the results of the correlation between interactive thinking and the shooting skills of forward jumping and overhead handling in handball

variable	R-value calculated interactive thinking	Error level	Statistical significance
Ability to shoot from jumping forward	0,932	0,000	significance
Over-the-head handling skill	0,889	0,000	significance

Significant at an error level smaller or equal to (0.05)

Discussion:

Through the results presented in the aforementioned tables (1-2), which show that the female learners possess interactive thinking and also have an appropriate degree in the skill performance of the two skills under study. The results also showed that there is a correlation between interactive thinking and the skills of overhead shooting and overhead handling. This indicates the importance of interactive thinking with the skills of forward jumping and overhead handling, as these two skills are among the most important skills in handball, and the student must possess information. And ideas that help her learn these two skills in order to stay away from boredom and boredom and do group work to solve and overcome problems. It has also been shown that female students have a major role in the educational process for the two skills by participating very effectively through increasing the drive towards performance and freedom in the practical application of the two skills, and this in

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turn leads to independence and thus Enhancing self-confidence, improving their outlook on themselves, and increasing their motivation towards performance. The researchers also attribute to the role of the teacher in teaching the students skills, especially the shooting skills of jumping forward and handling from above the head, and helped the students by providing them with the opportunity to interact among themselves and find solutions in order to reach Good performance of these two skills under study and the presentation of their ideas completely freely and in a scientific, thoughtful manner, aware of the educational situations, because the students have the opportunity to engage in interactive intellectual practice of play situations, criticize and analyze them in order to arrive at ideas that can be implemented independently, as the study of (Hind Abdel Salam and Hoda Abdel Samie) confirms (9). When we want to develop thinking among female students, we must help them acquire thinking skills that indicate awareness and control of the abilities, strategies, resources, and means we possess to perform tasks more effectively.

The study (Safa Abdel Karim and Naglaa Abbas) (5) also mentions that learning in its broad sense means everything that an individual seeks to acquire information, ideas, knowledge, abilities, trends, habits, inclinations, and skills of various kinds, whether they are mental, motor, emotional, or emotional, and whether this is achieved acquired in a purposeful or spontaneous manner." The study of (Atheer Khalil Ibrahim and Alia Essam Ahmed) also confirms that "previous experience has a role in using intelligence to solve learning problems" (1) and the study of (Jian Ahmed Muhammad and Sahar Hurr Majeed) states that "the exploration and innovation stage addresses students' abilities to search for answers." For their own questions that were generated by them through observation, measurement, and experimentation, through their passing through new experiences for them, and through their performance of new experiences" (4)

Through the results, it becomes clear to the two researchers that interactive thinking has an important role in improving the learners' performance of the skills of handling from above the head in front and shooting from jumping in front, and that this type of thinking is close to the Iraqi reality, where this type of thinking is needed to repair to a large extent what has been corrupted by technology. Interaction between individuals and even within the same family. Therefore, the global trend has become to think in coordination with others to solve the problems facing the student and share the problems facing them with those close to them so that they find logical solutions that lead to improving their performance.

Conclusions:

1-There is a significant correlation between the interactive thinking scale and the skill of shooting in front of the jump for female students at the College of Physical Education and Sports Sciences for Women.

2-There is a significant correlation between the interactive thinking scale and the overhead handling skill for female students at the College of Physical Education and Sports Sciences for Women.

Author's declaration:

Conflicts of interest: None

We confirm that all tables and figures in this article are ours and written by the researchers themselves.

Ethical-Clearance: this manuscript approved by local ethical committee of physical education and sport sciences college for women on (April /2024)

Author's contributions:

All contributions of this study were done by the researchers (A.I. and L.S.) who get the main idea and work on writing and concluding also with number of experts, Aliaa Issam in Statistics, Huda

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Recommendations:

1-Emphasis on constantly using the interactive thinking scale to find appropriate solutions and to know the students' abilities in thinking, innovation and exploration to improve the level of performance.
2-Conduct a similar study on female students in various sporting events.
3-Increase the number of programs and activities that contribute to developing interactive thinking among students and promoting individual and group activities.

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التفكير التفاعلي وعلاقته بمهارتي التصويب من القفز اماما والمناولة من فوق الرأس بكرة اليد للطالبات

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مستخلص البحث

هدف البحث الى التعرف على درجة التفكير التفاعلي واداء مهارتي التصويب من القفز اماما والمناولة من فوق الراس بكرة اليد لطالبات المرحلة الثانية في كلية التربية البدنية وعلوم الرياضة للبنات/ جامعة بغداد وكذلك التعرف على مدى ارتباط التفكير التفاعلي بإداء المهارتين قيد الدراسة لدى عينة البحث واعتمدت الباحثتان على المنهج الوصفي باسلوب العلاقات الارتباطية على عينة من طالبات المرحلة الثانية لشعبتي (ج, د) البالغ عددهن (39) طالبة, أما مشكلة البحث فقد ظهرت من خلال متابعة الباحثتان لنتائج الطالبات وخاصة بالجانب العملي تبين بأن هنالك بعض الصعوبات التي تواجهها طالبات المرحلة الثانية في كلية التربية البدنية وعلوم الرياضة للبنات عند تعلم مهارتي التصويب من القفز اماما والمناولة فوق الرأس بكرة اليد على الرغم من المحاولات والجهود التي يبذلها مدرس المادة وصولاً بهم نحو تعلم أفضل وبعد تطبيق اداة البحث وتحليل البيانات احصائياً تبين أن هنالك علاقة ارتباط ايجابية بين التفكير التفاعلي ومهارتيَ المناولة من فوق الرأس والتصويب من القفز اماماً واستناداً لتلك النتائج استنتجت الباحثتان أن الطالبات يتمتعن بدرجة من التفكير التفاعلي الايجابي الفردي او الجماعي فيما بينهن وبين التدريسية وكذلك هناك علاقة ارتباط معنوية بين التفكير التفاعلي ومهارتي التصويب من القفز اماماً والمناولة من فوق الرأس وقدمت الباحثتان بعض التوصيات ومن اهمها استخدام مقياس التفكير التفاعلي باستمرار لإيجاد الحلول المناسبة ولمعرفة قدرات الطالبات في التفكير والابتكار والاستكشاف لتحسين مستوى الأداء. وهذا ما يحقق احد اهداف التنمية المستدامة للامم المتحدة في العراق (التعليم الجيد).

الكلمات المفتاحية | **التفكير التفاعلي ، كرة اليد**