



The effects of the integrative strategy on fostering reflective thinking and imparting basic basketball offensive techniques to female students

Los efectos de la estrategia integradora en el fomento del pensamiento reflexivo y la transmisión de técnicas ofensivas básicas de baloncesto a estudiantes femeninas

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Abstract

Objective: The objective of this study is to develop instructional materials that teach fundamental basketball skills to female students enrolled in the first year of the College of Physical Education and Sports Sciences for Girls at the University of Baghdad while also encouraging reflective thinking (RT).

Research methodology: the researcher chose the experimental methodology with the two equal group's method. Finding the community and choosing the right sample for the study's kind and goals are essential to the accomplishment of any research project. A sample for the primary experiment was picked at random after the researcher confirmed the students' first-year basketball curriculum. This study community consisted of (40) fourth-year female students for the year (2022-2023). The number of students was split into (2) groups. Twenty students in-group (B) represent the experimental group, which follows the curriculum that the researcher has developed in an integrated, strategic manner.

Result: The method of selecting the (integrative) strategy that was given to the students is right to the level of their skills and characteristics, as well as while taking into consideration the distinct characteristics among them by means of the presentation offered by the stations—from a complete demonstration of the skill, then a slow delivery, then the appearance of the integrated strategy—is also attributed as the reason for the superiority of the members of the experimental group.

Concludes: The study concludes that the integrated approach has a beneficial impact on the post-tests for reflective thinking and the growth of basketball skills.

Keywords

Integrative Strategy; Reflective Thinking; Offensive Skills; Female Basketball.

Resumen

Objetivo: El objetivo de este estudio es desarrollar materiales didácticos que enseñen habilidades fundamentales de baloncesto a las estudiantes matriculadas en el primer año de la Facultad de Educación Física y Ciencias del Deporte para Niñas de la Universidad de Bagdad, fomentando al mismo tiempo el pensamiento reflexivo (PR).

Metodología de investigación: el investigador eligió la metodología experimental con el método de dos grupos iguales. Encontrar la comunidad y elegir la muestra adecuada para el tipo y los objetivos del estudio son esenciales para la realización de cualquier proyecto de investigación. Se seleccionó una muestra para el experimento principal al azar después de que el investigador confirmara el plan de estudios de baloncesto de primer año de las estudiantes. Esta comunidad de estudio consistió en (40) estudiantes femeninas de cuarto año para el año (2022-2023). El número de estudiantes se dividió en (2) grupos. Veinte estudiantes del grupo (B) representan el grupo experimental, que sigue el plan de estudios que el investigador ha desarrollado de manera integrada y estratégica.

Resultado: El método de selección de la estrategia (integrativa) que se les dio a los estudiantes es adecuado al nivel de sus habilidades y características, y al mismo tiempo, teniendo en cuenta las características distintivas entre ellos mediante la presentación ofrecida por las estaciones (desde una demostración completa de la habilidad, luego una entrega lenta, luego la aparición de la estrategia integrada), también se atribuye como la razón de la superioridad de los miembros del grupo experimental.

Conclusión: El estudio concluye que el enfoque integrado tiene un impacto beneficioso en las pruebas posteriores para el pensamiento reflexivo y el crecimiento de las habilidades del baloncesto.

Palabras clave

Estrategia integradora; Pensamiento reflexivo; Habilidades ofensivas; Baloncesto femenino.

Introduction

The technological revolution in education has caused numerous scientific and informational changes in the modern world, which have had an impact on education generally. These developments must be kept up with in order for education to benefit from them (Aldeen&Alaa, 2021). According to Al-Janabi et al. (2024), there is rising interest in educational institutions with strong capacities for growth, transformation, and adaptation to increasing environmental factors. Any advancement in the sectors of life that a person aspires to must involve all of their general and field-specific abilities in order to be attained. The desire for instructors and math experts to excel at the highest levels must be paired with the use of contemporary teaching techniques. Effective contemporary strategies encourage interaction and enthusiasm among students, help them recognize various behavioral patterns, help them learn to express their opinions, help some students overcome their shyness and embarrassment, and speed up and consolidate their learning (Mehdi, & Mohammed, 2023).

The ultimate goal of education in our current era is to develop thinking in an individual, and from here comes the role of the educational institution in preparing individuals who are able to solve unexpected problems through the use of multiple and different alternatives in renewable situations, and this is what contributes to making appropriate decisions that are in line with the drawn strategy (Al-Amiri, 2017). The strategy of integration includes merging the elements of education in the various subjects on the assumption that the components of cumulative knowledge are interrelated and not separate (Aziz., & Aljnabi, & Abdul Ameer 2022) . Among the benefits of this strategy is that it helps to find interdependencies between the different subjects, confirms the positive mutual dependence among the members of the group, encourages individual responsibility, and directs social skills to work effectively within the group. On the assumption that the parts of the cumulative knowledge are interrelated and not separate, the integration technique involves combining the educational components in numerous topics. This approach has the advantages of encouraging individual responsibility and directing social skills to function well within the group, as well as aiding in the discovery of interdependencies between various subjects. It also demonstrates the positive mutual dependency among group members. Due to their significance, which is demonstrated by the fact that learners frequently interact positively with them, the majority of experts have purposefully created numerous tools that facilitate learning and are used to learn skills. As a result, the learner is able to apply the skills they are being taught correctly, and they also add an exciting and enjoyable element to performances (Hashem, et al ,2022).

The physicality of the task makes it useful for teaching, learning, and performing the different basketball abilities. Additionally, it encourages students to consider who among their peers has put in the finest effort. Any development in the areas of life that a person seeks to reach must invest all the capabilities and capabilities that are specific to that field to reach that development. The ambition embraced by teachers and specialists in the sports field to reach the highest levels must be coupled with following modern educational methods (Hassan & Alwan, 2022). The teaching process is the cornerstone of the desired behavior of individuals as they acquire knowledge, values, customs, and other patterns of behavior (Adham & Al-Zuhairi, 2022). The use of human and applied sciences in the sports field, primarily physiology, anatomy, sports medicine, biomechanics, and sports psychology, has led to the advancement of games and activities (Sadiq & Nseif, 2022). When choosing female students, it is particularly significant to concentrate on the talents, the basic skills required by the type of activity, that allow each participant to be capable to demonstrate multiple motor tasks, that serve as the basis for the arrival of the person to the most advanced levels of the activity. Sporting skills have practical needs, so it is necessary to understand the most effective talents in each sport and for sure include the basic skills for turning into better. Technology development significantly contributes to giving instructors the tools and equipment they need to help learners receive information. One type of modern learning technology is the integrative technique. (Haneen maysam abbss, 2023) believes that building the personality of learners occurs through a set of successful strategies that lead to achieving the required goals that require the adoption of regular and elaborate planning, in addition to its weak focus on how the public integrates with the sport managed by the sports institution and the adoption of recreational means that contribute to increasing Demand for it. The media is based on a strict sequential structure that allows each student to advance in the educational section based on his unique qualities and to remain active and positive throughout his journey. Basketball is one of the team activities that a significant number of athletes enjoy playing since it requires a variety of talents that make it enjoyable to practice and watch.



A crucial foundation in the implementation of the art and methods of play in the game of basketball is the fundamental skills because of their delight and quickness in performance, and they are crucial in implementing strategies. This is crucial to achieving motor development, learning the skills, and determining the appropriate motor pathway for fundamental abilities through continual practice. Thus, the need for the thinking component of basic skills emerges. As a result, the researcher examined an integrative method in the development of reflective thinking and the teaching of some fundamental basketball skills to female students.

The research topic is that the integrative approach is a type of modern educational technology used to teach various mathematical skills. Moreover, it is a whole system of schools that works together to achieve predetermined objectives through practical interaction and programmatic thought. The topic of the study arose as a consequence of the fact that the techniques used in teaching do not enable learners to execute and acquire skills in the sport of basketball at a higher level for female students. The researcher progressed in delving into this experiment by employing a supplementary technique during the session to get the learners up to a level of skill and advanced thinking of some of the basic basketball skills of female students in the basics stage of college. As a result, the researcher chose to teach the influence of an integrative method in fostering reflective thinking and teaching some fundamental basketball skills to students in the second year of the College of Physical Education and Sports Sciences for Females at the University of Baghdad.

Method

In scientific research, the method is a process for gathering information and data in order to reach a conclusion and solve an issue (Sadiq & Nseif, 2022). As a result, due to the nature of the research problem, the researcher chose the experimental methodology with the two equal groups method.

Research hypothesis

The experimental group and the control group performed statistically differently on pre- and post-tests in terms of teaching female students some fundamental basketball skills and fostering RT.

Research areas

Research focus: The first-year female students at the University of Baghdad, College of Physical Education and Sports Sciences for Females, which had (40) students enrolled for the academic year (2022-2023). The geographic area: University of Baghdad's College of Physical Education and Sports Sciences for Females. The temporal range: from (1/2/2023) to (5/11/2022).

Sample

Finding the community and choosing the right sample for the study's kind and goals are essential to the accomplishment of any research project. A sample for the primary experiment was picked at random after the researcher confirmed the students' first-year basketball curriculum. This study community consisted of (40) fourth-year female students for the year (2022-2023). The number of students was split into (2) groups. Twenty students in group (B) represent the experimental group, which follows the curriculum that the researcher has developed in an integrated, strategic manner. Twenty students from group (A) work as per the subject researcher's instructions, and make up the control group. The participants in the two groups were subjected to equivalency by the researcher

Table 1. Statistical parameters

test name	Measuring unit	Experimental group		Control group		Calculated T- value	Level of significance	Sig
RT	score	38.933	7.564	37.400	10.716	0.353	0.042	Not Sig.
high plump	second	18.37	1.94	17.37	6.45	1.73	0.421	Not Sig.
thoracic handling	degree	11.917	3.679	12.667	4.097	0.472	0.642	Not Sig.
Aiming from stability	degree	2.700	0.470	2.500	0.513	1.285	0.206	Not Sig.

Study utilized Tools

Utilizing what was reported in (Ahmed, & Majeed, 2022), which was expressed by Arab and other



sources, the authors employed the following techniques from science to gather data: the survey experiment, examinations and metrics, statistical techniques of the (SPSS) system, and in-person interviews (Majeed, 2023). As well as the thoughts of gentlemen who are professionals in the field of basketball instruction. Reflective thinking scale Appendix (1)

Field research procedures

First: the reflective thinking test (the reflective thinking scale). The researcher developed the students' reflective thinking using the reflective thinking scale (Appendix 1). This scale comprises (16) components divided into four levels (Bin Aqla, 2014):

- The typical work: This refers to all that the individual has already learned via frequent use and has become an automatic activity.
- Understanding: This level entails comprehending and assimilating concepts without considering their relevance or meanings in the individual or the situation's behaviors.
- Reflection: It refers to all of the emotional and mental actions in which people engage in order to explore and delve into their experiences in order to get new insights and assessments.
- Critical reflection: This level represents the highest levels of reflective thinking and involves fundamental shifts in viewpoints. It is achieved when the individual becomes able to justify his viewpoints, thoughts, feelings, and actions.

Second: Description of the scale and method of aiming:

Reflective thinking in aiming according to the five-point response scale. The scale has (16) items, with (5) items assigned to each level: (totally agree), (agree), (not sure), (disagree), and (completely disagree). Each paragraph was assigned a degree, so the greatest score for the scale is (80) degrees, as shown by the scale's paragraphs.

Identify the techniques employed in the research

The researcher investigated the value of the following fundamental basketball skills, which are taught in basketball courses: high thumping, chest handling, and steady aiming.

Research tests

1. The test is known as the straight high plump (20) meters (Sami, 2000). The test's goal is to determine the high rectal plump velocity. A distance of (20 meters) establishes a line for the start and another for the end, a timer, and basketball are the instruments and devices employed. The tester starts running as soon as possible with a high jump from behind the starting line after hearing the starting signal from the referee, and the recorder turns on the watch when the player starts running until he crosses the finish line, the uniform that determines the end of the 20-meter distance. Legally, the high plump procedure must be carried out in the lab. One attempt is allotted to each player. The tester's time is calculated starting from the second the start signal is given and ending one-tenth of a second after it passes the finish line.

2. A test of handling and receiving the ball towards the overlapping circles on the wall from a distance of (7.50m) (Salloum, 2004) (Radhi, M. N., & Obaid, S. H., 2020).

The aim of the test: to measure the accuracy of handling towards the target.

Tools required: two basketballs, measuring tape, chalk, and non-elastic rope. Smooth wall.

Drawing instructions: Use chalk, non-rubber rope, and a nail as the common center to create three overlapping circles on a smooth wall.

The sizes of the overlapping circles are sorted from the smallest to the largest as follows:

- The first small circle has a diameter of (45) cm.
- The second medium circle's diameter is (98) cm.
- The third, largest circle has a diameter of (150) cm.
- The lower edge of the largest circle is 90 cm off the ground.
- On the ground, mark a line 7.50 m away from the smooth wall directly in front of it.

A detailed account of performance

- The player has the ball in his hand and is positioned directly behind the starting line.
- Each player is only allowed to use one chest handle during practice in order to feel the ball.
- The player then uses both hands to directly handle the ball on the overlapping circles.
- The player continues to repeat this performance for (10) direct and consecutive chest tackles.
- Each player has only one attempt, and the player must not cross the line drawn on the ground.



Administration of the test:

- A recorder who calls the names first and notes the handling results second.
- To ensure that performance and counting are done correctly, an arbitrator is stationed close to the player.

The calculation of scores:

- Calculating three (3) points for each direct chest tackle made after the ball has landed in the first tiny circle.
- When the ball strikes the second large circle, two points are recorded.
- maximum degree for the test is 30 points, with 1 point being recorded when the ball touches the common line connecting the two circles.

3- Aiming test from behind the free throw line (10 shots) (Al-Seid, 2022):

The test's objective is to assess a free-throw player's accuracy. A legal basketball court, a legal basketball goal, and ten legal basketballs are required. The player must assume a standing stance with the ball behind the center of the free-throw line to complete the performance. Each performer divides into two groups, each of which consists of five consecutive shots. The player is free to shoot into the basket however, they see fit. Each player only gets one shot. Each successful shot (where the ball goes into the basket) results in the calculation and recording of one point. When the ball misses the hoop (fails), the player does not record a score. The player's score is ten shots.

Exploratory experiment

The exploratory experiment was required after the research tests were proposed by specialists, game developers, and training specialists (Leqaa, 2020). The exploratory experiment served as practical training for the author to identify the drawbacks and advantages of the test so that we may take precautions against them (Allawi &Radwan, 2007). On December 15, 2022, the author performed a research experiment on a group of six female fourth-year students from the University of Misan. On 12/15/2022, the author administered the RT test, which consists of (16) items, to an exploratory group of forty female students from the two divisions (A) and (B), after selecting the test's final sentences. Following the procedure, the author gathered the sample members' data and put it in tables before doing a statistical analysis.

Statistical analysis of items for the RT scale

Following these procedures, the researcher used the two extreme groups approach to extract the difficulty coefficient:

- To determine the overall score each person received on the test items, a total correction of the scale items is made.
- For the entire group, the final results of scores are ranked from highest to lowest.
- To account for the sample size of (40) students, the total scores are split into two sections, each of which has (50%) of the total number of these points.
- Counting the proportion of students in each group who successfully answered the paragraph's questions.

After processing the scores of the sample individuals statistically, all (16) paragraphs were included since the normality of their difficulty coefficient exists, as the creators of tests and standards advise removing phrases with difficulty coefficients of value less than (0.10%) or more than (0.90%) (Al-Ajeel, 2001).

Coefficient of differentiation

First: consider the two terminal groups: To get the spinal differentiation coefficient, we must perform the following steps (Mohammed &Kzar, 2021b):

Sorting the testers' points for each paragraph from high to low.

Sorts the participants with the highest points into one group and those with the lower points into a second group.

Assigning (50%) of the high-scoring questionnaires and (50%) of the low-scoring questionnaires.

The use of the differentiation coefficient

Second: internal consistency: it is known as the internal consistency of the scale because the author used the binary correlation coefficient (by Cyril) between the score of one paragraph and the total score of the scale and all of the sample subjects. It refers to calculating the correlation coefficient between the



score of one paragraph and the score of the field. All of the sentences achieved computed values that were greater than the tabular values of (0.195) at a degree of freedom of 38 and less than a significance level of (0.05), proving that none of the sentences were rejected.

Table 2. Shows the discriminatory ability of the items on the RT scale between the upper and lower groups.

Paragraph	The lower group		The upper group		T-value	sig	The result
1	2.457	0.505	5.000	0.000	29.764	0.000	Sig.
2	2.086	0.284	4.771	0.426	31.031	0.000	Sig.
3	2.114	0.323	4.943	0.236	41.879	0.000	Sig.
4	2.171	0.382	4.886	0.323	32.089	0.000	Sig.
5	2.143	0.355	5.000	0.000	47.610	0.000	Sig.
6	2.000	0.000	4.943	0.236	73.927	0.000	Sig.
7	2.000	0.420	5.000	0.000	42.249	0.000	Sig.
8	1.943	0.236	5.000	0.000	76.798	0.000	Sig.
9	2.257	0.505	5.000	0.000	32.105	0.000	Sig.
10	2.000	0.000	4.657	0.482	32.641	0.000	Sig.
11	2.086	0.445	4.914	0.284	31.681	0.000	Sig.
12	1.857	0.430	4.943	0.236	37.237	0.000	Sig.
13	2.000	0.000	5.000	0.000	28.163	0.000	Sig.
14	1.800	0.406	4.714	0.458	29.764	0.000	Sig.
15	1.914	0.284	4.800	0.406	34.464	0.000	Sig.
16	2.114	0.323	4.800	0.406	30.640	0.000	Sig.

Table 3. Shows the Correlation coefficient between the paragraph score and the total score of the RT scale

Paragraph	Simple correlation coefficient	Sig	The result	Paragraph number	Simple correlation coefficient	Sig	The result
1	.327**	0.000	Sig.	9	.347*	0.000	Sig.
2	.240**	0.000	Sig.	10	.436*	0.001	Sig.
3	.260**	0.000	Sig.	11	.255*	0.000	Sig.
4	.342**	0.000	Sig.	12	.259**	0.000	Sig.
5	.414**	0.000	Sig.	13	.254**	0.000	Sig.
6	.377**	0.000	Sig.	14	.379**	0.000	Sig.
7	.413**	0.000	Sig.	15	.227**	0.000	Sig.
8	.382**	0.000	Sig.	16	.240**	0.000	Sig.

Curriculum application

Pre-tests: On December 15, 2022, at 10:00 a.m., the author administered the pre-tests before starting the instructional program.

The experimental group and cooperative learning used the curriculum for learning that the author had created. Additionally, the control group, to which the course professor applied the approved curriculum. The above-mentioned time marked the start of the test, which continued for a single day. The sporting education course is a series of scheduled events that its members put into effect through athletic endeavors, whereas the educational curriculum is an outline that must be fulfilled (Mohammed & Kzar, 2021a) (. As a result, after reviewing a number of scientific sources and taking advantage of prior experience in this area, the researcher created an instructional curriculum for the experiment group's participants. From 10/12/2022 to 30/1/2023, the researcher created educational modules. According to the length of the educational lessons, the curriculum consisted of (8) weeks, two instructional units every week, and (90) minutes for each educational unit.

The proposed curriculum's time distribution is as follows:

- Eight weeks.
- Number of instructional units per week: 1 unit, or (16 units multiplied by 8).
- There are ninety minutes in every instructional unit.
- The instructional units last (90 times 16 = 1440) minutes altogether.
- The instructional unit contains somewhere between (3 to 5) activities.

Steps to implement the IS

- Pick an educational unit from a book or other source of information and divide it into several fundamental topics.
- The creation of cooperative groups with five to six members each, each with various abilities.
- Giving each group member a portion of the reading material and recognizing them as subject-matter experts.
- Learners start in expert groups, practice, and repeat the given component until they are proficient in it.
- The experts return to their groups to impart information on their topics after finishing the application of the assignment or part of the group of experts.
- The students take a test (an evaluation) once the lesson is over.

Post-Tests: Following the same procedure that the researcher used for the pre-tests, the researcher administered the post tests for his research sample (the experimental group and the control group) on 1/2/2022, eight weeks following the experiment's allotted time frame. Regarding the time, location, and testing methods, all the prerequisites for the pre-tests and their criteria were discovered.



Statistical means

The researcher used the statistical package (17SPSS.Ver) on the electronic computer to process the results in order to achieve the objectives and hypotheses of the research.

Results

Referring at table (4) demonstrates the experimental group's pre- and post-outcomes in RT and exams (pluming-handling-aiming) in basketball. It becomes evident to us that the arithmetic mean of post-tests is (67.133) and a value of (10.656) for the standard deviation whereas the value of the arithmetic mean of the pre-test is (38.933) and the value of the standard deviation is (7.564). The arithmetic means of the pre-test and post-test values for the test (high plumpness) are, respectively, (18.37) and (12.25), while the corresponding standard deviations are, respectively, (1.94) and (4.62). The arithmetic means of the pre-test and post-test values for the test (thoracic handling) are, respectively, (11.91) and (18.583), while the corresponding standard deviations are, respectively, (3.679) and (2.610). The arithmetic means of the pre-test and post-test values for the test (aiming of stability) are, respectively, (2.700) and (7.400), while the corresponding standard deviations are, respectively, (0.470) and (0.681). The difference is therefore statistically significant and in the advantage of the post-test utilizing the T-Test standard for related groups under the level of significance (0.000), which indicates their significance at the level of significance (0.05) along with a degree of freedom (19).

Table 4. Shows the Results before and after the experimental group in RT and tests (Plumping - Handling - Aiming) in basketball

Tests Name	Measuring unit	Pre-test		Post-test		Calculated T-value	Sig	The result
		Going to	±	Going to	±			
RT	score	38.933	7.564	67.133	10.656	8.96	0.006	Sig.
High Plumping	second	18.37	1.94	12.25	4.62	8.68	0.004	Sig.
Thoracic Handling	score	11.917	3.679	18.583	2.610	8.42	0.000	Sig.
Aiming from stability	score	2.700	0.470	7.400	0.681	36.79	0.001	Sig.

Likewise, by taking a look at Table (5), which displays the pre- and post-outcomes of the control group's (plumping-handling-aiming) basketball tests on the reflective thinking scale. The arithmetic means of the pre-test and post-test values are, respectively, (49.667) and (37.400), while the corresponding standard deviations are, respectively, (12.299) and (10.716). As for the high plumpness test, the arithmetic means of the pre-test and post-test values for the test (aiming of stability) are, respectively, (17.37) and (17.12), while the corresponding standard deviations are, respectively, (6.450) and (5.46). As for the thoracic handling test, the arithmetic means of the pre-test and post-test values for the test (aiming of stability) are, respectively, (12.700) and (14.000), while the corresponding standard deviations are, respectively, (4.097) and (3.931). As for the aiming test of stability, the arithmetic means of the pre-test and post-test values for the test (aiming of stability) are, respectively, (2.500) and (4.950), while the corresponding standard deviations are, respectively, (0.513) and (0.826). As a result, the difference is statistically significant and favorable of the post-test at the level of significance (0.05) and with 19 degrees of freedom.

Table 5. Shows the Results before and after the control group in the RT scale tests (plumping-handling-aiming) basketball

Test Name	Measuring Unit	Pre-test		Post-test		Calculated T-value	Sig	The result
		Going to	±	Going to	±			
RT	score	37.400	10.716	49.667	12.298	3.71	0.004	Sig.
High Plumping	second	17.37	6.45	17.12	5.46	2.45	0.002	Sig.
Thoracic Handling	score	12.667	4.097	14.000	3.931	5.20	0.000	Sig.
Aiming from stability	score	2.500	0.513	4.950	0.826	11.60	0.000	Sig.

Likewise, by taking a look at Table (6), which displays the outcomes of the RT scale tests (plumping, handling, and aiming) for the experimental and control research groups. We can see that, on the RT scale, the dimensional arithmetic means of the pre-test and post-test values for the experimental and control research groups are, respectively, (67.133) and (49.667), while the corresponding standard deviations are, respectively, (10.656) and (12.298).

Table 6. Shows The post-results of the experimental and control research groups in the RT scale and the (plumping-handling-aiming) tests of basketball

Test Name	Measuring Unit	Experimental group		Control group		Calculated T-value	Sig	The result
		Going to	±	Going to	±			
RT	score	67.133	10.656	49.667	12.298	7.91	0.001	Sig.
High Plumping	second	12.25	4.62	17.12	5.46	4.80	0.004	Sig.
Thoracic Handling	score	18.583	2.610	14.000	3.931	3.365	0.003	Sig.
Aiming from stability	score	7.400	0.681	4.950	0.826	10.241	0.002	Sig.

The arithmetic means of the pre-test and post-test values for the test (high plumpness) for the experimental and control research groups are, respectively, (12.25) and (17.12)), while the corresponding standard deviations are, respectively, (4.62) and (5.46). The arithmetic means of the pre-test and post-test values for the test (thoracic handling) for the experimental and control research groups are, respectively, (18.583,) and (14.00), while the corresponding standard deviations are, respectively, (2.16) and (3.931). Regarding the test (aiming from stability), the arithmetic means of the pre-test and post-test values for the test (aiming from stability) for the experimental and control research groups are, respectively, (7.400) and (4.950), while the corresponding standard deviations are, respectively, (0.681) and (0.826).

Discussion

In order to properly do the skill, students must retrieve their mental images of the skill in all of its performance-related components (Mashkour, 2021). This involves looking for patterns and using those patterns to accomplish the skill. Therefore, Tables (4), (5), and (6)'s findings revealed that it had a favorable impact on the RT scale. The tests (plumping-handling-aiming) in basketball for female students indicate that there are significant differences between the post-tests of the control and experimental groups and in favor of the experimental group.

The implementation of the (integrative) technique accounts for the experimental group's superior performance on the scale of reflective thinking and fundamental skills tests in basketball for female students. Although these outcomes are important, the integrative strategy's significance goes beyond optimizing outcomes like achievement, good attitudes toward learning subjects, and the capacity for reflective thought (Aziz et al. 2021). If a learner cannot use their knowledge and abilities in collaborative interactions with others and develop their emotional side, they are useless. This method succeeded in removing students' feelings of boredom in their learning the traditional method because it makes the students a continuous response during the educational process, makes the instruction more engaging, and inspires significant and important independence on behalf of the students, both of which are not possible with the conventional approach. Thus, we underline the importance of using educational materials wisely to encourage students' engagement, as it is one of the methods that work to increase motivation towards the practice of motor activity and increase effort and self-confidence, integrating the educational situation with a pleasant emotional color (Muhammad, 1991).

The adoption of the (integrative) strategy and its emphasis on the role of the student rather than the function of the instructor (Gao., 2023), as is the case in the conventional method, may be the most notable of them, as the student is a component of the educational content. Students begin repeating and rehearsing the segment they are given until they have mastered it completely. All of this is carried out under the instructor's supervision and instruction, which improves the student's self-confidence and the scientific output he produces by connecting it to his conceptual framework. In contrast to what occurs in a traditional classroom, where students rely on the instructor to impart the lesson's content, all of this raises the degree of competence, skills, and knowledge (Qatami, 2013). The structure in the personality of the individual, which needs to examine the role of cognitive and personal factors with cognitive representation in predicting problem solving skill, and the representation of knowledge or knowledge building of the individual is a cumulative structure in which his information and knowledge interact with his direct and indirect experiences, which provides a good base for processing methods, which leads it supports his ability to create (Najlaa Abbas, et al, 2023). In addition, the nature of sports work, which requires continuous interaction between players and their cooperation together, gives clarity about the extent of their awareness and awareness in implementing what is required of them (1:4969) and that exercises and games have an advantage in their special nature and diversity, whether



they are practiced with tools or without tools or It is performed individually, in pairs, or collectively. It provides students with the appropriate opportunity to express their desires and inclinations, as well as the pleasure they gain by practicing it (Rashid, Muhalhel, & Neamah, 2024).

The method of selecting the (integrative) strategy that was given to the students is right to the level of their skills and characteristics, as well as while taking into consideration the distinct characteristics among them by means of the presentation offered by the stations—from a complete demonstration of the skill, then a slow delivery, then the appearance of the integrated strategy—is also attributed as the reason for the superiority of the members of the experimental group. Since the researcher considers that the (integrative) method allows for freedom of thought in performance and implementation with this method, it ultimately led to arousing their enthusiasm and assisting them with reflective thinking for learning. novelty and originality in performance (Al-Ajeel and et al ,2001), as opposed to abstract thinking and an orientation towards facts, theories, and beyond meaning, where learning takes place through thinking with a focus on facts and concepts. As a result, the learner is better equipped to handle more challenges and make the right choices (Al-Salloum, 2001). relationship between sports culture and sports media and the great role that sports media plays in raising the level of sports culture for Baghdad University students, especially since the research sample is a sample of non-athletes and thus shows the importance of spreading awareness and sports culture through the sports media, which includes all the sports information (Mehdi, & Mohammed ,2023). the sciences deal with the physical (kinetic) side or the psychological side for this reason, researchers created a large arena for preparing and applying a lot of research that aims to develop sports achievement. (Shabib, & Saeed, 2023).

Conclusions

1. The integrative strategy has benefited the growth of basketball skill levels and post-test results in the area of reflective thinking measurement.
2. The integrative strategy is the most effective kind to gauge basketball players' ability to think critically and act skillfully.
3. Additionally, the outcomes of analytical thinking and good basketball play indicate that integrative strategy is the ideal type of technique to employ.
4. In light of students' readiness and available capabilities, we recommend the possibility of developing appropriate educational steps for students through the application of several integrative tactics. and performing research on various sports (individual-team) and teaching methods. Additionally.
5. The observation system employed in the study needs to be improved in order to better serve the instructional goals.

References

- Abd Zaid, A. M., & Neamah, I. A. H. (2021). Comparing environmental awareness under the Corona pandemic between students of the Faculty of Physical Education and Sports Sciences at the University of Kufa. *Review of International Geographical Education Online*, 11(5). <https://rigeo.org/menu-script/index.php/rigeo/article/view/1598>
- Abdul Karim Al-Salloum: *Thinking and Problem Solving*, Al-Naba' Magazine, Issue 53, 2001.
- Abdullah Al-Smadi, Maher Al-Darabie (2004). *Measurement and Evaluation between Theory and Practice*, 1st Edition, Jordan, Dar Wael for Publishing and Distribution.
- Adham, S. I., & Al-Zuhairi, N. A. (2022). Level of professional pressures during the use of e-learning teaching method among teachers of the Faculties of Physical Education and Sports Sciences in Baghdad. *SPORT TK-Revista EuroAmericana de Ciencias del Deporte*, 52-52.
- Al-Amiri, H. A. (2017). Designing a proposed program using strategies for teaching multiple creative thinking skills to develop teaching competencies for teachers of physical education. *Modern Sport*, 16(1), 13. Retrieved from <https://jcopew.uobaghdad.edu.iq/index.php/sport/article/view/76>.



- Ali Salloum (2004). Tests, measurement and statistics in the field of mathematics, Ministry of Higher Education and Scientific Research, University of Al-Qadisiyah, Al-Taif for printing.
- Al-Janabi, A. S., Hussein, S. A., Mhaibes, H. A., & Flayyih, H. H. (2024). The role of entrepreneurial leadership strategy in promoting organizational sustainability: A descriptive and analytical study. *Corporate & Business Strategy Review*, 5(3), 62–71. <https://doi.org/10.22495/cbsrv5i3art6>
- Al-Murshid Youssef Bin Aqla (2014). Levels of reflective thinking among students of Al-Jouf University, 1st edition, Saudi Arabia, Taibah University Journal of Educational Sciences.
- Badwi Shbeeb, H. ., Saeed Almousawi, S. Q. ., & Mousa Jawad, S. . (2023). Analysis of the amount of lost fluids, some blood components and mineral salts in volleyball under hot weather conditions. *SPORT TK-Revista EuroAmericana de Ciencias del Deporte*, 12, 36: <https://doi.org/10.6018/sportk.577361>
- Duaa MohibAldeen, & M. Farah Alaa (2021). The effect of the periodic investigation model on attentive control and learning the scoring skill from persistence and peaceful scoring in female basketball. *Modern Sport*, 20(3), 0175. <https://doi.org/10.54702/msj.2021.20.3.0175>.
- Fares Sami (2000). Determining Standard Levels for Some Physical Abilities and Offensive Skills in Basketball in Iraq, Master Thesis, University of Baghdad, College of Physical Education.
- Hashem, N. Y., Al Edhary, D. F., Radhi, M. N., & Hmeid, M. G. (2022). The effect of dynamic lactic exercises in the maximum oxygen consumption and lay-up shot endurance of under-20 basketball players. *SPORT TK-Revista EuroAmericana de Ciencias Del Deporte*, 2. <https://doi.org/10.33438/ijdshs.1419276>
- Hassan, D. S., & Alwan, N. M. (2022). The Ratio Of The Contribution Of Models Of Cognitive Impersonation Of Information In The Skill Of Resolving Problems And Performance Of The Skill Of Blocking In Volleyball. *Revista iberoamericana de psicología del ejercicio y el deporte*, 17(5), 316-318. <https://dialnet.unirioja.es/servlet/articulo?codigo=8569658>
- Jian Ahmed, & Dr. Sahar HurrMajeed (2022). Impact of a learning program based on a constructive learning model on basic offensive abilities of some students in basketball. *Modern Sport*, 21(3), 0136. <https://doi.org/10.54702/msj.2022.21.3.0136>.
- Leqaa Abdullah & R. P. A. (2020). The effect of complex training in developing the characteristic of strength, with speed and some offensive skills, for young basketball players. *Modern Sport*, 19(4), 0136. <https://doi.org/10.54702/msj.2020.19.4.0136>.
- Majeed, S. H. (2023). The Effect of Special Exercises According to the Differentiated Teaching Method on Mental Motivation and Learning the Skills of Basketball and Aiming for Female Students. *Revista Iberoamericana de psicología del ejercicio y el deporte*, 18(1), 117-121.
- Mohamed Hassan Allawi (1992). *Sports Psychology*, 8th Edition, Dar Al-Maarif, Cairo.
- Mohammed, N. B., & Kzar, M. H. (2021a). The Effect of the Kemp Model on Some Compatible Abilities and Learning the Skill of Peaceful Shooting in Basketball for Female Students *Revista Iberoamericana de psicología del ejercicio y el deporte*, 16(5), 4.
- Mohammed, N. B., & Kzar, M. H. (2021b). The effect of the use of exploratory exercises in improving concentration of attention and skills of chest handling and correction of basketball stability for people with special needs. *Revista Iberoamericana de psicología del ejercicio y el deporte*, 16(4), 7.
- Morad, H., & Shbeeb, H. B. (2023). The Effect of Special Exercises Using Two Designed Devices in Developing Some Defensive Handball Skills. *Revista Iberoamericana de psicología del ejercicio y el deporte*, 18(2), 153-155. <https://www.riped-online.com/author/huda-badwe-shbeeb-33773>
- Muhammad Hassan Allawi and Muhammad Nasr al-Din Radwan (2007). *Measurement in Physical Education and Sports Psychology*, Cairo, Dar Al-Fikr Al-Arabi.
- Muqdad Al-Seid (2022). The effect of competitive exercises on the enzyme (LDH) and some offensive skills of youth basketball players. *Modern Sport*, 21(2), 0129. <https://doi.org/10.54702/msj.2022.21.2.0129>.
- Najat Baqir Mashkour. (2021). Mental exercises according to the vital rhythm, its mental and physical cycle and its effect on learning some basic skills of basketball for high school students. *Modern Sport*, 20(1), 0089-0099. <https://doi.org/10.54702/msj.2021.20.1.0089>
- Najlaa Abbas, A. Z., Ali, L. A., Talal, R., Samer, L., Alwan, N. M., Ameer, Z. A. A., & Nadem, M. (2023). University Sports Media and Its Relationship to the Spread of Sports Culture at the University of Baghdad. *Revista iberoamericana de psicología del ejercicio y el deporte*, 18(3), 286-287.

- Obaid Aziz, A. K. ., Radi Aljnabi, A. H., & Abdul Ameer, B. H. (2022). Effect of an educational curriculum according to the strategy of mental maps on kinetic abilities and offensive game plans in football in university students. *SPORT TK-Revista EuroAmericana de Ciencias del Deporte*, 11, 49. <https://doi.org/10.6018/sportk.526681>
- Radhi, M. N., & Obaid, S. H. (2020). The Effect of Functional Exercises in Some Biomotor Abilities and Metabolism Rate for Volleyball Young Players. *Indian Journal of Forensic Medicine & Toxicology*, 14(4). <https://doi.org/10.37506/ijfmt.v14i1.197>
- Rana S. Mehdi, & Nadima B. Mohammed (2023). The effect of active education with a combination inside and outside the cooperative circle in learning the skills of high bounce and aiming from stability in basketball for female students. *Modern Sport*, 2(1), 0020. <https://doi.org/10.54702/ms.2023.22.1.0020>.
- Rashid, S.F. Neamah, I.A.H.(2022). THE EFFECT OF USING GAMES IN DEVELOPING SOME CONCEPTS OF TRAFFIC SAFETY FOR FIFTH GRADE PRIMARY STUDENTS *SR Revista Ibero americana de Psicologia del Ejercicio y el Deporte*, Vol. 17 n° 4 pp. 234. <https://dialnet.unirioja.es/servlet/articulo?codigo=8569658>
- Rashid, S.F., Muhalhel, H., & Neamah, I. A.-H. (2024). Analytical Thinking and its Relationship to the Performance of the Simple Response Skill in Foil Weapon for Students, *International Journal of Disabilities Sports and Health Sciences*, 7, Pages 337 – 343: <https://dergipark.org.tr/en/pub/ijds/issue/86028/1519461>
- Sabah Hussein Al-Ajeel and others (2001). Principles of educational measurement and evaluation. Baghdad, Ahmed Al-Dabbagh Office for Printing and Reproduction.
- Safa Abdul-kareem Sadiq & Najlaa A. Nseif. (2022). The relationship of three-dimensional intelligence to cognitive achievements in the subject of teaching methods. *Modern Sport*, 21(4), 0001. <https://doi.org/10.54702/ms.2022.21.4.0001>.
- Shabib, H. B., & Saeed, S. Q. (2023). The effect of the two top calming strategies (straight-fixed) for the development of special strength and some functional abilities of volleyball. *Wasit Journal Of Sports Sciences*, 27-44. : <https://doi.org/10.31185/wjoss.298>
- Technology in the Background of Internet. *Applied Mathematics and Nonlinear Sciences*, 9(1) <https://doi.org/10.2478/amns.2023.2.01697>
- Xue Gao.,(2023). Research on the Integration Strategy of Secondary School Teaching and Information
- Youssef Qatami (2013). Strategies for Learning and Teaching Knowledge, 1st Edition, Dar Al-Masirah for Publishing, Distribution and Printing, Amman

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