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The Effect of the KWL Strategy on the Acquisition of Some Basic Basketball Skills by Students

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ABSTRACT
The aim of this study was to investigate the effect of the K.W.L. strategy on cognitive achievement and the learning of some basic basketball skills among secondary school students. The researcher employed an experimental approach using a two-group design (experimental and control groups) with pre- and post-tests. The research population consisted of 120 fourth-year secondary school students at the University Co-educational Secondary School for the academic year 2025–2026. A sample of 40 students was selected at random and divided into two groups of 20 students each. The experimental group adopted the K.W.L. strategy, whilst the control group used the traditional method. The skills tests included: the chest compression test, the defibrillation test, and the first-aid assessment test, with the validity, reliability and objectivity of the tests verified. The main experiment lasted for eight weeks, with one teaching unit per week, incorporating the stages of the (What do I know? What do I want to know? What have I learnt?) within the main section of the lesson. The results showed statistically significant differences between the pre- and post-tests in favour of the post-tests in both groups; however, the improvement was greater in the experimental group. The results also showed that the experimental group outperformed the control group in all the skills under investigation, confirming the effectiveness of the K.W.L. strategy in improving skill learning and cognitive achievement in basketball. The researcher attributes this to the strategy's role in activating prior knowledge, increasing mental engagement, and enhancing motivation and feedback during learning. The study recommended the need to employ active learning strategies, particularly the K.W.L. strategy, in physical education teaching and to apply them to different sports and educational stages.

Keywords: Teaching strategies; K.W.L. strategy; Learning; Basic basketball skills.

ABSTRAK
Tujuan dari penelitian ini adalah untuk menyelidiki pengaruh strategi K.W.L. terhadap pencapaian kognitif dan pembelajaran beberapa keterampilan dasar bola basket di kalangan siswa sekolah menengah. Peneliti menggunakan pendekatan eksperimental

menggunakan desain dua kelompok (kelompok eksperimental dan kontrol) dengan tes pra dan sesudah tes. Populasi penelitian terdiri dari 120 siswa sekolah menengah tahun empat di Sekolah Menengah Co-edukasi Universitas untuk tahun akademik 2025–2026. Sampel 40 siswa dipilih secara acak dan dibagi menjadi dua kelompok yang masing-masing terdiri dari 20 siswa. Kelompok eksperimental mengadopsi strategi K.W.L., sedangkan kelompok kontrol menggunakan metode tradisional. Tes keterampilan meliputi: tes kompresi dada, tes defibrilasi, dan tes penilaian pertolongan pertama, dengan validitas, keandalan, dan objektivitas tes yang diverifikasi. Eksperimen utama berlangsung selama delapan minggu, dengan satu unit pengajaran per minggu, menggabungkan tahapan (Apa yang saya tahu? Apa yang ingin saya ketahui? Apa yang telah saya pelajari?) dalam bagian utama pelajaran. Hasilnya menunjukkan perbedaan yang signifikan secara statistik antara tes pra dan sesudah tes yang mendukung pasca-tes di kedua kelompok; namun, peningkatannya lebih besar pada kelompok eksperimental. Hasilnya juga menunjukkan bahwa kelompok eksperimental mengungguli kelompok kontrol dalam semua keterampilan yang diselidiki, menegaskan efektivitas strategi K.W.L. dalam meningkatkan pembelajaran keterampilan dan pencapaian kognitif dalam bola basket. Peneliti mengaitkan ini dengan peran strategi dalam mengaktifkan pengetahuan sebelumnya, meningkatkan keterlibatan mental, dan meningkatkan motivasi dan umpan balik selama pembelajaran. Studi ini merekomendasikan perlunya menggunakan strategi pembelajaran aktif, khususnya strategi K.W.L., dalam pengajaran pendidikan jasmani dan menerapkannya pada berbagai tahap olahraga dan pendidikan.

Kata Kunci: Strategi pengajaran; Strategi K.W.L.; Pembelajaran; Keterampilan bola basket dasar.

INTRODUCTION

The educational process in the current era is a vast field for development and innovation, as it is no longer limited to the mere transfer of information from teacher to student, but has gone beyond that to encompass the development of the learner's well-rounded personality in cognitive, motor and emotional aspects. This radical shift in educational philosophy has necessitated the search for modern teaching strategies that move beyond traditional frameworks, which treated the student as a passive recipient, and instead shift towards active learning that places the student at the centre of the educational process and holds them responsible for their own learning. Physical education lessons stand out as one of the vital areas requiring the integration of mental aspects with physical performance, as the acquisition of sporting skills and the development of motor performance depend fundamentally on the student's existing knowledge base and sensory perception. Consequently, selecting the appropriate teaching method is the cornerstone of achieving the desired educational objectives and raising students' levels of knowledge and skill acquisition.

Modern educational trends emphasise the need to use strategies based on constructivist learning theory, which views learning as an active process in which the learner constructs new knowledge based on prior knowledge. In this context, the K.W.L. (Know – Want to know – Learned) strategy stands out as one of the most important metacognitive strategies that helps organise the learner's cognitive structure and

activate their mental abilities. This strategy is based on three fundamental questions that stimulate the student's thinking before, during and after the learning process: (What do I know?) to identify prior knowledge, (What do I want to know?) to define goals and motivation, and (What have I learnt?) to assess the final outcomes. Zeno (2007) points out that this strategy not only improves cognitive achievement but also provides the learner with criteria that help them organise their self-directed learning, discovery and research from various sources to expand their knowledge. Applied studies confirm that the use of the K.W.L. strategy contributes effectively to the development of comprehension and retention skills, as it provides the student with a mental roadmap that helps them connect facts with one another, making learning more profound and sustainable (Al-Thubaiti, 2017).

Basketball is a sport that requires a high level of physical fitness and skill, as well as the need for learners to possess the ability to concentrate and persevere in training in order to master the basic skills associated with the game. Through the researcher's field observations as a physical education teacher, his monitoring of physical education lessons, and his assessment of students' performance levels in basketball skills, it became apparent that there was a disparity in the level of performance of certain basic skills among students. This may be attributed to the adoption of certain traditional teaching methods and approaches that focus on presenting the skill directly without actively involving students in the learning process or providing them with the opportunity to learn through experience, experimentation and reflection on their performance. In light of modern educational trends that emphasise the importance of using teaching models based on active learning and the active involvement of the student, there has been a growing need to employ modern teaching models that can contribute to enhancing the effectiveness of the learning process and developing both the cognitive and skill-based aspects of learners simultaneously. The K.W.L. strategy is one of the educational strategies based on a metacognitive approach (beyond knowledge), whereby the learner goes through a series of stages beginning with recalling prior knowledge (What do I know?), then setting learning objectives (What do I want to know?), and finally assessment (What have I learnt?), which helps improve the level of learning and develop learners' cognitive abilities, as well as enhancing their skill performance.

The importance of the present research stems from the urgent need to develop physical education curricula and teaching methods in educational institutions, through the adoption of global strategies that have proven successful in various scientific disciplines. This importance is evident in the attempt to establish a scientific link between the K.W.L. strategy as an independent variable, and cognitive achievement and skill learning in basketball as dependent variables, thereby providing subject teachers with a new scientific perspective on how to manage teaching units in a way that develops both thinking and skills. The importance also lies in providing the academic sports library with a specialised study highlighting the impact of knowledge-based strategies in team sports, which is in line with modern trends calling for attention to and the balanced development of students' scientific and sporting aptitudes (Hamma Saleh et al., 2026). This research therefore represents a step towards transforming the physical education lesson into a cognitive and motor laboratory that contributes to preparing students capable of continuous learning and excellence in sporting performance.

METHODS

Research Methodology

The researcher employed an experimental approach involving two matched groups (an experimental group and a control group) with pre- and post-tests, as this was deemed appropriate for the nature of the problem to be addressed. The experimental approach is defined as "an intentional and controlled change to the specific conditions of a particular event, and the observation and interpretation of the resulting changes in that event" (Al-Thubaiti, 2017, 89).

Participants

The researcher defined the research population using a purposive approach. The research population consisted of fourth-year secondary school students at the University Co-educational Secondary School, totalling 120 students distributed across four classes, for the academic year 2025–2026. The research sample was selected randomly by choosing two of the four classes, resulting in a sample size of 40 students, representing 33.33% of the research population. They were divided into two equivalent groups, an experimental group and a control group, with 20 students in each group. A pilot sample of 10 students was also selected from the same research population but outside the main sample, to ensure the validity of the experimental tools and procedures before applying them to the main research sample. The selection of the research sample from fourth-year secondary school students is attributed to the importance of this stage of education in terms of physical and mental maturity, as well as the students' regular attendance at school, which helps to ensure the continuity of the programme's implementation and the achievement of the study's objectives.

To ensure homogeneity

Before commencing the experimental procedures, the researcher took care to ensure that the research sample was homogeneous across a set of key variables that might influence the study's results, namely: age, height and weight (Table 1). The aim was to minimise the influence of extraneous factors and ensure that any differences that might subsequently emerge were attributable to the effect of the independent variable rather than to individual differences among the sample members.

Table 1. Shows the statistical indicators of homogeneity among the research sample in terms of age, height and weight prior to the experiment

Skewness coefficient	Median	Standard deviation	Arithmetic mean	Variable
0.08	16.50	0.62	16.48	Age (years)
-0.12	167.00	5.10	166.80	Length (cm)
0.19	62.00	6.40	61.75	Weight (kg)

The results of the homogeneity table indicate that the skewness coefficients for all variables (age, height, weight) fall within acceptable limits (±1), suggesting that the data distribution is symmetrical and confirming the homogeneity of the sample participants in these variables prior to the experiment.

Skill tests used in the study

1. Chest handling test (bounce wall test): (Jassim, 2016)

Purpose of the test: To measure passing speed.

Equipment and apparatus: A smooth wall marked with a rectangle (2 x 4) feet (120 cm x 60 cm), with its lower edge 90 cm above the ground; a line drawn on the floor 6 feet (180 cm) from the wall; a basketball stopwatch; chalk; and a team of assistants.

Procedure

a. The test subject stands behind the line drawn on the floor, which is 6 feet (180 cm) from the wall. Using a basketball, the test subject dribbles the ball onto the rectangle drawn on the wall as many times as possible in ten seconds, ensuring that the ball does not touch the floor during the performance. The test taker is permitted to practise the test.
b. All passes must be made from behind the line drawn on the floor.
c. It is not permitted to play the ball after it has rebounded from the wall; it must first be caught and then passed again.
d. If the ball falls to the ground during the performance, the tester is entitled to retrieve the ball and continue the performance from behind the line; however, only valid passes are counted, where the ball travels from the tester to the wall and then directly back to the tester within the rectangle marked on the wall without the ball touching the ground.

Recording: Record the number of times the player touches the ball (passes) after it rebounds from the wall within the 10 seconds allotted for the test, noting that the ball must be directed towards the rectangle each time in the manner described above from the moment the start command is given.

2. Dribbling between cones tests

Purpose of the test:

To measure the ability to control the ball and agility during a one-on-one situation. (Al-Daim and Hasanein, 1999)

Equipment and organisation:

The test requires a flat area at least 40 feet (12 m) long. Four cones or (four chairs) are used. The cones or (chairs) are placed in a straight line. A starting line 6 feet (1.80 m) long is marked on the ground and is 12 feet (3.60 m) from the first hurdle, whilst the distance between the hurdles is 6 feet (1.80 m). It is preferable to mark the ground with numbers.

Performance specifications:

The test subject stands behind the starting line holding the ball and, upon hearing the start signal, runs whilst dribbling the ball between the cones in a figure-of-eight pattern i.e. a zigzag run, continuing to run until the referee calls 'stop', which marks the end of the 30 seconds, the time limit for the test (the test subject must try not to touch the hurdles or lose the ball whilst running in a zigzag pattern).

Scoring:

One point is awarded for each zone passed (numbered from 10 to 1 within 30 seconds; for example, if the 30 seconds end at zone 8, the test subject is awarded eight points, and if the 30 seconds end at zone 9, the test subject receives nine points.

3. Peaceful Shooting Test

Test name: Peaceful aiming test in front of the target from a distance of 5 m within 15 seconds: (Jassim, 2016)

Purpose of the test: To measure the speed and accuracy of free-throw shooting within 15 seconds.

Equipment required: a basketball court, 5 basketballs, a whistle, a stopwatch, adhesive tape, a registration form.

Performance specifications:

A line 1 metre long is drawn in front of the basket, 5 metres away. The player stands on the line and, upon hearing the signal, catches the ball, shoots, and quickly returns to catch the ball again, repeating the process for 15 seconds.

Scoring: Count the number of shots taken and successful shots within 15 seconds.

Verification of the scientific basis of the skill tests used in the research by ensuring their validity, reliability and objectivity. Face validity was verified by presenting the tests to a group of experts and specialists in the fields of motor learning and basketball, who agreed on their suitability for measuring the target variables with a high agreement rate of 80%, which is scientifically acceptable. Content validity was also established as the tests cover the basic skills in basketball (chest pass, dribbling, and lay-up), as well as possessing discriminant validity due to their ability to distinguish between students' different levels. Internal consistency was also assessed based on reliability coefficients, as the square root of the reliability coefficient is an indicator of internal consistency; the internal consistency coefficient for the chest pass test was 0.95, 0.94 for the tapping between markers test, and 0.96 for the ladder climbing test. These high values indicate that the tests possess a high degree of reliability.

The reliability of the tests was verified using the test-retest method, by administering them to a pilot sample of students and then re-administering them after a period of seven days, whilst keeping all conditions of administration constant. After statistical analysis using Pearson's correlation coefficient, the results showed high correlation coefficients, with the reliability coefficient for the chest handling test reaching 0.91, and 0.88 for the between-marker tapping test, whilst the stability coefficient for the peaceful aiming test was 0.93, indicating a high degree of consistency and stability in the results. As for the objectivity of the tests, this was verified by involving two judges in recording the results, where the correlation coefficient between their scores was calculated. The results showed a high degree of agreement, with the objectivity coefficient for the chest handling test reaching 0.95, and 0.90 for the between-marker tapping test, whilst it was 0.94 for the peaceful aiming test, indicating that the tests are free from bias and rely on clear quantitative indicators. Based on the above, it is clear that the tests used possess high levels of validity, reliability and objectivity, which confirms their suitability as accurate scientific measurement tools and reinforces the reliability of the results to be obtained in this study.

Procedures

The researcher conducted two pilot studies in collaboration with the research team on a sample of 15 students from the research population, who were subsequently excluded from the main study. The aim was to develop the curriculum based on the K.W.L. strategy and to ensure the soundness of the field procedures for its implementation. The two pilot studies aimed to determine the actual time required to implement the teaching units, verify the suitability of the equipment, tools and teaching aids used, as well as identify the obstacles and difficulties that the teacher might face during practical application, and ensure the teacher's ability to implement the steps of

the strategy correctly, as well as assessing the efficiency of the support team in test administration and organisational aspects, and verifying the validity and reliability of the skills tests, their suitability for the students' level, and their ability to measure actual performance prior to commencing the main experiment.

The pre-test was then conducted on Sunday, 6 October 2025, at 9.00 am, for Year 2 students in both the experimental and control groups, The tests relating to the research variables were administered whilst ensuring that all conditions relating to the test—in terms of time, place, tools used, method of implementation and the support team—were kept constant, in order to ensure accurate and objective results.

The main experiment ran from 13 October 2025 to 8 December 2025 and comprised nine consecutive teaching units, with one unit per week; each teaching unit lasted 45 minutes. These were distributed across the three sections of the physical education lesson. The preparatory section covered administrative preparation, general and specific warm-ups, and the physical and psychological preparation of students in line with the motor performance requirements of basketball, whilst the main section involved the application of the K.W.L. strategy in both theoretical and practical aspects; the concluding section focused on cool-down and relaxation exercises and a brief review of the teaching unit.

The steps of the strategy were implemented within the main section according to a structured sequence, with the prior knowledge (K) stage beginning as the teacher announced the target skill and distributed activity sheets for students to record their previous experiences and perceptions regarding the skill, with the aim of identifying errors and misconceptions before commencing the practical application. The teacher then moved on to the 'Willingness to Learn' (W) stage by posing thought-provoking questions to help students identify what they wished to learn and master regarding the skill, and to record this in the second column of the sheet. This was followed by a technical explanation and a practical demonstration of the skill. The practical component was then carried out by repeating the proposed skill exercises individually and in groups under the direct supervision of the teacher, with the aim of correcting motor errors and adjusting body positions and movement patterns. At the end of the main section, the 'Learned Outcomes' (L) phase was implemented, during which students returned to their activity sheets to record the motor skills they had actually acquired, identify the technical errors they had encountered during the application, and discuss and self-correct them.

The teaching skills were also distributed across the nine teaching units in a progressive and interconnected manner, with units (1, 2, 3) were dedicated to teaching the tapping skill, with a focus on control of the fingertips and changes in height and direction, whilst units (4, 5, 6) were dedicated to teaching the chest pass skill, with a focus on accuracy of direction, correct timing, arm extension and follow-through with the hands, Units (7 and 8) were dedicated to teaching the lay-up shot (Lay-up shot), focusing on approach steps, jumping, and directing the ball accurately towards the backboard, whilst Unit 9 was dedicated to integrating the three skills in a composite manner through practical game situations combining dribbling and passing or dribbling and lay-up shots, with a comprehensive performance assessment.

Following completion of the training programme, the post-test was conducted on Monday, 15 December 2025, at 9.00 am. The researcher took care to replicate the exact

conditions used in the pre-test in terms of location, time, tools, the support team and the implementation mechanism, with the aim of ensuring the objectivity of the results and a high level of reliability and consistency in the measurements obtained.

Statistical Methods

The researcher used SPSS to process the data and analyse the research results with scientific rigour. Percentages were used to identify achievement rates and results for certain variables, whilst the arithmetic mean, standard deviation and median were employed to describe the data and determine its statistical characteristics. The skewness coefficient was also used to verify the homogeneity of the sample and the normality of the data distribution. The researcher used Pearson's correlation coefficient to reveal the nature of the relationship between the variables under study. Furthermore, a paired t-test was used to detect differences between the pre- and post-tests, and an independent samples t-test was used to detect differences between the experimental and control groups.

RESEARCH RESULTS

Table 2 shows statistically significant differences between the pre- and post-tests for both the experimental and control groups in all the skills under investigation, as the Sig values were below the accepted significance level (0.05), indicating an improvement in the skill performance levels of the individuals in both groups. However, the extent of improvement was greater in the experimental group compared to the control group, as the mean score in the chest pass test for the experimental group rose from (11.45) to (17.65), and in the dribbling between cones test from (6.05) to (9.05), and in the safe shooting test from (4.45) to (8.10). These significant differences confirm the effectiveness of the educational programme based on the K.W.L. strategy. In contrast, the control group achieved only limited improvement, attributable to the continuation of traditional training and routine practice during the teaching units.

Table 2. Shows the results of the pre- and post-tests for the experimental and control groups

Sig value	T-value	Standard deviation	Mean	Test	Group	Test name
0.000	18.47	1.00	11.45	Pre-experimental	Experimental	Chest manipulation
		1.04	17.65	Posterior	Experimental	
0.001	5.32	0.88	10.95	Pre-	Female	
		0.82	12.95	After me	Control	
0.000	13.26	0.76	6.05	Pre-	Experimental	The pat between the signposts
		0.68	9.05	Post	Experimental	
0.002	4.11	0.71	5.90	Pre-	Female	
		0.72	7.00	After	Control	
0.000	15.11	0.51	4.45	Pre-	Experimental	Peaceful Correction
		0.72	8.10	Post-experimental	Experimental	
0.001	4.88	0.49	4.35	Pre-trial	Female	
		0.60	5.55	After	Control	

Significant because Sig ≤ (0.05)

The results in Table 3, which presents a comparative analysis between the experimental and control groups, revealed statistically significant differences in favour of the experimental group in all skill tests, with significance levels (Sig) of 0.000—which is lower than the accepted significance level of 0.05— indicating a clear superiority of the experimental group. The researcher attributes this superiority to the effectiveness of the KWL strategy in increasing students' mental and cognitive engagement during learning, as well as its role in organising prior knowledge ( ) and linking it to practical application, which had a positive impact on the speed and accuracy of performance in chest compression, tapping and safe correction skills. Furthermore, the steps of the strategy helped to promote active participation, feedback and continuous error correction, which contributed to achieving better results compared to the traditional method used with the control group.

Table 3. Shows the results of the differences in the post-test between the experimental and control groups

Sig value	T-value	Standard deviation	Mean	Group	Test name
0.000	11.82	1.04	17.65	Trial	Chest manipulation
		0.82	12.95	Constable	
0.000	7.94	0.68	9.05	Experimental	The pat between the signposts
		0.72	7.00	The Constable	
0.000	9.63	0.72	8.10	Experimental	Peaceful Correction
		0.60	5.55	Control	

Significant because Sig ≤ (0.05)

DISCUSSION

The research results showed statistically significant differences between the pre- and post-tests, with the post-tests in the experimental group performing better in all basic basketball skills, namely chest dribbling, bounce dribbling and jump shooting, as well as the experimental group's superiority over the control group in the post-tests, which confirms the effectiveness of the K.W.L. strategy in teaching basic basketball skills to secondary school students. The researcher attributes these results to the nature of the strategy, which relies on actively engaging the student within the learning unit, as the learner becomes a central figure in the learning process by recalling prior knowledge, identifying what they wish to learn, and then assessing what they have actually learnt during skill performance (Mohsen, 2021).

The K.W.L. strategy contributed to creating a learning environment based on thinking, interaction and discussion, which led to increased levels of attention and concentration among students during skill performance, as well as increased motivation to learn. This was directly reflected in improved speed and accuracy of performance in basic basketball skills. Furthermore, the strategy's reliance on linking theoretical knowledge with practical application helped students form a clear mental image before commencing the task, thereby facilitating skill acquisition and consolidation and reducing errors during application, a finding supported by modern motor learning

principles, which indicate that integrating cognitive processes with practical application enhances the efficiency of skill learning (Magill, 2018; Schmidt & Lee, 2019).

The researcher believes that the noticeable improvement in chest-passing skills is due to the students' reliance on prior analysis of the movement through the 'What do I know?' stage, which helped them to draw upon their previous experiences regarding how to grip and direct the ball, and then develop these during practical application. As for the dribbling skill, the strategy helped to raise the level of motor awareness and neuromuscular coordination as a result of active participation in learning and the organised repetition of skill exercises. The stages of the strategy also contributed to improving the skill of gentle shooting by increasing the focus on the steps of correct motor performance and the continuous feedback the students received during the teaching unit. This is consistent with what Bashford et al. (2014) noted, namely that prior motor planning contributes to the development of skill performance and accuracy.

The researcher also attributes the experimental group's superior performance to the fact that the K.W.L. strategy provided students with the opportunity to participate in the construction of motor knowledge rather than merely passively receiving it, as students began to think, analyse and compare their past and present performance, which led to increased motor awareness and improved the learning process. Furthermore, the use of educational activity sheets helped to organise ideas and information related to the skill and link them to practical application within the lesson. This is consistent with the principles of constructivist learning, which emphasise the importance of building knowledge through experience, interaction and practical application (Carvalho et al., 2020; Metzler, 2017).

The findings of this study are consistent with the study by Mohammed (2024), which confirmed that the K.W.L. strategy contributes to improving skill learning and raising the level of motor achievement among learners; the study indicated that the strategy has a positive impact on the development of ball-rolling skills in football. They are also consistent with the study by Khazal et al. (2024), which concluded that the use of the K.W.L. strategy contributed to the development of tactical knowledge and skill abilities among football players, as well as with the study by Hussein and Salih (2022), which confirmed that the use of the K.W.L. strategy led to improved learning of basic volleyball skills as a result of increased student motivation and greater interaction within the teaching unit.

Furthermore, the results of the current study are consistent with the study by Al-Abadi (2015), which showed that the K.W.L.H strategy contributed to the learning of motor skills in gymnastics more effectively than traditional methods, and are also consistent with the study by Fathel (2025), which confirmed that the K.W.L.H. strategy achieved a clear improvement in female students' learning of the volleyball smash. Furthermore, the study by Duea et al. (2021) indicated that the use of active learning strategies in physical education lessons contributes to raising the level of skill performance as a result of increased mental and motor engagement of students during learning.

In contrast, the results of the current study differ in part from some traditional studies that relied on direct instruction and demonstration in teaching basic skills, as those studies suggested that skill improvement could be achieved through repetition alone, whereas the current study showed that integrating cognitive processes with

motor application yields better and more stable learning outcomes. Furthermore, some studies have focused on the physical aspect or skill repetition without employing active thinking strategies, whereas the current study focused on both cognitive and motor interaction, which explains the higher level of improvement in the experimental group compared to the control group. This is consistent with the findings of Light (2013) regarding the importance of learning based on understanding and active participation within sports.

The significance of the present study lies in its contribution to addressing a clear research gap, namely the scarcity of studies examining the use of the K.W.L. strategy in learning basic basketball skills within physical education lessons , particularly in the Iraqi educational environment and among students in the second stage. Most previous studies have focused on cognitive aspects or on other sports such as football and volleyball, whereas this study presented a direct practical application of the K.W.L. strategy in learning basic basketball skills and linked cognitive aspects with motor performance within the teaching unit. The study also contributed to the development of a modern teaching model that can be utilised in the development of physical education teaching methods, by moving away from traditional rote-learning approaches towards modern methods that focus on active learning, interaction and the student's active participation in the construction of motor knowledge, as confirmed by recent literature in the field of physical education and motor learning (Rink, 2014; Metzler, 2017).

CONCLUSIONS AND RECOMMENDATIONS

In light of the research findings, the researcher concludes that the use of the K.W.L. strategy contributed effectively to the development of basic basketball skills among secondary school students, as the experimental group achieved a clear advantage over the control group in chest pass, dribbling and lay-up skills. This is attributed to the nature of the strategy, which enhanced the student's role in the learning process by activating prior knowledge, stimulating thinking, and linking cognitive aspects with motor application within the teaching unit. The results also demonstrated that the adoption of modern active learning methods within physical education lessons contributes to raising the level of skill performance and improving interaction and motivation towards learning compared to traditional methods reliant on direct explanation and rote learning. The researcher therefore recommends the use of the K.W.L. strategy in teaching various sports skills, and the conduct of similar studies across different age groups and other sports to verify its effectiveness in multiple fields.

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