



THE EFFECT OF THE BLENDED LEARNING STRATEGY ON LEARNING THE SKILLS OF REBOUND HANDLING AND SCORING FROM STABILITY IN BASKETBALL

Omar Hamdi Abdul Rahma

General Anbar Educational Directorate

Anbar Education Directorate, Ministry of Education. dr.omarhamdi88@gmail.com

Huda Qahtan Tuamaa

College of Physical Education and Sports Sciences, University of Anbar, huda.qahtan@uoanbar.edu.iq

Abstract

The study aims to identify the effect of the blended learning strategy on learning the two handling skills Rebounding and scoring in basketball, and the research sample consisted of first year female students in the department Physical Education and Sports Sciences at Al-Maarif University College. The study adopted the experimental method. Due to its suitability and the nature of the problem, the statistical package (SPSS) is used to process the data statistically. The researchers concluded that the blended learning strategy has a positive impact on learning the skills of rebound handling and scoring from a standstill in basketball. The researchers recommend using strategies that give traditional education and e-learning a boost for both secondary school and university to add excitement, spread cooperative spirit, and break out of the traditional pattern of learning the basic skills for all games.

Keywords: Scoring, rebound, pre-posttests, SPSS, blended learning, stability.

Introduction

Blended education is a new strategy that combines the traditional method of learning and benefiting from... Applications of modern information technology to design educational situations that blend teaching within Classrooms and electronic teaching. It has many benefits, including saving time effort and cost, in addition to the possibility of improving the general level of academic cognitive achievement, And to help the teacher and student in providing an attractive learning environment at any place and time, without depriving them of... Social relationships among themselves or with their teachers.

This study included the introduction of a strategy that combines the traditional education followed The imperative method and modern e-learning are based on the research sample, and the strategies depend on Previous cognitive information given to learners has a positive role in their ability to accept this Information and its translation into reality in performance, and this creates a difference between one learner and another in terms of ability On translation and benefit, teaching strategies did not come randomly, but rather came as a result of experiments

Many scientific studies influenced the learner's personality, way of thinking, and translation of information over time His characteristics have become fixed, distinguishing him from other learners and therefore requiring the development of multiple skills to achieve a level of special performance at the time of lectures and their influential pressures, this requires... The learner must be conversant and master the basic skills correctly and with correct technique, so enter Researchers use these teaching strategies to try to raise the learning level of learners in certain skills of Basic basketball



The importance of research lies in the optimal use of the time and effort dedicated by the teacher and the student, integrating this strategy with the traditional strategy, giving the student the learning competence in basic skills.

Research problem

Through the experience and follow-up of researchers on the process of teaching physical education and sports science for basic skills Whether offensive or defensive in basketball, note that the strategies and teaching methods that dominate Teaching skills in basketball as well as skills in other sports is the imperative method Which may not meet all the requirements for achieving the educational and pedagogical objectives of the lesson due to differences in abilities The mentality and motivation of students and to some extent limits the special and creative abilities of students

The teacher has organizational, educational, and supervisory responsibility, and hence it is necessary for those in charge of operations Teaching staff should strive to keep pace with technological development in teaching physical education and sports sciences

By experimenting with a number of modern teaching strategies that highlight the learner's positivity in obtaining the material scientific progress through investing in technological progress, which provides a state of educational standing and actual participation in

The educational process and demonstrating its effectiveness and capabilities by identifying all parts of the skill to be learned from Before the teacher, therefore, the researchers used the blended learning strategy, which is based on previous studies The use of this strategy was conducted on activities and skills other than those used by the researchers and in stages

Another study had scientific justification for its use and experimentation with female students in the Department of Physical Education and Science Sports at Al-Maarif University College.

Research objective

1. Identify the effect of using the blended learning strategy in learning the skills of handling feedback and scoring from stability in basketball.

Research hypotheses

1. There are statistically significant differences between the experimental and control groups in test results Pre and post in the skills of rebound handling and scoring from stability and in favor of test results Dimensionality of the experimental group

2. There are statistically significant differences between the results of the experimental group and the control group. The results of the post-tests in the skills of rebound handling and scoring are consistent and in favor of the results of experimental group.

2. Research Methodology

The experimental method was used according to the nature of this study to solve the research problem (Khalaf et al., 2024; Mohammed et al., 2025; Omar et al., 2025).

2.1. Research sample

The research sample was deliberately selected and represented by students from the Department of Physical Education, Science and Sport of the University Knowledge College for the academic year (2022-2023). The sample was taken from the students of the first stage, which consisted of (63) students. (3) Students were excluded due to absence on the day of the exam. Thus, the sample percentage (95.23) corresponded to the original population. The research sample was divided into one group. An experimental group and a control group were divided by lottery, with students representing the experimental group. The students in Section A are (30) students, and the control group represents Section B, where there are (30) students, the first group applies the blended learning strategy and the second group the traditional method used by the teacher.



2.2. Experimental design

The researchers used a two-group design (an experimental group and a random control group). Pre-test and a post-test have been chosen. The pre-test is administered to both groups and then the variable is entered. The experimental group was conducted for the experimental group, then the post-test was conducted for the two groups, and the differences between the two tests were calculated.

And between the two groups to find the effect of the experimental variable in relation to the experimental group.

2.3. Data Collection

Electronic calculator (1) - Video camera (Sony) (1) - Electronic calculator for laptop (1)

Type (Lenovo) - Stopwatch (1) - Signs (22) - Buzzer (2) - Tape

Adhesive tape - Metric measuring tape - (20) basketballs - Legal basketball court chalk

Arab and foreign sources - personal interviews - questionnaire form - World Wide Web (Internet).

2.4. Skill tests.

First: Two-handed bouncing ball control test: (Al-Mandaloui, 1997)

Test Objective: Evaluate performance by handling the bounce with both hands

Tools used: basketball court, two legal basketballs, tape measure and chalk. and whistles to give the signal to leave.

Performance Description: From a standing position and when the start signal is given, the student handles the ball from chest height with both hands pointing toward the ground until the last third of his partner is standing at a distance of (5 meters).

Performance evaluation: Each student is assigned two attempts and the best score is calculated, indicating that the score is (10).

Second: Stability Assessment Test: (1)

Test Objective: Measure assessment accuracy based on consistency

Tools needed: basketball court. Basketball goal. Basketball.

Performance Description: The experimenter throws the ball into the basket for three sets of (5) for each set. Consecutive shots from the center of the court and from the sides, giving everyone a proper rest between each group.

Scoring: Two points are awarded for each ball that enters the basket, and one point for each ball that touches the ring and does not interfere with any of the balls

The total score of the test is equal to the total score you get in the fifteen attempts, noting that

The maximum score is 30 degrees.

2.5. Field research procedures

First: Tribal skill tests

The researchers conducted skill tests for the experimental group and the control group

Under study are rebound handling and scoring from a standstill on two consecutive days, namely Sunday and Monday (12-2/13/202), the tests were conducted by an assistant work team and under the supervision of the researchers Set separately. The tests were conducted under the same conditions as the tests for the two groups.

Second: The main experience

Before implementing the classes in the educational curriculum for the skills under research, the researchers conducted a two introductory teaching sessions for students to learn about the blended learning strategy on one day (Wednesday, February 15, 2023) The researchers began implementing the main experiment, as the curriculum included (16) educational units, then introducing the blended learning strategy under study to these units in the section of Educational part of the main section of the educational unit, where the number of units



was two per week For a period of (8) weeks, the curriculum was implemented in the closed hall for female students in the Physical Education Department And Sports Sciences, Al-Maarif University College. The number of units regarding teaching each skill separately has been distributed Specialists, where (8) educational units are allocated to the skill of rebound handling and (8) educational units to the skill

Correction is based on stability and this division is according to the opinion of specialists, as the experimental group was studying using the integrated learning strategy, the control group studies using the imperative method followed by the teacher. As for the first experimental group, after explaining the skill to be learned and after presenting it before the teacher involves the students using modern technology in learning, such as using the Internet Power Point and access to websites related to skill techniques and the virtual form of the skill to be learned. As for the control group, they learned the skills using the method of the teacher followed by them. And so on this approach continued to be applied, under the supervision of the researchers, to all the main steps of the experiment, and it was completed. The researchers completed the implementation of the curriculum on Wednesday (4/12/2023), and this was the last day of the experiment after which it was completed to determine two days to conduct the post-tests.

Third: Post-tests. Upon completion of the main research experiment, the researchers conducted The post-tests for the experimental group are on Monday (4/24/2023) and on Tuesday, corresponding to (4/25/2023) At ten in the morning, post-tests were conducted for the control group in the same way Conditions and time in which the experimental group tests were conducted. The tests were conducted for the research groups

All of them are in the closed hall for female students, Department of Physical Education and Sports Sciences, Faculty of Knowledge, University

By a specialized assistant work team

2-6 Statistical methods

The researchers used the statistical package (SPSS) to process the data statistically (Abdullateef AbdulJabbar et al., 2025; Fayyad et al., 2025, 2026; Mohammed et al., 2025).

3- Results

First: Presenting and analyzing the results of the pre- and post-tests for the experimental group

Table 1 shows the means, standard deviations, differences in means, standard deviations, and the value (T) calculated between the tests before and after the experimental group

Variables	unit	pretests		posttests		Difference of arithmetic	Standard Deviation Difference	T value	function
		M	SD	M	SD				
rebound handling	degree	6.08	1.56	8.50	1.08	1.99	0.43	5.68	Significant
scoring from stability	Degree	16.82	3.56	25/37	3.04	8.55	0.52	8.70	Significant

* The tabular (t) value (1.697) at a significance level (0.05) and with a degree of freedom (30 - 1 = 29) The standard deviation is (1.56); In the test, the standard deviation is 8.50 and the smallest standard deviation is (1.08). The difference between the arithmetic mean is (1.99) and the difference in the standard deviation is (0.43). The calculated value of (t) was (5.68) and the table (1.697) was less than the significance level (0.05)



and one degree of freedom (29), and the mean value was the arithmetic score of the stability assessment skill in the preliminary test (16.82) and the standard deviation was (3.56). For the post-exam test, it was (25.37), the lowest standard letter was (3.04), and the mean difference was (3.04). (8.55), standard deviation difference (0.52), calculated value (t) (8.70) and combined value (1.697) below the significance level (0.05) and one degree of freedom (29).

Second: Presenting the results of the pre- and post-tests to the group.

Table (2) shows the means, standard deviations, differences in means and standard deviations, where the T-value was calculated between the pre- and post-tests for the control group.

Variables	unit	pretests		posttests		Difference of arithmetic	Standard Deviation Difference	T value	function
		M	SD	M	SD				
rebound handling	degree	6.92	2.68	8.62	1.08	1.7	1.6	3	Significant
scoring from stability	Degree	13.81	3.84	19.09	2.86	5.28	0.98	3.07	Significant

* * The tabular (t) value (1.70) at a significance level (0.05) and with a degree of freedom (30 - 1 = 29)

It is clear from the table that the arithmetic mean numbers for the ability to deal with rebounding in the pre-test are (6.92). The standard deviation is (2.68) and for the test the dimensional and linear test is (8.62) and the smallest standard deviation is (1.08). The difference between the arithmetic averages was (1.7), the difference in standard deviation was (1.6), and the calculated value of (t) was (3). The table is (1.70) lower than the level of significance (0.5) and with a degree of freedom (29). In addition, the mean arithmetic value of the stability assessment skill in the pretest is (13.81). The standard deviation is (3.84) and for the test after measurement it is (19.09) respectively (19.09) and the standard deviation is (2.86). The difference between the arithmetic means (5.28), the standard deviation difference (0.98), the calculated value (t) was (3.07) and the tabular value (1.70) was below the level of significance (0.05) and one degree of freedom (29).

Third: Presenting and analyzing the results of the post-tests for the experimental group and the control group Table (3) It shows the arithmetic means and standard deviations for the selected research variables for the experimental group and the experimental group

Variables	unit	Experimental group		Controlling group		T value	function
		M	SD	M	SD		
rebound handling	degree	8.50	1.08	7.62	1.08	3.54	Significant
scoring from stability	Degree	25.37	3.04	19.09	2.86	5.47	Significant

* The value in the table for (F) is (1.671) at the significance level of (0.05) and with a degree of freedom (60 - 2 = 58)



It is clear from the table above that the values of (F) calculated taking into account the results of subsequent tests and research groups in the main variables were (3.54 - 5.47), and when compared to the value of Table (T) which was (1.671) or lower than the level of significance (0.05).

4 Discussion

Table (1) shows that there are significant differences between the results of the pre- and post-tests of the skills under study and to obtain the results of the post-tests for the experimental group. The researchers explain the reason for this to the fact that the peculiarity of blended education is that it depends on stimulating the mental processes of the learners by asking questions. By finding one, the learner is forced to use a group of mental processes (such as perception, thinking, and imaging). And others, thus transferring the learner from the role of imitating the model given to him by the teacher in the usual method (Explanation and Arra) refers to the role of the discoverer of healthy movement techniques through the use of technological development. This is done by coupling the learning process with the thinking process, which comes from a complete awareness of every part of the skill as a result of the learner's thinking that is, limiting the learner's thinking to finding one answer. "The blended learning method works to transfer the focus of attention from the teacher to The learner, which prompts him to create different aspects and experiences of learning on his own, and also provides him with information relevant to his situation" (Mohammed, 1992:97)

"Awareness of the skill technique in a healthy manner plays an important role in discovering more than one answer to the question that the learner faces, because this requires the learner to always be aware of the elements of the situation he faces so that he can always deal with volatile circumstances, and that healthy thinking is only possible after healthy awareness." For all elements of the situation" (Annan, 1999:16)

Second: Discussing the results of the pre- and post-tests for the control group

Table 2 shows that there are significant differences between the results of the pre- and post-tests of the skills studied and the results of the post-tests of the control group. The researchers attribute this to the type of educational exercises that the teacher uses when applying and developing the educational curriculum. It emerged through the statistical treatments of the results confirms the effectiveness of the educational curriculum for the skills under study as well. This positive development from the researchers' point of view may affect the organization process the usual curriculum followed (presentation and explanation method), as it contains a set of exercises on skill preparation for basketball skills, which was consistent with the level and age of the learners their aptitude. As well as the content and continuous time in the educational units, clearly showed progress in the level through the results that appeared in the post-test tests compared to the results that appeared in the pre-test states that learners' success depends on the continuous learning process and learners' mastery of skills this requires learning for long hours" (Mahmoud & Hassanein, 1999:16).

Third: Discussing the results of the post-tests for the experimental group and the control group

From the results presented in Table (3), it appeared that there is a difference in learning between the groups In the skills under research, researchers attribute this discrepancy mainly to the specificity of each skill Basketball skills and their nature, and because these skills have special features that differ from one skill to another

Other, despite the interconnection of this skill and its sequence during play on the one hand, and on the other hand, harmony

The specificity of each skill with the blended learning strategy used, as well as the harmony of each skill with the method of what is followed, despite the fact that the calculated (t) value appeared larger than the tabulated (t) value, and this indicates that the differences are statistically significant in all the skills under study. The reason for this is that the tests through which the researchers measured the skills under study relied on The grade component, as is known, the higher the score in the post-tests compared to the pre-tests, and this



indicates the development of the groups in the skills under study because the higher the score in the performance of the skill, this modifies the development of the learner's level, and the experimental group that used the blended learning strategy was more developed. In handling rebounds with both hands and scoring from stability for female students compared to the control group, the researchers attribute the reason for this superiority to the blended learning strategy because it gives more freedom to the learner in discovering the answer, even though these two skills differ in the amount of development for learning, and this indicates that the strategy in this research is more recent. There is a tangible and effective development in developing the skills under research, and the blended learning strategy combines the use of digital development through virtual learning and traditional education, which has strengthened the relationship between the learner and the teacher, which works to make the student the focus of the educational process by giving him the opportunity to take some Decisions regarding the careful educational process are made through the teacher's participation while asking questions by the teacher and thinking and giving answers by the learner. Therefore, this partnership in the discovery process depends primarily on the combination of the learner's experience and the student's potential and intellectual abilities, which are reflected in the applied aspect on the learner's abilities. Skills and thus the success of the educational process, and this is what (Subhi Hamdan Abu Jalala) states, "Al-Athi believes that the teaching process is a situation characterized by interaction between the teacher and the learner, and each of them has a role that he exercises in order to achieve certain goals. Therefore, the teaching process has become educational experiences that the teacher plans and implements from In order to help learners achieve specific educational goals" (Jalala, 2023)

Conclusions and recommendations

Conclusions

- Teaching with a blended learning strategy and the traditional method improves learning of basketball skills of research sample under study, but teaching with the blended learning strategy excelled over the usual way.
- The experimental group has excelled in improving learning the rebound handling skill and the scoring skill from stability in basketball
- The blended learning strategy has a positive impact on learning the skills of handling rebounds and scoring from stability in Basketball

Recommendations

- Use strategies that give traditional education and e-learning a role for both at the same time during the lesson for the preparatory and university levels to add excitement, spread the spirit of cooperation, and break out of the usual traditional learning basic skills for all games
- The necessity of using a blended learning strategy in teaching basketball skills is under investigation.
- The necessity of preparing courses and seminars for those responsible for teaching and guiding in physical education and science sports for the intermediate, preparatory and university levels and educating them about the importance of using methods Teaching different and diverse physical education activities and training them on how to use them.

References

1. Abdel-Dayem, M. M. & Hassanein, M. S. (1999). *Modern basketball, scientific foundations And Applied*, 1st edition. Cairo: Dar Al-Fikr Al-Arabi,.
2. Abdullateef AbdulJabbar, M., M. Ali, M., Ali Khalaf, Y., Hadi Hammad, S., Khalid Awad, A., Jaber Mushref, A., & Adham Ali, O. (2025). The effect of mental training (mental visualization and attention focus) on the accuracy and speed of offensive performance in fencing players. *Retos*, 70, 1097–1113. <https://doi.org/10.47197/retos.v70.117026>



3. Al-Mandalawi, Q. (1997). Tests, measurement and evaluation for physical education, Baghdad: House of Wisdom.
4. Anan, M. (2004). Learning and motivation in sports, Cairo: Helwan University.
5. Fayyad, F. H., Hammood, Y. M., Ali, O. A., Mushref, A. J., Awad, A. K., & Khalaf, Y. A. (2026). Construction and Standardization of a Reliable Test to Measure Short Aerial Ball Shooting Accuracy in Football. *International Journal of Human Movement and Sports Sciences*, 14(1), 48–58. <https://doi.org/10.13189/saj.2026.140106>
6. Fayyad, F. H., Hammood, Y. M., Ali, O. A., Mushref, A. J., Awad, A. K., & Shanta, A. (2025). Building and legalizing a test to measure the level of football agility of young players. *Retos*, 68, 1578–1590. <https://doi.org/https://doi.org/10.47197/retos.v68.116368>
7. Hamoudat, F. B. & Jassim, M. A. (1987). Basketball, 2nd edition, Mosul: Dar Al-Kutub Printing Publishing.
8. Jalala, H, M. **Is education inculcation or participation?** Knowledge Forums. Retrieved from [http // WWW.almarefa.net](http://WWW.almarefa.net)
9. Khalaf, H. H., Abraham, A. A., Khaleel, N. M., Hummadi, J. N., Mushref, A. J., & Ali, O. A. (2024). THE IMPACT OF THE DINES MODEL AS AN EDUCATIONAL MEDIATOR ON COGNITIVE ACHIEVEMENT AND LEARNING OVERHEAD PASSING SKILL IN VOLLEYBALL. *Proximus Journal of Sports Science and Physical Education*, 1(12), 70–71.
10. Mohammed, K. J., Suleiman, K. I., Naser, M. M., Ali, O. A., & Ali, O. (2025). The effect of colorful and varied visual skill exercises on the development of sensory perception and complex skill performance among futsal players. *Retos*, 69, 1226–1239.
11. Muhammad, H. A. (1992). The effect of using a proposed strategy for teaching a unit of study in education Mathematics on the rate of growth in achievement and perception among third-grade primary school students. A dissertation of Master's degree. Alexandria: Faculty of Physical Education, Alexandria University.
12. Omar, A. F., Hammadi, W. K., Moseekh, L. Z., Muhammad, K. M., Saleh, M. M., & Ali, O. A. (2025). The impact of cognitive training on field intelligence growth and some composite skills of advanced football players | El impacto del entrenamiento cognitivo en el crecimiento de la inteligencia de campo y algunas habilidades compuestas de los jugadores d. *Retos*, 66, 46–58. <https://doi.org/10.47197/retos.v66.113234>