



## Al-Rafidain Journal for Sports Sciences

<https://rsprs.uomosul.edu.iq>



### The Effect of Using Different Types of Verbal Reinforcement on Learning the Accuracy of Performing the Skills of Forehand Float Serve and Overhead Pass in Volleyball

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#### Article information

##### Article history:

Received: 15/08/2024

Accepted: 07/10/2024

Published online: 15/10/2024

##### Keywords:

Verbal Reinforcement,  
Accuracy of Performance,  
Overhead Pass

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#### Abstract

The use of verbal reinforcement is significant in learning kinetic sports skills. Its importance is not limited to the teacher but also extends to the student. Some teachers neglect an important aspect of the learning process, which is the use of verbal reinforcement, both positive and negative, or they limit themselves to one type and neglect the other. Another group of teachers does not know which to start with, positive or negative verbal reinforcement. This study aimed to investigate the effect of using different types of verbal reinforcement on learning the accuracy of performing the skills of the forehand float serve and the overhead pass in volleyball. The researchers hypothesized that there would be statistically significant differences in verbal reinforcement (positive then negative) or (negative then positive) in learning the accuracy of skill performance in the forehand float serve and the overhead pass in volleyball. The study sample consisted of 30 students divided into two shifts (groups) with 15 students in each group. The sample was distributed to the two experimental groups by lottery. The sample underwent an educational program to learn the skills in the study, followed by the application of the educational program to the study groups. The researchers concluded several results, notably that the first experimental group using verbal reinforcement (positive-negative) outperformed the second experimental group using verbal reinforcement (negative-positive).

## اثر استخدام انواع مختلفة من التعزيز اللفظي في تعلم دقة اداء مهارتي الارسال المتموج الامامي والتمرير من اعلى بالكرة الطائرة

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تاريخ تسليم البحث (٢٠٢٤/٨/١٥)

تاريخ قبول النشر (٢٠٢٤/١٠/٧)

### المخلص

ان استخدام التعزيز اللفظي له اهمية كبيرة في تعلم المهارات الحركية الرياضية ولا تقتصر اهميته للمدرس فقط بل اهميه تكمن للطالب ايضاً وان قسماً من المدرسين يهملون جانب مهم من عملية التعلم وهو استخدام التعزيز اللفظي بنوعيه الايجابي والسلبي او يقتصرون على احدهم ويهملون النوع الاخر والقسم الاخر من المدرسين لا يعلم بايهم يبداء بالتعزيز اللفظي الايجابي ام السلبي وبذلك هدفت هذه الدراسة الى الكشف عن اثر استخدام انواع مختلفة من التعزيز اللفظي في تعلم دقة اداء مهارتي الارسال المتموج الامامي والتمرير من اعلى بالكرة الطائرة. وافترض الباحثان الى وجود خروق ذات دلالة احصائية في استخدام التعزيز اللفظي (الموجب ثم السالب) او (السالب ثم الموجب) في تعلم دقة الاداء المهاري في مهارتي الارسال المتموج الامامي والتمرير من اعلى بالكرة الطائرة. وتكونت عينة البحث من (٣٠) طالب موزعين على شفتين (مجموعتين) بواقع (١٥) طالباً لكل مجموعة. وتم توزيع افراد العينة على المجموعتين التجريبيتين عن طريق القرعة. وخضعت العينة الى برنامج تعليمي لتعلم مهارتي البحث ثم تطبيق البرنامج التعليمي على مجموعتي البحث. وتوصل الباحثان الى عدة نتائج وهي تفوق المجموعة التجريبية الاولى باستخدام التعزيز اللفظي (الايجابي \_ السلبي) على المجموعة التجريبية الثانية التي استخدمت التعزيز اللفظي (السلبي \_ الايجابي) الكلمات المفتاحية: التعزيز اللفظي، دقة اداء، التمرير من اعلى.

### Introduction

Learning is an issue that is no longer a subject of debate in any region of the world today. Modern international experiences have proven beyond any doubt that the real beginning of progress is education, that all countries that have made great strides in progress have advanced since the beginning of education, and that developed countries put learning as a

high priority. Learning is the science that seeks to discover the laws that rule the phenomenon of change in the behavior of individuals, and learning is an intentional process distinguished from the laws revealed by the science of education. Learning is a science and education is a technology, in that education is the application and employment of the vital situations revealed by science . Kinesthetic learning is one of the branches of the general educational process that characterizes the life of an organism from its birth until its death when human activity is not free from motor learning. The process of kinesthetic learning is consistent with sports training in the process of transferring information from the trainer or teacher to the player or learner, as well as in the changes that occur in motor behavior and resulting from the educational process, which aims to provide the learner with physical, motor and skill qualities.

Begel, et al. (2004) mention that Kinesthetic learning is the process of obtaining the initial information of movement and the initial experiences of performance, improving it, and stabilizing it. This process is considered part of the general development process of the individual The (positive and negative) reinforcement plays an influential role in teaching sports motor skills. Through the physical education lesson, positive reinforcement is used to support the desired responses, while negative reinforcement works to weaken and nullify the unwanted response In this regard, adds that reinforcements (positive and negative) lead to the learning of sporting motor skills.

The use of these two types of reinforcement in learning some volleyball skills gives varying results depending on the specificity of the skill and the specificity of the sample to which the reinforcement applies.

And volleyball skills are the same as in the rest of the sports, which includes verbal reinforcement (positive and negative) in learning its

skills, and it is presented in the form of information by the teacher about the performance that the learner performs to change or modify his motor behavior, improve or stabilize, Thus, the teacher must be sufficiently aware of the use of these two types of reinforcement to affect the learner correctly to establish his good performance and isolate the mistakes that the learner makes at the beginning of learning motor skills.

The importance of the research lies in the fact that it deals with a topic that those involved in the educational process may differ in how it is used with the learner during the kinesthetic performance of motor skills.

Through the researchers' field experience as game practitioners and academics in their teaching and training of basic volleyball skills, they noticed that some use positive and negative reinforcement in teaching skills, but linking these two types of reinforcement is important. Does the teacher use teaching skills, positive reinforcement first and then negative reinforcement, or vice versa?

The problem of the research is which way the teacher starts using verbal reinforcement (positive than negative) or (negative than positive). To answer this question, the researchers set out to study the effect of the two types of verbal reinforcement in learning some volleyball skills . The research aims to reveal the effect of verbal reinforcement (positive than negative) or (negative than positive) in learning the accuracy of performance of forward Float serve and passing from the top in volleyball skills.

The study hypothesizes there are statistically significant differences in the use of verbal reinforcement (positive then negative) or (negative then positive) in teaching performance accuracy for the forward Float serve and passing from the top in volleyball skills.

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### Previous studies:

Muhammad's study, 2006

The effect of using verbal reinforcement in learning some basic football skills for secondary school students in Khartoum Governorate.

This study aimed to know the effect of using verbal reinforcement in learning some basic skills in football for secondary school students in Khartoum Governorate, where teaching units were prepared to teach some basic football skills using verbal reinforcement. The sample consisted of (60) students in the first and second grades in the secondary stage in Khartoum Governorate. The sample was divided into two equal groups, one of them is experimental, and its number is (30) students, and it was taught by the method of verbal reinforcement, The other numbering (30) students, was not intended for verbal reinforcement. Rather, it was used traditionally.

It was used for study purposes some skill tests in football. The results revealed that there are statistically significant differences in favor of the experimental group in the skill tests under study, which indicates the importance and effectiveness of verbal reinforcement in learning some basic skills in football, especially for secondary students.

### 2-2 -Goni study, (1993):

The effect of using verbal and physical reinforcement on achievement in science for middle school students in Medina

The study aimed to identify the effect of using verbal and physical reinforcement on the achievement of second-grade intermediate students in science. The study also tried to find out which of the two

reinforcement types is better for raising the academic achievement of students.

The researcher used the experimental method to study this effect, and the random sample consisted of 90 students, then distributed into three groups, where reinforcement was not used with the first group, physical reinforcement was used with the second group, and verbal reinforcement with the third group.

The researcher prepared an achievement test on the topics that were taught to the students during the research experience, the experiment was conducted in the second semester of 1410 AH, starting from day 13 of Shawwal, and lasted for four weeks.

The study resulted in an improvement in the performance of students whom verbal and physical reinforcement was used with to a better degree than the students whom reinforcement was not used with. The study also showed a convergence in the achievement levels of the students who were verbally reinforced with the students who were physically reinforced, although there was a relatively slight superiority among the students who were physically reinforced.

## Materials and Methods

The researchers used the experimental method to suit the nature of the research.

The research community was selected from the students of the second academic year at the College of Physical Education and Sports Sciences - University of Mosul for the academic year 2021-2022, and the

number of its members was (180) students distributed among (6) divisions.

Two divisions were tested by lottery to represent the research sample, with (30) students in each division. The research sample represented two divisions (i - j), and thus the sample was randomly selected. The independent variables were distributed among them by lottery method, and they were as follows- :

The first experimental group represented by Division (I) reinforced their responses positively and then negatively

The second experimental group, represented by Division (J), reinforced their responses negatively and then positively

The researchers excluded several students because they were not homogeneous with the rest of the sample for the research and the excluded cases:

- 1- Students who practice the game
- 2- Postponed
- 3- Sports team players

**Table (1)**

It shows the number of the sample according to the two experimental groups

Division	Group	Total	Number of sample members after parity
(i)	the first Experiment	30	15
(j)	the Second experiment	30	15

The two researchers conducted the equivalence process for the two research groups in the variables above through

- 1- Height measured in centimeters
- 2- Age measured in years
- 3- Weight measured in kilograms

**Table (2)**

Shows the arithmetic means and standard deviations of the variables for height, age, and weight

Statistical Parameters Variables	The first experimental group		The second experimental group		T-value
	D <sup>-</sup>	S <sup>-</sup>	D <sup>-</sup>	S <sup>-</sup>	
<b>Height</b>	١٧١.١٤	٤.١٢	١٦٩.٢٢	٤.٦٧	١.٣٤
<b>Age</b>	٢٠.٠٩	٥.٤٢	٢٠.٤	١.٦٢	٠.٥٩
<b>Weight</b>	٦٨.١٧	٦.٣١	٦٤.٣٨	٥.٠٢	١.٥٨

Tabular value (T) at an error rate of  $\leq (0.05)$  and in front of the strike score  $-2 = 28$ , which is 2.05 (Al-Tikriti, Al-Obaidi, 1999, 440)

The two researchers used the experimental design called "the design of equal groups with a post-test" (Awda and Malkawi, 1987, 168).

One of the researchers, who is the subject teacher for the first and second experimental groups, applied an educational program prepared him in the light of the general program prepared by the Sectorial Authority for Physical Education faculties in the Ministry of Higher Education, It was presented to several specialized experts. (\*)Supplement No. (1) to indicate its suitability for the application. They agreed on its validity after making some modifications to it, which fit the purpose of the research. The educational program was divided into (6) educational units, each unit lasting (90) minutes, with two educational units per week.



The two researchers conducted the exploratory experiment on 12/12/2022 on (25) students who had not been included in the main experiment, which is a sample of the research community. The original research -2 = 28 represented by (I) Division

The types of verbal reinforcement were applied to it over two educational units, this aims to

- 1 -Verify the validity of applying verbal reinforcement.
- 2 -Avoid mistakes that may occur during the educational unit.
- 3 -Ensuring the validity of the devices and tools used, as well as giving the teacher an opportunity. The goals set by the researchers were achieved.

**The main experiment:** (6) educational units were applied to each group. In the first week, the skill of forward Float serve was taught over two educational units, while the second week included teaching the skill of passing from top to front over two educational units, according to the applicable system. in the Faculty of Physical Education, While the third week included a repetition of the two previous skills over two educational units, two types of positive and negative verbal reinforcement were applied for the first experimental group and one type of negative and positive verbal reinforcement on the second experimental group, an example of positive verbal reinforcement and then negative verbal reinforcement for the first experimental group, where the fingers were placed on the Ball and error in the flexion of the arms and vice versa for the second experimental group.

The two groups were equal in general and specific warm-up and educational activity, as well as in the type of exercises and the number of

repetitions that were equal for the two groups, and the difference was in the type of reinforcement.

**Final tests of the research:** The researchers conducted the final tests of the research sample as follows:

The researchers used the following statistical methods

arithmetic mean, standard deviation, t-test

## Result and Discussion

After processing the data statistically, the results appeared in Table (3).

**Table (3)**

It shows the arithmetic means, standard deviations, and the axial (t) value of the two research groups.

Statistical Parameters The experiments	The first experimental group		The second experimental group		T-value
	D <sup>-</sup>	S <sup>-</sup>	D <sup>-</sup>	S <sup>-</sup>	
performance accuracy test of the front Float serve	28	4.82	23.01	3.69	*2.59
Passing accuracy test from top to front	87.16	2.64	76.33	2.63	*2.411

Table (3) shows the arithmetic means, standard deviations, and the t-value for the two groups, the results and tests for the accuracy of the performance of the forward Float serve and the test of the accuracy of passing performance from top to front, as it showed significant differences between the two research groups in serve accuracy and passing accuracy, and in favor of the first experiment group that got the highest Arithmetic mean, as the arithmetic mean of the first experimental

group for the two tests was (87,16,28), while the arithmetic mean of the second group for the two tests was (1- 76,23).

The researchers attribute this to the superiority of the first experimental group that used positive verbal reinforcement first, then negative verbal reinforcement, The same reinforcement is an important factor and a necessary condition for learning motor skills, and it is a necessary condition for the repetition effectiveness , which must take place under conditions in which is the correct or acceptable response is similar, and frustrating or extinguishing the response in which there is an error in performance, in addition to the fact that the use of positive verbal reinforcement first increases the learner's motivation towards learning the skills, as well as informing the learner that his performance is similar to the typical picture of performance and telling him negatively about the error in his performance makes him motivated to perform skillfully better than the before, so he exerts more effort in his performance and tries to invest these efforts in skillful performance in volleyball, As “praise on the results achieved by the learner from time to time will be a new energies that motivate him to make effort and continue to progress”

This is consistent with what Shalash, Najah Mahdi and Mahmoud Akram Muhammad Subhi, 1994 mentioned “positive reinforcement has a great effect, it may be directed towards the desired response clearly and during the educational situation, praise the learner for his response first and then explain his error after that, it will lead to an increase in the effectiveness of his activity with the correct performance Shalash, Najah Mahdi and Mahmoud Akram Muhammad Subhi, 1994.

## Conclusions

From the results of the researchers, the following conclusions can be drawn:

- 1- The use of positive and then negative verbal reinforcement is more effective than using negative and then positive verbal reinforcement in teaching (the two skills of forward Float serve and passing from top to front).
- 2- The group of positive and then negative verbal reinforcement outperformed the group of negative and then positive verbal reinforcement in the two research skills.

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