



Effect of a compound teaching method with dual and quadruple peer guidance on personal struggle and learning the long jump for students

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Abstract.

The importance of research using a method that the researcher considers to be more developed and influential, which is the compound teaching method under the guidance of dual and quadruple peer guidance, which accompanies the type of special activity for the effectiveness of the long jump and to prove its effectiveness and the extent of its impact on the educational process through the optimal investment of effort and time as well as the extent of its contribution to enriching the teacher with the practical method that can through it the success of the educational process and keep pace with the scientific development of this game.

The research aims to identify the effect of the compound teaching method with dual and quadruple peer guidance on personal struggle and to learn the long jump for students, as well as to identify the significant differences between the two research groups (control and experimental) in the results of the post tests.



The researcher used the experimental method with two equal groups (control and experimental).

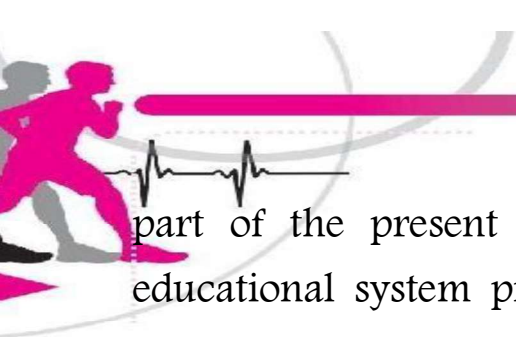
The research community consisted of students of the first stage in the College of Physical Education and Sports Sciences / University of Kerbala for the academic year 2020-2021 AD, which numbered (122) students distributed over (6) divisions (A - B - C - D - H - F) and in a random way By lottery method, division (C) was chosen as a control group and division (D) as an experimental group, as the researcher conducted a field experiment on a sample of (40) students representing two divisions (C-D), with (20) students from each division, and the sample percentage from the original population was equal to (32.78)

Among the most important conclusions reached by the researcher is that the followed teaching method and the complex method of teaching have a positive effect on personal struggle and learning technical performance for the effectiveness of the long jump for students. Also, the complex teaching method (application under the guidance of pairs and quadruple peers) showed superiority over the method used in personal struggle and learning technical performance for the long jump for students.

The most important recommendations reached by the researcher were the necessity of applying the compound teaching method (application under the guidance of bilateral and quadruple peers) to teach the rest of the athletics activities. As well as the need to apply the teaching method of compound teaching in the curricula of teaching methods in the faculties of physical education.

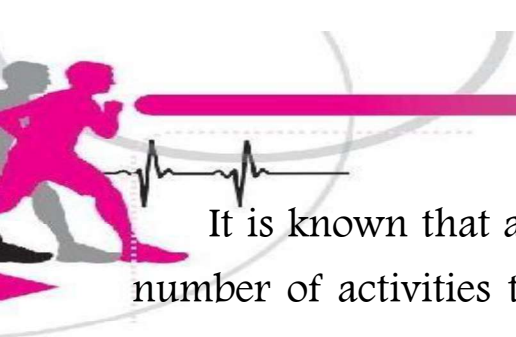
Introduction:

Education plays a vital and important role in building and organizing human societies, as it deals with millions of students who are



part of the present and all the future, and to the extent that the educational system provides a suitable environment and an organized educational atmosphere, it can provide learners with knowledge and skills and make them ready to accept further education, the teaching methods used by the teacher are among the most important aspects of the educational process, and each method has a specific role in the growth of learners in terms of physical, skill, emotional and cognitive aspects. The percentage of dependence on a method depends on the type of skill and the educational and learner's attitude, the teaching method that provides diverse educational situations and takes into account the individual differences of learners is the appropriate method to achieve the goals sought by educators, the teacher has to choose the best of those methods that suit the number of learners, their motor abilities, their interests and their experiences, modern learning and teaching methods are based on making the learner more active and positive in developing the material to be learned. It was necessary to use these methods in teaching sports activities, which depend on self-learning and make the learner the focus of the educational process, giving him the opportunity to master the basics of learning.

The compound teaching method is considered one of the modern teaching methods, as it uses more than one teaching method such as the method of application under the guidance of peers bilateral and triple or bilateral and quadruple or triple and quadruple where it depends on the learner to be active and positive, as the teacher's dependence on one method while teaching mathematical skills does not lead necessarily, all learners learn to the same extent, and therefore the teacher must use new methods of learning in order to provide diverse and appropriate educational situations for the largest number of learners.

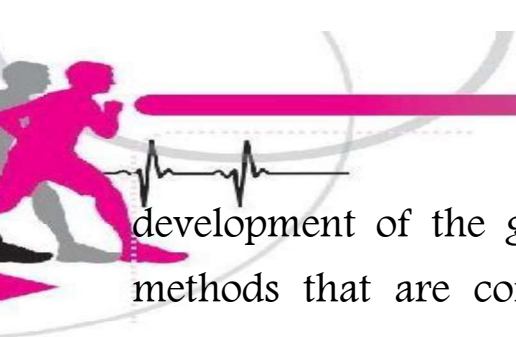


It is known that athletics is one of the games that consists of a large number of activities that the teacher or coach is required to teach and communicate to the learners or players and develop them well in order to raise their skill performance, and this is through the use of the appropriate and appropriate method that is consistent or consistent with the nature and tendencies learners and their desires and bring them to a level of mastery and a high rank of efficiency and effectiveness in order to reach the goals to be achieved.

Through the foregoing, the importance of the research becomes clear using a method that the researcher considers to be more developed and influential, which is the compound teaching method under the guidance of bilateral and quadruple peers, which accompanies the type of special activity for the effectiveness of the long jump and proves its effectiveness and extent of its impact on the educational process through the optimal investment of effort and time as well as the extent of its contribution to enriching the teacher uses the practical method through which he can make the educational process a success and keep pace with the scientific development of this game.

Research problem :

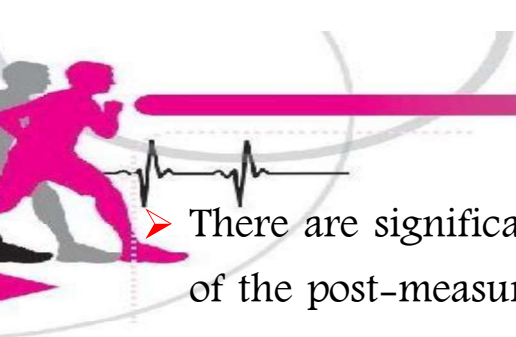
By supervising the applied students in the governorate's schools and being a teacher of athletics, he noticed that teaching most games, including athletics activities, is done through the traditional method, as the teacher or teacher explains how to perform the skill and presents a model for it, and the students have to perform accordingly, which leads to not taking into account the individual differences between learners, as a number of learners are grouped under one teacher or teacher who provides the educational material, the researcher also noted that the activities do not develop in a way that is commensurate with the rapid



development of the game, and this may be due to the failure to use methods that are commensurate with the large number of learners, which increases the burden of the educational process on the teacher or teacher in terms of following up on each student and correcting the errors that accompany the skill performance that he performs , the researcher also found not taking into account the variable of personal struggle among students and not paying attention to such an important variable for the educational process through its great role in helping the learning process and giving a moral impetus to learning for this type of activities, as a reaction to the shortcomings in the teaching or teaching environment and according to modern trends, the researcher chose the compound teaching method under the guidance of bilateral and quadruple peers, in order to develop the educational process in terms of developing their personal struggle variable and facilitating the process of acquiring and developing athletics activities in general and the effectiveness and mastery of the long jump in particular down to a better level.

Research objectives:

- Identify the effect of the compound teaching method with dual and quadruple peer guidance on personal struggle and learning the effectiveness of the long jump for students.
- Identifying the significant differences between the two research groups (control and experimental) in the results of the post-tests.
- Research hypothesis :
- There are statistically significant differences between the tribal and remote measurements of the control and experimental groups in the results of personal struggle and learning the long jump for students in favor of the post measurement.



➤ There are significant statistically significant differences in the results of the post-measurement for the control and experimental groups in the personal struggle and learning the long jump for students and in favor of the experimental group.

Research fields:

The human field: Female students of the first stage in the Faculty of Physical Education and Sports Sciences / University of Kerbala for the academic year (2020-2021).

Time field: from 24/12/2020 to 28/3/2021.

Spatial field: Stadium of track and field in the Faculty of Physical Education and Sports Sciences / University of Kerbala.

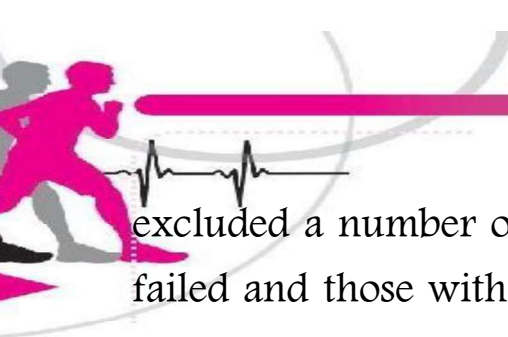
Research methodology and field procedures :

Research Methodology:

The nature of the problem is the basis through which the research method is chosen, so the researcher used the experimental method with two equal groups (control and experimental) for its relevance to the nature and objectives of this study.

Community and sample research:

The research community consisted of students of the first stage in the Faculty of Physical Education and Sports Sciences / University of Kerbala for the academic year 2020-2021 AD, which numbered (122) students, divided into (6) divisions (A - B - C - D - H - F) and in a random way By lottery method, division (C) was chosen as a control group and division (D) as an experimental group, as the researcher conducted a field experiment on a sample of (40) students representing two divisions (C-D), with (20) students from each division, and the sample percentage from the original population was equal to (32.78), and (10) students were chosen to represent the pilot experiment sample. The researcher



excluded a number of the sample members, who are students who have failed and those with pathological disabilities and students who practice this activity.

The homogeneity of the sample and the equivalence of the two research groups:

Homogeneity of the sample:

The researcher used the coefficient of variation law to measure homogeneity for variables (height, weight) among the sample members, as shown in Table (1).

Variables	Unit of measure	Mean	Std. deviation	Coefficient of variation
Length	Cm	154.47	4.68	3.02
Weight	Kg	47.21	4.77	10.10

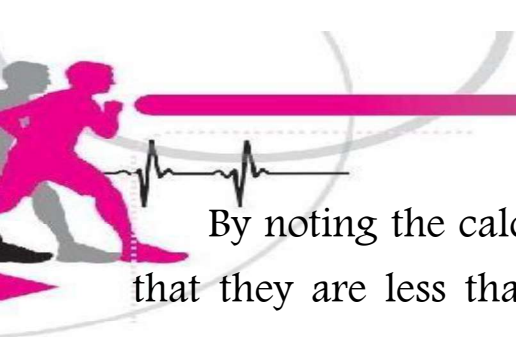
All values of the coefficient of variation were less than 30%, which indicates the homogeneity of the sample in the above variables.

Equivalence of the two research groups:

For the purpose of determining the starting point, the researcher found parity between the two groups using the (t) test for independent samples in the study variables, and the table (2) shows that.

Variables	Control group		Experimental group		T value		Sig type
	Mean	Std. deviation	Mean	Std. deviation	Calculated	Tabular	
Personal struggle	116.05	3.2	116.02	3.31	0.021	2.02	Non sig
Long jump	2.555	0.543	2.666	0.432	0.503		Non sig

The tabular value (t) at the degree of freedom (28) and the level of significance (0.05) is (2.02).



By noting the calculated (t) values of the research variables, we find that they are less than the tabular (t) value of (2,02) at the degree of freedom (28) and the level of significance (0.05), which indicates that there are no significant differences, and this means that the two groups are equivalent in the variables search.

Means, devices and tools used in the research.

Research Methods.

Arab and foreign sources - observation - tests and measurement.

Tools and devices used.

Measuring tape - medical scale - chalk - whistle - two (2) manual stopwatches - scientific calculator.

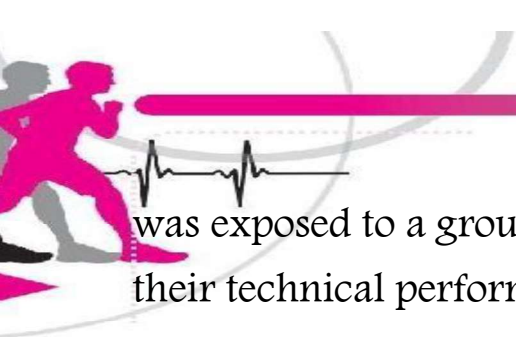
Determine the research variables.

The scale of personal struggle :

The scale of personal struggle built by (Haydar Qais Naji) was used, which consists of (40 items) distributed over four areas, and they are answered through five alternatives, which are (strongly agree, agree, neutral, oppose, strongly oppose) Thus, the highest score that can be obtained is (200 degrees) and the lowest score that can be obtained is (40 degrees), and the hypothetical mean of the scale is (120), and thus the student who obtains a score higher than the score of the hypothetical mean of the scale is an indication of his possession of personal struggle, the scores were given (5,4,3,2,1) for the positive items and (1,2,3,4,5) for the negative items. (Naji, p. 67)

Long jump performance test.

After examining the researcher on several special sources in measuring the technical performance, as the researcher did not find better than depicting the technical performance of the students and he



was exposed to a group of assessors as an accurate measure of the level of their technical performance for this event.

As the technical performance of the two research groups was photographed (and they were given two attempts for each student) and they were presented to a group of assessors (*) with specialization in athletics to evaluate the technical performance of this activity under discussion.

Experimental Experiment-:

The exploratory experiment "is a practical training for the researcher to find out the negatives and positives that meet him in the main experiment to address them".(Al-Khafaji, 2014, p. 177)

After completing the required procedures, and to identify the factors and obstacles that may encounter the researcher when carrying out the main experiment, and in order to obtain correct and accurate results according to the scientific methods used, the researcher conducted the exploratory experiment on (31/12/2020), on a sample consisting of (10) Students who are not from the research sample and from the community of origin, and the researcher aims from this exploratory experiment to the following::

- Identifying the difficulties that the researcher faces during the main experiment.
- Knowing the time allotted for conducting the tests.
- Ensure the safety of sports equipment.
- Knowing the requirements and times of educational units.
- Ensure the scientific bases of the tests used.



Field Research Procedures:

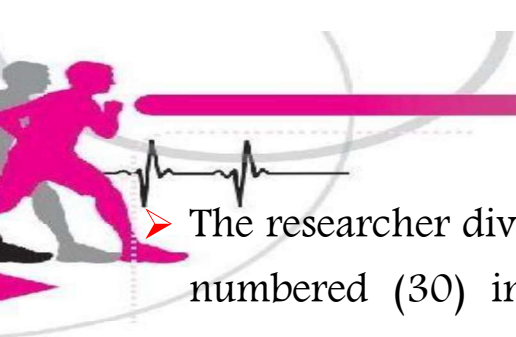
Pre-test:

Pre-tests were conducted on Thursday, 14/1/2021, on the track and field stadium in the College of Physical Education and Sports Sciences / University of Karbala for the variables of the personal struggle scale and technical performance for the long jump and in the presence of the assistant work team.

The general framework for implementing the method used.

After the researcher has identified all the requirements of the main experiment by defining the tests for the researched variables, and after conducting the exploratory experiment and benefiting from it in organizing work and preparing for the main experiment, and before conducting the tribal tests, the researcher gave two introductory educational units to each of the research groups its purpose is to give a prior education to the student to identify the nature of the effectiveness to be learned, as well as to achieve the goals that require the researcher to build the educational situations that the learners will pass during the implementation of the complex teaching method and study the place of implementation and the tools used within the framework of the method in question, and based on this:

- The researcher met with the students of the experimental group, the research sample, and in the presence of the subject teacher, before starting to apply the compound teaching method under the guidance of bilateral and quadruple peers used in the research to explain and clarify how to implement the compound teaching method under the guidance of bilateral and quadruple peers. All inquiries of students' questions were answered.



➤ The researcher divided the students of the experimental group, which numbered (30) into pairs, and each student together, where the number of pairs reached (15), then the researcher explained the role of the performing student and the role of the observing student.

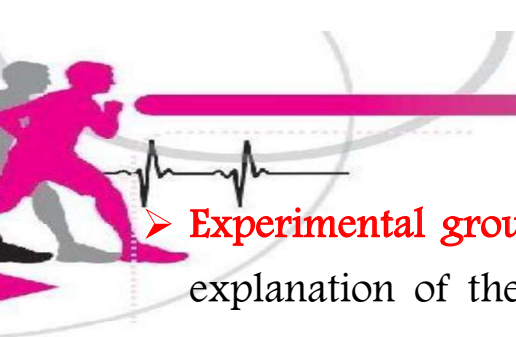
And the role of each of them in the framework of the application by guiding the paired peers and how to divide them into pairs and how to provide feedback, then how to apply by directing the foursome peers immediately after the binary application by moving to dividing the students into groups, each group consisting of (4-5) students in the context of students' compatibility With some of them to ensure cooperation during the application, where the number of groups will become (7) groups, then he explained and clarified the way to move to the four-way application and how to switch roles in the way of group rotation.

➤ The researcher adopted the skillful educational curriculum prepared by the physical education teacher (*) according to the vocabulary of the athletics curriculum, noting that the number of educational units is (6) educational units, with one educational unit per week for each division, and the time of the educational unit is (90) minutes divided as follows:

A. The preparatory section (20) minutes (warm-up, organizing work .

B. Main Section (60 minutes).

➤ **Control group:** (the educational part includes a faithful explanation of the effectiveness that is being taught, as well as the exercises that will be applied, as well as the practical part, in which the exercises of the activity to be taught are applied in the manner followed by the subject teacher)



➤ **Experimental group.** (it includes the educational part faithful to the explanation of the effectiveness that is being taught as well as the exercises that will be applied as well as the practical part in which the exercises of the effectiveness to be taught are applied using the compound teaching method under the guidance of bilateral and then quadruple peers).

C. The concluding section (10) minutes and includes (a light jog and a small game, then leave).

Post-test.

After completing the educational units, the post- tests were conducted on Wednesday, 25/2/2021, under the same conditions in which the pre- tests were conducted, and in the presence of the same auxiliary team..

Statistical means:

- Mean.
- Std. Deviation.
- Simple Correlation Coefficient (Pearson)
- Coefficient of Variation
- T test for independent samples
- T test conjugated samples.

Presentation, analysis and discussion of results:

Presentation and analysis of the results of the pre and post-tests of the control group in the personal struggle and learning the technical performance of the long jump.

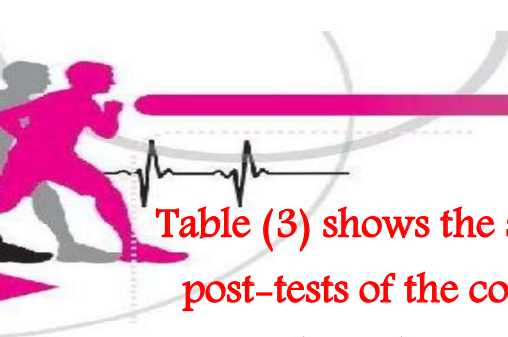


Table (3) shows the significance of the differences between the pre and post-tests of the control group in the personal struggle and learning technical performance for the effectiveness of the long jump.

Variables	Pre-test		Post-test		T value		Sig type
	Mean	Std. deviation	Mean	Std. deviation	Calculated	Tabular	
Personal struggle	116.05	3.2	133.5	3.64	8.92	2.09	Sig
Long jump	2.555	0.543	5.777	0.971	10.009		Sig

Tabular value (t) at the level of significance (0.05) and degree of freedom (19) is (2.09.)

Table (3) shows the arithmetic means, standard deviations, and the calculated (t) value between the pre and post measurements in the tests under study for the control group, the results showed that all the differences for the tests are significant and in favor of the post-measurement because the calculated (t) value is greater than the tabular (t) value of (2.09) and with a degree of freedom (29) and below the level of significance (0.05), and this indicates a significant difference in favor of the post-test in all variables are under investigation.

Presentation and analysis of the results of the pre and post-tests of the experimental group in the personal struggle and learning the technical performance of the effectiveness of the long jump.

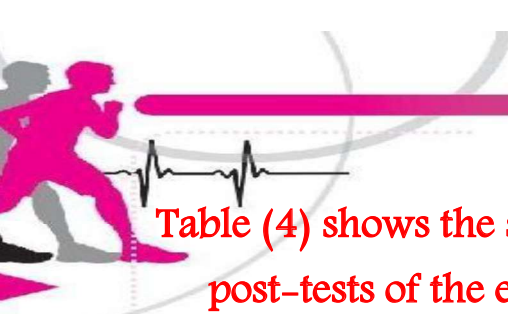


Table (4) shows the significance of the differences between the pre and post-tests of the experimental group in the personal struggle and learning the technical performance of the long jump.

Variables	Pre-test		Post-test		T value		Sig type
	Mean	Std. deviation	Mean	Std. deviation	Calculated	Tabular	
Personal struggle	116.02	3.13	141.57	4.33	12.91	2.09	Sig
Long jump	2.666	0.432	6.111	1.023	14.231		Sig

Tabular value (t) at the level of significance (0.05) and degree of freedom (19) is (2.09.)

Table (4) shows the arithmetic means, standard deviations, and the (t) value calculated between the two measurements, tribal and remote, in the tests under study for the experimental group, the results showed that all the differences for the tests are significant and in favor of the post-measurement because the calculated (t) value is greater than the tabular (t) value of (2.09) and with a degree of freedom (19) and below the level of significance (0.05), and this indicates a significant difference in favor of the post-test in all variables are under investigation.

Discussing the results of the pre and post tests for the control and experimental groups in the research variables:

Through the results shown in Tables (3,4), we find that there is a clear and tangible development for the members of the two groups in the skill post-tests, and this is consistent with what was stated in the first hypothesis of the study, the researcher attributes the reason for this to the soundness of the educational curriculum for the two groups and the fact that it contains selected exercises in a scientific manner and with correct and consistent repetitions and consistent with the level and ability of the

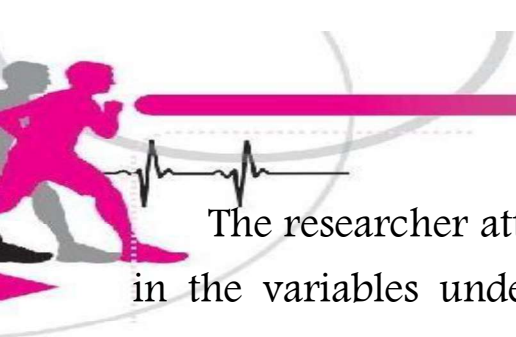


sample members, it is based on correct practice, and this was confirmed by (Lazam, Qassem,2005,p.g 43) that "training and practicing a specific skill within a motor duty leads to increased experience and development in learning" . Therefore, practice is the most important variable in the learning process for complex and even simple skills .

One of the factors that helped in acquiring learning for members of the two groups was the effect of the two teaching methods (followed and compound teaching), as each group practiced one of these teaching methods, and this in itself had a positive and effective impact on the educational process, "as each of the teaching methods when used during a period of time. It leads to communication and the attainment of a certain set of goals" . (Hussein, 2005,p.g 31.)

The researcher also attributes the development of the control group in the variables under study to the method followed by the subject teacher, which depends on the verbal explanation of the motor skill, followed by the performance of the model, which adds to the students an initial perception of how to apply the skills. And then feedback from the teacher, and all this would raise the level of students and their progress in the skill side.

The researcher also attributes the development of the experimental group in the personal struggle variable to the complex teaching method by expanding interaction and participation in the lesson, improving social relations through the work of work groups (dual and quadruple), and diversifying ways of thinking through asking questions, comparison, problem solving, students' repetition of skills, in addition to regularity and continuity. In education, and then feedback on the part of the teacher, and all of this would raise the level of students and their progress in the skill side.

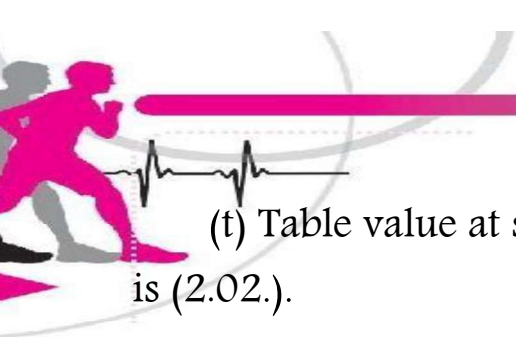


The researcher attributes the development of the experimental group in the variables under study as a result of the use of the compound teaching method with its two modes of application under the guidance of the two-part peers and the application under the guidance of the four-legged peers, which provided an opportunity for students to see the effectiveness in all its stages in its proper conditions, which helped their assimilation in addition to continuous evaluation and providing feedback from the colleague during the stage of learning as well as discovering and correcting mistakes, which in turn leads to progress and improvement, this is consistent with what (Othman , 2001,p.g 48) indicated, "The method of application under the guidance of peers appears useful in the early stages of learning when the learner needs to identify important points after each attempt to correct the motor performance of the activity, and thus provides a teacher for each student."

Presentation and analysis of the results of the post-tests for the control and experimental groups in the personal struggle and learning the technical performance of the effectiveness of the long jump:

Table (5) shows the significance of the differences between the post tests of the control and experimental groups in the personal struggle and learning the technical performance of the long jump

Variables	Control group		Experimental group		T value		Sig type
	Mean	Std. deviation	Mean	Std. deviation	Calculated	Tabular	
Personal struggle	133.5	3.64	141.57	4.33	11.316	2.02	Sig
Long jump	5.777	0.971	6.111	1.023	6.234		Sig



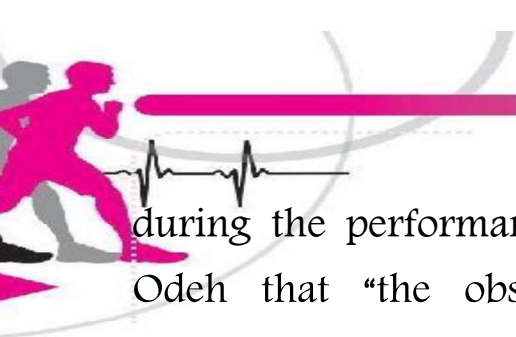
(t) Table value at significance level (0.05) and degree of freedom (38) is (2.02).

Table (5) shows the arithmetic means, standard deviations, and the calculated (t) value between the post-measurement in the tests under consideration for the control and experimental groups, the results showed that all the differences for the tests are significant and in favor of the experimental group because the calculated (t) value is greater than the tabular (t) value of (2.02) and with a degree of freedom (38) and below the level of significance (0.05), and this indicates a significant difference in favor of the experimental group in All variables are under investigation.

Discussing the results of the post-tests for the control and experimental groups in the personal struggle and learning the technical performance of the long jump.

Through the results shown in Table (5), we find that the value of (t) calculated for all the tests under study is greater than its tabular value, which indicates the significant differences between the post tests for the two groups and in favor of the experimental group. The researcher attributes the reason for the superiority of the experimental group which used the compound teaching method with dual and quadruple peer guidance that the student in this method has a good opportunity to correct the errors of his motor performance at an early date by receiving feedback from his colleague (the observer). be specific and clear". (Hussein, 2005,p.g 39)

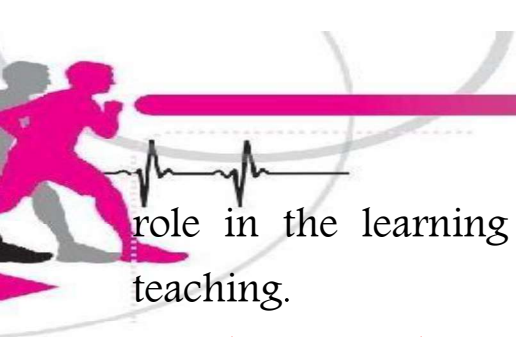
Also, one of the reasons that led to the superiority of the complex method of teaching with dual and quadruple peer guidance is the nature of this method, which imposed the presence of one observer as a teacher for each student, leading to help him get rid of the mistakes he makes



during the performance of the skill, and this was confirmed by Adel Odeh that “the observer student performs By making a mental visualization of the motor skill when correcting mistakes for his fellow performer, and this is what develops his intellectual side”. (Abdel Karim, Afaf, 1990 , p.g 56)

The researcher also attributes this progress to the experimental group to the fact that the use of the compound teaching method in the dual and quadruple modularity was proportionate and consistent and built on each other in a scientific and effective manner, which led to the student gaining experience as a result of applying the dual first and then the quadruple immediately after it, which resulted in an increase in this experience and mastery of the skill as Have a mental image and remember the correct sequence of performance, as well as the continuation of the feedback provided by the observers to the performers, in addition to the repetition of the exchange of the role of the observer and the performer, which results in the repetition of the practice of work several times, which helps to gain experiences from each other and establish the correct performance and attempt to reach it, which led to an increase in cooperation and interaction between students to help them to each other Some, which helped to take into account the individual differences and the occurrence of progress and improvement for the members of this group.

In the traditional method, the teacher presents the information, explains and displays the skills through the model, and then repeats the skill on the part of the student, but without a positive or signal for the student to participate in presenting the skill. What he hears and puts the student in the position of the recipient, which makes him play a negative



role in the learning process, in contrast to the complex method of teaching.

Conclusions and recommendations:

Conclusions :

1. The method of teaching followed and the method of compound teaching have a positive effect in the personal struggle and learning the technical performance of the students' long jump.
2. The complex teaching method (application with the guidance of pairs and quadruplets) showed superiority over the method used in personal struggle and learning technical performance for the long jump for students.

Recommendations :

1. The necessity of applying the compound teaching method (application under the guidance of pairs and quadruplets) to teach other athletics activities.
2. The necessity of applying the teaching method in the compound teaching method in the curricula of teaching methods in the faculties of physical education.
3. The necessity of holding training courses to train physical education teachers on how to use modern teaching methods, including the compound teaching method within the framework of the use of modern teaching methods, in cooperation between the faculties of physical education and sports sciences and the directorates of education.
4. The necessity of conducting other studies using the compound teaching method with its different patterns on samples for other stages and on other variables.



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