The journal « The challenge »: ISSN 9859-1112 EISSN2602-6619 :
Volume: 17 Issue: 01 / 2025, Pages 304 – 319

The impact of the use of forms of didactic work in improving the physical qualities of secondary school students (16-18 years)

تأثير استخدام اشكال العمل الديداكتيكي في تحسين الصفات البدنية لدى تلاميذ الطور الثانوي (16-18) سنة

Benyoub Abdelaali [*1]
[1] mohamed-cherif messaadia university- soukahras (Algeria), a.benyoub@univ-soukahras.dz

Received: 2024-02-14 **Accepted: 2024-07-12** **Published: 2025-02-22**

Abstract:

The study aimed to identify the impact of the use of didactic forms of work in improving the physical qualities of Secondary School students (16-18) years, This is done by highlighting the forms of didactic work, represented by automatic forms, forms of research, group work, and for this purpose we used the experimental approach to designing equivalent groups. where the study community was represented in the students practicing physical education and sports class at Swedani Muhammad al-Turki Souk ahras high school, the study sample included three experimental groups and a control group for both sexes, each group included 15 male and 10 female students selected randomly, physical tests were used and an educational program was designed, the results were concluded the forms of didactic work affect the improvement of physical qualities in pupils at Secondary the stage.

Keywords: forms of didactic action; physical qualities; secondary the stage.

Corresponding author: Benyoub Abdelaali **E-mail: a.benyoub@univ-soukahras.dz**

-Publication rights are reserved for Oum-El Bouaghi University - website: https://www.asjp.cerist.dz/en/PresentationRevue/71

1. Introduction

The educational process is seen as a set of logical elements that motivate students and support their learning. These elements include educational programs and means and teachers' skills, as they aim to transfer knowledge, skills, values and positive behaviors to students. They also consider from a special perspective of education as an organized process in which the teacher achieves educational goals through actions and activities within the classroom that promote learning and evaluate students' progress (Mohsen Ali Attia, 2013, p. 74), as the method facilitates learning and achieves educational goals efficiently and effectively. As the science of teaching is a unique and vital field in the world of education because it is the main pillar of the success of any educational system, it is concerned with understanding how to transfer knowledge and guide the learning process for individuals effectively (Muhammad Abu Al-Haq, 2010, p. 63). It also includes a variety of aspects, starting from designing educational programs and selecting appropriate methods and strategies to facilitate understanding, to evaluating student performance and improving educational processes. Forms of didactic work are an effective tool. Through their application, educational activities can be designed that encourage active participation in physical activities such as sports and various sports exercises. Instructing and guiding teachers and trainers to use innovative and effective teaching methods and strategies is one of the most important factors in achieving this goal. Through interactive and diverse training sessions, students can develop their motor skills and improve their physical abilities (Kamal Abdel Hamid Zeitoun, 2003, p. 41). Moreover, activities that promote health awareness and the importance of physical fitness in their daily lives can be included. In the current context, scientific studies show that the use of forms of didactic work in the educational context can have a positive impact on improving the outputs of the educational process. The researcher believes that the use of forms of didactic work in the field of physical and sports activities can contribute to improving the various physical qualities of students by providing an educational environment that encourages active participation and interaction in physical activities, giving students the opportunity to learn and develop through their personal experiences in various sports and physical activities. The use of forms of didactic work through the design of innovative educational programs contributes to improving the physical qualities of students, by motivating teachers for students to participate in various and enjoyable physical activities, allowing students to enhance their physical and skill capabilities, which positively affects their personal and academic development, and from the theoretical literature and intellectual starting points of didactic work in the physical and sports education class, the following general question came:

1.1 the problematic of study

Does the use of didactic forms of work affect the improvement of physical qualities in secondary school pupils (16-18 years) of different genders?

1.2 Partial problems

Does the use of didactic forms of work affect the improvement of speed in secondary school pupils (16-18 years) of different genders?

Does the use of didactic forms of work affect the improvement of the explosive strength of the muscles of the two men in secondary school pupils (16-18) years of age in different genders?

Corresponding author: Benyoub Abdelaali **E-mail: a.benyoub@univ-soukahras.dz**

-Publication rights are reserved for Oum-El Bouaghi University - website: https://www.asjp.cerist.dz/en/PresentationRevue/71

Does the use of didactic forms of work affect the improvement of the explosive strength of the arms in secondary school pupils (16-18 years) of different genders?

2. Study hypotheses

2.1 General hypothesis

The use of didactic forms of work affects the improvement of physical qualities in secondary school pupils (16-18 years) of different genders.

2.2 Partial hypotheses

- The use of didactic forms of work affects the improvement of speed in secondary school pupils (16-18 years) of different genders.
- The use of didactic forms of work affects the improvement of the explosive strength of the muscles of the two men in secondary stage pupils (16-18) years of age in different genders.
- The use of didactic forms of work affects the improvement of the explosive strength of the arms in secondary school pupils (16-18 years) of different genders.

2.3 The importance of the study

The importance of our study is reflected in highlighting the importance of the forms of didactic work for teachers of physical education and sports in achieving the desired goals, because the didactic work enhances the personal and interactive knowledge of students, which encourages them to participate continuously in physical activities in school and outside.

2.4 the objectives of the study

- Highlighting the impact of the forms of didactic work in the educational process, represented in the spontaneous forms, the forms of research, the forms of group work on improving the speed and explosive power of the muscles of the legs and the explosive power of the arms of secondary school students (16-18) years for different genders during the physical and sports education class.
- To guide education policies by understanding the relationship between didactic work and improving physical attributes, to improve and develop physical education programs in secondary schools more effectively.
- Support educational decision making with a better understanding of how didactic models affect the improvement of physical qualities.

2.5 Defining terminology concepts

2.5.1 Forms of didactic work: They are the various activities that the teacher must practice thanks to certain study materials, in order to make the pupils naturally achieve these activities independently of the pupils' behavior. The overlap between the work of the teacher and the activity of the pupils is very large and in turn determines the type of activity and the form of educational work (Kamal Abdel Hamid Zaytoun, 2003, p. 41).

2.5.2 Physical qualities: Those abilities that allow and give the body the ability and willingness to work on the basis of comprehensive and associated development in physical qualities such as endurance, strength, speed, flexibility and agility, and it is necessary to develop these qualities with a scientific background in the field of motor habits (Muhammad Abu Al-Haq, 2010, p. 63).

2.5.3 Secondary stage: It is a stage of education, which takes place in secondary educational institutions, comes after the intermediate education stage, and precedes higher education,

Corresponding author: Benyoub Abdelaali **E-mail: a.benyoub@univ-soukahras.dz**

-Publication rights are reserved for Oum-El Bouaghi University - website: https://www.asjp.cerist.dz/en/PresentationRevue/71

ending with a baccalaureate degree that allows the student to enroll in university education, or go to professional life (Mohsen Ali Attia, 2013, p. 74).

2.6 Previous and similar studies

2.6.1 Study of Qais Babai, Nasseri Muhammad Al-Sharif 2023 entitled "Study of the Relationship between the Pedagogical Pole and the Psychological Pole in the Didactic Triangle" in the Physical and Sports Education Lesson in the Secondary Phase.

- Objective of the study: The study aimed to detect the pedagogical pole and the psychological pole in the didactic triangle in the physical education and sports class at the secondary stage.
- Approach: The two researchers used the descriptive approach, and to achieve the goal of the study, a questionnaire was designed consisting of 22 statements directed to students.
- Research sample: The study sample consisted of 116 male and female students from the three levels selected in a stratified random manner.
- The study Findings:
- There is a statistically significant intermediate relationship between the pedagogical and psychological poles due to the variable.
- There are differences between the first, second and third years due to the academic level variable.
- There are no differences in the psychological level due to the gender variable and the academic level.

2.6.2 The study of Darwish Yahya, Tayebia Fawzi, Kassili Jamal 2023 entitled The Impact of an Educational Program in the Method of Solving Problems on the Achievement Motivation of the Intermediate School Students – A Field Study in the Intermediate School of Martyr Masai Mohammed Al-Taher Al-Owainat Tabsa.

- Objective of the study: The study aimed to identify the impact of a learning program in the problem-solving method on the achievement motivation of middle school students.
- Approach: The researcher used the experimental approach to design the two experimental and control groups.
- The research sample: The study sample consisted of the fourth year students, an average of 40 females and males, who were selected by the simple random method.
- The study Findings:
- There are statistically significant differences between the control group and the experimental group that studies problem-solving in the dimension of the motivation to achieve success in favor of the experimental group.
- There are statistically significant differences between the control group and the experimental group that studies problem-solving in the dimension of failure avoidance motivation in favor of the experimental group.

2.6.3 The study of Muammar Labad, Yaqoub bin Qassimi, Radwan bin Hamza 2022 entitled "Effectiveness of designing an athletic program with small games in the development of some elements of physical fitness (permanence, speed, flexibility) among primary school students (10-11) years.

- Objective of the study: The study aimed to design an athletic program for small games to develop some elements of physical fitness (permanence, speed, flexibility) for primary school students (10-11) years, as well as to know the impact of these games.

Corresponding author: Benyoub Abdelaali **E-mail: a.benyoub@univ-soukahras.dz**

-Publication rights are reserved for Oum-El Bouaghi University - website: https://www.asjp.cerist.dz/en/PresentationRevue/71

- Approach: The researcher used the experimental approach.
- The research sample: The sample consisted of the 30 students of Sallali Farhat Primary School, who were divided into two experimental and control groups, each group consisted of 15 pupils chosen intentionally.
- The study Findings:
- The use of small games in the physical education lesson has a positive impact on all the tests of the fitness elements under research among the students of the experimental group.
- The results of the proposed program in small games showed significant differences and statistical significance between the experimental and control groups in the post-measurement in favor of the experimental group.
- The improvement rate of the experimental group is better than the improvement rate of the control group in all tests of the fitness elements under research.

2.6.4 The study of Sesoum Ali 2022 entitled "The Efficiency of Implementing the Lesson in the Teacher of Physical and Sports Education and Its Reflection on the Motor Learning of Students during the Lesson".

- Objective of the study: The study aimed at the adequacy of the implementation of the lesson by the teacher of physical and sports education and its reflection on the motor learning of students during the class.
- Approach: The researcher used the descriptive approach.
- The research sample: A sample was randomly selected consisting of 38 teachers of physical and sports education.
- The study Findings:
- Preparing the teacher for the lesson and diversifying the stimuli is of great importance in achieving the process of motor learning among students.
- How the teacher finishes the lesson is of great importance in the process of motor learning among students during the physical and sports education class.

2.6.5 The study of Elias Leroy, Moataz Billah Sharif 3,202 entitled "The Impact of the Physical Education and Sports Program scheduled for the fourth year on the results of the 60m rapid running test for both males and females (17-14) years. A field study on some averages of the municipality of Biskra.

- Objective of the study: The study aimed to find out the impact of the physical education and sports program scheduled for the fourth year on the results of a 60 m rapid running test for both males and females for the age group (17-14) years
- Approach: The researcher used the descriptive approach.
- Research sample: A sample was selected in an intentional way consisting of 164 learners of both sexes (90 female learners and 74 male learners).
- The study Findings:
- There is an impact of the physical education and sports program scheduled for the fourth year on the results of the 60m rapid running test for male learners.
- There is no impact of the physical education and sports program scheduled for the fourth year on the results of the 60m rapid running test for female learners.

2.7 Commenting on previous studies

Through our review of previous and similar studies, we find that they are similar to our study in:

Corresponding author: Benyoub Abdelaali **E-mail: a.benyoub@univ-soukahras.dz**

-Publication rights are reserved for Oum-El Bouaghi University - website: https://www.asjp.cerist.dz/en/PresentationRevue/71

It dealt with the use of didactic forms of work during the implementation of the physical and sports education course in the development of physical fitness and motor learning elements. All studies dealt with these basic variables and in our study are more consistent with the study of Qais Babai, Nasseri Muhammad Al-Sharif 2023.

Our study is also consistent in terms of the objective of the study with the study of Qais Babai, Nasseri Muhammad al-Sharif (2023), Darwish Yahya, Tiyabiya Fawzi, Kasili Jamal (2023), Muammar Labbad, Ya 'qub bin Qasimi, Radwan bin Hamza (2022), Elias Rawi, Mu 'taz Billah Sharif (2023), as it aimed to know the impact of educational programs on the teaching of physical qualities among students. Our study is consistent in terms of the curriculum followed by Darwish Yahya, Tiyabiya Fawzi, Kasili Jamal (2023), Muammar Labad, Ya 'qub bin Qasimi, Radwan bin Hamza (2022), Elias Rawyas Rawy, Mu 'taz Billah Sharif (2023), and our study is consistent in terms of the sample used in the study with the study of Qais Babai, Nasseri Muhammad al-Sharif (2023), as it targeted secondary school students.

The previous studies differ with our study in the subject and variables of the study, such as the study of Qais Babai, Nasseri Muhammad al-Sharif (2023), Darwish Yahya, Tayebia Fawzi, Kassili Jamal (2023), Muammar Labbad, Yaqoub bin Qasmi, Radwan bin Hamza (2022).

Elias Leroy, Moataz Billah Sharif (2023), where she addressed the impact of a variety of educational program during the physical education and sports class. As for the forms of didactic work, the studies we mentioned did not address it previously, but rather dealt with the relationship between the pedagogical pole and the psychological pole in the Didactic Triangle , the problem-solving method, a sports program with small games, the physical education and sports program scheduled for the fourth year is medium. In terms of the curriculum, our study differed with the study of Qais Babai, Nasseri Muhammad al-Sharif (202), Samsoom Ali (2022), Elias Leroy, Moataz Billah Sharif (2023), where she used the descriptive approach. In terms of the sample, the study of Darwish Yahya, Tayyibya Fawzi, Kasili Jamal (2023), Samsoom Ali(2022), Elias Roy, Moataz Billah Sharif (2023), which targeted the intermediate stage, and the study of Muammar Labad, Yaqoub Ben Qasmi, Radwan Ben Hamza (2022), which targeted the primary stage.

3. Methods

3.1 The exploratory study

The exploratory study was conducted at Suwaidani Mohammed Al-Turki High School in Ahras Market during the period from 10/10/2021 to 16/10/2021 to determine the obstacles that may occur during work and the appropriateness of the time allocated for conducting the study. The tests under study were also applied to 10 students practicing physical and sports education to find the validity and stability coefficient.

3.2 Study Methodology

In his study, the researcher relied on the experimental approach in the pattern of equivalent groups to suit the nature of the study.

3.3 population and sample of the study

Our study community was represented in the (250) students of Suwaidani Mohammed Al-Turki High School in Sidratah, Souk Ahras State, which corresponds to the age group (16-18) years for the academic season 2021/2022. The study sample consisted of 60 male and

Corresponding author: Benyoub Abdelaali **E-mail: a.benyoub@univ-soukahras.dz**

-Publication rights are reserved for Oum-El Bouaghi University - website: https://www.asjp.cerist.dz/en/PresentationRevue/71

female students randomly selected from the original community by 40%, divided into four groups, each group consisting of 15 males and 10 females.

3.4 The homogeneity of the sample and the equivalence of the research groups

3.4.1 Homogeneity of the sample

In order to homogenize the sample, the researcher calculated the torsion coefficient for the experimental and control groups of variables that have an impact on the study, which are (height, weight, age) as follows:

Table 1. The homogeneity of the research sample shows males and females

Variables	Sex	Unit of measurement	Mean	St. Deviation	skewness
Length	Males	m	167.71	4.23	0.644
	Females		160.92	5.75	0.392
Weight	Males	kg	65.48	6.34	0.721
	Females		57.72	6.45	0.317
Age	Males	Year	16.78	0.71	0.346
	Females		16.90	0.74	0.165

Source: Prepared by the researcher, 2024

It is clear from Table No. (1) that the values of the torsion coefficient are limited between (-1, +1), which indicates the homogeneity of the male and female members of the research sample in these variables in the sense of the normal distribution of them.

3.4.2 Sample Equivalence

In order to attribute the differences to the experimental factor, the researcher worked to verify the equivalence of the research groups in the physical qualities of speed, the explosive power of the two men, and the explosive power of the arms in different genders as follows:

Table 2. Shows equivalence of research groups in male and female physical characteristics

Capacity	Sex	Source of variance	Total Averages	D.F	Mean squares	F value	sig	statistical Index
Speed 30m	Males	Between Groups	0.402	3	0.134	1.724	0.172	Statistically insignificant
		Within Groups	4.350	56	0.078			
	Females	Between Groups	0.295	3	0.098	1.625	0.201	Statistically insignificant
		Within Groups	2.179	36	0.061			
Leap Forward From Steady	Males	Between Groups	0.204	3	0.068	1.822	154	Statistically insignificant
		Within Groups	2.093	56	0.037			
	Females	Between Groups	0.016	3	0.005	047	0.986	Statistically insignificant
		Within Groups	4.187	36	0.116			
Forward throwing of medical balls to the maximum	Males	Between Groups	1.531	3	0.510	1.239	0.304	Statistically insignificant
		Within Groups	23.072	56	0.412			
	Females	Between Groups	1.808	3	0.603	1.376	0.266	Statistically insignificant
		Within Groups	15.766	36	0.438			
Level of signification: 0.05		F Tabular Male: 2.76				F Tabular Female: 2.84		

Source: Prepared by the researcher, 2024

Corresponding author: Benyoub Abdelaali **E-mail: a.benyoub@univ-soukahras.dz**

-Publication rights are reserved for Oum-El Bouaghi University - website: https://www.asjp.cerist.dz/en/PresentationRevue/71

It is clear from Table No. (2) that the values of (F) calculated for all groups of males and females are less than the value of (F) in the table, which indicates the equality of the research groups in these tests.

3.5 Data and information collection tools, the following have been used

3.5.1 Physical tests

Test of running at a speed of 30m: The goal of the test is to measure the maximum speed. Tools A stopwatch, a whistle, three parallel lines drawn on the ground The distance between the first and second lines is (10) meters and between the second and third (30) meters. The player stands at the starting line and takes the high standby position, upon hearing the whistle the player runs at full speed until he crosses the finish line, the coach records the time of the player's enemy. (Mohamed Sobhi Hassanein, 1987, p. 62). Leap Forward from Stability Test: The aim of the test is to measure the muscular ability of the two legs forward. The tools are flat ground that does not expose the individual to slipping, a measuring tape, draws on the ground a starting line and divides the vaulting distance in centimeters. The laboratory stands behind the starting line and the feet are slightly apart by the breadth of the pelvis and arms high, recording the distance from the elevation line until the last trace of the landing place (Mufti Ibrahim Hammad, 2001, p. 46). Medical Ball Throw Test: The aim of the test is to measure the explosive force of the muscles of the arms and trunk. Instruments are a medical ball with a weight of (3 kg), a measuring tape, the laboratory stands behind the starting line, holding the medical ball trying to throw it to the farthest point, the distance is calculated to the farthest point recorded by the laboratory (Osama Kamel Rateb, 2000, p. 95).

3.5.2 The educational program

The proposed educational program was built in its initial form and presented to the arbitrators, so that it included educational units of 6 educational classes for each member of the work team on the basis of two classes per week (a class for males and a class for females) and a total of 22 classes except for the pre and post measurement class that was done for all groups at the same time taking into account the nature of gender. The program contained three physical qualities (speed, explosive power of the two men, explosive power of the arms) using each group for a form of didactic work (spontaneous forms, research forms, group work), in improving them, taking into account the structure and characteristics of each form during the design of the educational unit except for the control group that worked in the usual way.

3.6 Scientific transactions of the study tests

3.6.1 The reliability and validity of the tests

The reliability coefficient for each test was calculated by a method (test – retest), where the tests were applied to 10 randomly selected students, and then the validity coefficient was extracted by the square root of the stability coefficient Alpha Cronbach as follows:

Table 3. The reliability and validity of the tests used

Exams	Stability coefficient	Validity coefficient
30m speed traction test	0.996	0.997
Leap Forward Test of Stability	0.983	0.991
Testing the forward throw of medical balls for the maximum distance	0.988	0.993

Corresponding author: Benyoub Abdelaali **E-mail: a.benyoub@univ-soukahras.dz**

-Publication rights are reserved for Oum-El Bouaghi University - website: https://www.asjp.cerist.dz/en/PresentationRevue/71

3.7. Field application procedures

After the researcher reviewed the previous sources and research in the field of specialization and identified the physical qualities represented in (speed, explosive power of the legs, explosive power of the muscles of the arms), we prepared a questionnaire form that includes a set of standardized tests and presented it to the arbitrators, and in application of the scientific methods followed in the research, the tests were applied to 10 students who were later excluded from the main experiment, and the test and retest were also conducted at the same time, and a working group consisting of four professors was formed according to the number of groups and several working sessions were conducted. The sample was also distributed in different groups, taking into account randomization. The researcher supervised one group and the rest of the groups worked with the assistant team consisting of experienced professors. Several special trainings were conducted with the team on how to control monitoring and record behavior during observation, followed by pre-testing of the study variables for all experimental and control groups at the same time, followed by the stage of applying the educational program to the experimental groups according to the forms of didactic work stipulated in the research, taking into account the conditions that the strength of the educational unit is 60 minutes, and one class per week has been divided into stages. The stage The first stage is where the physical qualities are taught to reach good performance while avoiding the principle of strength and speed. The second stage is where the physical characteristic is taught and fixed by gradually upgrading the speed of performance, and increasing the appropriate use of force and speed during performance. After the completion of the application of the program, we did the post measurement with the same specifications of the pre measurement with a comparison between the two measurements to know the differences between them.

3.8 Statistical methods used in the study: arithmetic mean, standard deviation, independent samples (T) test, simple correlation coefficient, torsion coefficient, single variance analysis, using the Statistical Package for Social Sciences version 28 (SPSS) program.

4. Analyze and discuss the results

4.1 Presenting and analyzing the results of the first hypothesis

The use of didactic forms of work affects the improvement of speed in secondary school pupils (16-18 years) of different genders.

Table 4. Differences in Study Groups on the 30m Speed Test Male and Female

		Pre-test		post-test		sig	statistical Index
		Mean	Std Deviation	Mean	Std Deviation		
Control Group	M	4.47	0.54	4.28	0.34	0.029	Significant Statistically
	F	5.29	0.29	5.17	0.20	0.014	
Exp.Group 1	M	4.16	0.20	4.10	0.19	0.016	Significant Statistically
	F	5.10	0.19	4.99	0.26	0.034	
Exp.Group 2	M	4.10	0.22	4.04	0.22	0.015	Significant Statistically
	F	5.08	0.20	4.46	0.65	0.018	
Exp.Group 3	M	4.13	0.25	3.88	0.49	0.037	Significant Statistically
	F	11.5	0.27	4.88	0.32	0.028	
Degree of freedom: Males: (14) Female:(9)						Level of signification: 0.05	

Source: Prepared by the researcher, 2024

Corresponding author: Benyoub Abdelaali **E-mail: a.benyoub@univ-soukahras.dz**

-Publication rights are reserved for Oum-El Bouaghi University - website: https://www.asjp.cerist.dz/en/PresentationRevue/71

Through the results shown in Table (4), the values of the differences were statistically significant between the pre- and post-test at all experimental groups and the control group, and this is in the 30 m speed test for males and females, for males, the values of (SIG) were estimated at (0.029, 0.016, 0.015, 0.037) respectively, which is less than the significance level 0.05 at the degree of freedom 14, while the females estimated the values of (SIG) at (0.014, 0.034, 0.018, 0.028), which is less than the significance level 0.05 at the degree of freedom 9.

Table 5. anova results in 30 meter speed test, male and female

Capacity	Source of variance		Total Averages	D.F	Mean squares	F value	sig. value	statistical Index
Speed 30m	Between Groups	M	1.251	3	0.417	3.697	0.017	Level of signification: 0.05
	Within Groups		6.316	56	0.113			
	Between Groups	F	2.747	3	0.916	5.713	0.003	
	Within Groups		5.769	36	0.160			
F Tabular Male (2.76)					F Tabular Female (2.84)			

Source: Prepared by the researcher, 2024

It is clear from the results presented in Table (5) for males that the calculated value of (F) amounted to (3.697), which is greater than the tabular value of (F) estimated at (2.76), while the value of (SIG) was estimated at (0.017), which is less than the significance level (0.05) at the degree of freedom and the degree of freedom (3, 56), while females estimated (F) calculated at (5.713), which is greater than the tabular value of (F) estimated at (2.84), while the value of (SIG) was estimated at (0.003), which is less than the significance level (0.05) at The degree of freedom and the degree of freedom (3, 36), which means that the differences are real, not due to chance between all groups.

4.1.1 Discussing the results of the first hypothesis

Which states that the use of forms of didactic work affects the improvement of speed in secondary school pupils (16-18 years) of different genders.

Through the results obtained in Table No. (4) and (5), it was found that the differences between the arithmetic averages of the pre-test and the post-test are statistically significant differences in favor of the post-test among the experimental and control research groups of different genders, and that the differences are real, and not due to chance between all groups, and the researcher attributed this to the fact that the forms of didactic delivery are methods of presentation that are primarily concerned with clarification, interpretation and indoctrination, which often includes reporting, the purpose of which is mainly to equip the student with a set of information and facts. Using experimental questions that were mainly concerned with the extent to which students followed the educational process, and thoughtful questions that urged students to think and dialogue because they are characterized by one-way starting with the teacher and ending with students with a focus on the fragmentation of the skill during the educational units, and the appropriate use of appropriate feedback according to the time given by the teacher allowed students to see the details of the correct movements and methods required, which led to a deeper and permanent

Corresponding author: Benyoub Abdelaali **E-mail: a.benyoub@univ-soukahras.dz**

-Publication rights are reserved for Oum-El Bouaghi University - website: https://www.asjp.cerist.dz/en/PresentationRevue/71

understanding and application of concepts and movements among students significantly. In the same context, Mohsen Ali Attia sees that the forms of Didactic Diction are a way that leads students to know the truth, and general provisions in a way of research, induction and deduction (Mohsen Ali Attia, 2013, p. 101). It also aims to encourage students to explore and understand knowledge in an active and independent way. It provides an opportunity to develop knowledge through induction, research and reflection. The Didactic Dialogue is one of the important educational methods that aims to encourage students to explore and understand knowledge in an active and independent way. Our study is consistent with what was confirmed by the study of Qais Babai, Nasseri Muhammad al-Sharif (2023), which found a direct relationship between the pedagogical pole and the psychological pole in the didactic triangle in the study of physical and sports education in the secondary phase, and the study of Darwish Yahya , Tayebia Fawzi, and Kassili Jamal (2023), which found statistically significant differences between the control group and the experimental group that studies in the problem-solving method after the motivation to achieve success in favor of the experimental group, with statistically significant differences between the control group and the experimental group that studies in the problem-solving method after the motivation to avoid failure in favor of the experimental group.

4.2 Presenting and analyzing the results of the second hypothesis

The use of didactic forms of work affects the improvement of the explosive strength of the muscles of the two men in secondary stage pupils (16-18) years of age in different genders.

Table 6. Differences in the front jump test for male and female stability

		Pre-test		post-test		sig	statistical Index
		Mean	Std Deviation	Mean	Std Deviation		
Control Group	M	1.51	0.17	1.56	0.22	0.020	Significant Statistically
	F	1.00	0.33	1.10	0.34	0.007	
Exp.Group 1	M	1.50	0.15	1.56	0.19	0.008	Significant Statistically
	F	1.04	0.34	1.51	0.23	0.001	
Exp.Group 2	M	1.53	0.12	1.61	0.14	0.001	Significant Statistically
	F	1.05	0.32	1.24	0.23	0.004	
Exp.Group 3	M	1.65	0.27	1.80	0.21	0.006	Significant Statistically
	F	0.90	0.27	1.25	0.26	0.009	
Degree of freedom: Males: (14) Female:(9)						Level of signification: 0.05	

Source: Prepared by the researcher, 2024

Through the results shown in Table (6), the values of the differences were statistically significant between the pre- and post-test at all experimental groups and the control group, and this is in the front jump test for males and females, for males, the values of (SIG) were estimated at (0.020, 0.008, 0.001, 0.006) respectively, which is less than the significance level 0.05 at the degree of freedom 14, while the females estimated the values of (SIG) at (0.007, 0.001, 0.004, 0.009), which is less than the significance level 0.05 at the degree of freedom 9.

Corresponding author: Benyoub Abdelaali **E-mail: a.benyoub@univ-soukahras.dz**

-Publication rights are reserved for Oum-El Bouaghi University - website: https://www.asjp.cerist.dz/en/PresentationRevue/71

Table 7. anova results in male and female front jump test

Capacity	Source of variance		Total Averages	D.F	Mean squares	F value	sig. value	statistical Index
Forward jump test	Between Groups	M	2.747	3	0.916	5.713	0.003	Level of signification: 0.05
	Within Groups		5.769	56	0.160			
	Between Groups	F	0.861	3	0.287	3.834	0.018	
	Within Groups		2.696	36	0.075			
F Tabular Male (2.76)					F Tabular Female (2.84)			

Source: Prepared by the researcher, 2024

It is clear from the results presented in Table (7) for males that the calculated value of (F) amounted to (5.713), which is greater than the tabular value of (F) estimated at (2.76), while the value of (SIG) was estimated at (0.003), which is less than the significance level (0.05) at the degree of freedom and the degree of freedom (3, 56), while females estimated (F) calculated at (3.834), which is greater than the tabular value of (F) estimated at (2.84), while the value of (SIG) was estimated at (0.018), which is less than the significance level (0.05) at The degree of freedom and the degree of freedom (3, 36), which means that the differences are real, not due to chance between all groups.

4.2.1 Discussing the results of the second hypothesis

It states that the use of didactic forms of work affects the improvement of the explosive strength of the muscles of the two men in secondary pupils (16-18) years of age in different genders.

Through the results obtained in Table No. (6) and (7), it was found that the differences between the arithmetic means of the pre-test and the post-test are statistically significant differences in favor of the post-test among the experimental and control research groups of different genders, and that the differences are real and not due to chance between all groups.

The researcher attributed this to the fact that the forms of didactic research gave independence and self-learning to students through the initiative and to give them a great deal of freedom and creativity by conducting research on the skills studied in a better form of evaluation and analysis, which contributed to the development of their abilities in the field of self-learning and independence in acquiring knowledge and active and effective learning within the educational environment. In the same context, (Kamal Abdel Hamid Zeitoun) believes that the didactic research method in motor learning is an essential tool that enhances students' thinking and enables them to have multiple skills (Kamal Abdel Hamid Zeitoun, 2003, p. 83). This method gives students the opportunity to acquire deeper knowledge and motor skills, and also contributes to the development of their research and analytical abilities and independence in learning. Hence, the research method in the field of motor learning is a powerful tool that promotes effective interaction and motivates students to learn actively and effectively within the educational environment. Our study is consistent with what was confirmed by the study of Muammar Labad, Yaqoub bin Qassimi, Radwan

Corresponding author: Benyoub Abdelaali **E-mail: a.benyoub@univ-soukahras.dz**

-Publication rights are reserved for Oum-El Bouaghi University - website: https://www.asjp.cerist.dz/en/PresentationRevue/71

bin Hamza (2022), which found that the use of small games in the physical education study has a significant improvement in all tests of the fitness elements under discussion among the students of the experimental group, and the results of the proposed program with small games are significant differences between the experimental and control groups in the post measurement in favor of the experimental group, and the rate of improvement of the experimental group is better than the rate of improvement of the control group in all tests of the fitness elements under discussion, and the study of Samsem Ali (2022), which found that the teacher's preparation for the lesson and his diversification of stimuli is of great importance in achieving the process of motor learning among students, and how to end the lesson by the professor is of great importance in the process of motor learning among students during the physical education and sports class.

4.3 Presentation and analysis of the results of the third hypothesis

The use of didactic forms of work affects the improvement of the explosive strength of the arms in secondary school pupils (16-18 years) of different genders.

Table 8. Differences in the front shooting test for medical balls male and female

		Pre-test		post-test		sig	statistical Index
		Mean	Std Deviation	Mean	Std Deviation		
Control Group	M	5.11	0.54	5.34	0.67	0.018	Significant
	F	0.61	4.51	0.65	2.929	0.017	Statistically
Exp.Group 1	M	4.99	0.48	5.38	0.58	0.009	Significant
	F	0.55	4.64	0.51	3.762	0.004	Statistically
Exp.Group 2	M	5.13	0.67	5.78	0.86	0.005	Significant
	F	0.80	4.86	0.80	5.117	0.001	Statistically
Exp.Group 3	M	5.90	0.70	6.27	0.56	0.001	Significant
	F	0.64	5.41	0.48	5.656	0.000	Statistically
Degree of freedom: Males: (14)		Female: (9)		Significance level (0.05)			

Source: Prepared by the researcher, 2024

Through the results shown in Table (8), the values of the differences were statistically significant between the pre- and post-test at all experimental groups and the control group, and this is in the front shooting test for medical balls for males and females, for males, the values of (SIG) were estimated at (0.018, 0.009, 0.005, 0.001) respectively, which is less than the significance level 0.05 at the degree of freedom 14, while the females estimated the values of (SIG) at (0.017, 0.004, 0.001, 0.000), which is less than the significance level 0.05 at the degree of freedom 9.

Corresponding author: Benyoub Abdelaali **E-mail: a.benyoub@univ-soukahras.dz**

-Publication rights are reserved for Oum-El Bouaghi University - website: https://www.asjp.cerist.dz/en/PresentationRevue/71

Table 9. anova results in medical ball throwing test males and females

Capacity	Source of variance		Total Averages	D.F	Mean squares	F value	sig. value	statistical Index
Medical Ball Throw Test	Between Groups	M	8.484	3	2.828	6.087	0.001	Level of signification: 0.05
	Within Groups		26.019	56	0.465			
	Between Groups	F	4.633	3	1.544	3.901	0.016	
	Within Groups		14.251	36	0.396			
F Tabular Male (2.76)					F Tabular Female (2.84)			

Source: Prepared by the researcher, 2024

It is clear from the results presented in Table (9) for males that the calculated value of (F) amounted to (6.087), which is greater than the tabular value of (F) estimated at (2.76), while the value of (SIG) was estimated at (0.001), which is less than the significance level (0.05) at the degree of freedom and the degree of freedom (3, 56), while females estimated (F) calculated at (3.901), which is greater than the tabular value of (F) estimated at (2.84), while the value of (SIG) was estimated at (0.016), which is less than the significance level (0.05) at The degree of freedom and the degree of freedom (3, 36), which means that the differences are real, not due to chance between all groups.

4.3.1 Discussing the results of the third hypothesis

It states that the use of didactic forms of work affects the improvement of the explosive strength of the arms in secondary school pupils (16-18 years) of different genders. Through the results obtained in Table No. (8) and (9), it was found that the differences between the arithmetic means of the pre-test and the post-test are statistically significant differences in favor of the post-test among the experimental and control research groups of different genders, and that the differences are real and not due to chance between all groups. The researcher attributed this to the fact that the forms of group work led the students participating in the study to the ability to store information about the studied skills far exceeds the individual ability, as the information is not a quantitative collection of information and opinions, but rather a dynamic result of the provision of information by each member of the group and the interaction and consultation of the opinions of the participants, and each member of the group has a structure of mental and cognitive formation, in terms of the content of ideas and the method of their regularity and work, and their abilities differ in organizing and integrating data and experiences and how to imagine the world. In the same context, (Muhammad Abu Al-Haq) believes that the method of working in groups in motor learning holds great importance in the learning process and the development of the individual. When students cooperate in groups, they are able to exchange knowledge and experiences in a way that promotes cooperative learning and effective interaction (Muhammad Abu Al-Haq, 2010, p. 86). This type of learning also promotes social interaction and constructive cooperation, resulting in a deeper and consistent understanding of concepts. Working in groups is also encouraged to develop communication, cooperation and leadership skills, and our study agrees with what was confirmed by the study of Muammar Labad, Yaqoub bin Qassimi, and Radwan bin Hamza

Corresponding author: Benyoub Abdelaali **E-mail: a.benyoub@univ-soukahras.dz**

-Publication rights are reserved for Oum-El Bouaghi University - website: https://www.asjp.cerist.dz/en/PresentationRevue/71

(2022), which found that the use of small games in the physical education study has a positive impact on all the tests of the fitness elements under research among the students of the experimental group. The results of the proposed program with small games are also significant differences and statistical significance between the experimental and control groups in the post-measurement in favor of the experimental group, and the percentage of improvement for the experimental group is better than the percentage of improvement for the control group in all tests of the fitness elements under research, and the study of Elias Roy, Mutazallah Sharif (2023), which found an impact of the physical education and sports program scheduled for the fourth year on the results of the 60-meter rapid running test for male learners.

5. Conclusions and Suggestions

5.1 Conclusions

Through all that has been presented in the research, it is possible to reach a set of conclusions and suggestions. From these results, we mention the following:

- The use of the forms of didactic work represented in the spontaneous forms and the forms of research. The forms of group work positively affect the improvement of the physical qualities of students during the physical education and sports class in the secondary stage.
- Forms of didactic work encourage pupils to take initiative and a great deal of freedom and creativity.
- The forms of didactic work during the physical and sports education class lead to the uniqueness of education and make it more effective.

5.2 Suggestions

Our findings prompt the formulation of the following suggestions:

- Applying the forms of didactic work during the educational process in physical education.
- Conducting more research on the forms of Didactic work in group games.
- Providing improved training programs for teachers to enhance their skills in the use of didactic forms of work.

6. Referrals and Quotations

1. Mohsen Ali Attia, Modern Curricula and Teaching Methods, Dar Al-Manhaj for Publishing and Distribution 2013.
2. Muhammad Abu Al-Haq, Analysis of the Educational Process, Methodologies and Applications, Dar Al-Fikr for Publishing and Distribution, 2010.
3. Kamal Abdel Hamid Zeitoun, Teaching Models and Skills, World of Books, 2003.
4. Mohamed Sobhi Hassanein, Methods of Building and Rationing Tests and Metrics in Physical and Sports Education, Dar Al-Fikr Al-Arabi, 1987.
5. Mufti Ibrahim Hammad, Modern Sports Training, Dar Al-Fikr Al-Arabi, 2001.
6. Osama Kamel Rateb, Sports Psychology, Dar Al-Fikr Al-Arabi, 2000.
7. Qais Babai, Nasseri Muhammad al-Sharif, Study of the relationship between the pedagogical pole and the psychological pole in the didactic triangle in the study of physical education and sports in the secondary phase, Journal of the Researcher in Humanities and Social Sciences, Volume No. 14, Issue No. 01, 2023, pp. 237-253.
8. https://www.asjp.cerist.dz/en/article/214140
9. Darwish Yahya, Tayebieh Fawzi, Kassili Jamal, The Impact of an Educational Program in the Method of Problem Solving on Achievement Motivation among Middle School Students – Field Study in the Intermediate Field of Martyr Mas 'i Muhammad Al-Taher Al-Owainat Tebessa, The journal « The challenge », Volume No. 15, Issue No. 01, 2023, pp. 143-163.
10. https://www.asjp.cerist.dz/en/article/213644

Corresponding author: Benyoub Abdelaali **E-mail: a.benyoub@univ-soukahras.dz**

-Publication rights are reserved for Oum-El Bouaghi University - website: https://www.asjp.cerist.dz/en/PresentationRevue/71

11. Muammar Labad, Yaqoub bin Qassimi, Radwan bin Hamza, Effectiveness of designing an athletic program with small games in the development of some elements of physical fitness (permanence, speed, flexibility) among primary school students (11-10) years, The journal « The challenge », Volume No. 14, Issue No. 01, 202 2, pp. 313-333.
12. https://www.asjp.cerist.dz/en/article/177910
13. Samsoom Ali, The Efficiency of Implementing the Lesson with the Professor of Physical and Sports Education and Its Reflection on the Motor Learning of Students during the Course, The journal « The challenge », Volume No. 14, Issue No. 01, 202 2, pp. 344-358.
14. https://www.asjp.cerist.dz/en/article/177912
15. Elias Leroy, Moataz Billah Sharif, The impact of the physical education and sports program scheduled for the fourth year is average on the results of the 60m rapid running test for both males and females (17-14 years). A field study on some of the averages of the municipality of Biskra, The journal « The challenge », Volume No. 15, Issue No. 01, 202 2, pp. 415-424.
16. https://www.asjp.cerist.dz/en/article/213661

Corresponding author: Benyoub Abdelaali **E-mail: a.benyoub@univ-soukahras.dz**

-Publication rights are reserved for Oum-El Bouaghi University - website**:** https://www.asjp.cerist.dz/en/PresentationRevue/71