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Effect of physical activity during practical works on (VO2max) and (MAS) outcomes - A field study for students of the institute of science and technology of physical and sports activities

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ABSTRACT

This study aims to identify the Effect of physical activity during practical works on (VO2max) and (MAS) outcomes a field study for students of the institute of science and technology of physical and sports activities, we used in our study the quasi experimental method, and the study sample consisted of 38 students of the institute of science and technology of physical and sports activities.

As for the statistical treatment, we used (arithmetic mean, standard deviation, total raw scores). The study concluded that the applied works did not affect the maximum volume of oxygen consumption (VO2max) and the maximum air speed (MAS) for students of the Institute of Science and Technology of Physical and Sports Activities

Keywords: practical works, aerobic capacity, VO2max, MAS,

INTRODUCTION

The In the teaching profession, attempts have been made to identify the characteristics of effective teachers. The teaching and learning process is a complex one. It demands various qualities on the part of the teacher if learning has to take place. Some of the outstanding characteristics of effective teachers include being an authority in the subject matter as well as the methods of imparting the knowledge, according to Adeyemiin 1989, The knowledge of the subject matter and the methods of instruction are not enough to make one a good teacher. (Njororai, W.W.S, 2003, p58).

Also, Ellena, Stevenson and Webb in Combs (1970) surveyed the views of the teachers in the United States and came up with a list of characteristics of a good teacher. According to them, a good teacher should:- know the subject, know much about related subjects, be adaptable to new knowledge, understand the process of becoming, recognize individual differences, be a good communicator, develop an inquiry mind, be available, be committed, be enthusiastic, have a sense of humour, have humility, be sincere and honest, act with integrity, be creative, be versatile, among others (Njororai, W.W.S, 2003, p58). Like the teacher of physical education and sports, who must possess these qualities by virtue of the fact that he practices the profession of teaching, and because he has other additional responsibilities in terms of the physical effort exerted with the students in the class of physical education and sports. according to Kane, JE. in 1975 The Physical Education teacher is therefore, involved to some extent in influencing the sports involvement, sports skills learning and the sports performance of young people.(Njororai, W.W.S, 2003, p59). In addition, he should encourage students are encouraged to be physically active inside and outside of the school setting. (Napper-Owen et al, 2008, p26). Also, according to the same study, which focused on ; What Constitutes a Highly Qualified Physical Education Teacher?, Which reached to add some important qualities that it must have, the most important of which are: Base their teaching on the national standards for Physical Education in order to provide students a foundation of skills and knowledge that can apply to many activities so that students are willing, able, and interested in seeking a lifetime of physical activity. Highly qualified physical education teachers understand the importance of meeting the needs of all types of learners, Highly qualified teachers give a purpose to their curriculum and illustrate that physical education has meaningful, educational. (Napper-Owen et al, 2008, p27).

And from it, based on the rulings issued by previous studies regarding the responsibilities of the physical education and sports teacher, which give a set of special qualities that the teacher of physical education and sports must possess like the rest of the teachers in other disciplines, it is more appropriate for the teacher of this subject to strive to acquire these qualities from the stages The first is for training, until it finally reaches the ability to automatically own it and harness it to serve its goals and responsibilities in the future.

Physical and sports education is one of the most important modern sciences that has increased in demand at all levels, including at the professional, health, and recreational levels. ..etc., so schools, institutes and specialized colleges that work on training and qualifying teachers of physical education and sports and coaches of sports teams for sports associations, have spread educationally and technically at the highest level and for every trainee or teacher, in addition to the need to control the pedagogy of applied sports classes, he must possess in the same Time is physical abilities and skill control as another means of pedagogical means that facilitate optimal control of motor and skill learning methods to reach the goals set in the physical education and sports class (Al-Alawi Abdel Hafeez, 2017, p148).

Since the target group in this study are students who are still receiving theoretical academic scientific education, in addition to a set of work-oriented classes, and practical works classes, where the adaptation of the students of the Institute of Physical and Sports Education to the various sports colors practiced through field practical works depends on their readiness and goals, The ruler on the personal level and its impact on the profitability of the achievement (Ababsa Najib, 2015, p270).

The applied pedagogy class in physical education and sports, like the other applied classes (practical works of handball, basketball, volleyball, football, judo, athletics, gymnastics, and the swimming class) is one of the basic and important time periods to support the student's personality first, It also prepares him to meet students from a scientific and psychological point of view, in addition to empowering him in terms of skill, as well as giving him a healthy body, morphological structure, and physical characteristics that help keep pace with the correct application and stand on the tasks of education. Where the development of physical fitness is the basic characteristic, as the previous motor construction will be established at this stage and that the effort exerted is always balanced with this movement (Ababsa Najib, 2015, p270). This is what makes us focus on the role of

physical activity in improving the most important physical qualities that help the student (the future professor) to perform his aforementioned tasks in the best way, which was represented in the characteristic of the maximal oxygen consumption (VO2max), and the maximal aerobic speed (MAS), which is one of the basic components of the characteristic of endurance pneumatic.

And since the student exercises physical activity in the practical works class on a daily basis, and in different sports disciplines, for the practical works classes, according to the program established by the administration of the institute. so that the total classes received by the student for practical works can be considered, which is the amount of physical effort for each week, which is calculated by the total hourly volume of practical works classes per week, which is 8 hours per week for the first year of the licence (for the first and second academic seasons), and 10 hours for the year the second year of a degree (for the third and fourth academic seasons), from the applied work. (Tableau analytique des matières par unités d'enseignement - Niveau licence - STAPS, 2021). this volume of weekly physical activity is roughly equivalent to the total hourly volume received by amateur athletes, for team sports disciplines (Ex: football, handball, basketball, ..).

Where a study has proven Carl Wells 2012, that sport-specific fitness testing differentiates professional from amateur soccer players for tests VO2max and VO2, However, neither tests of VO2 kinetics nor VO2max differentiated between the two groups (Carl Wells et al, 2012, p245). These results are no different from other sports disciplines.

From it, we can conclude that the hourly volume of physical activity applied to the students of the Sports Institute, through practical works, can be sufficient in terms of quantity, to develop the characteristic of the maximal oxygen consumption (VO2max), and the maximal aerobic speed (MAS). This is if used in the right way. Therefore, using the results obtained from previous studies, the problem of the study emerged, which made us pose the following problem:

- Does physical activity during practical works affect (VO2max) and (MAS) for students of the institute of science and technology of physical and sports activities?

Partial questions:

- Are there statistically significant differences between the pre and post-tests of the study sample with regard to improving (VO2max) for students of the institute of science and technology of physical and sports activities?

- Are there statistically significant differences between the pre and post-tests of the study sample with regard to improving (MAS) for students of the institute of science and technology of physical and sports activities?

To answer this problem, we proposed the following hypotheses:
Hypotheses:

- Physical activity during the practical works positively affects (VO2max) and (MAS) for students of the Institute of Science and Technology of Physical and Sports Activities.

Partial Hypotheses:

- There are statistically significant differences between the pre and post-tests of the study sample with regard to improving (VO2max) due to the post test.
- There are statistically significant differences between the pre and post-tests of the study sample with regard to improving (MAS) due to the post test.

Several studies have dealt with the subject of physical activity during the class of practical works, which was applied to different samples, including:
Study: **Dana Badau, Goran Prebeg, Mitić Dusan, Adela Badau, 2015.**
The study is titled: fitness index and vo2max of physical education students
This study aimed to show that through physical activity, the development of cardiovascular endurance is an important prerequisite in health promotion capacity of every man. The aim of this study was comparison of aerobic fitness tested students from the faculty of sport and physical education, from Belgrade University and Tirgu Mures from Romania. Methods :The method that was used is Survey method of a non- research, concluding on the basis of the transverse section of the results. The instrument is UKK 2km, walking test. The total sample consisted of two groups, university students, N = 250 (N = 50 students of University of Tirgu Mures and N = 200 students of Belgrade University). Results: Students from both groups have approximately the same average number of years, body height and weight, and BMI. The results show that men's Fitness index in both groups is in the average values, the values of the Swedish population norms (90-110). Also, the Romanian university students have average values of fitness index, while students at the University of Belgrade these values are slightly below average. VO2max men in both groups are moving into the category of 'good', according to the criteria of the Cooper oxygen consumption, it is for this value in Romanian's women,

while the VO2max value of students are in the average values. Conclusions: The results showed that the differences between our men students and Romanian are insignificant, and to move in the average when it comes to fitness index, respectively, are slightly above average in terms of VO2max. women students are slightly loose fit, and less physically prepared then Romanian students, while their VO2max values are approximately the same. We can conclude that these students are physically active, their results in the average values, as a result of engaging in teaching activities, but also in recreational activities outside the university.

Study: **Ratko Pavlović, Mensur Vrcić, Sid Solaković, M. Pupiš, Nikola Radulović, 2017.**

The study is titled: the values of fitness index and vo2max of students using indirect method aerobic tests, this study aimed to show the values of fitness index and vo2max of students using indirect method aerobic tests, based on testing using the UKK 2km are obtained Fitness Index values (FINDEX) and maximal oxygen consumption (VO2max) of 35 male students of the Faculty of Physical Education and Sport, University of East Sarajevo (BIH) in order to determine and define the physical condition of respondents. The results showed that the fitness index (103.22) in the upper zone average (103.22) and VO^2max = 49.12 reflects good shape, but still the results indicate toward decreasing trend in students' aerobic fitness, and have fitness index values below the standard norms of the Swedish population. The general trend of decreasing aerobic fitness of the population can be seen in the sport and physical education students, as a consequence of lifestyle in which there is not enough adequate physical activity.

Study of : **Alaoui Abdelhafid in 2017**, University of Setif 2

It aimed to study the importance of the applied pedagogical works scale for students in institutes of science and technology of physical and sports activities. Where the researcher relied on the descriptive approach, in its analytical apartment, and used the questionnaire, which was distributed to (03) three institutes of science and techniques of physical and sports activities for master students, for universities students (university of souk ahras, Sidi Abd Allah- University of Algiers 3, Batna-University of Haj Lakhdar). Where the results were: The student knows the values and objectives of movement education, and the student is formed on the elements of a successful professor in the subject of physical and sports education, and the professor is qualified

when he discovers mistakes, and knows how to avoid them, and he is able to solve the problems he faces.

From this we conclude that the student (the future professor) knows the duties of the school, understands the objectives of kinetic education, is qualified to avoid his mistakes, and knows how to solve all his problems.

Study of: **Ababsa Najib, 2015**

aim to study Attitudes of the students of the Institute of Sciences and Techniques of Physical and Sports Activities towards the Practice of Physical and Sports Activities - A Field Study at the Institute of Sciences and Techniques of Physical and Sports Activities at the University of Ouargla.

The purpose of this study is examining the attitude toward physical activity of selected students, the major dependent variable in the study is the attitude in terms of the six subdomains. The major independent variables are the study level and sex (male and female). The method used in the study was the descriptive approach. The tool used by the researcher was the Kenyon Scale (ATP) of Attitudes, which consisted of six dimensions. The researcher used different statistical methods in order to answer the different hypotheses. The most important results highlighted the absence of significant differences between the sexes in the dimensions of trends except in the dimension as experience, tension and risks, as well as the absence of a function according to the academic level between, with the registration of a positive trend for students towards practicing physical sports activity.

Study: **Njororai, W.W.S, 2003**

The study is titled: The characteristics of an ideal physical education teacher

This study sought to establish the Physical Education under-graduates' perception of the ideal teacher. The sample was made up of 62 physical education undergraduates at Kenyatta University in Kenya the students were made up of twenty-three (23) females and thirty-nine (39) males. The research method used to collect the data included posing the question; 'How important for a physical education teacher do you think is each of the following characteristic?'... The main objective was to obtain the physical education trainees' perceived characteristics of the ideal P.E. teacher. From the many characteristics, the highly rated characteristics were identified including ability to communicate ideas, thorough knowledge matter, knowledge of subject matter, high standards of honesty and integrity knowledge of child psychology and ability to gain respect and confidence of pupils, among others. It was therefore recommended that the teacher preparation process targets those elements that are likely to enhance the teachers' standing in the

es of the learners his facilitating a good delivery service. Further research on more comprehensive levels is recommended in order to make the teacher training process more relevant to turning out teachers who are best suited for the demands of the job, the learners as well as the community.

Research Objectives,The objectives of the study were to know the effectiveness of the training units for practical works on the development of (VO2max) and (MAS) of students of the Institute of Science and Technology of Physical Education and Sports Activities, in addition to showing that through physical activity in practical works, the development of cardiovascular endurance is possible due to for the hourly weekly volume of these applied classes. This study also aims to find out whether the cognitive and educational goals set by the professor of the class serve the physical and health goals at the same time, or are they limited only to what is theoretical and emotional. In addition to determining the physical and health level of the student to see if he is practicing physical activity within the practical works for the purpose of benefiting from it physically, health, and cognitive, or dealing with it as a class like other theoretical classes (tutorials).

3. Terminology

3.1 practical works

The term ‘practical work’ to refer to any teaching and learning activity which at some point involves the students in observing or manipulating the objects and materials they are studying.

3.2 aerobic capacity

The definition of aerobic capacity is the a measure of the ability of the heart and lungs to get oxygen to the muscles. (yourdictionary, 2021, Aerobic-capacity meaning)

3.3 Aerobic capacity and endurance

Aerobic capacity is commonly described by the vo2max, or maximal oxygen uptake. This measurement is an indication of the ability of the cardiovascular system to provide oxygen to working muscles and the ability of those muscles to extract oxygen for energy generation in the form of adenosine triphosphate (ATP). (Jan Stephen Tecklin, 2004, ScienceDirect)

3.4 Maximal oxygen consumption (VO2max)

Highest amount of oxygen a person can consume during maximal exercise of several minutes' duration. It is demonstrated by a leveling off or decline in oxygen consumption with increasing intensity. (TheFreeDictionary, 2021, Medical dictionary)

3.5 Maximal aerobic speed (MAS)

Maximal aerobic speed (MAS) is quite simply the minimal running velocity at which V02 max occurs – otherwise known as the velocity at V02 max (vV02 max). In other words, it is the lowest speed at which maximum oxygen uptake (V02 max) occurs. For example, as an athlete can continue running, and even run faster even though they have already achieved their V02 max, MAS is then simply the 'slowest' speed an athlete will achieve their V02 max. MAS was developed for the purpose of increasing the specificity of training and to enable coaches to monitor training loads more accurately.

Calculate MAS: MAS (km/h) = Final Shuttle Speed (km/h) * 1.34 – 2.86. (Owen Walker, 2017, Science for Sport)

4. Methodology

4.1 Research method

- Quasi -experimental analysis can provide a valuable extension of the experimental method (Donald T.Campbell, 1963, p157). where the research relied on the quasi-experimental method.

- The sample was chosen intentionally (intentionally targeted), which is the one whose members were chosen intentionally (intentional sample), where we chose the first-year bachelor's (Licence) department "they are the same students for the second year", where the study was layered on them for two consecutive years (first year 2017/2018, and the year second 2018/2019), as the study sample represented in (38 male students).

4.2 The homogeneity of the sample

A set of morphological measurements was layered on the study sample and for the same group, over two consecutive years, and its purpose was to find out the percentage of homogeneity among the members of the experimental group, which represents undergraduate students. (First year of bachelor's (Licence)for the academic year 2017/2018), then we took the same measurements for the same experimental group (second year of bachelor for the academic year 2018/2019).

Table 1. Table It shows the percentages of ages of the same students in the experimental sample during the academic years 2017-2018 (first year of Licence) and 2018-2019 (second year of Licence)

Age	Repetitions	percentage
From 19 years to 24 years old	28	73.7%
From 25 years to 29 years	10	26,4%
Total	38	100%

Source: the author, 2021

Through the above table, we note that 28 members of the sample, in percentage 73.7%, are between 19 to 24 years old. While there are 10 individuals, in percentage 26.4% of the total sample, whose ages range from 25 to 29.

Table 2. Table It shows the percentages of weights of the same students in the experimental sample during the academic years 2017-2018 (first year of Licence) and 2018-2019 (second year of Licence)

weight	Repetitions first	Repetitions a second	Percentage first	Percentage a second
50 -60 kg	4	2	%10,5	%5,3
61-70 kg	20	12	%52,6	%31,6
71-80 kg	10	16	%26,3	%42,1
more than 80 kg	4	8	%10,5	%21,1
Total	38	38	% 100	%100

Source: the author, 2021

Through the above table, we note that 4 of the experimental sample for a first level (Licence) weight ranged between 50 to 60 kg, or 10.5%, while there are 20 students for a first level (Licence) whose weights range between 61 to 70 kg, or 52.6% of the total sample, and 10 Students for a first level (Licence) degree ranged from 71 to 80 kg at a rate of 26.3%, and finally 4 individuals for a first level with a (Licence) degree over 80 kg at a rate of 10.5%. In addition, 2 of the experimental sample for a second level (Licence) weight ranged between

48 to 57 kg, or 5.3%, while there were 12 students for a second level (Licence) degree, their weights ranged between 58 to 67 kg, or 31.6% of the total sample, and 16 students for a bachelor's level. A second (Licence) level ranged from 68 to 77 kg at a rate of 42.1%, and 6 students for a second(Licence) level ranged between 78 to 87 kg at a rate of 15.8%, and finally 2 students for a second(Licence) level weighed more than 88 kg, or 5.3%.

Table 3. Table It shows the percentages for lengths of the same students in the experimental sample during the academic years 2017-2018 (first year of Licence) and 2018-2019 (second year of Licence)

length	Repetitions first	Repetitions a second	Percentage first	Percentage a second
50 -60 kg	7	6	%18,4	%15,8
61-70 kg	31	32	%81,6	%84,2
Total	38	38	%100	%100

Source: the author, 2021

We note from the above table that 7 students of a first-level(Licence) degree ranged in height from 1.50 m to 1.69 m, at a rate of 18.4%, while 31 students of a first-level (Licence) degree, their heights ranged from 1.70 m or more, or 81.6%. We also note that six 6 students at the second (Licence) level ranged in height from 1.50 m to 1.69 m, at a rate of 15.8%, while 32 students at the second(Licence) level had their heights from 1.70 m or more, or 84.2%.

4.3 Study variables

- The independent variable: physical activity during practical works.
- The Dependent variable: the maximal oxygen consumption (VO2max) outcomes, and the maximal aerobic speed (MAS) outcomes.

4.4 fields of study

4.4.1 Place and Time of the Study

We conducted a field study from 12/05/2018 to 02/05/2019, where we applied the tribal tests on the students of the institute for the first level of (Licence) degree, and then layer the post-tests on the same students, but at the

end of the second year of the (Licence).

The researcher conducted physical tests on 38 students studying at the Institute of Science and Technology of Physical Education and Sports - Amar Telidji University, Laghouat. Where the tribal tests and the post tests in the stadium of the Institute.

4.5 Materials

Materials and tools used in research:

4.5.1 The maximal aerobic speed (MAS)

Calculate MAS: MAS (km/h) = Final Shuttle Speed (km/h) * 1.34 – 2.86. (Owen Walker, 2017, Science for Sport).

4.5.2 The maximal oxygen consumption (VO2max) (Test navette de luc léger)

The Luc Léger test is an endurance test that allows an inductive assessment of maximum oxygen consumption. This repeatable and comparable test allows following the evolution of maximum aerobic velocity.(Patrick Bacquaert, 2018)

Description of the test :A track, gym, non-slip surface is necessary to perform this test in safe conditions.The cones are placed every 20 metres, or this area can be delimited by two parallel lines of 20 metres. A tape recorder and audio transmitter is necessary, pre-recorded CD in a specialized protocol. and adhesive tapes to embody parallel lines 20 meters. (Patrick Bacquaert, 2018)

Principle of luc léger test: The athlete is required to run either on a calibrated track every 20 metres, or between two defined lines spaced 20 meters apart in a gymnasium. For this test, the athlete must be in athletic clothing, shoes suitable for the surface, and have been heated and stretched prior to this test .

Instructions given to the athlete: The athlete must stand on the starting line, and either perform as many rounds as possible at gradually accelerating speeds or increase his speed as he passes each block on the athletics track. At each beep, the player must adjust his speed to find himself within another 20 metres. If the test takes place between two 20-meter lines, the player must block one foot behind the line to start the comeback and make a turn. You should not put anything dangerous or uncomfortable to allow this rotation. The

athlete stops when he is no longer able to follow the imposed speed and cannot reach the block or line in time when the whistle or signal passes. The event is stopped when this offset is equal to or greater than 2 metres. The athlete must then maintain the level declared by alert. (Patrick Bacquaert, 2018)

4.5.3 Equipment used for the tests:

Means of measuring height and weight: (la toise murale, une balance)
- cones every 20 metres, to mark the area with two parallel lines of 20 metres.
- Tape recorder or audio transmitter, CD pre-recorded in the Specialized Protocol.
- Adhesive tapes for the embodiment of parallel lines 20 meters.
- Assistant professor to record the results achieved for each student.

4.6Statistical means

After applying to the study sample, a set of data was reached, and to test the validity of the hypotheses, we carried out a set of statistical treatments through the statistical program (SPSS) and chose the following relationships: (arithmetic mean, standard deviation, total raw scores).

5. The applied aspect

5.1 Analysis and discussion

First hypothesis:
Based on the hypothesis of the study,there are statistically significant differences between the pre and post-tests of the study sample with regard to improving (VO2max) due to the post-test.

Table 4. Represents the results of the pre- and post-measurement of VO2max of the same students in the experimental sample during the academic years 2017-2018 (first year of Licence) and 2018-2019 (second year of Licence)

test	sample	Arithmetic mean	Standard deviation	T value	degree of freedom	level of	significant difference
pre test 2017/2018	38	44,99	5,49	1.36	37	0.18	Non sig
post test 2018/2019	38	43,25	7,85				

Source: the author, 2021

It is clear to us through the results of the above table regarding the significance of the differences between the pre-tests and the post-tests of the members of the experimental sample of the study:
The arithmetic mean of the pre-test is (44.99) with a standard deviation of (5.49), while the arithmetic mean of the post-test is (43.25), with a standard deviation of (7.8), while the calculated t-value is (1.36) and the degree of freedom is estimated at 37, at the significance level (0.18), where the significance level was greater than (0.05), and from it we conclude that there are no statistically significant differences between the results of the pre-test and the post-test at the maximum volume of oxygen consumption (VO2max) for the study sample.

Secondhypothesis:
Based on the hypothesis of the study,There are statistically significant differences between the pre and post-tests of the study sample with regard to improving (MAS) due to the post test.

Table 5. Represents the results of the pre- and post-measurement of MAS of the same students in the experimental sample during the academic years 2017-2018 (first year of Licence) and 2018-2019 (second year of Licence)

test	sample	Arithmetic mean	Standard deviation	T value	degree of freedom	level of	significant difference
pre test 2017/2018	38	12,06	0,91	1.38	37	0.175	Non sig
post test 2018/2019	38	11,77	1,30				

Source: the author, 2021

It is clear to us through the results of the above table regarding the significance of the differences between the pre-tests and the post-tests of the members of the experimental sample of the study:
The arithmetic mean of the pre-test is (12.06) with a standard deviation of (0.91), while the arithmetic mean of the post-test is (11.77) with a standard deviation of (1.30), while the calculated t-value is (1.38) The degree of freedom was estimated at 37, at the significance level (0.17), where the

significance level was greater than (0.05), and from it we conclude that there are no statistically significant differences between the results of the pre-test and the post-test at the maximum air speed (MAS).) for the study sample.

Discuss and interpretation of the General Hypothesis

The results of the statistical analysis showed that there are no statistically significant differences between the pre-test and the post-test of the maximum volume of oxygen consumption (VO2max) among the study sample members, and this indicates that the lack of improvement in the value of the maximum volume of oxygen consumption (VO2max), could be due to The content of the total practical work quotas applied to the study sample members does not affect the value of the maximum volume of oxygen consumption (VO2max) for students of this level, and this explains that the total practical work quotas applied to the students of the institute during the school year does not contain a sufficient number of situations that allow Develop or improve the maximum volume of oxygen consumption. This is inconsistent with the results of the 2014 Sébastien Chalencon study that the swimmer has a high level of endurance with a high energy capacity. With the possibility of maintaining it at the highest level with the longest possible period (Sébastien Chalencon, 2014), so that endurance and maintenance are physical traits that are developed or developed by controlling the maximum volume of oxygen consumption (VO2max), and the results of this study do not agree with the results of Dufour (1990): which says that a player runs only 20-40% (or 12-24 minutes). In this running time, we are based on an average of 03 km of walking and 7 km of running 7 km divided into 64% of slow aerobic running, 24% of running at an anaerobic pace (about 80% of VO2max 10-17 km/h) and 14% of running High intensity (18 to 27 km/h) (Erick Mombaerts, 1997). Knowing that these majors are part of the school's applied business standards.

From it, we can say that we proved the contradiction of the first partial hypothesis, which is that there are statistically significant differences between the pre-test and the post-test on the level of the maximum volume of oxygen consumption (VO2max) among students of the Institute of Science and Technology of Physical and Sports Activities. It could also be due to the lack of time for the teacher of the scale, and his focus on the cognitive, psychological, educational and emotional aspects with regard to the objectives of the applied classes.

The results of the statistical analysis also showed that there were no statistically significant differences between the pre-test and the post-test of the maximum

airspeed (MAS), among the study sample. This indicates that the lack of improvement in the value of the maximum airspeed (MAS), and it could be due to the fact that the content of the total quotas of practical work applied to the members of the study sample does not affect the value of the maximum airspeed (MAS) for students at this level, and this is what It is explained that the sum of the practical work classes applied to the students of the institute does not contain a sufficient number of situations that allow the development or development of the value of the maximum airspeed (MAS). This is inconsistent with the results of the 2014 Sébastien Chalencon study that the swimmer has a high level of endurance with a high energy capacity. With the possibility of maintaining it at the highest level with the longest possible period (Sébastien Chalencon, 2014), so that endurance and perseverance are physical qualities that are developed or developed by controlling the maximum air velocity (MAS), and the results of the study differ with the results of the level school Canadian Volleyball Association, which says that among the most important physical characteristics of volleyball players is the trait of special endurance and high intensity (École d'excellence (volleyball Québec), 2017), knowing that all of these disciplines are part of the school standards in applied business. From it, we can say that we have proven the opposite of the second partial hypothesis, which says that there are statistically significant differences between the pre-test and the post-test of the maximum airspeed (MAS), and these results can also be explained by the possibility of time constraints for the professor of the scale in the practical work class, and his focus only on The cognitive, psychological, educational and emotional aspect regarding the objectives of the applied classes of the scale.

From it, we can say that we have proven the opposite of the general hypothesis that physical activity during the course of practical work positively affects the maximum volume of oxygen consumption (VO2max) and maximum air speed (MAS) among students of the Institute of Science and Technology of Physical and Sports Activities. It can also be attributed to the lack of time for the teacher of the scale, and his focus on the cognitive, psychological, educational and emotional aspects with regard to the objectives of the applied classes, or we can refer this to the lack of interest of the students of the institute in the physical aspect and physical fitness, during the course of the applied work class in field.

4. CONCLUSION

And through the results obtained after applying this field study to the experimental sample, which shows that the total of the applied work quotas

over the length of the undergraduate study year at the bachelor's level did not affect the maximum volume of oxygen consumption (VO2max), and it did not affect the maximum air speed, (MAS) for students Institute of Science and Technology of Physical and Sports Activities. Where the maximum volume of oxygen consumption (VO2max) and maximum aerobic speed (MAS) are an essential characteristic in most team or individual sports during the practice of the various disciplines programmed in the practical work sessions. Through these results, we can say that the standards taught in the form of applied works and related to various sports disciplines at the level of the Institute of Science and Technology of Physical and Sports Activities, do not carry an implicit direction to achieve the most important goals of physical attributes, which are represented in (maximum volume of oxygen consumption (VO2max) and maximum aerobic velocity) MAS), similar to cognitive, psychological, social, and affective goals. This may cause real problems in terms of physical fitness for the professor of physical education and sports in the performance of his guest in the future.

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