

The importance of employing modern technological means in physical tests and measurements from the point of view of physical preparers

أهمية توظيف الوسائل التكنولوجية الحديثة في الاختبارات و القياسات البدنية من وجهة

نظر المحضرين البدنيين

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Abstract:

This study aims to identify the importance of employing modern technological means in physical tests and measurements from the point of view of physical therapists. The study was conducted on a sample of (20) physical therapists who were chosen intentionally. To collect data for the study and to verify its objectives, it was used The descriptive approach is because it is appropriate to the nature of the subject of the study, but with regard to data collection tools, we relied on books and references, in addition to using a questionnaire form directed to the study sample. The statistical processing was done using the statistical packages program (Spss), and the results of the study were as follows:

-There are statistically significant differences in the use of modern technological means in physical tests, which is in favor of practitioners.

-There are statistically significant differences in the use of modern technological means in analyzing physical performance, which is in the interest of practitioners.

Keywords: Technological means, physical tests and measurements, physical report.

ملخص:

تهدف الدراسة إلى التعرف على أهمية توظيف الوسائل التكنولوجية الحديثة في الاختبارات والقياسات البدنية من وجهة نظر المعالجين الطبيعيين. وقد أجريت الدراسة على عينة مكونة من (20) معالجا طبيعياً تم اختيارهم عمدياً، تم استخدام المنهج الوصفي وذلك لملاءمته لطبيعة موضوع الدراسة، واستخدماً استمارة استبانة موجهة لعينة الدراسة، وكانت نتائج الدراسة على النحو التالي:

-توجد فروق ذات دلالة إحصائية في استخدام الوسائل التكنولوجية الحديثة في الاختبارات والقياسات البدنية لصالح الممارسين.

-توجد فروق ذات دلالة إحصائية في استخدام الوسائل التكنولوجية الحديثة في تحليل الأداء البدني لصالح الممارسين.

الكلمات المفتاحية: الوسائل التكنولوجية، الاختبارات والقياسات البدنية، التقرير البدني.

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I- Introduction

The main goal of training using information technology is to reformulate the trainer's thought and direct it to research, creativity, understanding and persuasion, with the ability to solve problems and find solutions. From here we see that training using information technology does not in fact mean merely using modern and advanced devices and tools. As much as it originally means a way of thinking to develop a training system, that is, it is completely dependent on the method of following a specific curriculum.

Scientific progress has contributed to raising the level of sports, and perhaps the excellence and superiority that emerges from the countries of the developed world is the result of the knowledge and information reached by those working in this field, in addition to the experiences gained in scientific application, training, research and scientific experiments that greatly affect the level of sports and its returns from... During sports competitions, the societal shift brought about by information technology is essentially an educational shift in the first place. When the importance of natural and material resources disappears, information emerges as the most important source of power, and the training process centered around information technology becomes the decisive factor in determining the future of sports. (Nabil Ali, 1994, p. 67)

Because the coach is the focus of the training process, his role is no longer limited to indoctrination and transfer of information, and the training process has become participatory between the coach and the player. Thus, the roles have changed by changing the systematic curve of training techniques, so that the coach is conditioned on adopting advanced pedagogical plans that rely primarily on information technologies, and this is in order to Diversifying and strengthening training methods and developing interaction in the field through modern technological means, as well as saving time and effort in order to give a good return resulting from the training process. (Zaghloul Muhammad Saad and others, 2001, page 17)

In order to study this topic, we decided to highlight the importance of employing modern technological means in physical tests and measurements from the point of view of physical preparers, and we posed the following question:

- Does employing modern technological means have a positive role in physical tests and measurements from the point of view of physical preparers?

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- Partial questions

- Are there statistically significant differences in the use of modern technological means for physical tests between practitioners and non-practitioners, which is in favor of the practitioners?
- Are there statistically significant differences in employing modern technological means to analyze physical performance between practitioners and non-practitioners, which is in favor of the practitioners?

Research hypotheses

General hypothesis

- Modern technological means have a positive role in physical tests and measurements from the point of view of physical preparers.

Partial hypotheses

- There are statistically significant differences in the use of modern technological means for physical tests between practitioners and non-practitioners, which is in favor of the practitioners.
- There are statistically significant differences in the use of modern technological means to analyze physical performance between practitioners and non-practitioners, which is in favor of the practitioners.

Research objectives

- Identifying the positive role of modern technological means used in physical tests for athletes.
- Identifying the reality of modern technological means used in sports training and their role in improving sports performance among players.

The importance of research

The importance of this study lies in shedding light on the viewpoints of coaches on the use of modern technological means that have become an integral part of the educational and training process and the extent of their contribution to developing and improving training and capabilities during the training process in team sports.

Defining the terms of the study

Technological means

It includes all the modern methods, tools and devices used in the training process in order to achieve the best quality of the sports training process, such as electronic vests, technical analysis devices, training load monitoring devices, means of measuring and conducting physical, technical and physiological tests.

Physical report

He is the person who undertakes the process of raising and training players and directly affects their physical level. He has an effective role in developing the player in a comprehensive and balanced manner. Therefore, the physical record must be an example to follow in all his actions and information, and the physical record represents the basic and important factor in the training process (physical preparation).

II - Methods and Tools

1- Physical tests and measurements

The protocol used by the coach or physical trainer to measure and evaluate the physical characteristics of players.

2- Field procedures for the study

Exploratory study

It is the first step that helps the researcher collect information about the field study aspects of his research. The exploratory study aims to ensure the suitability of the research study, ensure the validity of the tool used to collect information, and know the appropriate time to conduct the study.

Study variables

A- Independent variable: modern technological means

B- Dependent variable: physical tests and measurements

Study population and sample

In our study, the study population is physical preparation.

Fields of study

A- Temporal domain

This study was conducted (from January 13, 2024 until February 5, 2024).

B- Spatial field

This study was conducted in the states of eastern Algeria

C- The human field

Physical bailiffs

Data collection tools

A questionnaire form was used in addition to theoretical sources and references

Statistical methods

percentage

C-squared test

III - Analyzing, discussing and interpreting the results

The first hypothesis: There are statistically significant differences in the use of modern technological means for physical tests between practitioners and non-practitioners, which is in favor of the practitioners.

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Table No. (01): Shows the sample members’ answers to the first hypothesis.

The answers	iterations	Percentage	K2	significance level	Sig	degrees of freedom	Statistical estimate
YES	17	85%	08,6	0,05= α	0.00	n-1 =2	significant
No	03	15%					
the Total	20	%100					

From Table No. 1: From Table No. 1: We note that those who answered yes were 17 physical reports, at a rate of 85%, and those who answered no were 03, at a rate of 15%. The value of $Ka_2 = 08.6$ at the significance level of 0.05, which is greater than $sig = 0.00$, and there are statistically significant differences in the use of modern technological means for physical tests between practitioners and non-practitioners, which is in favor of the practitioners.

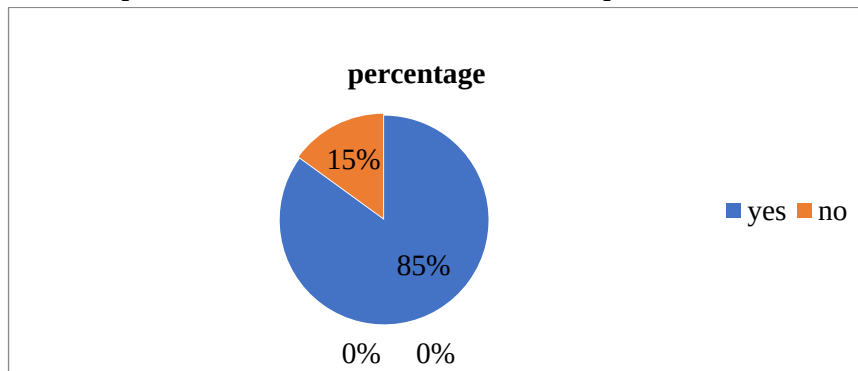


Figure No. (01)represents the circular representation of the percentage of individuals in the study sample for the first hypothesis.

The second hypothesis

There are statistically significant differences in the level of diastolic blood pressure value between those who practice and do not practice healthy physical activity, and this is in favor of the practices.

Table No. (02): Shows the sample members’ answers to the second hypothesis.

The answers	iterations	Percentage	K2	significance level	Sig	degrees of freedom	Statistical estimate
YES	18	%90	9.07	$\alpha=0,05$	0.00	n-1 =2	significant
No	02	%10					
the Total	20	%100					

Through Table No. (02), We note that the number of those who answered yes was 18 physical reports, at a rate of 90%, and those who answered no were 02, at a rate of 10%. The value of $Ka_2 = 09.7$ at the significance level was 0.05, which is

greater than $\text{sig} = 0.00$, and from this there are differences. It is statistically significant in employing modern technological means to analyze physical performance between practitioners and non-practitioners, which is in favor of the practitioners.

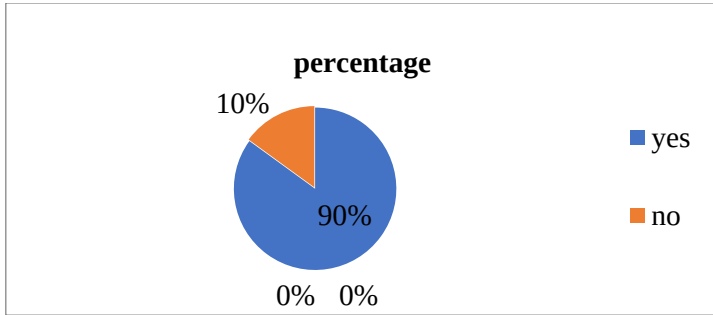


Figure No. (02): represents the circular representation of the percentage of individuals in the study sample for the second hypothesis.

VI- Discussing the results in light of the research hypotheses

1- Discussing the results of the first hypothesis

Through statistical treatment of the results obtained, and as required by the course of the research to ensure the validity of the hypothesis, the researcher found, through the results obtained in Table No. (01), that there are statistically significant differences in the use of modern technological means for physical tests between practitioners and non-practitioners. It is for the benefit of practitioners

This is consistent with the study of Mazari Fateh and Yousfi Fathi (2010) entitled “Utilizing audio-visual means in sports training to raise the quality of the process of teaching motor skills to volleyball players.” The study concluded that the proposed program using audio-visual clarification means had an impact. Moral improvement in players’ motor skills (**Mazari Fateh et al., 2010**)

This is consistent with Rabiha’s study, the tape of Muhammad Al-Hassan Al-Mamoun (2021), entitled Employing modern technological means in forming and training sports clubs, between reality and hopes. The results showed that the lack of interest in training in automated media techniques is one of the most important obstacles that stand in the way of using and understanding technology. . (Rabiha et al., 2021)

This is consistent with the results of the first hypothesis of our study, which is that there are statistically significant differences in the use of modern technological means for physical tests between practitioners and non-practitioners, which is in favor of the practitioners.

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2- Discussing the results of the second hypothesis

Through statistical treatment of the results obtained, and as required by the course of the research to ensure the validity of the hypothesis, the researcher found, through the results obtained in Table No. (02), that there are statistically significant differences in the use of modern technological means to analyze physical performance between practitioners and non-practitioners. Practitioners and it is for the benefit of practitioners.

This is consistent with the study of Al-Eid (2021), entitled The Impact of Using Interactive Video to Improve Basketball Dribbling Skills among Junior Players in the State of Tiaret. The results of the study found that there were statistically significant differences between the average scores of the experimental group players and the average scores of the control group players in the post-measurement in favor of The experimental group for dribbling skills (low - changing speed - changing direction - high) in basketball. The researcher recommended providing schools and clubs with interactive video devices, and designing classrooms close to stadiums equipped with interactive video devices. (Al-Eid et al., 2021)

A study by Safiya et al. (2018) entitled Employing modern technological means within the training process in team sports. After analyzing the results, the researcher concluded that the lack of coaches' possession of cognitive competencies contributes to their reluctance to use technological means in training, and that the use of technological means contributes positively to improving the training process. (Bafah Abdullah et al., 2022)

This is consistent with the results of the second hypothesis of our study, which is that there are statistically significant differences in employing modern technological means to analyze physical performance between practitioners and non-practitioners, which is in favor of the practitioners.

V- Conclusion

Based on our study of this topic on knowing the importance of employing modern technological means in physical tests and measurements from the point of view of physical preparers, our study reached the most important results:

- There are statistically significant differences in the use of modern technological means for physical tests between practitioners and non-practitioners, which is in favor of the practitioners.
- There are statistically significant differences in the use of modern technological means to analyze physical performance between practitioners and non-

practitioners, which is in favor of the practitioners.

From the above, we can say that employing modern technological means has a positive role in physical tests and measurements from the point of view of physical preparers.

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