

The Effectiveness of Using info graphic Technology on the Skill Level of High Jump Skill among Intermediate School Students

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Introduction and research problem

Life in the information age is witnessing many of the requirements that impose on community members the reality of dealing with the cognitive variables of this era that multiply rapidly, and which made educators constantly search for the development of educational institutions programs to keep pace with those changes and search for the best ways to provide an educational environment to attract students' interest. Reconsidering the content, goals and means of the educational process in order to allow the student to make the most of contemporary technological means and tools in his academic achievement, and to acquire knowledge and skills that are in line with the nature of the era in which he lives. (5:14)

One of the features of our current era is that it is the "age of the image", which means the hegemony and control of the image, to be one of the most

important tools in our world of knowledge and culture. The image is not a new issue in human history, but rather has shifted from the margin to the center, and from partial presence to a position of hegemony and sovereignty over other elements and tools. Cultural and cognitive. (32)

As a result of the knowledge explosion at the present time and the accumulation of information and data in all fields, we are faced with a large amount of information and data, some of which reach us in a complex way that is difficult to understand, and some of them give the reader a feeling of boredom and distraction, so this "info graphic" technique appeared to analyze this information, simplify it and transform it in an organized way to Information that is easy to understand and read clearly by everyone and in a beautiful, interesting and attractive manner in which several elements are mixed (pictures - drawings - texts - colors). (31)

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And the clip info means information and graphic means image, that is, it is the art of converting data, information and complex concepts into pictures and graphics that can be understood and understood clearly and interestingly. It is a style characterized by presenting complex and difficult information in a smooth, easy and clear way for the reader, and because info graphic usually consists of "text + image" Which makes the teacher able to combine verbal and visual teaching methods, which enhances the basic skills of students.(12: 33)

Moataz Issa (2014 AD) also points out that info graphic is a technical term that refers to converting complex information and data into pictorial drawings that can be easily absorbed by those who see it clearly and interestingly without the need to read a lot of texts, which provides effective visual communication between both the sender and the receiver. (16: 3)

There is almost unanimity on the superiority of the educational image over the abstract educational text, in clarifying the intent and presenting the minute details, so that it does not resemble others in the mind of the recipient, and the percentage of

understanding the basic idea down to any strength and firmness of the information and the ability to recall it over time, and because the image is richer in details. Therefore, other educational elements go beyond accuracy and clarity, and the presence of the image is essential and indispensable in the process of "educational communication". Without it, the pillars of this process are not complete, and thus educational outcomes go in a negative direction. (30)

Hussein Muhammad (2015) indicates that about 90% of the information that is transmitted to the brain is pictorial information and that about 40% of people use pictorial information better compared to textual information, and that the brain processes pictorial information faster than textual information. (4:15)

Davidson (2014) (22) proved that the info graphic helped students successfully participate in learning, and Meghan Kelly (2015) (27) indicated that visual communication design is a form of general pedagogy, and a study of Xian Guo (Lixian Guo 2015) (25) which referred to the development of the art of designing educational curricula based on visual communication technology.

Muhammad Allawi (2002 AD) points out that in the stages of learning motor skills, many assistive devices can be used that contribute greatly to learning and acquiring motor skills, mastering and stabilizing them, and among the most important aids in the process of teaching motor skills (visual aids, audio aids, audiovisual aids). Also, during the different stages of learning, some specific methods occupy the first place in the learning process, and other aids become assistive devices that come in the next rank, and the selection and use of that is related according to the main goal of each stage, and according to the characteristics of the motor skill and individual differences. (9: 58-60)

The success of the educational process depends on several factors, including the method of teaching used in education, as well as the method of presenting educational experiences, the conditions of the educational position, the extent of the learner's positivity, abilities, readiness and activity in obtaining educational experience. Therefore, modern trends in teaching methods call for the distance from the educational methods that

depend only on explanation. And the performance of the model, and the tendency to use modern teaching methods that depend on the participation and positivity of the learner in the educational process, and interest in the interaction between the teacher, the learners and the educational material. (17:247)

Athletics or field and track competitions is considered one of the ancient sports, as it is the mother of other sports and the bride of modern games and the scale of the civilizations of nations as well as it creates in the individual physical, skill, psychological and moral integration. The varied and multiple sports competitions, especially in short distances, which reach the point of human miracles, at the global and Olympic levels. (12:13)

Donald (2001) and Steben Esteban (2000) agree that the jump contestants are one of the field competitions in athletics, which are practiced by men and women without changing the venue of the competition. It is a complex skill that begins with approaching and ends with the landing, and is considered a challenge between the player and himself in every attempt to

achieve A high digital achievement, in which it is always superior to those whose mental, psychological, artistic and physical condition is better than others, and the hopper's knowledge of the technical stages of the competition and his ability to visualize the correct performance before entering promising in the competition contributes to invoking a sense of optimal performance and thus focusing attention before and after performance. (14:27) (44:28)

Holcomb (2001) also noted that the high jump competition is a competition Which aims to achieve the highest possible vertical distance, which requires special capabilities and characteristics

The ability to direct it towards the player, as he bears the responsibility of exploiting all his potential powers and reaching the maximum possible distance. (19:74)

Both "Pastwisi Ahmed" (2003) and Bassi Pease (2000) believe that the high jump competition is one of the topics that still occupy the minds of those interested in the training process in order to achieve development in the level of performance, due to the large

number of detailed movements that can be evaluated in order to Working on linking and directing them, in addition to the approaching steps, especially the small steps that may affect the process of raising, so we find that the rise process is one of the most important and difficult stages of the high jump because the competitor performs all his movements in a very short time. 0 From the second, there is also the elevation stage, during which the player's body is subjected to the law of gravity, then comes the landing stage and the player's keenness to avoid hitting the bench. (46: 2) (62:25).

Through the researcher teaching the subject of physical education and supervision, the schools at the intermediate stage in the State of Kuwait during the first semester of the eighth level students in the intermediate stage in the State of Kuwait with a small number of classes directed to physical education in the intermediate stage, as well as the number of study units per week became one unit, which formed Difficulty facing students, represented in the decrease in the number of teaching units needed to achieve the intended learning outcomes of the course and the skills for field

and track competitions, which is the correct skill performance of methodological skills, mastery of them, and the acquisition of knowledge and information related to them. Applied to middle school students for the skill of the high jump, and not relying on the traditional method of teaching as an attempt to simplify and facilitate learning skills and acquiring knowledge and information related to it, and making it easy to understand, as the info graphic technique relies on visual effects in presenting information through (pictures - drawings - words) Which in turn guides and organizes the educational message The cognitive data provided to students, taking into account their individual differences, by converting information and data into pictorial drawings that are easy for pupils to comprehend without having to read a lot of texts, to achieve ease and speed in presenting the educational content and connecting them to them, which will help them reach the achievement of the targeted learning outcomes their

Research goal

The research aims to identify the effectiveness of using info graphic technology on the level of skillful performance of high jump skill

among intermediate school students.

Research hypotheses

-There are statistically significant differences between the averages of the pre and post measurements in the level of some skill variables and in favor of the post measurement among students of the control group.

-There are statistically significant differences between the means of the pre and post measurements in the level of some skill variables and in favor of the post measurement among students of the experimental group.

-There are statistically significant differences between the mean of the two post measures of the experimental and control groups in the level of some skill variables in favor of the post measurement among students of the experimental group.

Terms used in the search

Info graphic

Info graphic as a term used to refer to the art of transforming data, information and concepts into images and drawings that can be understood and understood clearly and with suspense. This method is characterized by presenting complex and

difficult information in a smooth and clear manner. (13: 111)

Search procedures:

First: Research methodology

The researcher used the experimental method to suit its suitability to the nature of the goal, hypotheses and sample of the study under study, while determining the experimental design of the two groups, one of them is control and the other is experimental, and using the pre and post measurements of the research variables.

Second: the research community

The research community was selected from the eighth intermediate school students in the middle school in the State of Kuwait in the first semester of the academic year

2019/2020 from the total research community of (400) students in the educational administration in Al-Jahra Governorate.

Third: the research sample

The research sample was chosen by the deliberate method, and it is (48) female students of the intermediate eighth grade in the intermediate stage in the State of Kuwait in the first semester of the study year 2019/2020 AD, and (8) students were excluded for the exploratory study, and thus the basic research sample became (40) female students. They were divided randomly into two groups, one experimental and the other control.

Moderation of the sample distribution

**Table (1)
Moderation of the distribution of the basic and exploratory research sample In the variables of growth and level of intelligence N = 48**

Variables	measuring unit	SMA	standard deviation	Mediator	Coefficient of torsion
Length	Cm	171.25	2.88	170.00	1.30
weight	Kg	66.62	1.32	66.50	0.272
Age	Year	20.21	0.50	20.10	0.66
Intelligence	Degree	32.58	1.11	32.50	0.216

The results of the table refer to the arithmetic mean, standard deviation, and torsion coefficient of the growth

variables and the level of intelligence of the sample members as a whole (control - experimental - exploratory), as

evidenced by the table the moderation of the sample members in these variables

where the coefficient of torsion ranges between (± 3)

Table (2)
Moderation of the study sample's distribution of the physical variables under study N = 48

Variables	measuring unit	SMA	standard deviation	Mediator	Coefficient of torsion
Arm muscle strength	No.	18.15	1.22	18.00	0.368
Feet muscle strength	Kg	41.13	1.45	41.00	0.268
Feet capacity	Cm	29.70	1.17	29.60	0.256
Arms capacity	M	6.63	0.32	6.50	1.695
Balance for the right foot	S	7.23	0.45	7.00	1.533
Balance for the left foot	S	7.10	0.22	7.00	1.363

It is clear from Table (2) that all the values of the torsion coefficients for the physical variables in question ranged between (0.256 to 1.363), meaning that they are limited

between (± 3), indicating that the individuals of the research sample are free from defects in non-moderate distributions in these variables.

Table (3)
Moderation of distribution of the research sample in the level of skill performance under consideration N = 48

Variables	measuring unit	SMA	standard deviation	Mediator	Coefficient of torsion
Approaching	Degree	1.22	0.21	1.20	0.32
Upgrade	Degree	1.45	0.11	1.40	0.15
Crossing and landing	Degree	1.98	0.15	1.95	0.52
Total marks	Degree	4.65	0.61	4.55	0.11

It is evident from Table (3) that all the values of the torsion coefficients in the level of skill performance in question amounted to (0.32 to 0.11), meaning that they are limited

to (± 3), indicating that the individuals of the research sample are free from defects in non-moderate distributions in these variables.

The researcher also performed an equivalence process between the research group (experimental - control) in the

previous variables, on which the moderation of the sample was performed, and two tables (4), (5), (6) illustrate this.

Table (4)

Pre measures signified differences between experimental and control groups in rates Growth (age - height - weight – intelligence)

Variables	measuring unit	Experimental group		Control group		"T" value
		M	E	M	E	
Length	Cm	169.65	0.21	168.10	0.24	0.69
weight	Kg	65.28	0.17	65.10	0.15	0.52
Age	Year	20.13	0.33	20.17	0.52	0.15
Intelligence	Degree	32.42	0.52	33.10	0.11	0.063

The tabular "t" value at the level of 0.05 = 1.671 * D at the level of 0.05

It is evident from Table (4) that there are no statistically significant differences at the level of 0.05 between the experimental and control groups in the growth rates (age

- height - weight - intelligence), which indicates the equivalence of the two research groups in these variables.

Table (5)

Indication of differences between experimental and control groups. Pre measurements In the physical variables under investigation

Variables	measuring unit	Experimental group		Control group		"T" value
		M	E	M	E	
Arm muscle strength	No.	18.10	1.25	18.15	1.32	0.47
Feet muscle strength	Kg	41.35	0.86	41.32	0.69	0.54
Feet capacity	Cm	29.65	0.47	29.20	0.47	0.84
Arms capacity	M	6.62	0.32	6.68	0.32	0.89
Balance for the right foot	S	7.15	0.15	7.12	0.47	0.75
Balance for the left foot	S	7.09	0.25	7.10	0.62	0.45

The tabular "t" value at the level of 0.05 = 1.671 * D at the level of 0.05

It is evident from Table (5) that there are no statistically significant differences at the level of 0.05 between the experimental and control

groups in the physical variables under investigation, which indicates the equivalence of the two research groups in these variables.

Table (6)
Indication of differences between experimental and control groups. Pre measurements in the level of skill performance under consideration

Variables	measuring unit	Experimental group		Control group		"T" value
		M	E	M	E	
Approaching	Degree	1.28	0.32	1.30	0.12	0.54
Upgrade	Degree	1.46	0.28	1.44	0.11	0.14
Crossing and landing	Degree	1.94	0.21	1.95	0.17	0.63
Total marks	Degree	4.68	0.47	4.69	0.32	0.22

The tabular "t" value at the level of 0.05 = 1.671 * D at the level of 0.05

It is evident from Table (6) that there are no statistically significant differences at the level of 0.05 between the experimental and control groups in the level of skill performance under investigation, which indicates the equivalence of the two research groups in these variables.

Data collection tools:
They are divided into the following:

First: expert survey:
 Through reviewing the scientific references specialized in curricula, teaching methods, and field and track competitions, the researcher designed an opinion poll form, and it was presented to a number (6) of experts in field and track competitions, Appendix (1) to seek their opinion on the following:

-The most important physical abilities of field and track

competitions skills and the most important tests that measure them.

The researcher identified the physical tests that measure physical abilities, Appendix (1) according to the experts' opinions, and they were as follows:

- 1- The deep oblique recline test to measure the strength of the muscles of the arms and shoulders (15: 214.)
- 2- Testing the strength of the leg muscles using a dynamometer to measure the material muscle strength of the two legs: Leg Lift Strength (15: 210, 211.)
- 3- The vertical jump from stability test to measure the muscular capacity of the two men (305: 304: 15)
- 4- Throwing medical ball test, not a distance away, to measure the muscle capacity of the farmers (15: 308.)

5- The balance test on the metatarsal to measure static balance (15: 571) (18)

Skill Tests:

The researcher designed a form to measure the skill level in the high jump, and the skill was divided into three parts, namely (approach - rise - pass and landing) and the evaluation was done by the jury for high jump skills

Third: Higher Intelligence Test: Appendix (2)

This test was prepared by Mr. Muhammad Khairy (1989) with the aim of measuring general mental ability (intelligence) and is applicable for both genders and for all ages.

Fourth: The Kinetic Satisfaction Test: Appendix (3)

Kinetic Satisfaction Scale Designed by Nelson and Alan Alien Quote by Muhammad Hassan Allawi and it is applicable to both genders and all ages

Fourth: devices and tools used in the research:

The researcher to collect information and data related to this research relied on the following:

Data collection tools included :

-Rastameter device for measuring height (cm)

-Medical scale to measure weight (kg)

-Length measuring tape, included ruler, stopwatch, medicine ball (2 kg)

Computer, Data show

Microsoft office 2013 package

Adobe Photoshop

Adobe Illustrator

Adobe Fireworks

draw max

Sites for info graphic tools

- <http://www.clker.com>

- <https://www.iconfinder.com>

- <http://all-free-download.com>

- <http://www.freepik.com>

-Free websites for designing info graphics

- <https://infogr.am>

- <http://visual.ly>

- <http://venngage.com>

- <https://inkscape.org/en>

- <https://canva.com>

- <http://www.easel.ly>

Basic experience:

Suggested Info graphic

The researcher prepared the proposed educational info graphic for high jump skills in the high jump, the methodology prescribed for middle school students in the State of Kuwait, in light of the prescribed curriculum and by following the foundations and the following steps.

The goal of the proposed info graphic

The proposed educational info graphic aims at the level

of learning some motor skills in the field and the track for the methodological high jump skill established using the fixed and moving info graphics, to achieve the following goals:

Cognitive goals:

Providing the student with the knowledge and information related to the methodological high jump skill.

-The student's familiarity with the technical aspects determined for the field and track competitions under discussion skills.

-Introducing the student to the educational steps of the established methodological skills under discussion

Understanding the healthy performance method (technical stages) of the established methodological skills under investigation.

Skill goals:

Teaching and mastering the pupil, the eighth intermediate stage, the methodological skills determined in the field and track competitions, represented in (approaching - upgrading - transcendence - descending)

The foundations of building info graphics

The content of the proposed info graphic must be compatible with its objectives

-Taking into account the individual differences between students

-The contents of the info graphic challenge the potential and abilities of students

-That the info graphic allows to stimulate students' motivation to learn

-Observe the gradient from easy to difficult

To provide the opportunity for each student to participate and practice simultaneously

The info graphic should provide diversity in the presentation of the scientific material

In order to prepare the components of the proposed educational info graphic, the researcher followed the following steps:

-Choose and define a topic

- Data collection

-Set title and subtitles

-Define pictures, graphics and colors

Refining the design and building a framework or structure for the information and data that will be presented

-Determine the used visual coordination (horizontal - vertical - mixed)

-Checking the correctness of the drawings - images, texts

Ensure that all content is represented

Submission to the experts for opinion

Experimentation, evaluation and improvement

-Final output and validity of the application

The following has been taken into account in the artistic production of the info graphic:

-The presence of a headline in a clear font for the main idea of the image

-Linguistic accuracy of existing texts Formulate the information in a language that is easy to understand

-Clarity and attractiveness of the image (serial graphics - video cut images)

Brevity in the texts used without prejudice to the scientific content

-The simplicity of the design, and its lack of complexity with the consistency of the colors used

The content of the proposed educational info graphic

The researcher organized the educational info graphic content to include the following:

-Presenting the knowledge aspects of the curriculum in the field and track competitions.

-Demonstration of a skill performance model that includes (serial drawings - cut video images- brief texts of the method of performance)

- Presenting the educational progression for the stages of skill performance (the preliminary stage- the main stage - the final stage)

The researcher used a computer and a data show to present the info graphics

Evaluate the proposed educational info graphic

The researcher presented the proposed educational info graphic to a group of experts specialized in the field of (field and track competitions - teaching methods), for the purpose of seeking their views on the validity of the proposed info graphic for application, and the adequacy of the elements and content included, and the suggestions submitted by the arbitrators were taken into consideration.

time plan

The researcher prepared the educational units so that they consisted of (10) weeks, as an educational unit per week, and the time of the educational unit was (90) minutes.

Table (7)
Distribution of time for parts of the educational unit

Time	Unit content		
	Experimental group	Control group	
5 m	administrative works		
5 m	Warm-up + physical preparation		
60m	15 m	Watch the educational info graphic	Verbal explanation and model performance
	45m	Execute what was seen and fix errors, and return to the computer screen whenever the student needs	Practical application of skill with debugging
5m	Calm down		

Pre measurements:

The researcher conducted pre-measurements on the basic research sample (control - experimental) in the level of skill performance of methodical skills in field and track competitions, from March 2 2019 to 3/3/2019.

Basic experience:

The researcher applied the educational info graphic on the experimental group, and the traditional method used on the control group, from 5/3/2019 to 12/5/2019, at a rate of six weeks.

The researcher conducted the main research experiment as follows:

-The experimental group views the educational info graphic at the beginning of the

educational unit on (5) laptops distributed over the group of experimental students by (4) students for each device, and then returns to the performance of the skills of the field and track competitions.

-The control group performs the educational part without any observations and teaches skills by correcting the skillful performance of the researcher on the field.

Post measurement:

After completing the application of the basic experiment, the researcher conducted the post measurements in the period from 5/13/2019 on the two research groups (experimental and control) in the level of skill

performance of methodological skills in field and track competitions.

Statistical processors

In light of the research objectives and hypotheses, the size of the research sample, and also in light of what was indicated by many previous studies, statistical treatments were performed using the SPSS statistical package as follows:

Arithmetic means. Standard deviations. - Mediator.

-coefficient of torsion. Mann-Whitney test - percentage change

Simple correlation coefficient.

T-test

The researcher accepted a significance level (0.05) for accepting the research results.

Presentation and discussion of results Present the results of the first assignment

Table (8)

The significance of the differences between the averages of the pre and post measurements of the level of skill performance of the methodological skills in the field and track competitions of the control group N = 20

Measurements	measuring unit	Pre measure		Post measure		Average differences	Percentage change	"T" value
		S	E	S	E			
Approaching	Degree	1.30	0.12	1.55	0.14	0.25	19.23%	2.77
Upgrade	Degree	1.44	0.11	1.69	0.11	0.25	17.36%	2.63
Crossing and landing	Degree	1.95	0.17	2.11	0.25	0.16	8.20%	2.54
Total marks	Degree	4.69	0.32	5.35	0.41	0.66	14.07	2.17

*The tabular "t" value at the level of 0.05 = 1.708

Table (8) shows that there are statistically significant differences between the means of the pre and post measurements of the level of skill performance of the methodological skills of the control group in favor of the post measurement.

Discuss the results of the first hypothesis

It is evident through Table (8) that there are statistically

significant differences between the averages of the pre and post measurement of the control group in the level of learning the level of skill performance in the field and track competitions, and in favor of the post measurement, as the value of t calculated for the skill performance variables was greater than the tabular value of T at a significant level (0.05), which indicates the existence of statistically significant differences in favor

of the post-measurement, and the researcher attributes these results to the method used in education (explanation - model presentation), as well as to the regularity and continuity of practice by the students, as this is also due to the time difference between the two measurements, as it is During this period of time, students practiced the applied approach to the skills under investigation, correcting the errors that appear to them and directing them to the correct performance, as this contributed to the improvement of the skill level of the motor skills in the field and track competitions and to make differences between the averages of the pre and post measurement in favor of the post measurement.

These results are consistent with Wafiqah Salem (2001 AD) that the teacher's use of modern educational methods contributes to the development of cognitive achievement and improvement of the skill performance of the skills to be taught in addition to reducing the effort of the teacher and the learner in raising the level of skill performance. (17:28)

Thus, the first hypothesis of the research hypotheses is verified, which states that there are statistically significant differences between the averages of the pre and post criteria of the control group in the level of skill performance "under investigation" and in favor of the mean of the post-measurement.

Presentation of the results of the second hypothesis:

Table (9)

The indication of the differences between the averages of the pre and post measurements of the level of skill performance For methodological skills in field and track competitions for the experimental group N = 20

Measurement	measuring unit	Pre measure		Post measure		Average differences	Percentage change	"T" value
		S	E	S	E			
Approaching	Degree	1.28	0.32	2.15	0.28	0.87	67.96%	4.45
Upgrade	Degree	1.46	0.28	2.29	0.41	0.83	56.84%	4.36
Crossing and landing	Degree	1.94	0.21	3.15	0.32	1.21	62.37%	4.47
Total marks	Degree	4.68	0.47	7.59	0.18	2.91	62.17%	4.63

*The tabular "t" value at the level of 0.05 = 1.708

Table (9) shows that there are statistically significant differences between the means of the pre and post measurements of the level of skill performance in the field

and track competitions for the methodological skills of the experimental group in favor of the post measurement.

Discuss the results of the second hypothesis:

It is evident through Table (9) that there are statistically significant differences between the averages of the pre and post measurement of the experimental group in the level of skill performance of the methodical skills in the field and track competitions, and in favor of the post measurement, where the value of t calculated for the variables of the level of skill performance for the skills of field and track competitions was greater than the value of T Tabular at a significant level (0.05), which indicates the existence of statistically significant differences in favor of the post-measurement, and the researcher attributes these results to the use of educational info graphics, which provides the use of various colors, arrows and different lines, which would increase the students' attention and focus to the presented scientific material. Arranging educational steps through pictures and sequential drawings using infographics and displaying them through the computer to allow sufficient time and clear vision, as well as understanding the stages of performance of the skills under investigation in a

distinct manner, which increased the students' ability to perceive and absorb the movement to be learned as a result of the clarity of the form of performance and the possibility of returning to the device To see the correct model more than once, which helped to form a correct perception of the skill in the mind of the student and the teacher Helping to retain the information more time, as well as the positive participation and interaction of the pupils with the content of the info graphic, which contributed to the progress of the students' performance level of the experimental group of the methodological skills under consideration, as well as changing the routine method and the use of info graphics in education and the pictures, drawings, designs and attractive colors it contains It encouraged the pupils to better understand the correct performance method, as well as understand all the theoretical information and knowledge established for the field and track competitions curriculum, as the info graphics included structured and arranged educational content that helped to form a knowledge base for students that would be easy for them to retrieve and this showed clear differences in the level of cognitive achievement in favor of Telemetry.

Here, Muhammad Shaltout (2017) indicates that the art of info graphic appeared with its various designs in an attempt to give a new visual form to collecting and displaying information or transferring data in an attractive image to the reader, as info graphic designs are very important because they work to change the way people think about data and complex information And it is one of the arts that helps those in charge of the educational process in presenting the curriculum in a new and interesting way. (29:12)

These results are consistent with the results of Muhammad Salem (2016) (11), Amr Darwish, and Amani al-Dukhani (2015) (10) and Dai

siting (2014), where the results of these studies indicated the positive effect of using info graphic on The educational process, improving the level of performance and cognitive achievement of learners.

Thus, the second hypothesis of the research hypotheses is verified, which states that there are statistically significant differences between the averages of the pre and post criteria of the experimental group in the level of performance of the selected skill variables "under investigation" and in favor of the mean of the post-measurement.

Presentation of the results of the third hypothesis:

Table (10)

The significance of the differences between the averages of the post measurement of the control and experimental groups in the level of skill performance of the methodological skills in the field and track competitions N 1 = n 2 = 20

Measurement	measuring unit	Experimental group		Control group		"T" value
		S	E	S	E	
Approaching	Degree	2.15	0.28	1.55	0.14	3.18
Upgrade	Degree	2.29	0.41	1.69	0.11	3.21
Crossing and landing	Degree	3.15	0.32	2.11	0.25	3.69
Total marks	Degree	7.59	0.18	5.35	0.41	3.32

The tabular "t" value at the level of 0.05 = 1.671

It is evident from Table (10) that there are statistically significant differences between

the averages of the post measurement of the control and experimental groups in the

level of skill performance of the methodological skills in the field and track competitions in favor of the experimental group.

Discussion of the results of the third hypothesis:

It is evident through Table (10) that there are statistically significant differences between the mean post-measurement of the two experimental and control groups in the level of skill performance of the methodological skills in field and track competitions, and in favor of the post measurement of the experimental group, where the value of t calculated for the skill performance variables was greater than the tabular value of T Significant level (0.05), which indicates the existence of statistically significant differences in favor of the post measurement of the experimental group.

The researcher attributes this progress in the post measurement of the experimental group from the post measurement of the control group in the level of skill performance to the use of the info graphic technique, which helped to provide the students with the correct kinematic perception of the

skill performance of the methodological skills under study, as well as the understanding of the stages of performance of skills in a distinct manner, where the educational units provided with technology Infographic, serial graphics and video cut-out pictures of the stages of skillful performance of the methodological skills under discussion supported by structured explanations to cover the technical stages of performance from its various aspects, as well as providing the opportunity for students to see the correct model more than once at the time they want, and use the information that you get as positive feedback in Improving and enhancing pupils' performance and learning speed characteristics.

Which contributed greatly to improving the level of skill performance of the experimental group students to a degree than the students of the control group that used the traditional method and in which the student relies heavily on its memory to obtain the information required to improve performance.

Here, the strange Zahi Ismail (2001 AD) points out

that the use of teaching and learning technology and the modern techniques it provides and their adaptation in addressing the problems and obstacles to teaching, especially teaching physical education, has become a matter that must be kept up with, as it contributes to the renewal of learning methods and methods by providing new stimuli and skills that are active. Students' responses and help them acquire experiences and concepts, and allow them to think and pay attention in a systematic and systematic way. (3:45)

This is in agreement with the results of the study of Ivan Sudakov and others (2015) Ivan Sudakov, .et.al (20), and Guo Lixian (2015) (21), Muhammad Salem (2016 CE) (11) that infographic is a good technique for effective learning. It helps to improve the learners' skills and knowledge.

Thus, the third hypothesis of the research hypotheses is verified, which states that there are statistically significant differences between the two post averages of the experimental and control research groups in the level of performance of the selected skill variables "under

investigation" and in favor of the experimental group.

Conclusions and recommendations

Extracts

Within the limits of the research objectives and hypotheses and within the limits of the sample, and through the results, the researcher reached the following conclusions:

1- The traditional method used for control group students contributed positively to learning the methodological skills prescribed in field and track competitions among students of the control group.

2- Educational info graphics contributed positively to learning the methodological skills prescribed in field and track competitions among students of the experimental group.

3- The educational info graphic is superior to the traditional method used in learning the methodological skills prescribed in the field and track competitions for the skill of the field and track competitions, which indicates its effectiveness and positive impact on the educational process.

Recommendations

In light of the research results, the researcher recommends the following:

1- The application of the proposed program with info graphic technology because of its positive impact on improving the skills of field and track competitions

2- Using info graphic technology in designing educational programs to teach field and track competitions skills.

3- Expanding the development of educational units for the skills of field and track competitions by formulating a different info graphic image (stability - and movement.)

4- Conducting similar studies using innovative educational methods.

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