The effect of an educational program using the smart classroom on learning standing on the head and hands skills in a physical education lesson in gymnastics

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Introduction & research problem

The program is considered a group of experiences emerging from the curriculum and prepared according to an organization that increases the possibility of its implementation, This requires that the program include in addition to a group of educational experiences everything related to its implementation such as time, place, tools and methods of teaching and the role of both the teacher and the student in its implementation (12: 32).

It is a set of expected experiences emanating from the curriculum and what is required for its implementation in terms of capabilities, teaching methods, educational activities and a time period for implementation. In this regard, Ahmed Al-Laqani and Ali Al-Jamal (2006) mention that the educational program is a set of educational materials that are curricula, and it may be a group of writings or readings that are specified for students, and at the same time it may be with various educational means and activities, and it is specified for this The program is usually for a

specific period of time, and the learner may study some of this program within the school and others through independent home study (2:41)

The concept of the smart classroom refers to the maximum use of the elements of teaching and ease of access to learning resources, the participation and effectiveness of the teaching and learning process, the context of awareness and perception, the distribution of students in the classroom and their arrangement.

Amal Zahran (2014) defines the smart classroom as an interactive classroom that allows the teacher to benefit from technology effectively in the educational process and facilitate positive teaching and learning methods by integrating them with technology. (3:15)

It is also defined as a classroom that is equipped to present academic courses electronically, with the help of all appropriate media, devices and electronic displays.

The smart classroom is an interactive learning environment in which the students are present with the teacher at the same time and place, and in this environment computer network technology is employed integrated with audio-visual multimedia technology for the purpose of the learning process and its richness with the maximum possible interaction. (3:25)

In light of the foregoing, the researchers define the smart classroom as an educational environment in which multimedia and computer networks are employed supported by the Internet, and in which students are present with the teacher at the same time to support and enrich the teaching and learning process in order to achieve the goals with the maximum possible interaction.

Ibrahim Rashid (2012) indicates that the smart board is one of the latest tools used in the interactive process, and it is a special type of sensitive interactive whiteboard that is dealt with by touch and others by pen and is written on electronically, and it can also be used and display what is on the computer screen from various applications on it (1: 15)

The smart board is characterized by the ability to use most Microsoft Office programs and the ability to browse the Internet programs freely, which directly contributes to enriching the scientific material by adding dimensions and special effects and distinctive programs that help expand the student's experiences, facilitate the building of concepts, stimulate the student's interest and satisfy his need for learning. Because it presents the material in exciting, interesting and attractive ways. This board also provides students with the opportunity to interact with it and actively participate in the educational process, thus the impact of learning remains (14:112).

The researchers define it as a modern technological tool that works with touch technology and allows its users to interact with it through the various settings installed in the program prepared to run it, which enables the display of pictures and videos and Internet connection in a way that allows the interaction of all learners.

The physical education lesson is the backbone and the cornerstone in implementing the physical education curriculum, which contains the activities of some games (handball - volleyball - foot - basket) and some basic sports such as (field and track competitions, gymnastics). The physical education lesson provides the opportunity for such sports in a systematic and organized framework for a full period that extends for about three months, which is the period of one semester, where the lesson contributes to achieving the desired educational goals, whether they are general or behavioral goals that include cognitive, skillful and emotional purposes, and in which students touch the learning activities of field and track competitions, which may not pass them again during their next educational stages (5:15).

The ground movements are considered the educational approach to gymnastics championships because they constitute the cornerstone of teaching gymnastics equipment. It also contains a large number of technical groups that are similar to the technical groups present in other gymnastics devices. The ground movements develop the ability to use body parts, whether on the ground or in Space and these capabilities contribute effectively to the player's level up in the rest of the gymnastics apparatus (8: 18)

Laila Zahran (2008) indicates that the lesson in physical education implements the prescribed curriculum during the school day, and students must attend these lessons.These lessons must provide experiences for all students of the school and suit between 90:95% of its members and complete with a curriculum for the characteristics suitable for between 10:5%. This curriculum includes aspects of activity suitable for these characteristics. Physical education lessons are generally aimed at achieving the objectives of the physical education curriculum in all respects. To implement the physical education curriculum, the school schedule is determined by a weekly lesson for the various educational stages. (11:23)

Physical education is a manifestation of education that works to achieve its purposes through the chosen motor activity that uses the body in order to create a good citizen who enjoys comprehensive and balanced growth in the physical, mental, psychological and social aspects under the supervision of a conscious leadership. Hence the importance of research in designing an educational program emanating from the basic curriculum for students. It contains programmed materials practiced by the learner himself, step by step, commensurate with his inclinations, abilities, and desires to reach the student to an acceptable level of performance through the actual evaluation to learn the required skills under study. Hence the idea of the research came, which is " The effect of an educational program using the smart classroom on learning standing on the head and hands skills in a physical education lesson in gymnastics".

Research aims

The current research aims to design an educational program using the smart classroom to learn the skills of standing on the head and hands in the lesson of physical education in gymnastics.

Research hypotheses

In light of the research objective, the researchers put the following hypotheses

1-There are statistically significant differences between the mean scores of the pre and post measurements of the experimental group in learning the gymnastic skills under study, in favor of the post measurement

2-There are statistically significant differences between the mean scores of the pre and post measurements of the control group in learning the gymnastic skills under study, in favor of the post measurement

3-There are statistically significant differences between the mean scores of the two post measurements of the experimental and control groups in learning the gymnastic skills under study, in favor of the experimental group.

Terms used in the search:

The program:

It is a group of experiences emanating from the curriculum and prepared according to an organization that increases the possibility of its implementation. This requires that the program include in addition to a set of educational and selected experiences from the curricula and all that is related to its implementation, including time, place, tools, teaching methods, and the role of each of the teacher and the student in implementing it. (7: 5)

Smart classroom:-

Classrooms enhanced with technology equipped to provide students and teachers with new forms of computing, media, display and control devices that are connected to the Internet , rich in communication, and create new opportunities for teaching and learning by integrating network, audio, video and formal technology (16)

Research community and sample:

The research community consists of the students of the second grade of basic education from the third preparatory year at the British School of Minya for the academic year 2021/2022, the second semester, which is composed of (120) one hundred and twenty students. The researchers selected a random sample of (60) sixty students, with a percentage of 50%. The sample was divided into two equal groups, each of which consisted of (30) thirty students for the experimental group. The proposed program under study was used using smart classes and its impact on learning some gymnastic skills under study, and the other was a control one. The traditional method (explanation and performance of the model) was used in the same variables under study..

Distribution of the research sample members moderately:

The researchers ensured the moderateness of the frequency distribution of the two research groups in growth rates (age - height - weight), intelligence, physical tests (strength - flexibility - agility - balance) and the performance evaluation card for gymnastics skills (headstand - handstand) under study . Tables (1), (2) show that:

Table(1)

The arithmetic mean, median, standard deviation, and torsion coefficient for the growth rates, intelligence, physical tests, and the

Variables			Measurement unit	Mean	Median Standard	Standard Deviation	Torsion Coefficient
Growth rates	Age		Year	15.69	15.70	0.29	0.14-
	Length		Cm	144.52	144.00	2.21	0.70
	weight		Kg	48.95	49.00	2.35	0.06-
IQ test			Score	61.60	61.00	2.04	0.88
Physical Capabilities	power	The attachment of immutability	Sec.	9.31	9.40	1.29	0.21-
	Flexibility	Bend the torso forward from long sitting	Cm	6.83	7.00	0.78	0.64-
	Fit	side steps	number	3.00	3.00	0.58	zero
	balance	Walking on an inverted suede bench	Cm	5.18	5.10	0.22	1.11
Gymnastics skills scorecard	Headstand		Score	0.51	0.50	0.05	0.68
	Handstand		Score	0.48	0.50	0.11	0.68-
	the total		Score	0.99	1.00	0.16	zero

performance evaluation card for the gymnastics skills in question for the research sample as a whole (n = 60)

It is clear from Table (1) that the values of the torsion coefficients for growth rates, intelligence, physical tests, and the performance evaluation card for the gymnastics skills under study for the research sample as a whole ranged between (1.11: -0.68), and all of them ranged between (+3, -3), which indicates moderation in distributing the research sample in these variables.

Table(2)

The arithmetic mean, median, standard deviation, and torsion coefficient for growth rates, intelligence, physical tests, and the performance evaluation card for gymnastics skills under study for experimental and control groups (n = 60)

Variables			Experimental group (N=30)					Control Group (N= 30)			
			Measurement unit	Mean	Median Standard	Standard Deviation	Torsion Coefficient	Mean	Median Standard	Standard Deviation	Torsion Coefficient
Growth rates	Age		Year	15.64	15.65	0.30	0.13-	15.74	15.75	0.28	0.14-
	Length		Cm	144.77	144.00	2.49	0.92	144.27	144.00	1.91	0.42
	Weight		Kg	48.60	48.50	2.44	0.12	49.30	49.00	2.23	0.94-
IQ test			Score	61.40	16.00	2.08	0.58	61.80	61.00	2.02	1.19
Physical capabilities	power	The attachment of immutability	Sec.	9.15	9.40	1.67	0.45-	9.48	9.40	0.71	0.32
	flexibility	Bend the torso forward from long sitting	Cm	6.87	7.00	0.82	0.49-	6.80	7.00	0.76	0.79-
	Fit	side steps	Number	2.97	3.00	0.56	0.18-	3.03	3.00	0.61	0.16
	balance	Walking on an inverted suede bench	Cm	5.22	5.10	0.26	1.42	5.14	5.10	0.15	0.72
Gymnastics skills scorecard	headstand		Score	0.051	0.50	0.05	0.55	0.52	0.50	0.06	0.79
	handstand		Score	0.48	0.50	0.09	0.55-	0.47	0.50	0.13	0.79-
	the total		Score	0.99	1	0.14	zero	0.99	1	0.19	zero

It is clear from Table (2) that the values of the torsion coefficients for growth rates, intelligence, physical tests, and the performance evaluation card for the gymnastics skills under study for the experimental group ranged between (1.91: -1.93), while for the control group, they ranged between (1.19: -0.94), and all of them ranged between (0.94: 1.19). (+3, -3), which indicates moderation in distributing the research sample in these variables.

Equivalence of the two research groups:

The researchers found equivalence between the experimental and control groups in the light of the following variables: growth rates, tests (intelligence, physical abilities), and the performance evaluation card for the gymnastic skills under study. Table (3) explains this**:**

Table(3)

The significance of the differences between the mean scores of the two pre standards for the Experimental and control groupd in the variables under study (n = 60)

Variables			Measurement unit	Experimental group		Control group		The difference between the two averages	Calculated (T) value
Growth rates	Age		Year	15.64	0.30	15.74	0.28	0.10	1.33
	Length		Cm	144.77	2.49	144.27	1.91	0.50	0.78
	Weight		Kg	48.60	2.44	49.30	2.23	0.70	1.16
IQ test			Score	61.40	2.08	61.80	2.02	0.40	0.76
Physical capabilities	power	The attachment of immutability	Sec.	9.15	1.67	9.48	0.71	0.33	0.99
	flexibility	Bend the torso forward from long sitting	Cm	6.87	0.82	6.80	0.76	0.07	0.33
	Fit	side steps	number	2.97	0.56	3.03	0.61	0.07	0.44
	balance	Walking on an inverted suede bench	Cm	5.22	0.26	5.14	0.15	0.09	1.62
Gymnastics skills scorecard	Headstand		Score	0.51	0.05	0.52	0.06	0.01	0.58
	Handstand		Score	0.48	0.09	0.47	0.13	0.02	0.58
	the total		Score	0.99	0.14	0.99	0.19	0.03	1.16

Tabled t-value at (58) degrees of freedom and significance level (0.05) = 1.671

It is clear from Table (3) that

There are statistically non-significant differences between the mean scores of the two pre measurements of the experimental and control research groups in the variables under study, as all the calculated (t) values are less than the tabled(t) value at the significance level of 0.05, which indicates the equivalence of the two research groups in those variables.

Data collection methods

The researchers used the following methods to collect data

First: the set of devices and tools

Second: Tests and standards, including

1- IQ test Attachment (2)

2 -Physical Exams Attachment (5)

Third: the performance evaluation card for the gymnastics skills under study. Attachment (10)

First: Equipment and tools

Restameter device for measuring height in centimeters and weight in kilograms - stop watch - Swedish seat - measuring tape - balls - mattresses - ramp surface - horizontal bar - step box.

Second: Tests

1- Cattell's intelligence test:

The researchers chose the intelligence test that was developed by Raymond B. Katell in (1970) (6) and his Arabic copy was prepared by "Fouad Abu Hatab, Amal Sadiq, Mustafa Abdel Aziz." It is a non-verbal test because it does not depend on language but is subject to the performance of individuals for their ability to determine the relation of similarity and difference between the forms in the test. This test aims to estimate the general mental ability "IQ" of the students under study. The test consists of two parts, each part includes four tests. After completing the explanation of the examples, the students are asked to answer the first

part and then the second one according to the number of items allocated for answering each test. The following table (5) shows the names of the tests, the number of items each of them contains, and the time specified for answering them in each part.

Scientific transactions for the test

The researchers calculated the scientific transactions of validity and reliability in the period from 2/12/2022 AD to 2/21/2022 AD, as follows:

A-honesty

The sincerity of intelligence selection was calculated by means of the validity of the peripheral comparison, on an exploratory sample similar to the research community and from outside the main research sample, the number of which was (20) twenty students, and the grades of 2022 AD were arranged ascendingly to determine the highest quartiles, whose number was (5) five students, and the lowest quartiles, whose number was (5) five female students, and the significance of the differences between them in the test was calculated using the Mann and Whitney Labarometric . Table (4) shows the result

Table(4)

The significance of the differences between the upper and lower quartiles in the intelligence test under study using the Mann-Whitney non-barometric test (n = 10)

Upper Quartiles (n = 5)			Lower Quartiles (n = 5)			U	W	Z value	error probability
SMA	Standard deviation	Rank average	SMA	Standard deviation	Rank average				
64.60	**0.55**	**8.00**	**60.60**	**0.89**	**3.00**	**zero**	**15.00**	**2.68-**	**0.007**

It is clear from Table (4) that there are statistically significant differences between the two groups of the highest and lowest quartiles in the intelligence test under study, in favor of the group of the higher quartiles, as the value of the probability of error is significant at the level of significance (0.05), which indicates the validity of the test and its ability to distinguish between the different groups.

B - Constancy

To calculate the stability of the test: The researchers used the method of applying the test and re-applying it on a sample of (20) twenty students from the research community and outside the original sample, with a time difference of (10) ten days between the two applications, then finding the correlation coefficient between the first and second applications. Table (5) shows the result

Table (5)

Correlation coefficient between the first and second applications in the intelligence test in question (n = 20)

First application		Second application		S, C total	correlation coefficient
S total	S` total	C total	C` total		
1234.00	76216.00	1238.00	76704.00	76456.00	0.95

Tabled t value at (18) degrees of freedom and significance level (0.05) = 0.444

It is clear from Table (5) that the correlation coefficient between the first and second applications of the intelligence test in question was (0.95), which is a statistically significant correlation coefficient, as the calculated (r) value is greater than the tabled (r) value at the significance level (0.05), which indicates stability the test.

Physical Tests: Attachment (5)

The researchers selected the elements of physical fitness for the floor movement apparatus and the measured physical tests based on the practical references ""Kamal Abdel Hamid and Sobhi Hassanein" (2001) (10) and previous studies such as the study of "Hamdi Wtut" (2008) (4) and "Mervat Al-Twansi" (2001) (13), and it was also presented to a group of experts whose number is (9) nine faculty members and specialists in the field of gymnastics, and they have experience of not less than (10) ten years "Attachment (17) "and they agreed that the elements of physical fitness are (strength - flexibility - agility - balance) and on the tests that measure each of these elements, where (12) twelve tests were presented. And based on the above, (4) four tests were identified, namely:

- Hanging from stability" test to measure the strength of the muscles of the arms and the unit of measurement is "time in seconds".

- "Bending the torso forward from sitting for a long time" test to measure the flexibility of the torso and the unit of measurement "centimeter"

"."side steps" test to measure agility and the unit of measurement is "number of lines-

-Walking on an inverted Swedish bench" test to measure balance and the unit of measurement is "time in seconds".

Scientific transactions for physical tests

The researchers calculated the scientific transactions of validity and reliability in the period from 2/12/2022 AD to 2/14/2022 AD, as follows:

A- Honesty

The validity of the physical tests under study was calculated by means of the validity of the peripheral comparison, on an exploratory sample similar to the research community and outside the basic research sample. The number of which was (20) twenty students. Five female students, and the significance of the differences between the two quadrants in the tests was calculated as shown in table (6)

Table (6)
Significance of differences between the upper and lower quartiles in the tests of physical abilities in this research, the Mann-Whitney labarometric method N=10

Tests		Measurement Unit	upper quartiles N=5		lower quartiles N=5		Ranks average	U	W	Z value	error probability
			M	A	M	A					
power	The attachment of immutability	Sec.	10.31	0.13	9.01	0.40	8.00 3.00	zero	15.00	2.62-	0.009
flexibility	Bend the torso forward from	Cm	8.20	0.45	6.40	0.55	8.00 3.00	zero	15.00	2.74-	0.006
Fit	Long sitting	Number	3.80	0.45	2.60	0.55	7.70 7.30	1.50	16.50	2.46-	0.014
balance	side steps	Sec.	5.32	0.14	5.10	0.04	8.00 3.00	zero	15.00	2.62-	0.009

It is clear from Table (6) that there are statistically significant differences between the two groups of the upper and the lower quartiles in the physical tests under study, in favor of the higher quartile group, as the value of the probability of error is significant at the level of significance (0.05), which indicates the validity of the tests and their ability to distinguish between groups.

B- constancy

To calculate the stability of the physical abilities tests under study, the researchers used the method of applying the test and reapplying it on a sample of (20) twenty students from the research community and from outside the original sample, with a time interval of (3) three days between the first and second applications. Table (7) shows the correlation coefficients between the two applications.

Table(7)

Correlation coefficients between the first and second applications in physical capacity tests under study (n = 20)

Tests		Measurement Unit	First application		Second application			correlation coefficient
Power	The attachment of immutability	Sec.	179.18	1678.32	182.3.6	1737.52	1705.39	0.97
flexibility	Bend the torso forward from	Cm	139.00	983.00	142.00	1024.00	1001.00	0.86
Fit	Long sitting	Number	57.00	173.00	59.00	183.00	177.00	0.91
balance	side steps	Sec.	103.12	531.97	103.36	534.42	533.18	0.95

Tabled t value at (18) degrees of freedom and significance level (0.05) = 0.444

It is clear from Table (7) that

The correlation coefficients between the first and second applications of the physical abilities tests under study ranged between (0.86, 0.97), which are statistically significant correlation coefficients, as the calculated (t) values are greater than the tabled (t) value at the level of significance (0.05), which indicates the stability of these tests.

The educational program using the smart classroom in question: Attachment( )

The researchers identified the components of the program according to the scientific foundations and presented it to a group of gentlemen experts from the faculty members of the faculties of physical education in the field of curricula and teaching methods, who have an experience of not less than (10) ten years, in order to determine the suitability of the program for students of the dental stage, its content , organization Its components and its suitability for the purpose of the research, so it became in the final form:

The overall goal of the educational program:

This program aims to use the smart classroom and find out its impact on learning some gymnastics skills in a physical education lesson for female students of the second grade of basic education in the city of Minia, under study.

Research execution steps

Administrative procedures :

Explain the research objectives to the sample and ensure their desire to participate in the program and their commitment to the method and implementation of exercises and daily life

- Agreeing on a specific time to conduct the required measurements for the research sample and setting dates for implementing the program

- Resorting to the opinions of experts in physical education and specializing in gymnastics, through a form to seek the opinion of experts and using the scientific references.

Exploratory study

The researchers conducted the exploratory study from 12/2/2022 AD to 21/2/2022 AD, on a sample of (20) twenty students from the same research community and outside the original sample, in order to identify:

1-Testing the validity of the devices, tools and the place used to carry out the experiment

2-Calculating the scientific coefficients for the tests under study

3- Holding a meeting with the experimental group students to teach them how to access YouTube and watch educational videos.

Pre-measurement

The researchers conducted a pre-measurement of the research sample in the variables under study, during the period from 2/22/2022 AD to 2/23/2022 AD

The general framework for carrying out the experiment

The researchers taught the students of the experimental group on Monday of each week, one lesson with a lesson time of (45) minutes, for a period of (8) eight weeks, with (8) eight lessons, from 2/27/2022 AD to 4/24/2022 AD.

Post- measurement

After the completion of the specified period for implementing the experiment for the experimental and control groups, the researchers conducted a post-measurement of the variables under study, during the period from 4/25/2022 AD to 4/28/2022 AD, and all measurements were done as in the pre-measurement

The used statistical method:

To calculate the results of the research, the researchers used the following statistical methods

"Arithmetic mean - median - standard deviation - skewness coefficient - correlation coefficient - ease coefficient - difficulty coefficient - discrimination coefficient - percentage - Mann-Whitney non-barometric test - t-test - percentage change". The researchers also used the Spss program to calculate some statistical coefficients.

Presentation, interpretation and discussion of the results:

Through the objectives and hypotheses of the research, and within the limits of the research sample, and the reality of the data and results that were reached, which were processed statistically, the researchers will review the results of the research according to the following order:

Significance of differences between the mean scores of the pre and post measurements of the experimental group in learning the gymnastic skills under study.

Significance of differences between the mean scores of the pre and post measurements of the control group in learning the gymnastic skills under study.

Significance of differences between the mean scores of the two post-measurements of the experimental and control groups in learning the gymnastic skills under study.

Table(8)

The significance of the differences between the mean scores of the pre and post measurements of the experimental group In learning the gymnastic skills under study (n = 30)

variables	Measurement Unit	Pre-measurement		Post-measurement		The difference between the two averages	error probability	T value	Change rate
headstand	Score	0.51	0.05	1.75	0.25	1.24	0.05	25.48	243.14
handstand	Score	0.48	0.09	1.78	0.25	1.30	0.05	28.58	270.83
total	Score	0.99	0.14	3.53	0.5	2.54	0.1	54.06	513.96

Tabled (T) value at (29) degrees of freedom and significance level (0.05) = 1.699

It is clear from the results of Table (8) the following

There are statistically significant differences between the mean scores of the pre and post measurements of the experimental group in learning the gymnastic skills under study, in favor of the post measurement, as all the probability of error is smaller than the 0.05 level of significance.

The researchers attribute this result to the fact that using the experimental group members of the proposed educational program under study using the smart classroom contributed to create an educational environment that attracts the attention of the female students by employing different methods inside the smart classroom, such as the interactive board, which addresses many senses. Once it is connected, it turns into a giant computer screen in seconds. It is also characterized by the delivery of scientific content in an easy, clear and interesting way, due to its ability to use clear expressive colors, focus attention in a specific light space and in a specific direction, and make the drawings realistic and enjoyable, which helps to better understand the lesson, in addition to its ability to memorize and retrieve the content of the lesson for the female students, as it is equipped with the feature of sending the content of the lesson by e-mail, which makes it easier for the female students and the teacher to retrieve it when needed. And thus improving the quality of

learning and raising the performance of students, as well as increasing the participation of students in group discussions, and this enhances their self-confidence.

This is consistent with what was indicated by Ghaleb Al-Freijat (2011) (9) that classes that contain the interactive whiteboard have a wide impact on the course of the educational process, as they help to facilitate the educational process in schools by provoking dialogue and discussion during the presentation of the lesson because it can attract attention and make students focus throughout the duration of the class. This allows the students to increase activity and interaction. It also helps teachers to clarify a plan before starting the class by arranging, organizing, and adding some aesthetics of sound and image. It serves all the contents of lessons and courses.

Thus, the first hypothesis of the research has been achieved, which states that "there are statistically significant differences between the mean scores of the pre and post measurements of the experimental group in learning the gymnastic skills under study, in favor of the post measurement".

Table (9)

The significance of the differences between the mean scores of the pre and post measurements of the control group In cognitive achievement and learning the gymnastic skills under study (n = 30)

variables	Measurement Unit	Pre-measurement		Post-measurement		The difference between the two averages	error probability	T value	Change rate
headstand	Score	0.52	0.06	1.22	0.31	0.70	0.06	12.62	134.62
handstand	Score	0.47	0.13	1.30	0.31	0.83	0.06	13.76	176.60
total	Score	0.99	0.19	2.52	0.62	1.53	0.12	26.38	311.22

Tabled (T) value at (29) degrees of freedom and significance level (0.05) = 1.699

The results of Table (9) show the following

There are statistically significant differences between the mean scores of the pre and post measurements of the control group in learning the gymnastic skills under study in favor of the post measurement, as all the probability of error is smaller than the 0.05 level of significance.

The researchers attribute this progress to the commitment and continuity of the control group in practice and learning, which had a positive impact on the efficiency of skillful performance. This is consistent with the results of the study of both "Mervat Al-Twansi" (2001) (13) and "Rasha Nageh" (2007) (5), which indicated the most important results indicated that the traditional method (explanation and performance of the model) has a positive effect on learning the skills under their research.

Thus, the second hypothesis of the research has been achieved, which states that "there are statistically significant differences between the mean scores of the pre and post measurements of the control group in learning the gymnastic skills under study, in favor of the post measurement.

Tabled(10)

Significance of differences between the mean scores of the two post-measurements of the experimental and control groups In cognitive achievement and learning the gymnastic skills under study (n = 60)

variables	Measurement Unit	Pre-measurement		Post-measurement		The difference between the two averages	T value	Change rate
headstand	Score	1.75	0.25	1.22	0.31	0.53	7.24	108.52
handstand	Score	1.78	0.25	1.30	0.31	0.48	6.62	94.23
total	Score	3.53	0.5	2.52	0.62	1.01	13.86	202.75

Tabled (T) value at (29) degrees of freedom and significance level (0.05) = 1.699

It is clear from Table (10) that

There are statistically significant differences between the mean scores of the two post-measurements of the experimental and control groups in learning the gymnastic skills under study, in favor of the experimental group, as all the probability of error is smaller than the 0.05 level of significance.

The researchers attribute this to the fact that the proposed educational program is under study using the smart classroom through using the interactive whiteboard, which has led to its various technological advantages of "static and animated pictures, cartoons, colors, video clips, informational text" to attract the attention of the students and increase their motivation to learn. And it made them in constant suspense and positivity, Thus this was reflected in the form of educational experiences that led to bringing about change in a way that helps to achieve the educational goals set effectively. Also, the interactive whiteboard allows repetition of the educational content and control of the speed at which it is presented, especially when performing mathematical skills. Where the board can be provided Interactive programs that make the video files displayed slowly, allowing the students to check the details of the movement, and this matter is not available in the traditional method due to the dependence of this method on the teacher and its use of limited educational means with a limited effect.

Thus, the third hypothesis of the research has been achieved, which states that:

"There are statistically significant differences between the mean scores of the two post-measurements of the experimental and control groups in learning the skills under study, in favor of the experimental group".

Conclusions

1-The proposed educational program under study using the smart classroom has a positive effect on learning gymnastic skills (headstand - handstand) under study.

2-The traditional method has a positive effect on learning the gymnastic skills under study.

3-The students of the experimental group that used the proposed educational program under study by using the smart classroom were superior to the students of the control group in learning the gymnastic skills under study.

Recommendations

1- Using the smart classroom in teaching gymnastics skills to the students of the second cycle of basic education.

2-The necessity of teaching the curricula and teaching methods departments how to use the smart classroom within the teaching methods in the faculties of physical education.

3- Conducting similar research using the smart classroom on other mathematical activities and on other variables and other similar samples.

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The effect of an educational program using the smart classroom on learning standing on the head and hands skills in a physical education lesson in gymnastics

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The current research aims to design an educational program using the smart classroom to learn the skills of standing on the head and hands in the lesson of physical education in gymnastics. The research community consists of the students of the second grade of basic education from the third preparatory year at the British School of Minya for the academic year 2021/2022, the second semester, which is consisted of (120) one hundred and twenty students. The researchers selected a random sample of (60) sixty students, with a percentage of 50%. The sample was divided into two equal groups, each of which consisted of (30) thirty students for the experimental group, and used the proposed program under study using smart classes and its impact on learning some gymnastic skills under study, and the other was a control one, and the traditional method (explanation and performance of the model) was used in the same variables under study. The results indicate that the proposed educational program under study using the smart classroom has a positive effect on learning gymnastic skills (headstand _ handstand) under study. The researchers recommend using the smart classroom in teaching gymnastics skills for the second grade of basic education students.

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