

The impact of Jigsaw's strategy using action games on learning some basic skills For basic education students

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Introduction:

Cooperative learning is one of the teaching strategies brought by the contemporary educational movement, which has proven some research and studies have a positive impact on the academic achievement of students and the Jigsaw strategy is one of the cooperative learning strategies, where students are divided into groups and each student in the group is assigned to study a specific aspect, then the students assigned to study the same aspect of the subject meet and form a group (called the expert group) To discuss this part of the topic, then each one returns to his original group and explains this aspect to the rest of the group, and thus the whole topic is presented at the end among the members of the same group and this is very similar to the games that need to assemble the pieces to eventually reach the desired shape, each student is necessary to complete the understanding of the subject as a whole and this is what makes this strategy very effective.

The need for cooperative learning has emerged as a result of a set of factors, perhaps the most prominent of which is the state of confusion and confusion that learners complain about after each educational situation, which can be interpreted as a result of the lack of integration of new information in a real way in their minds after each traditional educational activity, hence the interest of many researchers in this field, there are many

studies that indicated the need for an active learning environment in which the student plays a positive interactive role during learning, as she explained Some studies that the use of active learning strategies helps in the development of achievement and increase the positive learner, such as the study of **Hani Hany (2003)** (49).

Both **David Belka (1995)**, **Said Chahed (1995)** that the smaller the child the more motor activity and the practice of motor games without educational guidance, through movement, games and multicolored sports practice provides the child opportunities to communicate with children of the same stage as well as learning the rules and general laws to determine the relationships between children at this stage. (46:16), (22:17)

In this regard, **Mufti Ibrahim Hammad (1998)** that the most important purposes of kinetic education is the comprehensive education of the child on the basis of correct kinesthetic, emotional, cognitive and mental so that the child's control can be achieved early on his body, and accustom the fol early on the skills of exploration, and the use of movement in learning the rest of the educational sciences (language - science - arithmetic - meeting - music - art) and enjoy the performance of movement in addition to the development of the child's self-awareness and mental appreciation. (42:12, 13)

Ahmed Abdul Azim Abdullah (2002) mentions that the first movement stage and basic education has become a forum for games and physical sports movement and not to link students to chairs in the classroom, the essence of reform and change in the curricula of that educational stage is to take students on their nature with their different capabilities and abilities, each separately, and thus students learn in school life experiences and can keep pace with the continuous changes in their communities and that the school must become a field for movement and sports and exhaust the potential energy in Motor education is an essential part of the school and teachers must find new programs so that the school becomes more exciting and attractive (5: 25)

Therefore, this study comes within the framework of complementary programs through which the deficit in motor activity provided to the child at school can be filled, due to the clear lack of places designated for sports practice and also the lack of equipment in sports halls and play places that will lead at some time to a severe lack of motor abilities, and weakness in compatibility and behavior in children. (10)

This is in addition to the fact that physical and motor education in the first three grades of primary education in Egypt is a side topic and not fundamental, although it is included in the lessons of the academic schedule and is rarely applied regularly or systematically as is the case in other activities and hobbies for children, although play and movement are an

innate and natural tendency in children that has not been exploited by its principles and sound scientific foundations, which are something necessary for physical, motor and social development in children. (4: 1)

Bastawisi Ahmed (1996), Kamal Abdel Hamid and Mohamed Sobhi Hassanein (1997), Amin Al-Khouli and Osama Rateb (1997), and Alan Bacon (2001) agree that the basic motor skills acquired by the child from the first year to (12) years are multiple and varied and include basic motor skills in which the body moves from one place to another such as "walking, running, jumping, partridge", and basic motor skills performed with hands and feet such as "bouncing, hitting, throwing, standing, kicking". (14:156), (29:67), (13:65) (45:347)

Motor games are an imperative necessity for children, they achieve innate satisfaction for them and make learning happen with some pleasure, and provide them with reflective thinking, and increase the child's sense of what is around him, because it is one of the manifestations of educational renewal, and also helps to make the child effective and active by working in a team and developing plans, excitement and suspense, and in this regard **Haynes (2000)** believes that motor games are cognitive and cooperative strategies that help children self-esteem and provide them with high chances of success while **Judd confirms (2007)** on the need to use motor games with children as they help them strengthen social relations with each other and with their teachers.

(11: 283: 300) (50: 28 ,33) (53:312, 314)

The problem of research and its importance:

Through the **work** of the researcher as a teacher of physical education, she noticed a weakness in the level of learning some basic skills, and the researcher believes that this is due to the method used in teaching these skills so as not to be commensurate with the level of students' abilities, which invited the researcher to think about using a strategy of learning strategies, which can use a set of educational games (movement games), so that this strategy works on listening, participation and cooperation between students to work in groups that integrate with each other To achieve the desired goal, it is to learn basic skills, and the results of using this strategy may contribute to enriching the educational process and increasing the speed and mastery of students for some basic skills, and trying to avoid shortcomings in the field of teaching to learn basic skills to reach a better level of performance in the applied field for students.

In this regard, to the best of the **researcher's** knowledge, theoretical reading and access to reference studies, it is clear that the Jigsaw strategy for cooperative learning using action games is not addressed, and therefore this attempt is the first attempt to address the use of action games through the Jigsaw strategy for cooperative learning, and this is what prompted the researcher to carry out this study entitled "The effectiveness

of the Jigsaw strategy for cooperative learning using action games to learn some basic skills for basic education students."

Research Objective:

The effectiveness of the (Jigsaw) strategy for cooperative learning using action games on learning some basic skills for basic education students.

Fourth: Research Hypotheses:

- There are statistically significant differences and the rate of change between the average of the pre- and post-measurements and in favor of the post-measurement in the basic skills (running- throwing- snatching- kicking - jumping) of the experimental group.
- There are statistically significant differences and the rate of change between the average of the pre- and post-measurements and in favor of the post-measurement in the basic skills (running - throwing- stalking- kicking - jumping) of the control group.
- There are statistically significant differences and the rate of change between the average dimensional measurements of the experimental and control groups and in favor of the dimensional measurement of the experimental group in the research variables (running- throwing- standing - kicking - jumping)

Search Terms:

• **Jigsaw Strategy:**

It is one of the cooperative learning strategies in which the work is organized in small groups consisting of 5 to 6 students, and each student is given information, exercises and games that are not given to others in the group, which makes her an expert

in her own part, after that she teaches this part, after mastering it for the students who are members of her parent group.

• **Action Games:**

Motor skills that suit the interests, desires, possibilities and abilities of students in the light of achieving psychological, social, and physical goals according to the goal to be achieved.

• **Basic motor skills:**

They are the movements that lead to the movement of the body and its movement from one point to another or from one place to another, whether by walking, running, jumping or jumping. (20: 197)

Search Procedure

First: Research Methodology:

The researcher used the experimental method due to its suitability to the nature of this study,

and the researcher used the experimental design with two experimental and control groups and using pre- and post-measurement.

Second: The research community and sample:

The research community and sample were selected from the students of Al-Awael Language School in Sadat City, Menoufia Governorate, who are registered in the school in the official statements for the academic year 2020 AD / 2021 AD in a deliberate way, and their number reached (42) students under (9) years of third grade primary students, and (10) students were withdrawn as an exploratory sample from the research community, but they are not from the basic sample that reached (32) students, divided equally to become a group of experimental and control (16) students, Table 4 illustrates this.

Table (1)

Classification of the research population and sample

Research Community	Sample Survey	Basic research sample	
		Experimental Group	Control Group
(42) His disciple	(10) Pupils	(16) His disciple	(16) His disciple

Conditions for selecting the research sample:

- Continuity and regularity in the study.
- There is a desire and eagerness to participate in the implementation and application of this research.
- The work of the researcher is a practical education supervisor for physical education in the school under research.

Data moderation for search variables (homogeneity):

The researcher conducted the homogeneity of the community and the basic research sample in the basic variables of growth rates based on the opinion and guidance of the supervisory body and the experts attached (2).

Table (2)
Arithmetic mean, median, standard deviation and coefficient
Torsion of variables in question n = 42

Variables	Unit of measurement	Arithmetic mean	Broker	Standard deviation	Torsion coefficient	
Growth rates	Age	Year	9,098	9,100	0,098	0,547
	Length	poison	135,786	136,000	0,606	0,127
	Weight	kg	33,786	34,000	0,616	0,123
Basic motor skills	Wide jump of stability	poison	80,119	80,000	1,041	-0,385
	He threw and caught the ball	degree	14,036	14,000	0,320	-0,060
	Winding running	second	12,798	12,800	0,064	0,020
	Kicking the ball	meter	11,745	11,700	0,059	0,930

It is clear from Table (5) that the value of the torsion coefficient was limited between the value of (± 3) in the variables of each of the "growth rates, basic motor skills", where the value of the torsion coefficient was

limited between (-0.385, 0.930), which indicates that the research community follows a normal distribution in these variables under research.

Equivalence of the two research groups (experimental and control):

Table (3)

The significance of the differences between the average of the pre-measurement of the experimental and control groups in Variables under consideration (parity)
 $n_1 = n_2 = 16$

Variables	Unit of measurement	Experimental Group		Control Group		value "T"	
		Q1	K1	Q2	K2		
Rates Growth	Age	year	9,069	0,087	9,094	0,093	0,784
	Length	poison	135,875	0,619	135,688	0,602	0,868
	Weight	kg	33,875	0,619	33,688	0,602	0,868
Basic motor skills	Wide jump of stability	poison	80,125	0,957	80,000	1,095	0,344
	He threw and caught the ball	degree	13,969	0,287	14,031	0,340	0,562
	Winding running	second	12,806	0,068	12,794	0,068	0,520
	Kicking the ball	meter	11,756	0,063	11,744	0,069	0,562

* Tabular value of "T" at (30, 0.05) = 2,042

It is clear from Table (3) that there are no statistically significant differences between the average pre-measurement of the experimental and

control groups in the variables for each of (growth rates, basic motor skills), which indicates the equivalence of the

two groups in these variables under research.

The researcher has directed and cooperated with the supervisory

body to develop a time plan for the application of research procedures and measurements, and this is shown in Table (4).

Table (4)

Timeline of research procedures and measurements

M	Measurements under consideration	Period
1	First Exploratory Study Ensure the validity of tools and devices and train assistants	Sunday 1/2/2021AD
2	Second Exploratory Study and scientific transactions (truthfulness / consistency) of research variables	From Tuesday 16/2/2021AD To Tuesday 23/2/2021AD
3	Third Exploratory Study Application of an educational unit of the proposed program	Wednesday 24/2/2021AD
4	Pre-measurement of search variables	From Thursday 2/2/2021AD To Saturday 27/2/2021AD
5	Implementation and implementation of the modules of the proposed program	From Sunday 28/2/2021AD To Wednesday 6/4/2021AD
6	Telemetry of search variables	From Thursday 7/4/2021AD To Saturday 15/4/2021AD

Third: Means of Data Collection:

1- Search Devices:

- Restameter device to measure height (in centimeters). Appendix (4)
- Calibrated medical scale approved by the Ministry of Health (kg). Appendix (4)
- DATA SHOW.
- Computer (video).

2- Research Tools:

- Wide jump hole.
- Medicine balls.
- Soccer balls.

• Forms:

- Expert opinion survey form to determine the basic motor skills of the research and its tests.

Table (5) shows the percentage of expert opinions to determine the most important basic motor skills and the most important tests for them, and Table (6) shows the percentage of expert opinions to determine the most important times of the learning process and the time plan for one lesson.

Table (5)

**Percentage of expert opinions on identifying the most important skills
Basic kinetics under research n = 5**

M	Basic motor skills	Percentage of expert opinions		
		Number of repetitions	Percentage %	Order
1	Walk	---	---	---
2	Running	5	100%	The first
3	capering	5	100%	The first
4	Climbing	---	---	---

Follow Table (5)
Percentage of expert opinions on identifying the most important skills
Basic kinetics under research n = 5

M	Basic motor skills	Percentage of expert opinions		
		Number of repetitions	Percentage %	Order
5	Boarding	---	---	---
6	landings	---	---	---
7	Mouth	4	80%	the second m
8	jumping	---	---	---
9	Flinging	5	100%	the first m
10	Kicking the ball	5	100%	the first m

Table (5) shows the percentage of expert opinions on determining the most important basic motor skills, and the researcher was satisfied with the choice at a percentage of not less than

(80%) and what is more, and therefore these basic motor skills were under research: (walking / running / jumping / standing / throwing / kicking the ball).

Table (6)
Percentage of tests for motor skills Basic under research n = 5

M	Basic motor skills	Candidate Tests	Unit of measurement	Percentage of expert opinions		
				Number of repetitions	Percentage %	Order
1	Walk	30m walk	(w)	---	---	---
		50m walk	(w)	---	---	---
		100m walk	(w)	---	---	---
2	Running	50m running	(w)	---	---	---
		100m Run	(w)	1	20%	Second
		Winding run	(w)	4	80%	First
3	capering	Wide jump of stability	(cm)	4	80%	The first
		Vertical jump up	(cm)	1	20%	Second
4	Flinging	Throw a hockey ball as far as possible	(cm)	---	---	---
		Throw a tennis ball as far as possible	(cm)	---	---	---
		Throwing and catching the ball	(degree)	5	100%	First
5	Kicking	Kicking the ball with the foot	(cm)	5	100%	The first
		-----	---	---	---	---

It is clear from Table (6) the percentage of expert opinions, to determine the most important basic motor skills tests, where the researcher was satisfied at (80%) or more to choose the most important test for each skill under research, and thus the tests are:

- Running (80% slalom running test).
- Jump (wide jump of stability according to 80%).
- Throwing (throwing and catching the ball) according to 100%.
- Kicking (kicking a soccer ball and achieving 100%). Appendix (6)

Fourth: Exploratory Studies:

The researcher conducted the first exploratory study in the period from Sunday, 1/2/2021AD, on an exploratory sample of (10) female students from the research community and from outside the main sample of the research, with the aim of:

- Identify the difficulties faced by the researcher when carrying out measurements and tests.
- Ensure the safety and validity of the tools and devices used.
- Determine the time required to carry out the tests and arrange them.
- Training assistants on how to conduct tests and measurements.

The researcher carried out the second exploratory study from

Tuesday, 16/2/2021 AD to Tuesday, 23/2/2021AD, on the exploratory sample to conduct scientific transactions for the tests under research to ensure the truthfulness and stability of the tests under research.

The researcher carried out the third exploratory study in the period from Wednesday, 24/2/2021 AD on the exploratory research sample.

Scientific transactions of the tests used under research:

Calculation of the stability coefficient for the tests of "basic motor skills" under researchw":

The stability of the tests used in the study, which measure the "basic motor skills" under research, was found using the method of applying the test and then reapplying it at an interval of (7) days between the two applications, where the first measurement was applied on Tuesday, 16/2/2021 AD, and the second measurement on Tuesday, 23/2/2021AD, on the sample of the exploratory study of (10) students From the research community and outside the basic sample, where the correlation coefficient between the first and second applications was calculated using the simple correlation coefficient of "Pearson", which is illustrated in Table (7).

Table (7)

Correlation coefficient between the first and second applications in "basic motor skills" For the sample under research n = 10

Study variables	Unit of measurement	First application		Second application		Correlation coefficient
		Q1	K1	Q2	K2	
Wide jump of stability	poison	80,100	0,994	80,300	1,160	0,935**
He threw and caught the ball	degree	14,200	0,350	14,500	0,337	0,895**
Winding running	second	12,970	0,057	12,810	0,032	0,681*
Kicking the ball	meter	11,730	0,048	11,740	0,052	0,802**

** Tabular T at (8, 0.01) = 0.765 * Tabular R at (8, 0.05) = 0.632

It is clear from Table (10) that there is a statistically significant correlation between the first and second applications of the tests that measure (basic motor skills) under research and that the values of the correlation coefficients ranged between (0.681, 0.935), which indicates that these tests enjoy a high degree of stability.

Calculation of the honesty coefficient for the "Basic Motor Skills" tests under research:

To find the honesty coefficient for the tests used in the research, the researcher applied the tests that measure the basic motor skills under

research to the sample of the exploratory study of (10) students, on 23/2/2021AD, and then applied the same tests under the same conditions to a sample of under (12) years old participants in external clubs in Menoufia (Distinguished), whose number is (10) sixth grade students from the same school, and then the validity of the tests was calculated using the method of honesty of differentiation by finding the significance of the differences between the two groups (distinctive - non-distinguished), which is evident in Table (8).

Table (8)

Significance of the differences between the average scores of the two groups (distinguished and non-distinguished) In the "basic motor skills" of the survey sample under research $n_1 = n_2 = 10$

Study variables	Unit of measurement	Featured Collection		Unmarked group		value "T"
		Q1	K1	Q2	K2	
Wide jump of stability	poison	114,300	1,947	80,100	0,994	49,478**
He threw and caught the ball	degree	19,000	0,471	14,200	0,350	25,863**
Winding running	second	10,960	0,070	12,970	0,057	76,235**
Kicking the ball	meter	16,400	0,699	11,730	0,048	21,018**

** Tabular value of "T" at (18, 0.01) = 2,878

It is clear from Table (8) that there are statistically significant differences at a significant level (0.01) between the averages of the two distinct and non-distinct groups in each of the tests that measure the basic motor skills under consideration in favor of the distinguished group, which indicates that these tests enjoy a high degree of honesty.

Modules using the Jigsaw strategy for cooperative learning using motor

games to learn some basic motor skills:

The researcher prepared educational units using the Jigsaw strategy for cooperative learning using kinetic games through a comprehensive survey of references, scientific research and reference studies, in preparation for presenting it to experts, Appendix (8) to poll their opinions about the total time period, the number of educational units, the time of the educational unit, the

appropriate time for the contents of the program, and the program was developed through the following steps:

1- Determining the general objectives of the educational units:

- Students acquire cognitive information from concepts, terms and facts associated with motor games (cognitive goal).
- The acquisition of technical and educational stages of basic motor skills (skill goal).
- Providing students with positive attitudes towards using the Jigsaw strategy for cooperative learning in learning basic motor skills (emotional goal).

2- Foundations for developing the educational program:

- To achieve the goal for which it was set.
- To be suitable for the students to whom the program will be applied.
- Taking into account the individual differences between the pupils.
- The flexibility of the program and its acceptance of modification.

3- Jigsaw Cooperative Learning Strategy:

- Dividing the students into (4) groups, each group consists of (5) students (the mother group).
- Identify topics for students within each group, so that each student is responsible for a specific part.
- Redistribution of pupils into a new group called the Expert Group.
- Pupils in expert groups cooperate with each other so that they can master the part assigned to them.
- The teacher asks the students in the expert group to prepare a mini-

presentation of the part assigned to them.

- The teacher asks the students to return to their original group (the parent group) and play the role of expert.
- The teacher asks the students to make their observations and the important points presented by the student (expert) during the presentation of her part, encourage them to inquire, and then provide a plan about the topic as a whole in an integrated manner.
- If the teacher notices any problem for the students in their groups, she intervenes and encourages the group leader to do her part.
- The teacher asks the pupils (the parent group) to make a presentation on the topic as a whole covering the entire topic.
- In the end, the students are tested individually through a short skill and cognitive test, determining the grade of each student and encouraging the students in the distinguished groups. (16: 42) ,(1: 102) ,(26: 116–118) ,(28)

First: Distribution of tasks (10) s:

This part of the educational unit aims at the researcher to distribute all the requirements of the educational unit of training, knowledge and information on the desired skill = learned in this unit to the students after dividing them into groups.

Second: Group of Experts (10) S:

Third: Preparatory Part (5) S:

- (elasticity – lengthening = m1 axis (1) (5)s.
- Warm-up exercises=m2axis(2) (5)s.

This part of the module aims to prepare and configure (body organs).

Fourth: Main Part (25) S:

It is the most important part of the content of the daily educational unit, which is represented in the Jigsaw strategy for cooperative learning using kinetic games and included the group of experts (attachment (2) - the mother group - the calendar) in which each student in the expert group completes its part of learning in preparation for moving to the mother group and in the end the teacher conducts a comprehensive test that covers the parts of the unit, the grades of the

group as a whole are calculated, and the researcher announces the scores of each group and then the name of the group that achieved the highest grades and table (12) Shows the time distribution and content.

Fifth: Calming Part (Conclusion) (5) S:

At the end of each educational unit, there is a goal of returning the internal body systems to their semi-normal state, and Table (12) shows the chronological distribution of the parts of the educational unit.

Table (9)

**Time distribution of module parts using the GIXO cooperative learning strategy
Using action games to learn some basic motor skills for students
Basic education under consideration**

M	Parts of the educational unit	Time(s)	
1	First: Distribute tasks from the parameter	(10)s	
2	Second: Group of Experts	(10)s	
3	Third: Preparatory Part A- Flexibility – Lengthening	(5)s	
	B- Warming up	(5)s	
4	Fourth: Main Part A – The parent group (learning and mastering basic motor skills using action games)	(15)s	(25)s
	B- The teacher conducted some discussions and made an oral skill test for the students in what was learned (evaluation)	(10)s	
5	Concluding part (soothing and relaxing)	(5) s	
Total unit time		(60)s	

Table (9) shows the time distribution for the application of the units in the proposed program under discussion.

Table (10)

**Time distribution of the application of units in the program
Proposal under consideration**

M	Week	Program Modules	
		Unit One – Sunday (60) S – 10.30 am	Module Two – ednesday (60) S – 10.30 am
1	First	28/2/2021	2/3/2021
2	Second	6/3/2021	9/3/2021
3	Third	13/3/2021	16/3/2021
4	Fourth	20/3/2021	23/3/2021
5	V	27/3/2021	30/3/2021
6	Sixth	13/4/2021	6/4/2021

Table (10) shows the time distribution and contains the parts of the weekly units to learn some basic motor skills using the strategy (Jixo) cooperative learning for basic education students.

Fifth: Basic Study:

Tribal measurement:

The tribal measurements were made during the period from Thursday 25/2/2021 to Saturday 27/2/2021 AD for the experimental group and the control group, and all students in the two groups were organized regularly in the application of the program, and the measurements were made in the playgrounds of Al-Awael Language School in Sadat City, Menoufia Governorate.

Apply the basic experience:

The proposed training program was implemented to develop the skill of aiming by jumping up in handball using auxiliary tools for a period of (8) weeks from Sunday 28/2/2021 AD to 6/4/2021AD on the experimental group under induction.

Telemetry:

The dimensional measurement of the experimental and control group was carried out from Thursday, 7/4/2021 AD to Saturday 15/4/2021 AD, and after the application of the program and trainings, the data was collected, organized, tabulated and subjected to appropriate statistical treatments.

Sixth: Statistical Treatments:

Statistical analysis of the data was carried out using the statistical program (SPSS) for the humanities and educational sciences, where the following statistical treatments were carried out:

1- Arithmetic mean- median- standard deviation- torsion coefficient.

Presentation and interpretation of results

First: Presentation of Results:

1- Presentation of the results of the first hypothesis:

Table (11)

The significance of the differences between the average of the pre- and post-measurements in basic motor skills In the experimental group members under consideration n = 16

Variables	Pre-measurement		Telemetry		value " T "
	Q1	K1	Q2	K2	
Wide jump of stability	80,125	0,957	112,000	1,633	82,588**
He threw and caught the ball	13,969	0,287	18,813	0,403	44,376**
Winding running	12,806	0,068	11,022	0,031	83,886**
Kicking the ball	11,756	0,063	14,750	0,447	27,670**

** Tabular value of "T" at (15, 0.01) = 2,947

It is clear from Table (11), that there are statistically significant substantial differences at the level of significant (0.01) between the average of the pre- and post-measurements of

the experimental group in the basic motor skills of the members of the experimental group in favor of the post-measurement.

Table (12)

The rate of change between the average pre- and post-measurements in basic motor skills In the experimental group members under consideration n = 16

Variables	Pre-measurement	Telemetry	The difference between the two averages	Rate of Change (%)
	Q1	Q2		
Wide jump of stability	80,125	112,000	31,9	39,8%
He threw and caught the ball	13,969	18,813	4,8	34,7%
Winding running	12,806	11,022	1,8	16,2%
Kicking the ball	11,756	14,750	2,99	25,5%

It is clear from Table (12) that there is an accident change rate between the pre- and post-measurements in the basic motor skills of the experimental group members in favor of the post-measurement, where the largest rate of change accident in the skill of "wide jump of stability"

with a rate of change of (39.8%), while the lowest rate of change accident (16.2%) in the skill of "slalom running",

2- Presentation of the results of the second hypothesis:

Table (13)

The significance of the differences between the average of the pre- and post-measurements in basic motor skills Members of the control group under consideration n = 16

. Variables	Pre-measurement		Telemetry		value " T "
	Q1	K1	Q2	K2	
Wide jump of stability	80,000	1,095	95,375	0,885	42,272**
He threw and caught the ball	14,031	0,340	15,813	0,403	12,360**
Slalom running	12,794	0,068	11,822	0,026	51,690**
Kicking the ball	11,744	0,063	13,188	0,403	15,979**

** Tabular value of "T" at (15, 0.01) = 2,947

It is clear from Table (16) that there are statistically significant differences between the average of the pre- and post-measurements of the

control group in the basic motor skills of the members of the control group in favor of the post-measurement.

Table (14)

The rate of change between the average pre- and post-measurements in basic motor skills Members of the control group under consideration n = 16

Variables	Pre-measurement	Telemetry	The difference between the two averages	Rate of Change (%)
	Q1	Q2		
Wide jump of stability	80,000	95,375	15,4	19,2%
He threw and caught the ball	14,031	15,813	1,8	12,7%
Slalom running	12,794	11,822	0,97	8,2%
Kicking the ball	11,744	13,188	1,4	12,3%

It is clear from Table (17) that there is an accident change rate between the pre- and post-measurements in the basic motor skills of the control group members in favor of the post-measurement, where the largest rate of change was an accident

in the skill of "**wide jump of stability**" with a rate of change of (19.2%), while the lowest rate of change was an accident (8.2%) in the skill of "**slalom running**",

3- Presentation of the results of the third hypothesis:

Table (15)

The significance of the differences between the average of the two dimensional measurements in basic motor skills In the members of the experimental and control groups under research n1 = n2 = 16

Variables	Experimental Group		Control Group		value " T "
	Q1	K1	Q2	K2	
Wide jump of stability	112,000	1,633	95,375	0,885	35,802**
He threw and caught the ball	18,813	0,403	15,813	0,403	21,049**
Slalom running	11,022	0,031	11,822	0,026	78,878**
Kicking the ball	14,750	0,447	13,188	0,403	10,381**

** Tabular value of "T" at (30, 0.01) = 2,750

It is clear from Table (15) that there are statistically significant differences at the level of significance (0.01) between the average of the two

dimensional measurements of the experimental and control groups in the basic motor skills in favor of the measurement

Table (16)

Rate of change between the two dimensional averages in basic motor skills In the members of the experimental and control groups under research n1 = n2 = 16

Variables	Experimental Group	Control Group	The difference between the two averages	Rate of Change (%)
	Q1	Q2		
Wide jump of stability	112,000	95,375	16,6	17,4%
He threw and caught the ball	18,813	15,813	3	18,97%
Slalom running	11,022	11,822	0,8	7,3%
Kicking the ball	14,750	13,188	1,6	11,8%

It is clear from Table (19) that there is an accident change rate between the two dimensional measurements in the basic motor skills of the members of the experimental and control groups in favor of the dimensional measurement of the

experimental group, where the largest rate of change accident in the skill of "**throwing and stopping the ball**" with a rate of change of (18.97%), while the lowest rate of accident change was (7.3%) in the skill of "**slalom running**",

Second: Discussion and interpretation of the results:

1- Discussing the results of the first hypothesis:

It is clear from Table (11) and (12) that there are statistically significant differences at the level of significance (0.05) between the pre- and post-measurements of the experimental group in learning some basic motor skills in favor of the post-measurement.

The researcher attributes this progress in the level of basic motor skills among the students of the experimental group to the positive impact of the strategy of Jigsaw using kinetic games as a proposed educational method and what was included in this strategy of creating an educational atmosphere that helps cooperation between students as well as the ability to absorb, where the method of Jigsaw is characterized by the fact that each student has a role to play during the lecture, which increases understanding and awareness of artistic performance and improve it when the student plays the role of (leader, performer, reader or observer), it acquires several Skills including retrieval, visualization, discovery, comparison or conclusion.

This is consistent with both "**Mashi Al-Shammari**" (2011) and "**Mohammed Al-Haila**" (1999), in that the Jigsaw strategy is an effective method that contributes to providing students with the skills of effective listening and a sense of personal responsibility and enables students to evaluate their part depending on

themselves and their own effort. (16: 42 –43), (21:341)

The researcher believes that although all members of the group learn together. However, each individual has a specific role to play and must emphasize the importance of each individual believing that he is responsible for accomplishing his role, and this would create coordination between the members of the group as partners in achieving the collective goal and this strategy is characterized by that it occurs in an atmosphere free of stress and anxiety, which helps students to increase self-confidence and increase their motivation towards learning and cognitive achievement and form cooperative relationships in The collection.

This is consistent with "**David**" (1995) that the students whenever they are competent in cooperative work increased their learning quantity and quality, and this will not come unless the students master cooperative skills and these skills self-confidence, communication skills, leadership, exchange of roles, conflict resolution between learners. (46 : 30)

The researcher attributes this progress in the level of basic motor skills among the members of the experimental group in basic motor skills to the motor games used by the researcher with the Jigsaw strategy for cooperative learning, where the researcher employed kinetic games to achieve their goal, which is to acquire learning basic motor skills and the acquisition of knowledge and information, and the spirit of the group and cooperation between members of

the group, as play makes the educational process better and faster and works to remove fatigue and boredom.

2- Discussing the results of the second hypothesis:

It is clear from Table (13) and (14) that there are statistically significant differences between the average of the pre- and post-measurements of the control group in learning basic motor skills (under research) in favor of the post-measurement.

The researcher attributes these differences and the positive impact of the results of the dimensional measurement of the control group to the program followed in education represented in (verbal explanation and performance of the practical model) by giving a clear idea of how to perform correctly as well as the work of a model of skill by the learner and then give a set of graded exercises from easy to difficult and from simple to complex and correction of errors and guidance, which led to an improvement in the level of performance of the students of the control group in the basic motor skills under research.

The results of the researcher's study are consistent with the results of reference studies that used modern educational strategies or means or the use of hypermedia in teaching basic motor skills, including the study of both "**Ashraf Mahmoud Morsi**" (1997) (10), "**Justin O'Conner**" (2003) (54), and the **study of Heronzi** (2004) (50), through which these studies confirmed the importance of using educational games, small and

preliminary games and movement games in learning basic motor skills and basic motor skills For various sports activities.

This applies to what was pointed out by "**Hassan Abu Abdo**" (200 AD) (6) that motor learning is the change in performance or motor behavior as a result of training and practice and not as a result of maturity or fatigue or the effect of some stimulant drugs and other factors that affect performance or motor behavior temporarily.

This is consistent with what was pointed out by **Wafiqa Salem** (2000) (24) and **Mahdi Mahmoud Salem** (2002) (22) that modifying the learner's behavior is linked to practice and exercise so that adaptation occurs in new situations.

Richard Schmidt (1991) points out that continued training and experience lead to a permanent change in skill performance. (27 : 153)

It also agrees with what was pointed out by "**Talha Hossam El-Din and others**" (2006) (12) that motor learning is the process of learning basic motor and sensory skills resulting from the individual learner making an effort, which led to the change of his motor behavior for the better.

It is consistent with the results of the study of "**Randa Saeed**" (2009) (20), "**Muhammad Kamal Hussein Ezzat**" (2002) (40), "**Hind Saeed Ali Khalil**" (2001) (44) and the most important results were that the use of the traditional program of the control group has a positive impact on the teaching of basic motor skills among

students of the first cycle of basic education.

Therefore, one of the most important results was that the program followed by the college (verbal explanation and performance of the practical model) contributed in a positive way to teaching some basic motor skills (under research).

Thus, the validity of the second hypothesis, which states that **"there are statistically significant differences between the pre- and post-measurements of the control group on the learning of some basic motor skills in favor of the post-measurement."**

3- Discussing the results of the third hypothesis:

It is clear from Table (15) and (16) that there are statistically significant differences between the average dimensional measurements of the experimental and control groups at a significant level (0.05) in learning basic motor skills (under research) in favor of the dimensional measurement of the experimental group.

The researcher attributes this progress in the dimensional measurement of the experimental group from the dimensional measurement of the control group to one of the active learning strategies, which is the Jigsaw strategy for cooperative learning using educational games, which had the largest role in activating the role of the student and making it the focus of the educational process and also had a positive impact in terms of creating an educational atmosphere that gives the student a clear perception of performance and

receives feedback from multiple and diverse sources and acquires values and trends, which leads to the acquisition of good motor performance.

In this regard, the researcher explains the importance of using the Jigsaw strategy as a learning method, with its distinctive steps that suit and suit the characteristics and nature of the age stage (the first cycle) of basic education in a sequence that contains providing opportunities for the learner and guidance and guidance from the teacher.

The researcher also believes that the strategy of Jigsaw cooperative learning using some kinetic games is the responsibility of the educational process from the teacher to the student, which helps in improving performance as a result of increasing motivation towards learning and increasing the spirit of cooperation and love among students as well as self-knowledge through experience and exploration, as well as removing from the educational process fear, tendon and anxiety and increases self-confidence and group spirit and helps to perform skills and increase the ability to obtain information and knowledge related to the skills to be learned, while in the learning style The main role of the teacher is to make all decisions and does not provide the opportunity for the student to participate positively, which reduces the positivity in performance.

This is consistent with what **Kawthar Kojak (2008)** pointed out that active learning strategies depend on the learner's positivity in the

educational situation and include all educational practices and teaching procedures that aim to activate the role of the learner and maximize where learning, research, experimentation and self-reliance of the learner in obtaining information and acquiring skills. (15 : 152)

He agrees with "**Hanan Al-Anani**" (2002) that educational and kinetic games are one of the educational methods that attract the attention of the learner and his eagerness for education, education by playing provides the learner with an atmosphere in which he rushes to work, which is a learning and exploration tool that helps the learner to acquire many knowledge and information about skills, and self-knowledge, through experience and exploration, the student recognizes what he loves and recognizes his problems and becomes more able to solve them. (7 : 27)

This is consistent with the studies of **Randa Sari (2010)** (20), **Al-Shaimaa Abdullatif (2009)** (22), **Mohamed Kamal Ezzat (2002)** (40), **Hind Saeed Ali (2001)** (44), that Jigsaw's cooperative learning strategy using water or motor games has a positive impact beyond the traditional method used without the use of strategy and motor games in learning basic motor skills.

Therefore, the most important results reached by the researcher is the superiority of the experimental group that used the Jigsaw strategy and motor games in its dimensional measurement on the control group that used the method used in the college (verbal

explanation and performance of the practical model) in learning basic skills (under research), and the researcher adds that these results between the two dimensional measurements of the experimental and control groups, in which the dimensional measurements of the experimental group outperformed the control is a relative superiority that does not reduce the program followed, But it explains the importance of these modern strategies and the importance of action games for the age group (4-9) years.

Through the previous presentation, the validity of the third hypothesis is verified, which states that **"there are statistically significant differences between the two dimensional measurements of each of the experimental groups, and the control to learn some basic motor skills in favor of the dimensional measurement of the experimental group."**

Conclusions and recommendations

First: Conclusions:

In the light of the objectives of the research and within the limits of the sample and the results reached, the researcher concluded the following:

- There are statistically significant differences and the rate of change between the average pre- and post-measurements and in favor of the post-measurement in the experimental group in the basic motor skills (wide jump of stability - throwing and stopping the ball - slalom running - kicking the ball) under research, where the largest rate of change of an accident in the skill of the wide jump of stability was (39.8%), while the

lowest rate of change of an accident was (16.2%) in the skill of slalom running.

- There are statistically significant differences and the rate of change between the average measurements before and after and in favor of the dimensional measurement in the control group in the basic motor skills under research, where the largest rate of change in the skill of the wide jump of stability was a rate of change of (19.2%) while the lowest rate of change was (8.2%) in the skill of slalom running.

- There are statistically significant differences and the rate of change between the average of the two dimensional measurements in the experimental and control group and in favor of the dimensional measurement in the experimental group in basic motor skills, where the largest rate of change occurred in the skill of throwing and stopping the ball with a rate of change of (18.97%) while the lowest rate of change of accident (7.3%) in the skill of slalom running.

Second: Recommendations:

In light of the findings of the broadcast results, the researcher recommends the following:

- Apply the Jigsaw strategy for cooperative learning using kinetic games to teach other skills.
- Conduct similar studies using the Jigsaw strategy for cooperative learning and kinetic games in other sports activities.
- Use learning styles that give a positive and effective role to the learner.

Bibliography:

First: Arabic References:

- 1. Ibtihaj Ahmed Abdel Aal (1994):** The Effect of a Kinetic Education Program on the Development of Cognitive Abilities and Some Mini Volleyball Skills for Students of the First Stage of Basic Education, Scientific Journal of Physical Education and Sports, Issue 21, Faculty of Physical Education for Boys, Helwan University.
- 2. Abu Al-Naga Ahmed Ezz El-Din (2001):** Physical Education Teacher, Dar Al-Siddiq for Publishing and Distribution, Mansoura.
- 3. Ahmed El-Sayed Al-Mowafi (2004):** The effect of using some teaching methods on the level of skill and cognitive achievement in volleyball, for students of the Faculty of Physical Education, PhD thesis, Faculty of Physical Education, Mansoura University.
- 4. Ahmed Abdul Rahman Al-Sarheed and Farida Ibrahim Othman (1993):** Scientific foundations of kinetic education and its applications for kindergarten and primary stage, 2nd Edition, Dar Al-Qalam, Kuwait.
- 5. Ahmed Abdel Azim Abdullah (2002):** The Effect of a Kinetic Education Program Using Small Recreational Games on Motor Variables and Motor Satisfaction for Children 6-9 Years Old, PhD Thesis, Physical Education for Boys, Helwan University, Cairo.
- 6. Adele Saad Shenouda and Samia Farghaly Mansour (1999):** Artistic Gymnastics Concepts, Applications, Forum of Thought, Alexandria.

7. **Osama Kamel Rateb (1997):** Teaching Swimming, 3rd Edition, Dar Al-Fikr Al-Arabi, Cairo.
8. **Osama Kamel Rateb (1999):** Motor Development (Introduction to the Integrated Development of the Child), Dar Al-Fikr Al-Arabi, Cairo.
9. **Osama Kamel Rateb and Ibrahim Abd Rabbo Khalifa (1999):** Growth and Motivation in Directing the Child's Motor Activity and Sports Activities, Dar Al-Fikr Al-Arabi.
10. **Ashraf Mahmoud Morsy (1997):** The Effect of a Kinetic Education Program on Some Psychological and Motor Aspects of Pre-School Children, Master's Thesis, Faculty of Physical Education, Minia University.
11. **Ellen Wadih Farag (2002):** Experiences in games for young and old, Dar Al-Maaref, 2nd Edition, Alexandria.
12. **Amin Anwar El-Khouly (1996):** The Origins of Physical Education and Sports (Introduction - History - Philosophy), Dar Al-Fikr Al-Arabi, Cairo.
13. **Amin Anwar Al-Khouly and Osama Kamel Rateb (1997):** Kinetic Education for Children, Dar Al-Fikr Al-Arabi, 5th Edition, Cairo.
14. **Bastawisi Ahmed (1996):** Foundations and Theories of Movement, Dar Al-Fikr Al-Arabi, Cairo.
15. **Hamed Abdel Salam Zahran (1997):** Developmental Psychology "Childhood and Adolescence", World of Books, Cairo.
16. **Hassan Hussein Zeitoun (2003):** Teaching Strategies, A Contemporary View of Teaching and Learning **Methods**, Volume 1, World of Books, Cairo.
17. **Hassan Hussein Zeitoun and Kamal Abdel Hamid Zeitoun (2003):** Learning and Teaching from the Perspective of Constructivist Theory, 2nd Edition, World of Books, Cairo.
18. **Khalil Radwan Suleiman (2000):** The Effect of Using Constructivist Learning in Science Teaching on the Development of Some Scientific Concepts and Critical Thinking among Second Preparatory Grade Students, Unpublished PhD Thesis, Faculty of Education, Minia University.
19. **Khalil Mikhail Moawad (1994):** The Psychology of Growth (Childhood and Adolescence), 2nd Edition, Dar Al-Fikr Al-Jamia, Alexandria.
20. **Randa Sari (2010):** The Effect of Using Cooperative Education according to the Computer-Enhanced Jigsaw Strategy on the Achievement and Attitudes of Students in Mathematics, Master's Thesis, Damascus University, Syria.
21. **Saad Galal (1993):** Childhood and Adolescence, 2nd Edition, Dar Al-Fikr Al-Arabi, Cairo.
22. **Said Khalil Al-Shahed (1995):** Methods of Teaching Physical Education, Female Students' Library, Cairo.
23. **Al-Shaimaa El-Sayed Abdel Latif (2009):** The effectiveness of using cooperative methods and commands on learning the skill of the first star in signature swimming, Master's thesis, Faculty of Physical Education for Girls, Zagazig University.
24. **Abdel Hamid Sharaf (2001):** Physical and motor education for

normal children and challengers with disabilities, Book Center for Publishing, 1st Edition, Cairo.

25. Abdel Salam Mostafa Abdel Salam (2000): Fundamentals of Teaching and Professional Development for the Teacher, Dar Al-Fikr Al-Arabi, Cairo.

26. Afaf Abdel Karim (1995): Kinetic Programs and Teaching for Kids, Dar Al-Maaref for Publishing, Alexandria.

27. Enayat Ahmed Farag (1990): A Physical Education Teacher's Guide in the Basic Education Stage, Dar Al-Fikr Al-Arabi.

28. Fath Al-Bab Abdel Halim Sayed (1994): Training teachers in the field of educational technologies in educational technology, Volume IV, Ain Shams University.

29. Kamal Abdel Hamid Ismail and Mohamed Sobhy Hassanein (2002): Modern Handball Quartet, Part IV, Book Center for Publishing, Cairo.

30. Kamal Abdel Hamid Zeitoun (2002): Teaching Science for Understanding: A Constructivist Vision, World of Books, Cairo.

31. Kamal Abdel Hamid Zeitoun (2002): Designing educational programs with constructivist thought (intellectual rooting - empirical research), World of Books, Cairo.

32. Kamal Abdel Hamid Zeitoun (2002): The effectiveness of the structural analysis strategy in correcting physical perceptions of strength and movement among physics students with different learning styles, Journal of Scientific Education, Volume I, Issue 4, Cairo.

33. Magda Akl Mohamed (1993): The Effect of Popular Games on Some Grammar Skills of a Pre-School Child, Faculty of Physical Education, Tanta University.

34. Maysa Mohamed Afifi (2020): The effectiveness of the Jigsaw strategy for cooperative learning using water games on learning some basic skills and cognitive achievement in water polo, Scientific Journal of Physical Education and Sports Sciences, Issue (73), Part (2) January, Faculty of Physical Education for Boys in Haram, Helwan University.

35. Magdy Aziz Ibrahim (2004): Teaching Strategies and Learning Methods, Anglo-Egyptian Library, Cairo.

36. Mahrous Mohamed Kandil, Ahmed Fouad El-Shazly and Mohamed Ibrahim Shehata (1998): Fundamentals of Physical Exercise, Knowledge Foundation, Alexandria.

37. Mohamed Ibrahim Shehata (1992): A Guide to Modern Gymnastics, Dar Al-Maaref, Cairo.

38. Mohamed Hassan Allawi and Mohamed Nasr El-Din Radwan (1994): Motor Performance Tests, 3rd Edition, Dar Al-Fikr Al-Arabi, Cairo.

39. Mohamed Said Azmy (1996): Methods of developing and implementing the physical education lesson in the basic education stage between theory and practice, Knowledge Foundation, Alexandria.

40. Mohamed Kamal Hussein Ezzat (2002): The Effect of Water Games on Learning Motor Skills in Swimming for Children, Master's Thesis, Faculty of Physical Education for Boys, Al-Haram, Helwan University.

- 41. Mohamed Mohamed El Hamahmi (1999):** The Philosophy of Play, Book Center for Publishing, Cairo.
- 42. Mufti Ibrahim Hammad (1998):** Kinetic Education and its Applications for Kindergarten and Primary School, Al-Mukhtar Foundation for Publishing and Distribution, Cairo.
- 43. Munir Taha (2012):** The Effect of Using the Hijab Method (Jixo) in Science Education on the Learning of Students and Teachers, Master's Thesis, University of Bidzet, Palestine.
- 44. Hind Saeed Ali Khalil (2001):** The effect of using water games on both learning to swim crawling on the abdomen and anxiety among female students of the Faculty of Physical Education, Master's thesis, Faculty of Physical Education in Sadat, Menoufia.
- Second: English References:**
- 45. Allyn & Bacon (2001):** Fundamental motor skills, a chapter (15) hand books cubak, edu, nabiley/power point/mike chapter 15.
- 46. Davide Belka (1995):** Teaching children Games, Becoming a master Teachers, Human kinetics, publisher, Inc.
- 47. Fernandez-Balbon Juen and Others (1996):** Perspectives on Content Knowledge in Physical Education Journal of Physical Education – B1, Nov. Dec.
- 48. Garvin, Paul (2002):** Congtion amultiple view, Sparton Book, N.Y.
- 49. Hany, J.J. (2003):** Constructivist beliefs about the science classroom learning environment perspectives from teachers, administrators, parents, communality members & students, School Science and Mathematics, 103 (8), pp. 366-378.
- 50. Haynes, L.C. (2000):** Gender differences of a computer-based mathematics game: strategies, motivation, and beliefs about mathematics and computers, Dissertation Abstract International Vol. 60, No. 9, pp. 28, 33.
- 51. Joanne & HuiTzu (2004):** The effect of a creative movement program on motor creativity and gross motor skills of preschool children, Ph.D. The University of South Dakota, May.
- 52. Jonassan, D.H. (1999):** Designing Constyructivisit Learning Environment, in Reigeluth, Design Theories and Methods. Anew Paradigm of Instructional Theories Mahwah, N.J. Lawerance Erlabaum Associates.
- 53. Judd, W. (2007):** Instructional games. Methmatis teaching in middle school Vol. 12, No. 6, pp. 312-314.
- 54. Justen O'connert (2003):** Development children are our children compentent? RimT.paperpre sented at Biennial Achpneh Conference, Jan.
- 55. Kruber, Dieter (1996):** Vebungslcarten, Zur Bewegung serzichung invor and Giund Shul-Pohi-Verleg.
- 56. Parish (1995):** Self-concept, development. New York, Live right.
- 57. QiaoMengduo & Jin Xiaoling (2010):** Jigsaw Strategy as a cooperative learning teachinque:

Focusing on the Language learners', Chinese's Journal of Applied linguistics (Bimonthly), Aug, 2010, Vol. 22, No. 4.

58. Stewart, J., Cartier, J.L. & Oassonres, C.M. (2004): Developing understanding through based injuiry, American Association for the Advancement of Science, Washington, D.C.

59. Yoger, Robert (1999): The Constructivist Leanring Model, Journal of Science Teacher, Vol. 58, No. 60.

Third: International Information Network References:

60. [http://www.badnia.net/badnia/showharead.Php?t=26152\(1998\)](http://www.badnia.net/badnia/showharead.Php?t=26152(1998))

61. [http://www.educationaljournal.net,\(11:40am\)](http://www.educationaljournal.net,(11:40am)).

62. [http://www.al_vefagh,\(11:40am\)](http://www.al_vefagh,(11:40am)).

63. [http://www.wffw.jeeran.com,\(9:15pm\)](http://www.wffw.jeeran.com,(9:15pm)).

64. [http://www.almorappi.com,\(9:15pm\)](http://www.almorappi.com,(9:15pm)).

65. [http://www.aljoufedu.gov.sa,\(10:10pm\)](http://www.aljoufedu.gov.sa,(10:10pm))

66. [http://www.ithraa.net,\(10:10pm\)](http://www.ithraa.net,(10:10pm)).