



The Effect of a Proposed Educational Program With Motor Games on Developing of Some Basic Motor Skills and Creative Motor Abilities for the Fourth Year Primary Students

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Abstract:

This research aimed to identify the effect of a proposed educational program with motor games on developing of some basic motor skills (running, jumping, static balance, moving balance, throwing and catching) and creative motor abilities (motor fluency, flexibility and genuine) for the fourth year primary students aged (9-10) years. The researcher used the experimental approach to design two groups equal; experimental and control groups with pre and post tests. The research sample composed of 48 students (boys and girls) of the fourth year primary students aged (9-10) years from the primary school Nedjaoui Saleh Ichemoul -Batna- during the school year 2021-2022 choosing randomly by lottery from the research community of 72 students, who were selected into two groups with 24 students in each group. In order to reach the research objectives, The researcher used a set of tests to measure the basic motor skills and the creative motor abilities. The researcher applied the suggested motor games program on the experimental group with 28 educational units for 60 minutes each taking 14 weeks . At the same time, The primary school teacher applied the traditional program on the control group. After that, we applied the post tests on the two groups. After collecting from the research sample, it has been processed statistically with SPSS 25, The results came as follows:

- ✓ The proposed education program with motor games has a positive impact on the development of some basic motor skills and motor creativity in fourth-year primary pupils (9-10 years)
- ✓ The regular program has a positive impact on the development of some basic motor skills in the fourth-year primary students (9-10 years)
- ✓ The regular program has no impact on the development of the dynamic creativity of fourth-year primary students (9-10 years).



Keywords: educational program, motor games, basic motor skills, creative motor abilities, fourth year primary students

First: the introductory aspect

1. Introduction and research problem

The primary education stage is considered the cornerstone of the educational structure upon which nations rely, as it aligns with the children's age and is ideal for developing and enhancing their motor skills. Subsequent educational stages build upon these foundational skills. (Al-Delami, 2010, page 209)

Physical education plays a significant role in the primary stage by directly influencing behavior and transforming it from inherited to structured actions, guided by a comprehensive scientific curriculum and an open-minded view of the environment. The physical education class remains the richest space for learning through play. (Ben Sassi and Boussif, 2022)

One of the objectives of physical education at the primary stage is to develop fundamental motor skills, both transitional and non-transitional, and processing and handling skills in children. This enables them to perform precise and efficient motor actions with minimal excess movements and energy expenditure. (Al-Garwani and El-Sawi, 2009, page 31)

Schools are essential for nurturing and enriching creativity, especially in the primary stage. This stage is the most critical period in a child's life, where experiences and knowledge are shaped. Since physical education is an integral part of general education, it should contribute to identifying and nurturing creative minds to promote societal progress and scientific advancements. (Al-Diwan, 2007, page 298)

Given the above, it is evident how crucial physical education is at the primary education stage, as it offers significant benefits primarily to the child, enhancing their physical, motor, and cognitive development. However, in practice, the absence of physical education classes in this stage has a negative impact on a child's growth and capabilities. In a preliminary study we conducted with some primary school teachers, it became clear that most of these teachers are incapable of managing physical education classes, as they are not qualified for it. Additionally, there is a shortage of pedagogical resources and dedicated facilities for teaching physical education in the majority of primary schools. Moreover, the health protocols applied in schools for the 2020-2021 and 2021-2022 academic years reduced the number of classroom hours for students, including physical education. It allocated only 30 minutes every 15 days for physical education classes and canceled the subject-specific exam, which led most teachers to abandon physical education classes entirely under these circumstances. (Ministry of National Education, 2021)

The idea for this study stems from the preparation of a proposed educational program using motor games aimed at developing some basic motor skills and creative motor abilities among fourth-grade elementary school students (9-10 years old). The aim is to examine the



effectiveness of this educational program and provide the primary school teacher with educational units that enhance their role and effectiveness in physical education classes. Furthermore, it aims to highlight the importance and benefits of play and motor games, as well as their programs, in developing basic motor skills and creative motor abilities at this age.

As a result, the general and sub- Questions of the research were asked :

General Research Question:

- ✓ Does the proposed educational program using motor games have an impact on the development of some basic motor skills and creative motor abilities in fourth-grade elementary school students (9-10 years old)?

sub- Questions

- ✓ Are there statistically and practically significant differences between the pre and post measurements of basic motor skill tests for the experimental group?
- ✓ Are there statistically and practically significant differences between the pre and post measurements of basic motor skill tests for the control group?
- ✓ Are there statistically and practically significant differences between the pre and post measurements of creative motor ability tests for the experimental group?
- ✓ Are there statistically and practically significant differences between the pre and post measurements of creative motor ability tests for the control group?
- ✓ Are there statistically and practically significant differences between the post measurements of basic motor skill tests for the experimental and control groups?
- ✓ Are there statistically and practically significant differences between the post measurements of creative motor ability tests for the experimental and control groups?

2. Hypotheses of the research:

General Hypothesis:

- ✓ The general hypothesis of the research states that the proposed educational program using physical games has a positive impact on the development of some basic motor skills and creative motor abilities among fourth-grade elementary school students (9-10 years old).

Sub Hypotheses:

- ✓ there are statistically significant and practical differences between pre-test and post-test measurements of basic motor skills for the experimental group.
- ✓ there are statistically significant and practical differences between pre-test and post-test measurements of basic motor skills for the control group.
- ✓ there are statistically significant and practical differences between pre-test and post-test measurements of creative motor abilities for the experimental group.
- ✓ there are statistically significant and practical differences between pre-test and post-test measurements of creative motor abilities for the control group.
- ✓ there are statistically significant and practical differences between the post-test measurements of basic motor skills for the experimental and control groups.



- ✓ there are statistically significant and practical differences between the post-test measurements of creative motor abilities for the experimental and control groups.

3. Research Objectives:

- ✓ Develop a proposed educational program using physical games aimed at enhancing some basic motor skills and creative motor abilities among fourth-grade elementary school students (9-10 years old).
- ✓ Evaluate the impact of using the proposed educational program on the development of basic motor skills and creative motor abilities among fourth-grade elementary school students.
- ✓ Compare the proposed program with traditional methods in terms of their effectiveness in developing basic motor skills and creative motor abilities among fourth-grade elementary school students.

Significance of the Research:

- ✓ This study can be adopted as a scientific addition to the field of educational sports activities, and it will serve as a precedent and reference for researchers.
- ✓ Highlight the general importance of play in a child's life.
- ✓ Emphasize the significance of having specialized teachers for physical education in elementary school and understand its impact on the acquisition of basic motor skills and creative motor abilities among students.
- ✓ Provide a model for elementary school teachers on how to design theoretical and practical educational units aimed at developing basic motor skills and creative motor abilities.

5. Defining Research Concepts and Terminology:

5.1. Educational Program

Terminological Definition: It refers to the implementation steps of a pre-designed plan, including time allocation, implementation methods, and the resources needed for this plan's execution (Ashoura, 2011, p. 17).

Operational Definition: An educational program is a set of instructional units designed by a teacher based on specific curriculum objectives. It is used to work with students to achieve these objectives and bring them to their highest possible levels.

5.2. Physical Games

Terminological Definition: Physical games are activities that train and develop children's motor skills, preparing them for future life. They include activities related to running, jumping, climbing, chasing, and moving various body parts (Sawalha, 2015, p. 97).

Operational Definition: Physical games are a form of play in children that rely on physical movement and are often competitive in nature. They aim to promote the healthy development of children in various aspects.

5.3. Basic Motor Skills

Terminological Definition: Basic motor skills are the fundamental building blocks of a child's or learner's movement. They consist of clear changes in body position, allowing for classification, even if not performed for a specific purpose or goal (Ad-Dailami, 2011, p. 36).



Operational Definition: Basic motor skills are the foundational movements of young children, including transitional, non-transitional, manipulative, and object control movements. These skills serve as the fundamental basis for most sports in a child's future and should be well-developed during childhood.

5.4. Creative Motor Abilities

Terminological Definition: "Lama Al-Diwan" defines creative motor abilities as "the ability of children to create new patterns of sports skills derived from previous experience while avoiding traditional thinking methods to produce uncommon movements and skills" (Al-Diwan, 1999, p. 27).

Operational Definition: Creative motor abilities are a set of abilities generated by a creative individual, and they are often used less frequently compared to their peers. These abilities can include fluency, flexibility, and originality in motor skills.

5.5. Fourth-Grade Elementary School Students

Definition: A group of students studying in the fourth year of elementary education, ranging in age from 9 to 10 years.

Second: Methodological Procedures:

1. Research Approach:

Given the nature of our study, we adopted an experimental approach due to its suitability for the research problem and objectives. The student researcher used the experimental design with two equivalent groups (experimental and control) that underwent both pre-test and post-test measurements. The independent variable, the proposed educational program using physical games, was introduced to the experimental group, while the control group was left to regular conditions and received the traditional program provided by the elementary school teacher.

2. Research Fields:

2.1. Human Field: The research sample consists of fourth-grade students at Njawy Al-Saleh Elementary School in Ichemoul, Batna Province, aged between 9 and 10 years.

2.2. Temporal Field: The pilot study was conducted from Sunday, September 26, 2021, to Thursday, October 7, 2021.

The main study was carried out from Sunday, October 10, 2021, to Wednesday, February 23, 2022, for both the experimental and control groups.

2.3. Spatial Field:

The research was conducted in the playground of Njawy Al-Saleh Elementary School in Ichemoul, Batna Province. The playground consists of a cement court with dimensions of 33 meters in length and 21 meters in width and a dirt field measuring 38 meters in length and 30 meters in width.

3. Data Collection Tools:

✓ Anthropometric measurements (height and weight).



- ✓ A set of tests to measure some basic motor skills (20-meter sprint, broad jump from a standing position, one-leg balance, walking on a plank, tennis ball throw for distance, and throwing and catching tests).
- ✓ Tests for creative motor abilities (obstacle test, ball test, and sign test).
- ✓ The proposed educational program using physical games.

4. Research Population and Sample:

The research population comprises fourth-grade students at Njawy Al-Saleh Elementary School in Ichemoul, Batna Province, totaling 72 students for the academic year 2021/2022. The sample was intentionally selected and divided into two equal groups: experimental and control. The sample included 48 students, representing 66.66% of the research population, and was divided into 24 students (12 males and 12 females) in the experimental group, where the proposed educational program using physical games was applied, and 24 students (12 males and 12 females) in the control group, where the traditional program prepared by the elementary school teacher was implemented. Ten students who participated in the pilot study and 14 students who did not meet the necessary conditions were excluded.

5. Normal Distribution of Data:

Before applying statistical tests, it is essential to determine whether the data follow a normal distribution. If the data follow a normal distribution, parametric tests will be used, while if they do not, non-parametric tests will be employed (Tammimi & Dawood, 2016, p. 323). Therefore, after conducting the pre-test and post-test measurements and recording all results, the student researcher calculated the normal distribution of the data for both the pre-test and post-test for each of the experimental and control groups using the Shapiro-Wilk test.

Table number (01) provides a summary of the significance of the normal distribution for the data in both the control and experimental groups in the pre-test and post-test.

			Tests									
Grp	Measure	The normal distribution significance	Running 20m	Jumping	Standing on one foot	Walking on the beam	Throw the tennis ball	Shooting - catching		Obstacle	Ball	Plots
								Shooting	catching			
Experimental	Pré	The normal distribution significance	Normally distributed	Normally distributed	Normally distributed	Normally distributed	Normally distributed	Normally distributed	Not Normally distributed	Normally distributed	Normally distributed	Not Normally distributed



	Post	The normal distribution significance	Not Normally distributed	Normally distributed	Normally distributed	Normally distributed	Normally distributed	Normally distributed	Normally distributed	Not Normally distributed	Not Normally distributed	Not Normally distributed
Control	Pré	The normal distribution significance	Not Normally distributed	Normally distributed	Normally distributed	Not Normally distributed	Normally distributed	Normally distributed	Not Normally distributed	Not Normally distributed	Not Normally distributed	Not Normally distributed
	Post	The normal distribution significance	Not Normally distributed	Remise naturelle	Remise naturelle	Not Normally distributed	Remise naturelle	Remise naturelle	Remise naturelle	Not Normally distributed	Normally distributed	Not Normally distributed
Important note: table cells colored in indicate that the data is not normally distributed												

Source: Compiled by the researcher using SPSS 25

8. Sample Homogeneity and Consistency

8.1. Consistency:

The student researcher verified the consistency of the research sample in terms of variables such as age, height, and weight. This was done to control all variables that might affect the accuracy of the results

Table number (02) illustrates the significance of the normal distribution and the homogeneity of the research sample in age, height, and weight variables.

Variables	Experimental sample			Control sample			signification				
	Sig de Shapiro-Wilk	Moyenne	Écart type	Sig de Shapiro-Wilk	Moyenne	Écart type	Independent Samples t-test		Homoscedasticity Test. levene		Signification
							T	Sig	F	Sig	
Age	0.114	113.53	2.54	0.635	113.36	2.53	-0.22	0.821	0.074	0.787	Non-significant



							7				
Height (cm)	0.51 9	133.8 3	5.7 3	0.28 1	132.3 7	6.5 1	- 0.82 4	0.414	0.371	0.545	Non-significant
Weight (kg)	0.30 8	31.87	5.2 5	0.19 8	30.70	5.7 8	- 0.73 1	0.468	0.148	0.702	Non-significant

Source: Compiled by the researcher using SPSS 25

From the provided text, it appears that all the variables (age, height, and weight) for both the experimental and control groups are normally distributed. The Sig value for the Shapiro-Wilk test indicates no statistically significant difference at a significance level of 0.05, suggesting homogeneity of the sample for these variables. Additionally, it is evident from the table that all t and F values were not statistically significant at the 0.05 significance level (Sig values greater than 0.05). This indicates the absence of statistically significant differences between the control and experimental groups, demonstrating the homogeneity of the sample in these variables.

6.2. Parity:

After the tests used in the study were identified and their normal distribution was checked for the experimental and control groups, the equivalence of the two research groups was checked in the tribal research tests and the following table shows this.

Table (03) illustrates the homogeneity of the research sample in the pre-tests.

Tests	Experiment al sample		Control sample		Signification						
	Moyenne	Écart type	Moyenne	Écart type	Independent Samples t-test		Homoscedasticity levene Test.		Mann Whitney Test		Signification
					T	Sig	F	Sig	U	Sig	
Running 20m	6.17	0.44	6.18	0.46	0.080	0.937	0.033	0.856	/	/	insignifiantes
Jumping	122.83	8.83	118.7	11.02	-1.462	0.151	2.208	0.144	/	/	insignifiantes
Standing on one foot	91.96	7.07	91.69	6.64	-0.132	0.896	0.351	0.556	/	/	insignifiantes
Walking on the beam	9.25	0.62	9.72	1.14	/	/	/	/	241.0	0.332	insignifiantes
Throw the	9.78	0.59	9.86	0.67	0.45	0.653	0.179	0.675	/	/	insignifiantes



tennis ball						2						
Shooti ng - catchi ng	Shooti ng catchi ng	30.5 4	3.17	31.16	3.81	0.61 7	0.541	2.594	0.114	/	/	insignifiantes
		17.7 5	2.06	19.37	3.65	/	/	/	/	228.0	0.212	insignifiantes
Obstacles		69.9 1	2.76	69.45	1.71	/	/	/	/	259.0	0.543	insignifiantes
Ball		16.7 9	2.25	16.46	3.48	/	/	/	/	280.0	0.868	insignifiantes
Plots		3.58	1.06	3.67	0.76	/	/	/	/	286.0	0.965	insignifiantes

Source: Compiled by the researcher using SPSS 25

From table number (03), it becomes evident that when conducting independent comparisons between the pre-tests of the control and experimental groups, we found that all calculated t values, F values for variance homogeneity (parametric statistics), and all U values (non-parametric statistics) were not statistically significant at a significance level of 0.05 (Sig values greater than 0.05). This indicates that there are no statistically significant differences between the control and experimental groups in the pre-tests, demonstrating the homogeneity of the sample in these tests.

7. Study Variables

7.1. Independent Variable: "It is the variable controlled by the researcher by keeping all variables constant except one, or it is the variable that the researcher assumes to be the cause, or one of the causes of a specific result, and studying it may lead to understanding its impact on another variable." (Boudaoud & Attallah, 2009, page 139). In our research, the proposed educational program with motor games is the independent variable.

7.2. Dependent Variable: "It is the variable that changes as a result of the influence of the independent variable, or it is the variable that is desired to understand the impact of the independent variable on." (Atiya, 2009, page 179). In our study, the dependent variable includes some basic motor skills (running, jumping, static balance, dynamic balance, throwing, and catching) and creative motor abilities (motor fluency, motor flexibility, motor authenticity).

8. Survey Study:

The researcher conducted an initial study to understand the research problem and assess the state of physical education. This was done by distributing questionnaires to a group of elementary school teachers in the district of Ichmoul, during the period from Sunday, May 23, 2021, to Thursday, May 27, 2021. Subsequently, the student researcher conducted a survey study on a sample consisting of 10 students who were not part of the primary sample. These students are from the same research community. This survey study was conducted from Sunday, September 26, 2021, to Thursday, October 7, 2021, as follows:

8.1 First Survey Experiment: This experiment was conducted on Sunday, September 26, 2021. It involved conducting the research tests on a sample of 10 students chosen randomly



from the research community and not part of the primary sample. The same tests were repeated on the same sample under the same conditions on October 3, 2021. The primary purpose of this experiment was to confirm the reliability and stability of the tests (psychometric properties) and to assess the following:

- ✓ Confirm the suitability of the tests for the students in the sample.
- ✓ Training the research team.
- ✓ Determining the time required to perform each test and the overall time.
- ✓ Assessing the validity of each test and how to organize and sequence them.
- ✓ Evaluating the suitability and appropriateness of the registration forms used in the research tests.

8.2. Second Survey Experiment: This experiment was conducted on October 5, 2021, and October 7, 2021. It involved implementing two educational units on the survey sample to:

- ✓ Assess the appropriateness of the content of the proposed program and its suitability for the research sample.
- ✓ Determine how to divide the students into groups and the maximum number for each group.
- ✓ Identify suitable locations for implementing each game.
- ✓ Determine the appropriate time for applying the educational activities within the educational unit.
- ✓ Identify potential difficulties and problems that may arise during the program's implementation.
- ✓ Allow the researcher to practice applying the proposed educational program.
- ✓ Assess the availability of safety and security factors.

9. Psychometric Properties of the Tests:

9.1. Reliability: The student researcher calculated the reliability of the tests used in the research by reapplying the tests to a sample of 10 students who were not part of the primary sample but were randomly selected from the research community. The time gap between the initial test and the retest was one week. This was done to calculate the reliability coefficients (Pearson or Spearman).

Table number (04) shows the reliability coefficients for the survey experiment tests.

Tests		Value of (Pearson) test	Value of (Spearman) test
Running 20m		0.918	
Jumping		0.801	
Standing on one foot		0.812	
Walking on the beam			0.939
Throwing the tennis ball		0.946	
Shooting - catching	Shooting	0.793	
	catching	0.868	
Obstacle		0.767	



Ball		0.781
Plots	0.793	

Source: Compiled by the researcher using SPSS 25

It appears from Table 04 that all correlation coefficients are positive and high, ranging from 0.767 to 0.946, indicating the reliability of the tests used.

9.2. Validity: The student researcher ensured the validity of the tests used in the research through the following methods:

9.2.1. Face Validity: This relies on the logical content of the test and its relevance to the measured phenomenon. It represents the external (general) appearance of the test. It requires an initial analysis of the test items to determine if they are related to the measured aspect. It is calculated based on the percentage of agreement of experts and specialists using the formula: Face Validity Percentage = (Part/Whole) x 100

The researcher presented a set of tests that measure basic motor skills and another set of tests that measure creative motor abilities to a group of experts in the field of physical education and sports. These experts were asked to assess the suitability of the tests for research purposes, and the panel of experts unanimously agreed that the content of the mentioned tests was valid for the intended measurements.

9.2.2. Self-Validity: The self-validity coefficient is calculated as the square root of the reliability coefficient.

After calculating the reliability coefficients for the tests, as mentioned earlier, the researcher calculated the self-validity coefficients for the tests. The table below illustrates this.

Table number (05) illustrates the self-validity coefficients for the survey experiment tests.

Tests		coefficient of stability	self-report validity
Running 20m		0.918	0.938
Jumping		0.801	0.895
Standing on one foot		0.812	0.901
Walking on the beam		0.939	0.969
Throwing the tennis ball		0.946	0.973
Shooting - catching	Shooting	0.793	0.891
	catching	0.868	0.932
Obstacle		0.767	0.876
Ball		0.781	0.884
Plots		0.793	0.891

Source: Compiled by the researcher using SPSS 25

It is evident from Table 05 that all self-validity coefficients (square roots of reliability coefficients) are positive and high, ranging from 0.876 to 0.973, indicating the validity of the tests used.



9.3.Objectivity: Objectivity means not being influenced by the personal judgments of the scorers or examiners. To verify the stability of the test scoring, another scorer (Saadane Anwar) recorded the results of the tests for the survey sample and re-administered the test in parallel with the student researcher.

After confirming the normal distribution of the data for the tests and retests of the survey sample, both by the student researcher and the second scorer, the student researcher calculated the scoring reliability coefficients for each test. The table below illustrates this.

Table No. (06) shows the correction constant factor between the researcher and the second corrector of the exploratory experiment tests

Tests			Value of (Pearson) test	Value of (Spearman) test
Running 20m	Test		0.997	
	Retest		0.985	
Jumping	Test		0.991	
	Retest		0.990	
Standing on one foot	Test		0.999	
	Retest		0.999	
Walking on the beam	Test			1
	Retest		0.873	
Throwing the tennis ball	Test		0.987	
	Retest		0.990	
Shooting - catching	Shootin g	Test	0.866	
		Retest	0.944	
	catchin g	Test		0.895
		Retest	0.963	
Obstacles	Test		0.891	
	Retest		0.876	
Balle	Test			0.870
	Retest			0.872
Signes	Test			0.865
	Retest		0.876	

Source: Compiled by the researcher using SPSS 25

Table 06 reveals that all correlation coefficients are positive and high, ranging between 0.870 and 1. This indicates the consistency of the researcher's scoring with the second scorer in the tests used, ensuring the objectivity of the tests.

10. Proposed Educational Program: The proposed educational program was designed to achieve the following objectives: developing some fundamental motor skills (transitional – running and jumping, non-transitional – static and dynamic balance, handling and manipulation – throwing, catching, and receiving), as well as enhancing creative motor abilities (motor agility, motor flexibility, motor authenticity). In addition, the program aims to



teach students some other basic motor skills (hurdling, kicking, jumping, somersaulting) since they are interrelated and closely linked to creative motor abilities. The program consists of 28 teaching units, with each unit lasting 60 minutes, and it was implemented with fourth-grade elementary students, with two teaching units per week.

11. Statistical Analysis: After collecting all the research data, the student researcher performed the appropriate statistical analysis to verify the research hypotheses and achieve the outlined research objectives using the SPSS 25 software. The analysis involved calculating the following:

Mean (average), Standard deviation, Pearson correlation coefficient, Spearman correlation coefficient, Shapiro-Wilk test, Independent samples t-test, Paired samples t-test, Levene's test for homogeneity of variances, Mann-Whitney test, Wilcoxon test, Percentage, Scatterplots, Effect size (Cohen's), Effect size (Eta square).

Fourth: Presentation, analysis and discussion of results

1. View and analyze results:

1.1. Presentation and analysis of the results of the first hypothesis:

Hypothesis Text: There are statistical and practical differences between the pre and post measurements of the fundamental motor skills tests of the experimental group.

Table no. (07) Shows the arithmetic mean, standard deviation, t and Wilcoxon values and their significance, the rates of improvement and gain, the size of the effect and its significance between the pre-and post-measurements of the tests of basic motor skills of the experimental group

Statistical methods	run		Jump		balance		Dynamic balance		Shooting the ball		Throwing the ball		Catching	
	Pre	post	Pre	post	Pre	post	Pre	post	Pre	post	Pre	post	Pre	post
Arithmetic mean	6.17	5.43	122.83	136.38	91.96	98.96	9.25	8.25	9.78	11.38	30.54	35.96	17.75	23.50
Standard deviation	0.44	0.41	8.34	5.73	7.07	2.89	0.62	0.43	0.60	0.52	3.18	2.91	2.07	2.40
Maximum score test	4.96		145		104.85		7.56		12.35		40		28	
Degree of earning	0.74		13.55		7.00		1.00		1.60		5.42		5.75	
Percentage of improvement%	11.19		11.03		7.61		10.81		16.36		17.74		32.40	
Mc Guigan	0.61		0.61		0.54		0.57		0.63		0.57		0.56	
T TEST	/		8.242		6.062		-5.947		10.894		6.397		/	
Wilcoxon	-4.258		/		/		/		/		/		-4.082	



Sig	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Level of significance	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Statistical significance	Significant	Significant	Significant	Significant	Significant	Significant	Significant
Effect size	0.87	1.68	1.24	1.21	2.22	1.31	0.83
Effect size signification	big	big	big	big	big	big	big

Source: Compiled by the researcher using SPSS 25

It is clear from Table (07) that there is an improvement between the pre- and post-measurements of the fundamental motor skills tests of the experimental group, and that the Sig values of the correlated two-sample t-test and the Wilcoxon test are below the 0.05 significance level in all tests, and Cohen's d and r effect size values are all above 0.8, indicating large effect sizes. There are statistically and practically significant differences between the pre- and post-measurements of the fundamental motor skills tests of the experimental group in favor of the post-measurement.

1.2 Presentation and analysis of the results of the second hypothesis:

Hypothesis text: there are significant and practical differences between the anterograde and anterograde measurements of the basic motor skills tests of the control group.

Table no. (08) Shows the arithmetic mean, standard deviation, t and Wilcoxon values and their significance, the rates of improvement and gain, the size of the effect and its significance between the pre-and post-measurements of the tests of basic motor skills of the control group

Statistical methods	run		Jump		balance		Dynamic balance		Shooting the ball		Throwing the ball		Catching	
	Pre	post	Pre	post	Pre	post	Pre	post	Pre	post	Pre	post	Pre	post
Arithmetic mean	6.18	5.89	118.71	123.46	91.69	93.89	9.73	9.09	9.87	10.41	31.17	32.5	19.38	21.46
Standard deviation	0.46	0.26	11.03	9.47	6.64	6.13	1.14	0.84	0.68	0.63	3.81	4.14	3.66	2.23
Maximum score test	5.14		139		105.70		8.07		11.76		42		27	
Degree of earning	0.29		4.75		2.2		0.64		0.54		1.33		2.08	
Percentage of improvement%	4.69		4.00		2.4		6.58		5.47		4.27		10.73	
Mc Guigan	0.29		0.23		0.15		0.39		0.29		0.15		0.27	



T TEST	/	4.672	2.631	/	4.341	2.776	/
Wilcoxon	-3.172	/	/	-2.251	/	/	-2.263
Sig	0.002	0.000	0.015	0.024	0.000	0.011	0.024
Level of significance	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Statistical significance	Significant	Significant	Significant	Significant	Significant	Significant	Significant
Effect size	0.65	0.95	0.54	0.46	0.89	0.57	0.46
Effect size signification	big	big	big	Average	big	Average	Average

Source: Compiled by the researcher using SPSS 25

Table no. (08) shows that there was an improvement between, the pre-and post-measurements of the basic motor skills tests of the control group, that the Sig values of the t test for two interrelated samples and the Wilcoxon test were below the significance level of 0.05 in all tests, and the effect size values of Cohen's and R were between 0.46 and 0.95, indicating an effect size between medium and large. From it, there are significant and practical differences between the pre-and post-measurements of the tests of the basic motor skills of the control group in favor of post-measurement.

1.3 .Presentation and analysis of the results of the third hypothesis:

Hypothesis text: there are significant and practical differences between the pre-and post-measurements of the tests of the creative-motor abilities of the experimental group.

Table no. (09) shows the arithmetic mean, standard deviation, Wilcoxon value and its significance, the rates of improvement and gain, the size of the effect and its significance between the pre-and post-measurements of the tests of the creative-motor abilities of the experimental group

Statistical methods	obstacles		Ball		Plots	
	Pre	post	Pre	post	Pre	post
Arithmetic mean	69.92	75.88	16.79	18.5	3.58	4.33
Standard deviation	2.76	3.14	2.25	1.64	1.06	0.82
Maximum score test	80.00		20.00		5.00	
Degree of earning	5.96		1.71		0.75	
Percentage of improvement%	8.52		10.18		20.95	
Mc Guigan	0.59		0.53		0.53	
Wilcoxon	-4.053		-2.945		-3.069	
Sig	0.000		0.003		0.002	
Level of significance	0.05		0.05		0.05	
Statistical significance	Significant		Significant		Significant	



Effect size r	0.78	0.60	0.63
Effect size r signification	Big	Big	Big

Source: Compiled by the researcher using SPSS 25

Table no. (09) shows that there is an improvement between the pre-and post-measurements of the tests of the creative-motor abilities of the experimental group, and that the Sig values of the Wilcoxon test are less than the indicative level of 0.05 in all tests, and the effect size r values are greater than 0.5, which indicates a large effect size. From it, there are significant and practical differences between the pre-and post-measurements of the tests of the creative-motor abilities of the experimental group in favor of post-measurement.

1.4 Presentation and analysis of the results of the fourth hypothesis:

Hypothesis text: There are significant and practical differences between the pre-and post-measurements of the tests of the creative-motor abilities of the control group.

Table No. 10 shows the computational average, standard deviation, Wilcoxon values, indication, improvement and gain ratios, impact size and indication between pre and post measurements of the control group's motor creative abilities tests

Statistical methods	obstacles		Ball		Plots	
	Pre	post	Pre	Pre	post	Pre
Arithmetic mean	69.46	70.13	16.46	16.96	3.67	3.88
Standard deviation	1.72	1.19	3.48	2.61	0.76	0.74
Maximum score test	74.00		21.00		5.00	
Degree of earning	0.67		0.5		0.21	
Percentage of improvement%	0.96		3.04		5.72	
Mc Guigan	0.15		0.11		0.16	
Wilcoxon	-1.880		-1.420		-0.994	
Sig	0.060		0.156		0.320	
Level of significance	0.05		0.05		0.05	
Statistical significance	No-Significant		No-Significant		No-Significant	
Effect size r	0.38		0.29		0.20	
Effect size r signification	Average		Weak		Weak	

Source: Compiled by the researcher using SPSS 25

1.5 .Presentation and analysis of the results of the fifth hypothesis:

Hypothesis text: there are significant and practical differences between the two telemetry of basic motor skills tests between the experimental and control groups.



Table No. 11 shows the improvement and gain ratios between pre and post measurement, calculative average values, standard deviation, t and Mann Whitney values, their semantics, Eta squared impact size and indication between the two post measurements of tests of the basic motor skills of the experimental and control groups

Méthode statistique	run		Jump		balance		Dynamic balance		Shooting the ball		Throwing the ball		Catching	
	exp	ctrl	exp	ctrl	exp	ctrl	exp	ctrl	exp	ctrl	exp	ctrl	exp	ctrl
Arithmetic mean	5.43	5.89	136.38	123.46	98.96	93.89	8.25	9.09	11.38	10.41	35.96	32.5	23.50	21.46
Standard deviation	0.41	0.26	5.73	9.47	2.89	6.13	0.43	0.84	0.52	0.63	2.91	4.14	2.40	2.23
Deference between two mean	0.46		12.92		5.07		0.84		0.97		3.46		2.04	
Gain degree	0.74	0.29	13.55	4.75	7.00	2.2	1.00	46.0	1.60	0.54	5.42	1.33	5.75	2.08
Improvement %	11.19	4.69	11.03	4.00	7.61	2.4	10.81	6.58	16.36	5.47	17.74	4.27	32.40	10.73
Mc Guigan	0.61	0.29	0.61	0.23	0.54	0.15	70.5	0.39	0.63	0.29	0.57	0.15	0.56	0.27
T	/		5.715		3.664		/		5.786		3.348		3.059	
Mann Whitney	-3.558		/		/		-4.114		/		/		/	
Sig	0.000		0.000		000.0		00.00		0.000		0.002		0.004	
Signification level	0.05		0.05		0.05		0.05		0.05		0.05		0.05	
Stat signification	Significant		Significant		Significant		Significant		Significant		Significant		Significant	
Eta squared	0.264		0.415		0.226		0.353		0.421		0.196		0.169	
Eta squared signification	Big		Big		Big		Big		Big		Big		Big	

Source: Compiled by the researcher using SPSS 25

Table No. (11) shows that there is a superiority of the experimental group over the control group in the tests of basic motor skills between the pre-and post-measurements, this is evidenced by the improvement rates and the gain rates for: Mc Guigan. As can be seen from the same table and when comparing the two post measurements between the two groups, the Sig values of the t test for two independent samples and Mann Whitney are below the significance level of 0.05, and the eta squared effect size values are greater than 0.14, which indicates a significant effect size. From it there are significant and practical differences



between the two telemetry of tests of basic motor skills between the experimental and control groups in favor of the experimental group.

1.6. Presentation and analysis of the results of the sixth hypothesis:

Hypothesis text: there are significant and practical differences between the two telemetry of tests of motor creative abilities between the experimental and control groups.

Table No. 12 shows improvement and gain ratios between pre and post measurement, calculative average values, standard deviation, Mann Whitney values, indicator and impact size Eta squared and indication between post measurements of experimental and control kinetic creative capability tests

Méthode statistique	obstacles		Ball		Plots	
	exp	ctrl	exp	ctrl	exp	ctrl
arithmetic mean	75.88	70.13	18.5	16.96	4.33	3.88
Standard deviation	3.14	1.19	1.64	2.61	0.82	0.74
Maximum score test	5.75		1.54		0.45	
Degree of earning	5.96	0.67	1.71	0.5	0.75	0.21
Percentage of improvement %	8.52	0.96	10.18	3.04	20.95	5.72
Mc Guigan	0.59	0.53	0.53	0.11	0.53	0.16
Wilcoxon	-5.052		-2.110		-2.194	
Sig	0.000		0.035		0.028	
Level of significance	0.05		0.05		0.05	
Statistical significance	Significant		Significant		Significant	
Eta square	0.352		0.093		0.1	
Eta square signification	Big		Average		Average	

Source: Compiled by the researcher using SPSS 25

Table No. (12) shows that there is a superiority of the experimental group over the control group in the tests of creative motor abilities between the pre and post measurements, this is evidenced by the improvement ratios and the gain ratios for: Mc Guigan. As can be seen from the same table and when comparing the two post measurements between the two groups, the Sig values of the Mann Whitney test are below the significance level of 0.05, and the eta squared effect size values range from 0.093 indicating an effect size between medium and large. From it, there are significant and practical differences between the two post measurements of tests of motor creative abilities between the experimental and control groups in favor of the experimental group.

2. Discussing the results and comparing them with hypotheses:

2.1. Discussion of the results of the first hypothesis:



It is clear from Table No. (07), that there are significant and practical differences between the pre-and post-measurements of basic motor skills tests (running, jumping, static balance, moving balance, throwing and catching) for the experimental group and in favor of post-measurement, and this is indicated by the Sig values of the t or Wilcoxon test as well as the impact size results that showed a significant impact of the proposed Motor Games program on basic motor skills.

The student attributes this to the effectiveness of the proposed educational program in motor games, which included many individual and group games planned according to valid scientific bases and based on the principle of competition and respect for the rules and laws governing these games. . Motor play, as **Akram khatibia** shows, is one of the colors of educational play based on the physical or motor activity of the child, and this type of play is interested in the development of abilities and motor skills in children. (**khetabia**, 2011, p. 21)

The student researcher also took into account many conditions that are considered basic conditions for teaching motor games, such as taking into account the number of students participating, diversity in the use of formations and formations, as well as the time of the beginning and end of each game... What made the action games applied in the program characterized by rigor and seriousness, which creates in the souls of learners the spirit of persistence, perseverance and suspense.

This is consistent with the findings of the **Houari ouinti** study in 2021, which indicated the impact of the motor Games program on the development of basic motor skills, and also consistent with the study of **Ahmed bin Quaider** in 2021, which found differences between the pre-and post-tests of the experimental group in the development of basic motor skills in the research sample in favor of the post-test and a huge rate of development.

From this and from the above, we find that the proposed educational program with motor games contributed to the development of the basic motor skills under consideration among the experimental group members, indicating the fulfillment of the hypothesis.

2.2. Discussion of the results of the second hypothesis:

It is clear from Table No. (08) that there are statistically significant and practical differences between the pre- and post-measurements of the basic motor skills tests (running, jumping, static balance, moving balance, throwing and standing) , for the control group and in favor of the post-measurement, and this is what This was indicated by the Sig values of the t or Wilcoxon test, as well as the effect size results, which showed a significant effect of the traditional program on the skills of running, jumping, and throwing (for the farthest possible distance), and a moderate effect on the skills of static and motor balance, throwing (against the wall), and standing. The student researcher attributes this to the fact that the program The traditional one prepared by the primary school teacher is basically approved by the National Ministry of Education through the physical and sports education curriculum for the primary education stage according to the competency approach, which confirmed that physical and sports education at this stage, based on games, guarantees the child's functional balance within the framework of harmonious development. For the whole body. Through basic



movements such as running, walking, throwing, and jumping, physical education seeks to develop the motor systems, which gives the child the ability to improve his posture. (Ministry of National Education, 2016, p. 258) The traditional program was based on a group of games, which, even if they were often based on simple, traditional, and boring movements, often lacked the spirit of competition, suspense, and excitement. However, playing in itself, as mentioned, by **Al-Hamid Al-Anani** is important for the child's physical and motor development, and through it the child is taught many basic motor skills. (Al-Anani, 2014, p. 23) This is consistent with **Abdel hafid kadri** study in 2018, which concluded that the regular program prepared by the primary school teacher had an impact on the development of basic motor skills among students (06-07) years. we find that the traditional program has contributed to the development of the basic motor skills under study among members of the control group, which indicates that the hypothesis has been fulfilled.

2.3. Discussion of the results of the third hypothesis:

It is clear from Table No. (09) that there are statistically and practically significant differences between the pre- and post-measurements of the tests of motor creative abilities (motor fluency, motor flexibility and motor originality) for the experimental group and in favor of the post-measurement, and this is what was indicated by the Sig values of the test. Wilcoxon, as well as the results of the effect size, which showed a significant impact of the proposed motor games program on motor creative abilities. The student researcher attributes this to the effectiveness of the educational units applied during the proposed educational program with motor games, which was designed in a manner that combines group and individual competition among the students, which arouses joy, pleasure, and enjoyment among them. The program took into account the teaching of all basic motor skills in its objectives, which contributed especially to the development of motor fluency among students, and this is confirmed by **Khairiya Ibrahim Al-Sukarim**, and others that basic motor skills help the child to develop his spatial and temporal world and develop his ability to think properly, analyze and study, in addition to developing fluency and skill. Movement, creative thinking skills, and organizing various information about the environment around him, then accumulating it in the child's mind until it is expressed in the form of physical movements, which achieves comprehensive and balanced growth for the child in all aspects. (Al-Sukkari, Mahran and Abdel-Rahman, 2005, p. 32)

This is consistent with the results reached by **Fatih Yaqoubi's** study in 2013, which showed that the proposed program with motor games contributed to developing motor creativity in children aged 9-12 years. It was also done During the application of the program, and in each educational unit during the fourth educational situation, reliance was placed on leaving the freedom to the students to play the game and apply the motor assignment in the way they saw fit, which had a positive impact on the development of their creative motor abilities, as the motor game was presented in this situation in the form of a competition. Individuality among students. This is in agreement with both **Amin Anwar Al-Kholy** and **Osama Kamel Rateb**, who stressed that the motor education program must rely on individual



learning whenever the opportunity arises, as well as providing freedom for the child to interact with the teacher, and also constructing the motor problem in a way that allows for various motor solutions. All this in order to provide children with motor creativity. (Al-Khouli and Ratib, 2007, pp. 368-369) Hence, through the above, we find that the proposed educational program using motor games has contributed to the development of motor creative abilities among the members of the experimental group, which indicates that the hypothesis has been fulfilled.

2.4. Discussion of the results of the fourth hypothesis:

It is clear from Table No. (10) that there are no statistically significant differences between the pre- and post-measurements of the motor creative abilities tests (motor fluency, motor flexibility and motor originality) for the control group, and there are practical significant differences between the two measurements in favor of the post-measurement. This is indicated by the Sig values of the Wilcoxon test, which showed that there were no statistically significant differences between the two measurements. The effect size results showed a moderate effect of the traditional program on the ability of motor fluency and a weak effect of the same program on the abilities of motor flexibility and motor originality. The student researcher attributes the lack of statistically significant differences between the two measurements primarily to the traditional program prepared by the primary school teacher, as the games present during it were simple and traditional movements in which fun, excitement, and competition among the students were absent, and they always caused boredom among the students. This is consistent with what **Haitham Hussein Abdel Hassan Al-Jubouri** and others concluded, that games must contain exercises and movements that are pleasing to the students' souls, in addition to the factor of suspense, encouragement, and enticement, as well as competition among the students. (Al-Jubouri, Ali, and Hussein, 2013, p269)

This is consistent with what **Adnan Latif Al-Sudani** found in his study in 2013, that the traditional program did not work to develop the creative motor abilities of fifth-grade primary school students. As for the slight improvement in the creative motor abilities between the two measurements in favor of the post-measurement, which was indicated by the results of the effect size, The researcher attributes it to the application of the program itself. Naturally, regardless of the shortcomings in the program and the teacher's style, practice improves the individual's abilities, even if only slightly. Among the general goals of motor education is developing the child's motor fluency and motor richness, as well as developing the child's ability to think properly, solve problems, and be self-reliant. It also gives the opportunity for self-expression and creativity. (Othman, 2010, pp. 41-42) This is consistent with the study of **Lamia Hassan Al-Diwan** in 2007, where she found a slight improvement among members of the group to which the regular program was applied in the imperative style in creative motor abilities. While the results of this research differed with the results of Some previous studies, such as the study of **Murad Ben Amara** in 2018, confirmed the existence of an effect of the regular program in developing creative motor thinking skills among middle school students



during the physical education and sports class. And **Nasima Mahboubi's** study in 2020, which showed that the regular program left significant differences between the pre- and post-tests for its learners.

2.5. Discussing the results of the fifth hypothesis:

It is clear from Table No. (11) that there are statistically and practically significant differences between the two post-measurements of the basic motor skills tests (running, jumping, static balance, moving balance, throwing and standing) between the experimental and control groups and in favor of the experimental group, and this is indicated by the Sig values. For the t-test or Mann Whitney, as well as the effect size results, which showed a significant impact of the proposed motor games program on basic motor skills compared to the traditional program.

The student researcher attributes this to the effectiveness of the proposed educational program using motor games prepared by the researcher compared to the traditional program prepared by the primary school teacher. Both in terms of the content of the program and in terms of how it is applied to students. This is because the proposed educational program contains movement games that were carefully developed and built on sound scientific foundations, in which all the requirements of students at this age stage were taken into account, including maturity factors and physical, motor, and social characteristics. It included, at times, individual games, sometimes bilateral games, and other times, group games performed. There is competition between teams. Contrary to the traditional program proposed by the primary school teacher, which, despite its effectiveness in developing basic motor skills among students, was less effective compared to the educational program proposed by the researcher, this is due to its reliance in most cases on simple, traditional and often boring movements in which the spirit of competition, suspense and excitement was absent. Among the general goals of play, as explained by **Hanan Abdel Hamid Al-Anani**, is to make the child feel fun, joyful, and pleased, as well as to excite him and develop his readiness to learn in order to get rid of stress, harmful emotions, and excess energy. (Al-Anani, 2014, p. 22)

This is consistent with what **Ahmed bin kouider** concluded in his study in 2021, where he showed that the proposed program with motor games had a much greater impact on the development of basic motor skills than the traditional program.

Hence, through the above, we find that the proposed educational program using motor games has contributed to the development of basic motor skills more than the traditional program, which indicates that the hypothesis has been fulfilled.

2.6. Discussing the results of the sixth hypothesis:

It is clear from Table No. (12) that there are statistically and practically significant differences between the two post-measurements of the motor creative abilities tests (motor fluency, motor flexibility and motor originality) between the experimental and control groups and in favor of the experimental group, and this is indicated by the Sig values of the Mann Whitney test as well as the results. The size of the effect that showed the impact of the



proposed motor games program on creative motor abilities compared to the traditional program.

The student researcher attributes this to the effectiveness and effectiveness of the proposed educational program with motor games prepared by the researcher compared to the usual programme prepared by the primary school teacher. On the one hand, the program proposed by the student researcher contained many various motor games that were of a competitive, playful and exciting nature that gave the fun and happiness among the pupils as opposed to the usual programme prepared by the primary school teacher, which relied on simple, unregulated and traditional movements in which competition and suspense often caused boredom among the pupils. This is consistent with **Fateh Yacoubi**, who stressed that kinetic games in the form of play competitions play a major role in increasing the effectiveness of children's performance leading to the development of their kinetic creativity. He also quotes **Mohamed Said Azmi** as saying that the child likes to compete not to be of a stressful type but to be simple and light and not to be intersided with formal appeals. (Yacoubi, 2013, p. 153) On the other hand, the objectives of the educational units between the two programs are different. education program proposed by the student researcher and applied to the members of the pilot group, Its objectives focused on teaching most of the pupils' basic motor skills as opposed to the traditional program applied to members of the control group in which the primary school teacher focused only on the basic motor skills included in the curriculum. This is seen as one of the main reasons why there are differences between the members of the experimental group and the control group in the variable of the motor creative capabilities. On the other hand, we believe that the manner in which educational units were implemented played a major role in the pilot group's superiority over the control group. The manner in which the program proposed by us was dealt with, especially during the fourth educational position of each education unit, where the pupil was placed in a problematic situation and left him or her free to find an appropriate solution to this problem in the way he or she deems appropriate, makes the effort to issue diverse, different and often uncommon or common responses. The reversal of the way relied upon in the traditional program, which has always relied on orders to carry out motor duties, generates long-lasting traditional and repetitive responses for pupils.

Psychological freedom, which means the student's awareness that he is free in his sensations, is one of the prerequisites for the development of creativity in the classroom. (Al-Fakhri, 2018, p. 86) Also, traditional teaching (in the command style) does not allow for the growth of creativity, but rather exploration and guided exploration are the best for creative teaching (Al-Kholy & Rab, 2007, p. 88). (El-Kholy and Ratib, 2007, page 368)

From the above, we find that the proposed educational program with kinetic games has contributed to the development of creative motor abilities more than the traditional program, indicating that the hypothesis has been fulfilled.

Five:Conclusions and recommendations



1. Conclusions:

- ✓ There are statistically and practically significant differences between pre and post measurements of the experimental group's basic motor skills tests in favor of post measurement.
- ✓ There are statistically and practically significant differences between pre and post measurements of the control group's basic motor skills tests in favor of post measurement.
- ✓ There are differences of statistical and practical significance between pre and post measurements of experimental group kinetic creative abilities tests in favor of post measurement.
- ✓ There are no statistically significant differences between pre and post measurements of the control group's motor creative abilities tests.
- ✓ There are pragmatic differences between pre and post measurements of the control group's kinetic creative abilities tests in favor of post measurement.
- ✓ There are significant statistical and practical differences between the two post measurements of basic motor skills tests between the experimental and control groups in favor of the experimental group.
- ✓ There are statistically and practically significant differences between the two post measurements of kinetic creativity tests between the experimental and control groups in favor of the experimental group.
- ✓ The proposed education program with motor games has a positive impact on the development of some basic motor skills and motor creativity in fourth-year primary pupils (9-10 years)
- ✓ The regular program has a positive impact on the development of some basic motor skills in the fourth-year primary students (9-10 years)
- ✓ The regular program has no impact on the development of the dynamic creativity of fourth-year primary students (9-10 years).

2. Recommendations:

- ✓ Use the proposed educational program using motor skills games for its positive and effective impact on the development of basic motor skills and creative motor skills.)
- ✓ Conduct similar studies involving different forms of play to determine the extent of their impact on basic motor skills and creative motor skills.)
- ✓ Work to satisfy the child's motor needs within the motor play program in a manner consistent with the student's inclinations and tendencies.)
- ✓ Give the student their right to play, particularly in the class designated for physical education, and this must under no circumstances be replaced by another subject.)
- ✓ The need to include creative motor skills in the annual programs of the physical education and sports program of primary education and to work on their development among students.)



- ✓ Increase the time allocated to physical education and sports classes in the weekly schedule.]
- ✓ The need to include teachers specialized in physical education and sports at the primary education level.]
- ✓ The need to provide a sufficient and significant number of appropriate tools, means and spaces to regularly practice physical education and sports lessons in primary schools.

References

- Al-Bayati, F. R. (2018). *Al-Hawi in Scientific Research Methodologies* (1st ed.). Amman, Jordan: Dar Al-Awafe Scientific.
- Al-Daylami, N. A. Z. (2010). The effect of a group of small games on developing specific motor abilities and some basic movements for female students aged (7-8) years. *Journal of Physical Education Sciences*, 3(4), 207-230.
- Al-Daylami, N. A. Z. (2016). *Foundations and Rules of Scientific Research*. Amman, Jordan: Dar Safaa for Publishing and Distribution.
- Al-Diwan, L. H. (1999). *The effect of using two teaching styles to develop general and motor creative abilities in physical education lessons for fifth-grade primary female students* (Doctoral dissertation). College of Physical Education, University of Basrah, Iraq.
- Al-Diwan, L. H. (2007). The effect of using teaching styles in developing some motor creative abilities in physical education lessons. *Proceedings of the 16th Scientific Conference of Colleges and Departments of Physical Education in Iraq*, 297-326.
- Al-Fakhri, S. A. S. (2018). *Psychology of Creativity* (1st ed.). Amman, Jordan: Academic Book Center.
- Al-Jarwani, H., & Al-Sawi, H. (2009). *Applications of Basic Skills in Physical Education*. Alexandria: Mahey for Publishing and Distribution.
- Al-Jubouri, H. H. A. H., Numan, A. A. H., & Nasir, H. I. (2013). The effect of small games with different time durations on the development of motor creative abilities. *Journal of Human Sciences*, (14), 263-272.
- Al-Khouli, A. A., & Rateb, O. K. (2007). *Theories and Programs of Motor Education for Children* (1st ed.). Cairo, Egypt: Dar Al-Fikr Al-Arabi.
- Al-Shar Fawaii, M. A. R. (2011). *A Training Program for Some Choking Skills and Its Effect on the Performance Level of Judo Players* (1st ed.). Alexandria: Dar Al-Wafa.
- Al-Tamimi, J. M., & Dawood, W. M. (2016). *Biostatistics Using SPSS Program*. Amman: Academic Book Center.
- Anani, H. A. H. (2014). *Children's Play: Theoretical and Practical Foundations* (9th ed.). Amman, Jordan: Dar Al-Fikr Publishers and Distributors.
- Attiya, M. A. (2009). *Scientific Research in Education: Its Methods... Tools and Statistical Means*. Amman, Jordan: Dar Al-Manahij for Publishing and Distribution.



- Ben Sassi, R., & Bouseif, I. (2022). The reality of constructing a learning situation in physical education and sports classes from the perspective of primary school teachers. *Taouafouk Journal in Sciences and Techniques of Physical and Sports Activities*, 7(1), 21-30.
- Boudadaoud, A., & Ata Allah, A. (2009). *The Guide to Scientific Research for the Faculty of Physical Education and Sports*. Algeria: Office des Publications Universitaires (OPU).
- Ministry of National Education. (2021). *Exceptional Organization of Schooling in the Three Educational Stages for the Academic Year 2021/2022*. Algeria.
- Othman, A. O. (2010). *Modern Trends in Motor Education* (2nd ed.). Alexandria: Dar Al-Wafa Donya for Printing and Publishing.
- Radwan, M. N. E. (2006). *Introduction to Measurement in Physical Education and Sports*. Egypt: Book Center for Publishing.
- Regaieg, G. (2020). *Development of fundamental motor skills and learning strategies in children with intellectual disabilities: design and evaluation of an adapted physical activity program integrating virtual reality games* (Doctoral dissertation). STAPS, University of Western Brittany, Brest, France.
- Saber, F. A., & Khafaja, M. A. (2002). *Foundations and Principles of Scientific Research*. Alexandria: Al-Eshraaq Technical Library and Press.
- Sawalha, M. A. (2015). *Psychology of Play* (7th ed.). Amman, Jordan: Dar Al-Masirah for Publishing and Distribution.
- Shihab, I. H. (2021). The effect of organized motor games on the mental ability and sensory-motor cognitive efficiency of children aged (4-5) years. *International Sports Science Journal*, 3(9), 57-61.
- Yakoubi, F. (2013). *The effect of a proposed training program using motor games, educational games, and mixed games on developing motor creativity in children aged (9-12) years* (Doctoral dissertation). Institute of Physical Education and Sports, University of Algiers 3, Algeria.