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The effect of a proposed educational program using mini-games on the development of agility for Pupils of the second phase primary (9-11)

- An experimental field study on the primary school of Bait Ben Jeddou in Laghouat .

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Abstract:

This study aims to identify the effect of a proposed educational program using mini-games on the development of agility for Pupils of the second phase primary (9-11). We use the experimental method and the study sample included 60 Pupils , 30 Pupils from Bait Ben Jeddou School as an experimental group, and 30 Pupils from Awissi El Tayeb School in Laghouat as a control group.

The educational program included 11 lessons and has been implemented over a period of 04 months. We used the zigzag test to measure agility. For statistical methods, we used arithmetic mean, standard deviation, T-test, and statistical processing using SPSS. The study found that the proposed educational program using mini-games contributes to the development of agility for members of the experimental sample.

Keywords: Educational program ; mini-games ; Agility ; Pupils of the second phase primary (9-11) .

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1. Introduction and Research Problem

Physical education and sports constitute an integral part of general education, given their focus on the body and its health. The primary objective is to cultivate a citizen who is physically, mentally, and morally able to contributing productively to society and fulfilling their obligations toward their community and nation. Another conceptualization of physical education and sports describes it as :

"a set of activities, skills and arts embedded within the educational curriculum at various educational stages, designed to equip pupil with skills and tools that facilitate his learning process. Physical education aims to enhance physical competence, including the health, agility, and strength of the body as well as to promote the growth and optimal functioning of its systems" (Al-Khouli, 1996: 39).

Physical education represents a contemporary system that strategically harnesses and structures the inherent instinct to play, channeling it towards educational and social objectives, whether physical or behavioral (Khuli, 1996: 211).

This field is recognized as a fundamental element of the educational process, with its conceptual framework encompassing both pedagogical and instructional goals.

In modern scientific discourse, education is increasingly acknowledged as a discipline that seeks to cultivate well-rounded individuals capable of contributing meaningfully to both their personal development and the betterment of society. Within the domain of sports education, there is a particular emphasis on the holistic development of the individual, encompassing psychological, social, spiritual and physical dimensions. Consequently, the role of physical education classes becomes critically significant, as they are instrumental in imparting and enhancing a range of motor skills and experiential learning, all of which are coupled with structured physical and cognitive exertion. These activities are tailored to align with the developmental needs of pupil at various stages of his growth.

Fateh Yaakoubi and Hamadi Jamal underscore that while the development of these skills is partially influenced by genetic predispositions, environmental factors, including education and training, play a pivotal role in their advancement (Yaakoubi & Hamadi, 2014: 243).

Additionally, Ahmed Emad Eldin Younes highlights motor experiences as a vital component in a child's cognitive development, asserting that play serves as



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an educational and pedagogical tool through which children can acquire an accurate understanding of objects, their relationships and their significance

(Younes, 2018: 273).

Childhood is a stage of continuous physical activity and excess energy, marked by growth and development. It is considered one of the most crucial stages of life, as it lays the foundation for personality development. Sports play a significant role in satisfying the innate tendencies for play in children and help in expending their excess energy. Well-prepared sports programs contribute to the growth of children and the development of their physical, mental and social abilities.

Modern educational programs are based on a set of psychological and social principles that emphasize the importance of the early years of a child's life in shaping their future personality. Therefore, the general and fundamental objectives of these programs are to assist the child in achieving holistic growth across all physical, motor, cognitive, social and emotional aspects. Physical and sports education scholars have given special attention to the development of motor abilities, recognizing their importance in a child's life and their relationship to other aspects of growth. The child possesses basic types of movement, such as walking and running, and performs all these fundamental motor skills with a degree of coordination that requires minimal refinement and mastery. The child's insatiable thirst for movement and activity is a key characteristic of this stage and forms the basis for motor learning, resulting from interaction with individuals and objects in their environment.

Small games are among these important educational methods and programs. Children are naturally inclined to play, as it serves as a means of self-expression and allows them to release their physical and psychological energies, fulfilling their need for fun and joy. Abdelrahman Ben Misra emphasized the necessity of providing children with the appropriate space and time to engage with play tools, enabling them to express their feelings openly (Ben Misra, 2015: 22). This requires the educator to optimally exploit this attractivity towards play and use it to develop the child's sensory and motor abilities through the effective and precise use of games. This led us to experiment with this study, starting with a program based on small games to motivate pupils.

2. Problematic

Sports activities serve as educational tools that aid in the development of an individual's intellectual, physical, psychological, motor and social abilities. These activities have seen significant advancement in the modern era, contributing to a child's growth by fostering a well-balanced physique and essential motor skills. Additionally, they instill in children a sense of obedience, discipline, cooperation, and social interaction. Among these activities, play is particularly important as it supports the holistic development of children by providing opportunities for self-expression, creativity, and skill enhancement. Children are naturally inclined to engage in play, and according to Fath Ya'qubi, play is the primary means by which children explore the world around them (Ya'qubi, 2011: 29).

This understanding has prompted scholars and experts to establish and refine the rules governing games. Our study specifically focuses on mini-games due to their significant role in child development. These games contribute to a child's growth across various stages by allowing them to seize opportunities to develop their aptitudes and capabilities while also meeting their fundamental needs (physical, motor, cognitive, and psychological), as emphasized by Al-Roumi, 1999: 25).

Mini-games are defined as "simple, organized games that are easy to perform, bring joy and pleasure, and foster fair competition. They do not involve complex motor skills, and the rules governing them are characterized by flexibility and simplicity" (Sharaf, 2005: 147).

These games are suitable for individuals of all ages and serve various purposes, much like other activities within physical education. The true measure of adherence to these purposes is linked to the specific objectives of each mini-game.

Childhood is a critical stage in human life, spanning from birth to adolescence. It serves as the foundation for a child's proper and comprehensive development across all domains, including skills, physical abilities, cognition, psychology and emotions. This stage has a profound impact on the child's behavior and personality in all its dimensions. Modern science has increasingly emphasized the importance of developing children's physical and motor abilities, recognizing their close relationship with overall human development. Fath Ya'qubi and Hamadi Jamal emphasize that the development of physical elements is particularly crucial during childhood, as it enhances the functional efficiency of the body's systems (Ya'qubi & Hamadi, 2014: 244).



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Motor and physical abilities are essential topics within the field of sports, with ongoing debates regarding their components and distinctions. The scientist Kalaho classifies abilities that rely on physiological efficiency as physical abilities, which include strength, speed, endurance, and flexibility. In contrast, abilities that do not involve changes in physiological states but instead involve the control of movement through the central and peripheral nervous systems are classified as motor abilities, which include balance, coordination, motor precision, agility and flexibility (Khayun, 2002: 21).

In our study we focus on the development of agility, a key motor ability. Numerous scholars have provided definitions to clarify this concept. Hertz, as cited by Amer Fakher Shaghati, defines agility as "the ability to quickly modify mouvement in accordance with changing situational demands" (Shaghati, 2011: 334).

Agility is critical for sports activities that require rapid and precise changes in body direction, whether involving the entire body or specific parts, either on the ground or in the air. It is defined as the ability to move quickly, stop and change direction efficiently.

In our study, we addressed the development of agility, which is considered one of the essential motor abilities. Numerous researchers have provided various definitions to clarify this concept. According to Hertz, as cited by Amer Fakher Shaghati, agility is defined as "the ability to rapidly modify mouvement in accordance with changing situational demands" (Shaghati, 2011: 334).

Agility is particularly important in sports activities that require quick, accurate, and well-timed changes in body direction, whether involving the entire body or specific parts, either on the ground or in the air. It is defined as the ability to move quickly, stop, and change direction efficiently (Robert V. Hocchy, 1981, p. 54).

In light of the preceding , we ask the following primary research question :

*To what extent does a proposed educational program using mini-games influence the development of agility in students in the second stage of primary education (ages 9-11)?

2.1 Sub-questions

1. Are there statistically significant differences between the mean scores of the pre-tests and post-tests for the experimental group regarding agility among

students in the second stage of primary education (ages 9-11)?

2. Are there statistically significant differences between the mean scores of the post-tests of the experimental group and the control group regarding agility among students in the second stage of primary education (ages 9 -11)?

2.2 General Hypothesis

There is a statistically significant effect of the proposed educational program using mini-games on the development of the agility among second cycle primary school pupils (ages 9-11).

2.3 Sub-hypotheses

1. There are statistically significant differences between the average scores of the pre-tests and post-tests of the experimental group for the agility trait among students in the second stage of primary education (9-11) in favor of the post-tests attributed to the proposed educational program.

2. There are statistically significant differences between the average scores of the post-tests of the experimental group and the post-tests of the control group for the agility trait among students in the second stage of primary education (9-11) in favor of the post-tests attributed to the proposed educational program.

3. Previous and Similar Studies

3.1- Study by Asaad Hussein Abdul-Razzaq (2009): The Effect of Small Games on Developing the Most Important Physical and Motor Abilities of Children Aged 7-8 Years .

This study aimed to investigate the effect of small games on developing the most important physical and motor abilities of children aged 7-8 years. The researcher employed an experimental method using a sample of 60 second-grade students aged 7-8 years from Al-Mudhariyah Primary School for Boys in the center of Babil Governorate.

The students were randomly divided into two groups: an experimental group and a control group, with 30 students in each group. The researcher used statistical methods such as the arithmetic mean, standard deviation, and Student's t-test. The results of the tests indicated that the use of small games had a significantly positive effect on the students' performance, leading to the development of the physical and motor abilities under investigation, better than the standard physical education curriculum for the second grade. Thus, the study achieved its objectives and purposes.



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3.2- Study by Jassim Mohammed Al-Naif Al-Roumi (1999): The Effect of a Small Games and Motor Stories Program on Some Physical and Motor Abilities of Kindergarten Children.

The study aimed to identify the effect of using a program of small games and movement stories on the development of some physical and motor abilities of kindergarten children according to gender. The researcher employed the experimental method using a sample of 63 children who were deliberately selected and divided into an experimental group and a control group.

The researcher used the arithmetic mean, standard deviation, and Student's t-test as statistical tools. The results of the tests indicated significant and statistically meaningful differences between the control and experimental groups in favor of the experimental group, demonstrating that small games and movement stories have a positive effect on improving physical and motor abilities.

4. General Objective of the Study

The aim of this study is to:

1. Develop an educational program using mini-games to enhance agility in students aged 9 to 11 years.
2. Investigate the impact of an educational program utilizing mini-games on the development of agility in students aged 9 to 11 years.

5. Significance of the Research

The significance of this research lies in its focus on the practice of physical and sports education within the educational system, particularly at the primary level. It is therefore essential to explore the most effective methods and strategies that can help to achieve the educational objectives of this subject in the school environment, given the large number of participants and the role of schools in preparing future generations.

This approach takes into account the specific characteristics of this age group by attempting to establish an educational program using mini-games. The program aims to assist physical education teachers in effectively conveying various educational tasks and responsibilities to their pupils to enhance their agility, which could foster positive interactions and contribute to the further development of this attribute in the future.

6.Operational Definition of Concepts in the Research:

6.1. Program : According to Bastawisi (1984), a program is defined as “the implementation steps of a pre-designed plan, including the necessary timeline, methods of execution, and resources required to achieve this plan” (p. 57). The researcher defines the educational program as a set of educational units proposed by the researcher, comprising various situations expressed through activities.

6.2. Agility: Allawi and Nasr El-Din (2008) describe agility as a “complex ability that includes components of muscular strength, movement reaction speed, speed, muscular power, accuracy, control, and coordination” (p. 235). The researcher concludes that agility is a complex motor attribute, defined as the ability to change body position efficiently. It requires an isolated combination of motor skills and a good connection with balance, coordination, speed, response, reaction time, strength and endurance.

6.3. Mini-Games: According to Musharraf (2001), mini-games are “games that are simple in organization and easy to perform, characterized by joy and excitement, with an inherent spirit of competition, and governed by simple and easy rules” (p. 120). The researcher defines mini-games as competitive and enjoyable games for children, characterized by simple and easy rules that do not limit participation by age, gender, or physical fitness level.

7.Methodological Procedures Followed in the Study

7.1 Research Method Used: The researcher employed the experimental method, using pre- and post-measurements for two groups: one experimental and one control.

7.2 Research Domains

7.2.1 .Human Domain

7.2.1.1.Population of the Study: According to Grawitz, the population is defined as “a finite or infinite group of predefined elements on which observations are based”. (Ingers, 2004, p. 298). The population of this study consists of second-stage primary school students (aged 9–11) in the city of Laghouat.

7.2.1.2.Sample of the Study: The sample was purposefully selected and consisted of a total of 60 pupils (boys and girls) aged 9–11, studying in primary schools in

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Laghout. Thirty pupils from Baït Ben Djeddou School formed the experimental group, while thirty pupils from Aouissi Tayeb School formed the control group .

7.2.2. Temporal Scope: The work period lasted from 08/11/2021 to 03/03/2022. The pre-tests were conducted on 07/01/2022, with a duration of 45 minutes for each group. Following this, the program was implemented on the experimental group until 03/03/2022, with sessions scheduled twice a week, each session lasting 45 minutes in the afternoon.

Table 1. Equivalence of the research samples: the experimental group (Baït Ben Jeddo School) and the control group (Aouissi Tayeb School) in terms of age, height and weight variables.

the level of significance 0.01 .	the tabulated value of (F).	the calculated value of (F).	the difference between the two means	Control group N =30		Experimental group N = 30		Unit of measurement	Variables
				A	M	A	M		
Not significant	2,60	1,31	0,04	0,47	9,76	0,45	9,80	year	Age
Not significant		1,38	0,01	0,04	130,6	0,05	130,7	metre	Length
Not significant		1,54	0,31	2,77	27,58	2,34	27,89	Kg	weight

illustrates the homogeneity of the sample from the experimental group and the control group in terms of age, weight, and height, with degrees of freedom = $n-1 = 29$.

From our observation of Table 1, it is evident that the value of "t" is not statistically significant between the experimental and control groups for age, height and weight . This is reflected in the calculated "t" values for each variable. Statistical analyses revealed that the calculated "t" value was lower than the tabulated "t" value of 2.60 at 29 degrees of freedom (n-1) at a significance level of 0.01, indicating homogeneity between the two groups in these variables.

7.3. Research Tools

7.3.1 The Zigzag Run Test:

A. Purpose of the Test:

- To measure the individual's ability to change direction while running.
- It is suitable for individuals from the age of 10 years up to the university level for both genders.
- Test Evaluation: JACK Clayton recorded an objectivity coefficient of 0.980 for this test.
- Mohamed Nasr El-Din Radwan recorded an objectivity coefficient of 0.812 for the test.
- The test has a reliability coefficient of 0.934 for high school students. GATES and SHEFFIELD reported a validity coefficient of 0.841 in measuring the ability to change direction. Johnson and Nelson reported a correlation coefficient of 0.820, corresponding with a criterion score consisting of the total scores of 16 tests that assess agility.

B. Tools:

- 04 chairs, a stopwatch, and a measuring tape.

Procedures:

- The running field should be on a solid ground, 10.80 meters long and 2 meters wide.
- A starting line of 1.80 meters in length and 5 cm in thickness is drawn.
- Four obstacles or chairs are placed facing the starting line, with the first obstacle 3.60 meters from the line. The distance between each obstacle is 1.80 meters.
- Two points are marked at the ends of the start and finish lines, named points (A) and (B).

C. Performance Description:

- The participant starts in a ready position, standing behind the starting line at the right end of the line at point (A).
- Upon the signal, the participant begins running between the chairs or obstacles, circles around the last obstacle, and continues running between the obstacles in the same manner toward the other end at point (B).

7.3.2. Test Instructions:

- The participant starts running from a standing position at point (A).
- The running direction is between the four obstacles.
- The test ends when the participant crosses the finish line at maximum speed at point (B).
- The participant is given only one attempt.

7.3.3. Test Administration:

- Timekeeper : Gives the start signal and records the time.
- Recorder: Counts the errors and records the time.

7.3.4. Scoring:

The participant's score is the time taken to complete the performance from the moment of the start signal until crossing the finish line, rounded to the nearest 0.1 second. Time penalties are added for errors, with each error (such as touching one of the four obstacles or chairs) adding 0.1 seconds to the total time.

7.3.4. Test Standards:

Standards for this test were developed based on 100 students from middle schools in Paris, France (Mohamed Hassan Allawi, 2008, p. 244).

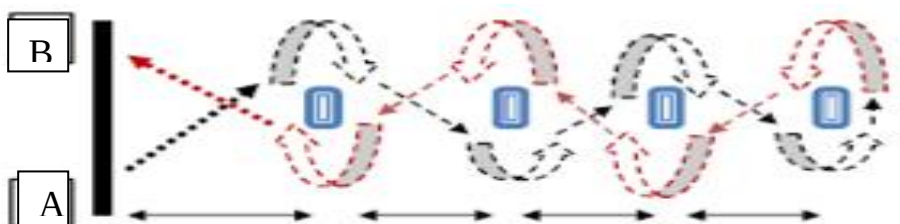


Figure 1. Illustrates the Zigzag Run Test.

7.4. Statistical Methods:

Statistics is the science that deals with collecting, organizing, presenting, analyzing data, and making decisions based on them. Among the techniques used in our research are:

- 1- Arithmetic mean
- 2- Standard deviation
- 3- Pearson correlation coefficient
- 4- Student's t-test

All calculations were performed using the Statistical Package for the Social Sciences (SPSS) software.

8. Presentation, Analysis and Discussion of Results

8.1. Presentation and Analysis of the First Hypothesis Results:

Table 2 . presents the results of the pre-test and post-test for agility in the experimental group, assessed through the zigzag running test:

Statistical significance	Critical T-value	T-value	Difference between the means	Poste-test of the experimental group		Baseline test for the control group		Examination
				Arethmitic mean	Standard deviation	Arethmitic mean	standard deviationn	
significant	2.04	6.51	2.2	0.91	7.36	1.00	9.56	Agility

Illustrates the pre- and post-test results for the zigzag run test, used to measure agility in the experimental group. The mean score for the pre-test was 9.56, with a standard deviation of 1.00, while the mean score for the post-test was 7.36, with a standard deviation of 0.91. The difference between the means of the



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two tests was 2.2, with a computed t-value of 6.51 compared to a critical t-value of 2.04 at 58 degrees of freedom and a significance level of 0.05.

These results indicate significant statistical differences between the pre- and post-tests for the experimental sample, reflecting an improvement in agility for the experimental group. Similar results were obtained in Asaad Hussein Abdel Razzak's (2009) study on the impact of small games on developing key physical and motor abilities in 7-8-year-old children. The study found that the use of small games positively and significantly influenced pupils' performance, leading to an enhancement in the physical and motor abilities examined.

8-2-Presentation and Analysis of the Results of the Second Hypothesis.

Table 03. shows the results of the post-test agility for the experimental group and the post-test agility for the control group in the zigzag running test.

Statistical significance	Critical T-value	T-value	Difference between the means	Poste-test of the experimental group		Baseline test for the control group		Examination
				Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation	
significant	2.00	3.20	1.17	0.91	7.5	4.03	8.59	Agility

Illustrates the pre-test and post-test results for the zigzag running agility test for the experimental group. The mean score of the post-test for the control group was 8.59 with a standard deviation of 4.03, while the mean score for the experimental group was 7.5 with a standard deviation of 0.91. The difference

between the mean scores of the two tests is 1.17. The calculated t-value was 3.20, compared to the tabulated t-value of 2.00 at a 58-degree of freedom and a significance level of 0.05.

These results indicate a statistically significant difference between the pre-test and post-test scores, favoring the experimental group. This suggests an improvement and development in agility for the experimental group. These findings align with the study by Jassim Mohammed Al-Nayef Al-Roumi (1999), which found significant statistical differences between the control and experimental groups in favor of the experimental group.

8-3 Discussion of Results and Interpretation:

Based on the previous findings, we can be concluded that the educational program using mini-games has a positive effect on developing agility among second-grade primary students (ages 9-11). This study demonstrated that the program contributes to the enhancement and improvement of agility in these pupils.

This underscores the importance of the researcher's study, given its beneficial impact on the physical health of children in the future. Additionally, the program provides children with a sense of self-confidence, which fosters better and more flexible control over their motor skills, preparing them for participation in sports, whether in organized sports teams or among friends.

9. Conclusion:

The use of mini-games is considered one of the most important and modern methods employed in the educational process during physical education classes. Its primary aim is to develop physical and motor abilities while also enhancing numerous essential life skills.

This approach is particularly suitable for the age group of 9 to 11 years, as it saves significant time and effort in the educational process. Children at this stage are highly active and continuously inclined toward play. Mini-games with their various forms, provide elements of excitement, fun, and entertainment, allowing children to develop and refine their abilities. They also encourage group play, respect for others, adherence to rules and a spirit of competition and challenge from an early age.

The research aimed to uncover the role of mini-games, based on the hypothesis that they would enhance agility in the experimental group of the sample. The primary goal in the educational field is to foster the development of well-rounded students, which can be achieved through mini-games. Given the clear deficiency



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in motor skills that teachers in the middle school stage and elite sports coaches encounter, attributed to factors such as a lack of sports culture in primary education and social environments, as well as neglect of younger age groups and reliance on outdated methods that may have only yielded positive results by chance, this study seeks to provide a valuable scientific reference. It aims to establish a solid foundation that helps in efficiently developing young talents, ensuring continuous attention and follow-up to achieve high levels and compete with international teams.

References Used in the Research:

- 1. Al-Khouli, Amin Anwar.** (1996). Principles of Physical Education and Sports . Cairo.
- 2. Younes, Ahmed Emad El-Din.** (2018). "The Effect of a Proposed Program of Motor Games on Developing Sensory-Motor Perception in First-Year Primary Students Aged 6-7 Years: An Experimental Study on First-Year Primary Students in Batna Province." Journal of Sports Creativity, Volume 9, Issue 01, Pages 260-273.
- 3. Abdel-Razzaq, Asaad Hussein.** (2009). "The Effect of Mini-Games on Developing Key Physical and Motor Abilities in Children Aged 7-8 Years." Journal of Sports Education Sciences, Volume 2, Issue 2, Pages 167-192.
- 4. Bashtouysi, Ahmed; Saleh, Abbas Ahmed.** (1984). Teaching Methods in Physical Education. Baghdad: University of Baghdad.
- 5. Al-Roumi, Jassim Mohammed Naif.** (1999). "The Effect of Programs of Mini-Games and Motor Games on Certain Physical and Motor Abilities of Sports Children." PhD Thesis, *University of Mosul, College of Physical Education.
- 6. Shaghati, Amer Fakher.** (2011). Sport Training Science: Training Youth for High Levels (1st ed.). Baghdad: Al-Noor Office.
- 7. Sharaf, Abdel Hamid.** (2005). Physical and Motor Education for Healthy Children and Children with Disabilities: Theory and Practice* (1st ed.). Cairo: Center for Publishing.
- 8. Moshref, Abdel Hamid.** (2001). Physical Education for Children. Cairo: Center for Publishing.
- 9. Ben Misra, Abdel Rahman.** (2015). "The Role of Targeted Educational Games in Developing Motor Skills in Pre-School Children Aged 4-6 Years." Journal of Sports Creativity, Volume 6, Issue 01, Pages 20-28.

- 10. Yacoubi, Fattah. (2011).** "The Effect of a Proposed Training Program Using Motor Games, Educational Games, and Combined (Motor + Educational) Games on Developing Creative Thinking in Kindergarten Children." *Journal of Sports Creativity*, Volume 2, Issue 03, Pages 28-54.
- 11. Yacoubi, Fattah; Hamadi, Jamal. (2014).** "The Effect of a Proposed Training Program Using Mini-Games on Developing Certain Physical Traits (Flexibility, Speed, Agility) in Fifth-Grade Primary Students." *Journal of Sports Creativity*, Volume 5, Issue 02, Pages 242-250.
- 12. Al-Alawi, Mohamed Hassan; Radwan, Mohamed Nasr El-Din. (2008).** *Motor Performance Tests*. Cairo: Dar Al-Fikr Al-Arabi.
- 13. Ingres, Maurice. (2004).** *Scientific Research Methodology*, Translated by Bouzid Sahraoui et al., Algeria: Dar El-Kassaba Publishing.
- 14. Khyoun, Yaarab. (2002).** *Motor Learning: Principles and Practice*. Baghdad: Al-Sakhra Office.
- 15. Hocehy, Robert V. (1981).** *Physical Fitness: The Pathway to Healthy Living*. The C. V. Mosby Company.