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The Effect of a Proposed Educational Program Based on the Play Strategy in Developing Basic Motor Skills among Primary School Students (6–7) Years Old A Field Study at the Martyr Manad Amhamed Primary School, Kebaba Region – Tissemsilt

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Abstract

This study sought to identify the effect of a proposed educational program, built according to the play strategy, on the development of certain basic motor skills (running, jumping, throwing) among primary school students aged 6–7 years. For this purpose, the experimental method was adopted, using a design involving two homogeneous groups (control/experimental) with pre- and post-measurements. The study sample consisted of 20 students, divided equally between the two study groups, while the study instrument consisted of a number of tests specific to the basic motor skills under investigation. After collecting the data relating to the study's results and processing them statistically, all of the study's partial hypotheses were confirmed. Accordingly, it can be affirmed that the proposed educational program, built according to the play strategy, had a positive effect on the development of basic motor skills among primary school students aged 6–7 years.

Keywords: Play; basic motor skills; middle childhood.

1. Introduction

Through the inclusion of physical and sports education in the primary school curriculum, Algeria's educational system seeks, on the one hand, to form a responsible citizen and, on the other, to impart to the student a range of knowledge and skills associated with programmed sporting activities. The importance and standing of physical education in the primary stage as an educational subject is thus no less valuable than that of other subjects; indeed, it is the only educational subject concerned with the balanced development of the student across all dimensions of growth. It is not a mere set of movements, as the general public often perceives it, but rather a comprehensive system that aims to promote the student's health and to foster the various dimensions of development, including the motor dimension.

Childhood represents the foundation of the pyramid of human developmental stages and the cornerstone in the construction of personality in all its dimensions. Investing in childhood through sound socialization and the balanced construction of the child's personality in its various dimensions will later have a positive effect on the remaining stages of development. In this regard, numerous psychologists point out that childhood, in its various forms (early, middle, and late), is among the most important stages in a child's life, being the stage of socialization par excellence, in which the child's personality can be shaped and guided as desired; this age stage is also considered the most suitable period for developing and advancing the child's motor abilities.

The phenomenon of play in children has long been regarded as a strong indicator of balanced, healthy development, and as a clear sign of freedom from psychological or behavioural disturbances. Many scholars concerned with developmental psychology agree on the profound importance of play for the balanced development of the child's personality: the child is observed to turn to play in all its forms as a tool for expressing the self and its needs, in pursuit of enjoyment and pleasure, as a means of discovering the surrounding world and environment, and as a tool for releasing excess energy in the best possible manner.

Discussing the child's motor development leads us to affirm that the child begins to acquire certain simple basic motor skills, such as walking, from the earliest years of life; nevertheless, the complete maturation of the child's motor development is not achieved even as the child grows older and reaches adolescence. During the early years of primary schooling, the child finds it difficult to acquire certain complex motor skills and cannot fully control them, owing to incomplete neuromotor development and weak coordination between the various senses and the hands and feet during the performance of different motor skills. The child, for instance, finds it difficult to control the ball and direct it to a specific place when kicking it, or when attempting to aim it by hand.

The development of the child's basic motor skills is influenced by the increase in movement and participation in various forms of play activity. Numerous studies and research works have indicated that play plays an essential and fundamental role in developing the child's various motor skills. By the age of five, the child's movements increase and the child becomes unable to remain still in one position for long, often spending most of their time in motion and play. From this standpoint, educational specialists in the field of motor learning have become increasingly interested in building motor-education programs designed to capitalize on the playful character that distinguishes this stage of the child's life, in order to develop and advance the child's various basic motor skills, by adopting educational strategies grounded in play as a means of motor learning. In recognition of the importance of play and its role in developing and advancing the various basic motor skills (running, jumping, throwing) of the child, this study was undertaken to examine the effectiveness of a proposed educational program based on the play strategy in developing basic motor skills among primary school students (6–7) years old. On this basis, the following general research question is posed: Does the proposed educational program, built according to the play strategy, have an effect on the development of basic motor skills among primary school students (6–7) years old?

2. Sub-Questions

- Are there statistically significant differences in the level of the basic motor skills under study between the pre- and post-measurements for the control group?
- Are there statistically significant differences in the level of the basic motor skills under study between the pre- and post-measurements for the experimental group?
- Are there statistically significant differences in the level of the basic motor skills under study between the control and experimental groups in the post-measurements?

3. Study Hypotheses

3.1 General Hypothesis: The proposed educational program, built according to the play strategy, has a positive effect on improving the basic motor skills under study (running, jumping, throwing) among primary school students (6–7) years old.

3.2 Partial Hypotheses

- There are no statistically significant differences in the level of the basic motor skills under study between the pre- and post-measurements for the control group.
- There are statistically significant differences in the level of the basic motor skills under study between the pre- and post-measurements for the experimental group.
- There are statistically significant differences in the level of the basic motor skills under study between the control and experimental groups in the post-measurements.

4. Objectives of the Study

- Identify the level of certain basic motor skills (running, jumping, throwing) among primary school students (6–7) years old.
- Reveal the differences in the levels of the basic motor skills under study between the pre- and post-measurements for the experimental group.
- Reveal the differences in the levels of the basic motor skills under study between the members of the two study groups (control/experimental) in the post-measurements.
- Build an educational program based on the play strategy aimed at developing certain basic motor skills (running, jumping, throwing) among primary school students (6–7) years old.
- Determine the effect of the proposed educational program on developing the levels of the basic motor skills under study among primary school students (6–7) years old.
- Draw the attention of all sections of society to the importance of play in the life of the child.

5. Significance of the Study

- The present study sheds light on a highly significant aspect of child development, namely motor development.
- It reveals the role of play in developing various abilities, including the motor skills under study, among primary school students aged 6–7 years.
- The study's significance is reflected in the age stage it addresses, and in the rapid motor development of the child's various basic motor skills during this stage.
- This study serves as a gateway for further future research examining the relationship between play and the development of the child's various basic motor skills.

6. Operational Definitions of Key Terms

Educational Program: a set of instructional units in physical and sports education, relying on play as a strategy for motor learning, aimed at developing the basic motor skills under study among primary school students (6–7) years old.

Play: play is a natural, innate activity manifested in a set of movements performed by the child. It may also be defined as a set of motor and intellectual activities, whether free or guided, that are not tiring for the child, and which the child practices for enjoyment and in pursuit of pleasure and happiness.

Basic Motor Skills: all natural motor skills associated with certain aspects of development in the early stages of a child's life. In the present study, the basic motor skills examined are the skills of running, jumping, and throwing.

Middle Childhood: the age stage extending from 6 to 9 years, corresponding to the first three years of primary schooling. This age stage is characterized by a rapid pace across the various aspects of development, including motor development. The age of the study sample corresponds to this stage, the sample members ranging in age from 6 to 7 years.

7. Previous and Related Studies

7.1 Zebiche Samir & Hussein Mohamed Amine (2018), “The Effectiveness of a Proposed Educational Program for Developing Certain Basic Motor Skills among Preschool Children (4–6) Years Old.” Through this study, the researchers sought to demonstrate the effectiveness of a proposed educational program for developing certain basic motor skills among preschool children aged 4–6 years. The researchers relied on the experimental method, with a design involving a control group and an experimental group; the sample size reached 50 students, divided equally between the two study groups. The researchers used tests of basic motor skills, and the study concluded with the effectiveness of the proposed educational program in developing certain basic motor skills among preschool children aged 4–6 years.

7.2 Oukelili Salah Eddine & Kassemi Bachir (2019), “The Effect of Proposed Instructional Units Using Semi-Sports Games on Developing Certain Basic Motor Skills (Throwing, Broad Jump) among First-Year Primary School Students.” This study sought to determine the effect of instructional units proposed using semi-sports games on developing certain basic motor skills (throwing, broad jump) among first-year primary school students. The researchers used the experimental method, with a design involving a control group and an experimental group; the sample size reached 40 students, divided equally between the two study groups (control/experimental), with 20 students in each group. The researchers relied on tests of the throwing and broad-jump skills. The study results demonstrated the effectiveness of the proposed instructional units using semi-sports games in developing certain basic motor skills, namely throwing and the broad jump, with statistically significant differences found in both motor skills under study between the members of the two study groups (control and experimental) in the post-measurements, in favour of the experimental group.

7.3 Lakhal Abdelkader et al. (2021), “The Effect of a Proposed Motor-Education Program on Developing Certain Locomotor Skills among Children with Mild Intellectual Disability (7–9) Years Old.” This study aimed to identify the effect of a proposed motor-education program on developing certain locomotor skills among children with mild intellectual disability aged 7–9 years. To this end, the researchers used a single-group experimental method with a sample of 11 children, relying on certain tests of the basic skills under study. The study concluded by demonstrating the effectiveness of the proposed motor-education program and its positive effect on developing certain locomotor skills under study among children with mild intellectual disability aged 7–9 years.

7.4 Abdellah Haddache (2023), “Educational Games and Their Effect on Developing Basic Motor Skills among Preschool Children (4–5) Years Old.” Through this study, the researcher sought to identify the effect of educational games on developing basic motor skills among preschool children aged 4–5 years. The researcher used the experimental method, with a design involving a control group and an experimental group with pre- and post-measurements; the study sample consisted of 20 children, divided between the two study groups (control/experimental), with 10 children in each group, while the study instruments consisted of certain skill tests for basic movements. The study found no statistically significant differences in the levels of the basic motor skills under study in the post-measurements between the two study groups in favour of the experimental group; however, the study did demonstrate the effectiveness of educational games and their positive effect on developing basic motor skills among preschool children aged 4–5 years.

7.5 Jamila Amir & Jamal Marazka (2023), “The Effect of a Proposed Motor-Education Program on Developing Certain Basic Motor Skills among Preschool Children (4–5) Years Old.” This study aimed to determine the effect of a proposed motor-education program on developing certain basic motor skills among preschool children aged 4–5 years. The researchers used the experimental method, with a design involving a control group and an experimental group; the sample size reached 28 children, divided equally between the two study groups (control/experimental), with 14 children in each group. The researchers relied on the Ohio State University Scale of Intra-Gross Motor Assessment as the study instrument. The study results demonstrated the effectiveness of the proposed motor-education program and its positive effect on developing certain basic motor skills among preschool children aged 4–5 years.

8. Methodology and Field Procedures

8.1 Method of the Study: the experimental method was adopted, given its suitability to the nature and objectives of the study.

8.2 Experimental Design: the study relied on the experimental design of two equivalent groups (control/experimental) with pre- and post-measurements.

8.3 Study Population: the study population comprised all primary school students aged between 6 and 7 years — i.e., first-year primary school students — enrolled at the Martyr Manad Amhamed Primary School, Kebaba region, Tissemsilt Province, for the 2024/2025 academic year, with a total population size of 79 students.

8.4 Study Sample: the study sample consisted of twenty (20) students, divided equally between the two study groups (control/experimental), with ten (10) students in each group. Sample members were selected by purposive sampling, taking the following factors into account:

- Schooling environment: a single schooling environment, as all sample members were enrolled at the Martyr Manad Amhamed Primary School, Kebaba region, Tissemsilt Province.
- Age: students' ages ranged between 6 and 7 years.
- Performance level in the basic skills under study: performance levels in the basic motor skills under study (running, jumping, throwing) were, overall, average.

8.5 Homogeneity and Equivalence of the Study Sample: the researchers verified the homogeneity of the members of the two study groups (control/experimental) with respect to the study variables — namely the basic motor skills under study (running, jumping, throwing) — in addition to certain anthropometric variables such as height, weight, and growth indicators, particularly the student's age.

Table 1: Homogeneity and Equivalence of the Experimental and Control Groups in the Study Variables

Variable	Exp. Mean	Exp. SD	Ctrl. Mean	Ctrl. SD	Computed t	Significance
Age (years)	6.46	1.18	6.51	1.22	1.13	Not significant
Height (cm)	118	1.66	121	1.73	1.45	Not significant
Weight (kg)	25.74	1.19	26.08	1.24	1.19	Not significant
Running skill (sec.)	4.97	1.16	4.86	1.13	1.09	Not significant
Jumping skill (cm)	52.39	1.18	53.62	1.24	1.25	Not significant
Throwing skill (m)	3.86	1.07	3.94	1.11	1.06	Not significant

Tabulated t-value = 1.73; significance level = 0.05; degrees of freedom (n = 18).

Source: Prepared by the researchers based on SPSS V.23 output.

Table 1 shows that the mean values for all variables (age, height, weight, running skill, jumping skill, throwing skill) were very close across the pre-measurements for the members of the two study groups (control/experimental), and the same holds for the standard-deviation values, which were likewise very close across all study variables.

Referring back to the same table, it can be seen that the computed t-values for the study variables (age, height, weight, running skill, jumping skill, throwing skill) — reaching 1.13, 1.45, 1.19, 1.09, 1.25, and 1.06 respectively — are all smaller than the tabulated t-value of 1.73 at a significance level of 0.05 and degrees of freedom $n = 18$. We therefore confirm the absence of statistically significant differences in any of the study variables between the control and experimental groups in the pre-measurements, and can accordingly affirm the homogeneity and equivalence of the two study groups (control, experimental) across all study variables.

8.6 Study Variables

Independent Variable: the independent variable in this study is the proposed educational program based on the play strategy.

Dependent Variable: the dependent variable consists of the performance scores for the basic motor skills under study (running, jumping, throwing).

Confounding (Random) Variables: controlled as follows:

- Excluding from the experimental group any student showing negligence or absence from a session of the proposed educational program.
- Ensuring that no member of either study group practised any other sporting activity, of any kind, outside the institution.
- Controlling the members of the two study groups (control/experimental) across all characteristics and specifications, such as age and performance levels in the basic motor skills under study, while ensuring a single schooling environment.
- Ensuring that the measurement process (pre- and post-measurements) was carried out under the same conditions and circumstances.

8.7 Domains of the Study

Temporal Domain: the study was conducted during the 2024/2025 academic year, specifically during the period extending from 8 December 2024 to 27 February 2025.

Spatial Domain: the study was conducted at the Martyr Manad Amhamed Primary School, Kebaba region, Tissemsilt Province.

Human Domain: the study was conducted on primary school students aged between 6 and 7 years.

8.8 Tools of the Study

8.8.1 Tests of the Basic Motor Skills Under Study (Running, Jumping, Throwing)

8.8.1.1 The 12-Metre Running Test

- Objective of the test: to measure sprint speed (running).
- Equipment used: a running track at least 20 metres long, comprising three lanes each 90 cm wide, with the finish line marked 12 metres from the starting line; a stopwatch; evaluation forms for recording results.
- Performance method: three students stand at the starting line, each in their assigned lane. On hearing the starting signal (whistle), each student sprints at maximum speed, crossing the finish line.
- Performance conditions: the start is taken from a standing position; the student must not set off before hearing the signal (whistle); the student must not stop before crossing the finish line.
- Scoring: the time taken by each student to cover the distance is recorded in seconds, to the nearest 0.01 of a second.

8.8.1.2 The Standing Broad Jump Test

- Objective of the test: to measure technical performance of the jumping skill.
- Equipment used: a flat, non-rigid surface marked with a starting line for the jump; a tape measure; a whistle; evaluation forms for recording the results of the attempts.
- Performance method: the student stands with the toes of both feet touching the starting line. On hearing the starting signal (whistle), the student swings the arms backward while bending the knees, then swings the arms forward and pushes off with both feet with maximum force, aiming to jump as far as possible.
- Performance conditions: the starting line must not be crossed before the jump; the jump must be performed with both feet together; the student must not begin the arm swing before hearing the signal (whistle); each student is allowed three attempts, with the best attempt counted.
- Scoring: the jump distance is measured from the starting line (inner edge) to the point where the heels touch the ground, or to the nearest mark left by the student upon landing; the student's best of the three attempts is recorded.

8.8.1.3 The Throwing Test

- Objective of the test: to measure the throwing skill.
- Equipment used: a sufficient number of handballs; cones; chalk; a tape measure; a whistle; evaluation forms for recording the results of the attempts.
- Performance method: the instructor marks a line on the ground on which the student stands to throw. The student stands at the inner edge of the throwing line; on hearing the starting signal (whistle), the student attempts to throw the ball with both hands together, from a stationary position and from chest height, after which the distance is measured from the throwing line to the point where the ball first landed.
- Performance conditions: the line marked on the ground must not be crossed; the throw must be made with both hands together; the student must not begin the throw before hearing the signal (whistle); each student is allowed three attempts, with the best attempt counted.
- Scoring: the throwing distance is measured from the throwing line (inner edge) to the first point where the ball lands and touches the ground; the student's best of the three attempts is recorded.

8.8.1.4 Scientific Properties of the Applied Tests

Reliability: the researchers calculated the reliability of the applied tests on a pilot sample of seven (7) students, using the test–retest method, with the test and retest administered two weeks apart while keeping all other variables constant (the same sample, the same timing, the same location, the same equipment, etc.). The reliability coefficients obtained for the applied tests (the 12-metre running test, the broad-jump test, and the throwing test) were 0.90, 0.84, and 0.87 respectively, at a significance level of 0.05. These results indicate a strong association between the scores of the first and second measurements for the applied tests, and we can accordingly affirm that all the applied tests are characterized by a very high degree of stability and reliability.

Validity:

- Face validity (expert validity): the tests were presented to a panel of expert reviewers from among the teaching staff (university professors) holding the rank of Professor and Associate Professor (Class A) at the Institute of Science and Techniques of Physical and Sports Activities, University of Tissemsilt. The expert panel confirmed the suitability and appropriateness of these tests for the study's objectives and their compatibility with the characteristics of the study sample members.
- Construct (intrinsic) validity: the intrinsic validity of the applied tests was calculated by taking the square root of the reliability coefficient, yielding a very high validity coefficient for all applied tests, as shown in the following table.

Table 2: Reliability and Intrinsic Validity Coefficients for the Tests Applied in the Study

Test	Reliability Coefficient	Intrinsic Validity Coefficient
12-metre running test	0.90	0.94
Broad jump test	0.84	0.91
Throwing test	0.87	0.93

Source: Prepared by the researchers based on SPSS V.23 output.

Objectivity: the researchers took care to ensure that all applied tests were characterized by clarity and ease of administration, while taking into account certain surrounding factors, such as weather conditions and the timing of the tests. The researchers sought to maintain neutrality, integrity, and scientific honesty, avoiding personal bias and preconceived ideas, and accepting the study's results whatever they turned out to be.

8.9 The Proposed Educational Program

The program comprised twelve instructional units, delivered at a rate of two instructional units per week. Implementation of the program took six consecutive weeks, from 12 January 2025 to 20 February of the same year.

Objective of the Program

- Determine the relationship between play and the development of certain basic motor skills (running, jumping, throwing) among primary school students (6–7) years old.
- Develop and advance the basic motor skills under study among primary school students (6–7) years old.
- Identify the effect produced by the proposed educational program on developing the basic motor skills under study among primary school students (6–7) years old.

Domains of the Proposed Program

The proposed educational program comprised twelve instructional units. These units incorporated a number of individual and group games, together with a set of semi-sports games and competitive sporting activities. Each instructional unit comprised three instructional phases:

- Preparatory phase: lasting ten minutes, aimed at preparing the student psychologically, physically, and functionally for the activity.
- Main phase: lasting thirty-five minutes, during which the proposed instructional situations are implemented.
- Closing phase: lasting five minutes, aimed at returning the student to their normal state prior to the activity.

General Principles Guiding the Construction of the Proposed Program

- The proposed program relies on play as an educational strategy for motor learning.
- Clarity and simplicity of the instructional situations.
- Taking into account the developmental characteristics of the targeted age group when constructing the program's instructional units.

Validation and Arbitration of the Program

The instructional units of the proposed program, in their initial form, were presented to a panel of professors holding the rank of Professor and Associate Professor (Class A) at the Institute of Science and Techniques of Physical and Sports Activities, University of Tissemsilt, with a view to drawing on their opinions and guidance and ascertaining the suitability of the instructional situations contained in these units and their compatibility with the developmental characteristics of the study sample. The expert panel recommended removing certain instructional situations, modifying others, and adding new ones. The researchers responded to all the panel's recommendations and guidance, and after revising and amending the program's instructional units into their final form, the program was resubmitted to the same panel of experts, all of whom expressed their satisfaction with the final version of the program and granted the researchers permission to implement it.

8.10 Statistical Methods Used

The researchers relied on the Statistical Package for the Social Sciences (SPSS), version 23.

9. Presentation, Analysis, and Discussion of the Study Results

9.1 Presentation and Discussion of the Results of the First Partial Hypothesis

- There are no statistically significant differences in the level of the basic motor skills under study between the pre- and post-measurements for the control group.

Table 3: Significance of the Differences in the Levels of Certain Basic Motor Skills Under Study Between the Pre- and Post-Measurements for the Control Group

Basic Motor Skill	Pre Mean	Pre SD	Post Mean	Post SD	Computed t	Significance
Running skill (sec.)	4.86	1.13	4.82	1.11	1.24	Not statistically significant
Jumping skill (cm)	53.62	1.24	54.07	1.37	1.31	Not statistically significant
Throwing skill (m)	3.94	1.11	4.05	1.09	1.14	Not statistically significant

Tabulated t-value = 1.83; significance level = 0.05; degrees of freedom (n = 9).

Source: Prepared by the researchers based on SPSS V.23 output.

Table 3 shows that the mean values for the basic motor skills under study (running, jumping, throwing) among the members of the control group in the pre- and post-measurements were stable and very close: the mean value for the running skill in the pre-measurement was 4.86 seconds, with a standard deviation of 1.13, whereas in the post-measurement the mean value for the same skill (running) was 4.82 seconds, with a standard deviation of 1.11.

For the jumping skill, the mean value in the pre-measurement was 53.62 cm, with a standard deviation of 1.24, whereas in the post-measurement the mean value for the same skill (jumping) was 54.07 cm, with a standard deviation of 1.37.

As for the throwing skill, the mean value in the pre-measurement was 3.94 metres, with a standard deviation of 1.11, whereas in the post-measurement the mean value for the same skill (throwing) was 4.05 metres, with a standard deviation of 1.09.

Referring back to the same table, the computed t-values for the basic motor skills under study (running, jumping, throwing) reached 1.24, 1.31, and 1.14 respectively, all of which are smaller than the tabulated t-value of 1.83 at a significance level of 0.05 and degrees of freedom $n = 9$. We therefore conclude that there are no statistically significant differences in the levels of the basic motor skills under study between the pre- and post-measurements for the members of the control group.

9.2 Presentation and Discussion of the Results of the Second Partial Hypothesis

- There are statistically significant differences in the level of the basic motor skills under study between the pre- and post-measurements for the experimental group.

Table 4: Significance of the Differences in the Levels of Certain Basic Motor Skills Under Study Between the Pre- and Post-Measurements for the Experimental Group

Basic Motor Skill	Pre Mean	Pre SD	Post Mean	Post SD	Computed t	Significance
Running skill (sec.)	4.97	1.16	3.95	1.02	1.94	Statistically significant
Jumping skill (cm)	52.39	1.18	75.06	1.43	2.27	Statistically significant
Throwing skill (m)	3.86	1.07	5.79	1.16	2.16	Statistically significant

Tabulated t-value = 1.83; significance level = 0.05; degrees of freedom ($n = 9$).

Source: Prepared by the researchers based on SPSS V.23 output.

Examining Table 4, we note that the mean values for the basic motor skills under study (running, jumping, throwing) among the members of the experimental group in the pre- and post-measurements were markedly different: the mean value for the running skill in the pre-measurement was 4.97 seconds, with a standard deviation of 1.16, whereas in the post-measurement the mean value for the same skill (running) was 3.95 seconds, with a standard deviation of 1.02.

The mean value for the jumping skill in the pre-measurement was 52.39 cm, with a standard deviation of 1.18, whereas in the post-measurement the mean value for the same skill (jumping) was 75.06 cm, with a standard deviation of 1.43.

As for the throwing skill, the mean value in the pre-measurement was 3.86 metres, with a standard deviation of 1.07, whereas in the post-measurement the mean value for the same skill (throwing) was 5.79 metres, with a standard deviation of 1.16.

From the same table, the computed t-values for the basic motor skills under study (running, jumping, throwing) reached 1.94, 2.27, and 2.16 respectively, all of which are greater than the tabulated t-value of 1.83 at a significance level of 0.05 and degrees of freedom $n = 9$. We therefore conclude that there are statistically significant differences in the levels of certain basic motor skills under study between the pre- and post-measurements for the members of the experimental group, in favour of the post-measurement.

9.3 Presentation and Discussion of the Results of the Third Partial Hypothesis

- There are statistically significant differences in the level of the basic motor skills under study between the control and experimental groups in the post-measurements.

Table 5: Significance of the Differences in the Levels of Certain Basic Motor Skills Under Study Between the Control and Experimental Groups in the Post-Measurements

Basic Motor Skill	Exp. Mean	Exp. SD	Ctrl. Mean	Ctrl. SD	Computed t	Significance
Running skill (sec.)	3.95	1.02	4.82	1.11	2.29	Statistically significant
Jumping skill (cm)	75.06	1.43	54.07	1.37	2.37	Statistically significant
Throwing skill (m)	5.79	1.16	4.05	1.09	1.98	Statistically significant

Tabulated t-value = 1.73; significance level = 0.05; degrees of freedom ($n = 18$).

Source: Prepared by the researchers based on SPSS V.23 output.

The results in Table 5 show that the mean values for the basic motor skills under study (running, jumping, throwing) among the members of the two study groups (experimental/control) in the post-measurements were markedly different. Among the members of the experimental group, the mean value for the running skill reached 3.95 seconds, with a standard deviation of 1.02, whereas among the members of the control group the mean value for the same skill (running) was 4.82 seconds, with a standard deviation of 1.11.

For the jumping skill, the mean value among the members of the experimental group reached 75.06 cm, with a standard deviation of 1.43, whereas among the members of the control group the mean value for the same skill (jumping) was 54.07 cm, with a standard deviation of 1.37.

As for the throwing skill, the mean value among the members of the experimental group reached 5.79 metres, with a standard deviation of 1.16, whereas among the members of the control group the mean value for the same skill (throwing) was 4.05 metres, with a standard deviation of 1.09.

Examining the table above (Table 5), we note that the computed t-values for the basic motor skills under study (running, jumping, throwing) reached 2.29, 2.37, and 1.98 respectively, all of which are greater than the tabulated t-value of 1.73 at a significance level of 0.05 and degrees of freedom $n = 18$. We therefore conclude that there are statistically significant differences in the levels of certain basic motor skills under study between the members of the two study groups (control/experimental) in the post-measurements, in favour of the members of the experimental group.

10. Discussion

10.1 Discussion of the First Partial Hypothesis

The first partial hypothesis of the study posits the absence of statistically significant differences in the level of the basic motor skills under study between the pre- and post-measurements for the members of the control group. Based on the statistical processing of the results for the basic motor skills under study in the pre- and post-measurements for the control group, and referring back to the results shown in Table 3, it is clear that the levels of the basic motor skills under study remained stable among the members of the control group across both the pre- and post-measurements. The first partial hypothesis of the study is therefore confirmed. These results are consistent with those of certain previous studies, such as the study by Zebiche Samir and Hussein Mohamed Amine (2018) and the study by Abdellah Haddache (2023). The researchers attribute the results obtained with respect to the first partial hypothesis to the following:

- The members of the control group were not subjected to any experimental procedures.
- The members of this group (the control group) were not exposed to the proposed educational program and were limited to the motor activities included in their regular physical and sports education sessions.
- The similarity of the conditions under which the pre- and post-measurements were conducted for the members of the control group.

10.2 Discussion of the Second Partial Hypothesis

The second partial hypothesis of the study posits the existence of statistically significant differences in the level of the basic motor skills under study between the pre- and post-measurements for the members of the experimental group. Based on the data shown in Table 4 for the results of the pre- and post-measurements for the experimental group, we note the existence of statistically significant differences in the level of the basic motor skills under study among the members of this group between the pre- and post-measurements, in favour of the post-measurement. We can therefore affirm that the second partial hypothesis of the study is confirmed. The researchers attribute these results to several factors, among them:

- The interaction of the members of the experimental group with the various games included in the proposed program, which was positively reflected in the development of the basic motor skills under study among the members of this group.
- The external stimuli contained in the various instructional situations of the proposed instructional units provided the members of this group with numerous opportunities to repeatedly practise the basic motor skills under study, which was positively reflected in their learning of these skills.
- The suitability, in both quantity and quality, of the units of the proposed program to the objectives of the study: the proposed program was specifically designed to develop the basic motor skills among the members of the experimental group, an objective that was achieved.
- The inclusion, within the proposed program, of varied forms of play, presented in an engaging manner that captured the students' interest, which was positively reflected in the development of the basic motor skills under study among the members of this group.

The results of this study with respect to the second partial hypothesis are consistent with the results of certain similar previous studies, such as the study by Zebiche Samir and Hussein Mohamed Amine (2018), the study by Lakhal Abdelkader et al. (2021), and the study by Jamila Amir and Jamal Marazka (2023): the practice, by the members of the experimental group, of the various motor activities included in the proposed educational program resulted in the consolidation of the basic motor skills under study among the members of this group. In this connection, many scholars concerned with motor learning point out that the learning and acquisition of basic motor skills proceeds at a slow pace unless accompanied by suitable exercise, and that play is considered one of the best forms of exercise for developing various basic motor skills. At the same time, the child at this stage is characterized by a degree of excess energy and continuous movement, which should be harnessed through the construction of educational programs aimed at developing the child's various basic motor skills.

10.3 Discussion of the Third Partial Hypothesis

The third partial hypothesis of the study posits the existence of statistically significant differences in the level of the basic motor skills under study between the control and experimental study groups in the post-measurements. Based on the statistical processing of the results for the basic motor skills under study for both groups (control/experimental) in the post-measurements, and referring back to the results recorded in Table 5, we note the existence of a difference and divergence in the level of the basic motor skills under study in the post-measurements between the members of the two

study groups, in favour of the members of the experimental group. We can accordingly affirm that the third partial hypothesis of the study is confirmed. The researchers attribute these results to:

- The difference in experimental procedures between the members of the two groups: the members of the experimental group were subjected to the proposed program, whereas the members of the control group were not subjected to any experimental procedures.
- The diversity and multiplicity of the games included in the proposed program, which contributed to the development of the basic motor skills under study among the members of the experimental group, compared with the members of the control group.
- The presentation of the games included in the proposed program to the members of the experimental group in an engaging, attractive, and motivating manner, which contributed to the development of the basic motor skills under study among the members of the experimental group, compared with the members of the control group.

The results of this study with respect to the third partial hypothesis are fully consistent with the results of certain previous studies, such as the study by Oukelili Salah Eddine and Kassemi Bachir (2019), the study by Lakhal Abdelkader et al. (2021), and the study by Abdellah Haddache (2023): all of these studies examined the effect of educational motor programs using various educational games on developing basic motor skills in children, and the results of all these studies confirmed the positive effect of motor activities and play on developing basic motor skills, in addition to the existence of statistically significant differences in the levels of basic motor skills when comparing the post-measurements of the members of the two study groups (control/experimental), in favour of the members of the experimental group.

The surplus-energy theory indicates that the child in the stage of middle childhood is characterized by continuous movement and a limited capacity for stillness, and tends towards engaging in play with peers, and that this stage is the most suitable age stage for the process of acquiring and developing various basic motor skills. In this regard, theories explaining play — and in particular the theory of Jean Piaget — have highlighted the importance of play as a fundamental pillar in the life of the child, demonstrating its role in the child's balanced development. Jean Piaget likewise affirms that play is an effective medium for the development of various basic motor skills, while at the same time being of the utmost importance to the life of the child.

11. Conclusion

This study arrived at the following conclusions:

- Convergence and homogeneity of the two study groups (control/experimental) across all the basic motor skills under study.
- Stability and consistency of the levels of the basic motor skills under study among the members of the control group in the pre- and post-measurements.
- The existence of statistically significant differences in the levels of the basic motor skills under study between the pre- and post-measurements for the members of the experimental group, in favour of the post-measurement.
- In the post-measurements for the two study groups (control/experimental), there were statistically significant differences in the basic motor skills under study, in favour of the members of the experimental group.
- Confirmation of the study's general hypothesis; the researchers accordingly affirm the existence of a positive effect of the proposed program, built according to the play strategy, on developing basic motor skills among primary school students (6–7) years old.

12. Recommendations

- Raising awareness among all segments of society of the importance of play and its positive role in the life of the child.
- Ensuring the implementation of the instructional units of the proposed educational program, given its positive effect on developing basic motor skills among primary school students.
- Giving the child ample scope to engage in play, while ensuring that this play is harnessed to develop the various aspects of the child's development, including the motor aspect.
- The necessity of providing instructional resources and a stimulating environment for the practice of physical and sports education, as it represents one facet of structured play within educational institutions.
- Expanding the scope of research to include other basic motor skills, with similar studies conducted on other populations and research samples.
- Ensuring that the playful character distinguishing the stage of middle childhood is harnessed to develop the various aspects of the child's development, including the motor aspect.

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