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Research Paper

The Effect of Kinetic Stories on Developing Some Physical Abilities Among Second-Grade Primary School Students

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ABSTRACT

The importance of the current research lies in identifying the impact of the kinetic storytelling program on developing a number of physical attributes for second-grade primary school students.

The research problem is defined by the application of the kinetic storytelling program and the physical practices it contains that influence the development of certain physical abilities, and comparing them with the current school curriculum in primary schools.

The current research aims to reveal:

- The impact of using kinetic stories on the development of certain physical abilities among second-grade primary school students.

The researcher hypothesized the following:

1. There are significant differences between the two research groups in the post-test in the development of certain physical abilities.
2. There are significant differences between the pre- and post-tests in the development of certain physical abilities for the experimental group.

The researcher used the experimental method because it is appropriate for the nature and objectives of the research. The research population was deliberately selected from second-grade primary school students at Al-Mawaheb Boys School in Kirkuk Governorate for the 2024/2025 academic year, aged between 7 and 8 years. The total number of students is 64, distributed into two classes (A) and (B). The researcher concluded:

- The kinetic story program achieved significant improvements in developing physical abilities when comparing the pre- and post-tests of the experimental group.

The researcher recommends:

- The kinetic story program should be used to better develop physical abilities within the primary school curriculum for the first grades.

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1. INTRODUCTION

Storytelling currently constitutes an important educational tool in the process of preparing students in developing countries. This is due to the connection between the process of cultural correction and human development and the overall changes required in society. This issue cannot be addressed quickly, especially with regard to childhood (Karim, 1997, 37). For it to be a successful educational tool, educational values must constitute a central pillar, as they represent a clear and desirable goal. Therefore, we must present students with stories that deepen positive life values (Al-Zahuri, 1985, 105). Even though students are unable to distinguish between good and bad on their own, these stories reveal an urgent and necessary need to guide and direct students in choosing the appropriate stories (Shahata, 1991, 26). Through them, students will learn about good and evil and will be drawn to good over evil. They also provide them with information and enable them to distinguish right from wrong. Consequently, students will have to know the principles and moral values they adhere to, which they can apply in life situations (Al-Eisawi, 2000, 158).

From this perspective, we find that kinetic storytelling is an important educational tool in educating and preparing students, in addition to its significant role in refining students, modifying their behavior, and improving their morals. Such narrative drama activities provide students with kinetic activity in the form of engaging stories, which they will embrace and enjoy.

Childhood is one of the most important stages in a person's life. It is during this time that their personality is formed, and their future directions, inclinations, and values are determined in accordance with the values and standards of society. During this time, the child forms social and emotional relationships with important others in their life. They also develop a strong desire to understand the things and sensations around them and how to deal with them. Furthermore, their self-awareness and self-reliance are enhanced, as is evident through their greater interaction with the outside world (Musa, 1993, 293). The importance of the current research lies in identifying the effect of the kinetic storytelling program on developing a number of physical characteristics in second-grade primary school students.

Research Problem

Psychologists and sociologists confirm that students' cultural and social development occurs through play. Play is considered one of the most successful educational methods, as it is a natural method during childhood, which requires a strong need for movement. However, teachers rarely use kinetic stories, to the best of their knowledge, as a method for developing some positive aspects and correcting some negative aspects in students. The research problem arose in presenting alternatives that might be suitable for filling the gap in students' acquisition of sound moral values. These alternatives can be used to develop students' moral character through a kinetic story program. Hence, the research problem is defined as the application of the kinetic story program and the physical practices it contains that influence the development of certain physical abilities, and comparing them with the current school curriculum in elementary schools.

2. RESEARCH OBJECTIVE

The effect of using kinetic stories on developing certain physical abilities among second-grade elementary school students.

Research Hypotheses

1. There are significant differences between the two research groups in the post-test in the development of some physical abilities.
2. There are significant differences between the pre- and post-tests in the development of some physical abilities of the experimental group.

Research Areas

- Human Area: A sample of second-grade students at Al-Mawaheb Elementary School for Boys.
- Temporal Area: The period from March 7, 2025, to June 30, 2025.
- Spatial Area: The outdoor yard of Al-Mawaheb Elementary School for Boys in Kirkuk Governorate.

3. RESEARCH METHODOLOGY

The researcher used the experimental method because it suited the nature and objectives of the research.

Research Population and Sample

The research population was deliberately selected from second-grade primary school students at Al-Zubair bin Awam Boys School in Kirkuk Governorate for the 2024/2025 academic year, aged between 7 and 8 years. The total number of students was 64, distributed between two classes (A) and (B). The researcher excluded (40) students from the research population for the following reasons:

- Students who were absent from school (10).
- Students who failed (5).
- Students suffering from certain illnesses (5).
- Female students (10).
- Students in the pilot experiments (10).

Thus, the research sample consisted of (24) students, with (12) students in each class, who were deliberately selected. The two groups were named so that Class (A) represented the experimental group, while Class (B) represented the control group. Table 1 shows the number of individuals in the research sample and the students excluded from each academic class.

Table 1: Shows the research community and its sample

Group	Section	Total Number	Excluded	Applied Program	Remaining Sample Size
Experimental	A	30	21	Motor Stories Program	12
Control	B	34	19	Conventional Program	12
Total		64	40		24

Research Sample Equivalence

(The researcher should form equivalent groups with respect to at least the variables relevant to the research) (Van Dalen, 1984, 398). To achieve this, the researcher conducted an equivalence test between the two research groups to control the following variables:

- Age measured in months.
- Weight measured in kilograms.
- Height measured in centimeters.

To determine the significance of the differences between the aforementioned variables, equivalence was determined between the individuals in the two research groups. Table 2 shows the relevant results.

Table 2: Statistical parameters for the variables of age, weight, and height for the students in the two research sample groups

Variables	Experimental Group		Control Group		Calculated (t) Value*
	Mean	SD	Mean	SD	
Age (months)	87 .45	4 .33	90 .88	3 .88	0 .77
Weight (kg)	30 .78	15 .17	27 .43	7 .54	0 .94
Height (cm)	127 .10	6 .87	124 .40	02.5	0 .95

* Significant at a significance level of 0.05.

Table 2 shows the presence of insignificant differences in the variables mentioned above, indicating the equivalence of the two groups of the research sample.

Data Collection Methods

The researcher used several research methods to obtain the data required for the research, namely: scientific sources, questionnaires, testing, and measurement. The required data was obtained through the following steps:

Tests

To obtain appropriate tests, the researcher used content analysis of scientific sources and the opinions of specialists to determine physical abilities and their tests:

1. Determining the physical abilities of second-grade primary school students and appropriate tests for them:

To determine the most important physical abilities and select appropriate tests for second-grade primary school students aged 7-8 years, after analyzing the content of scientific sources and previous studies (Al-Rumi, Al-Takriti, 1999), (Nabras, Mu'ayyad, 2007), as well as personal interviews with specialists, the researcher extracted several tests appropriate for these physical abilities.

2. Nominating appropriate physical ability tests:

The appropriate physical ability tests were established and then presented to a group of specialists in motor learning and physical education teaching methods. After collecting the questionnaires, a portion of the tests was deleted, and another portion was modified and added, based on the specialists' agreement rates. Accordingly, the tests that achieved an agreement rate of 75% or more among the specialists were nominated. (Bloom et al. indicate that the researcher must obtain agreement at a rate of 75% or more among the arbitrators' opinions.) (Bloom *et al.,* 1983, p. 126).

The nominated tests are:

3. Physical Abilities Tests:

- A (15) m running test from a high start.
- A standing long jump test.
- A soft ball test for the longest possible distance.
- A hanging circular target scoring test.
- Various tests to develop overall physical abilities.

Scientific Conditions for Testing

1. Test Validity:

Test validity means that "the test's purpose is to measure and evaluate the characteristic for which it was designed" (Al-Hakim, 2004, p. 22). In order for the researcher to verify the validity of the tests, they were presented to a group of the aforementioned arbitrators. The appropriate and valid tests for the study were selected and standardized using the arbitrators' logical validity. They unanimously agreed that the tests were valid in measuring their intended purpose, in addition to calculating self-validity by calculating the square root of the test's reliability coefficient.

2. Test Reliability:

Reliability is one of the most important characteristics of a good test. A reliable test is one that consistently measures the intended skill (Abdul-Jabbar and Ahmad, 1987, 113). Al-Hakim (2004) defines it as, "If it is repeated once or more times on the same sample or other samples with the same specifications and under the same conditions, it yields significant results, i.e., there is a high correlation coefficient between the test results each time it is administered" (Al-Hakim, 2004, 27). To calculate the reliability coefficient, the researcher used the test-retest method, whereby the tests were repeated in the same manner on a sample of 10 students from the research community who were not included in the primary research sample. The researcher calculated the simple correlation coefficient (Pearson) between the scores of the two tests. The results of the calculated

correlation coefficient showed a high correlation across all tests, confirming their reliability.

Devices and Tools Used in the Research

1. **Devices:**

- Electric medical scale and height gauge.
- Electronic stopwatch (number (3)).

2. **Tools:**

- Leather measuring tape (50) m long (number (1)).
- Strong rope (2) m long (number (1)).
- Tennis balls (20).
- Small flags (2).
- Whistle number (4).
- Colored chalk.

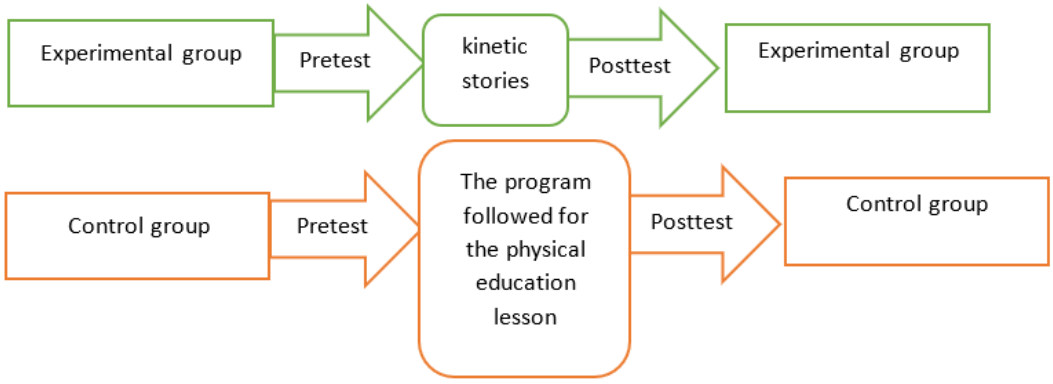
Experimental Design:

Experimentation involves formulating and testing hypotheses. Using an experimental design is important in every research because it helps obtain answers to research questions.

The research design is the strategy by which the researcher describes all the necessary information and controls the factors and variables that may influence this information (Alawi and Rateb, 1999, 232).

Herefore, the researcher used an experimental design called "the design of purposefully selected equivalent groups with controlled pre- and post-observation" (Van Dalen, 1984, 384).

Figure 1 illustrates the experimental design used.



Defining Variables and How to Control Them

One of the advantages of experimental work is that a competent researcher carefully examines their plans to ensure that there are no external influences, variables due to the experimental procedures, or variables due to the sample that affect the dependent variable. He must make every effort to control the variables he adopts (Van Dalen, 1984, 386). The research included the following variables:

A. The independent (experimental) variable:

- Some proposed movement stories

B. The dependent variable:

- Physical abilities.

Educational Programs:

1. The Kinetic Story Program

After reviewing scientific sources and analyzing the content of numerous previous studies and research papers used in kinetic story programs (Majid *et al.,* 1990). (Al-Hayari *et al.,* 1992). (Hanour and Abbas, 1996). (Al-Rumi, 1999). (Abu Abdo, 2002). Referring to the opinions of specialists in the field of teaching methods for physical education, the researcher developed the proposed program, taking into account the comprehensive development of all physical abilities under study, using some movement stories (Appendix 1) that achieve the desired goals. Then, it was presented to a group of the aforementioned specialists for the purpose of implementing it. The single educational unit consisted of the preparatory part, which included the organizational aspect and two movement stories as a warm-up and physical exercises. Then, the main part, which includes the educational and applied aspects, followed. This part includes two movement stories that are diverse in terms of the goal, such that the two stories lead to the development of some physical abilities, and the period of explaining the story is considered a rest period for the students. Then, after that, comes the concluding part, which includes calming exercises for the body, educational instructions, and dismissal. The time for one educational unit took 40 minutes.

2. The program followed for the physical education lesson

The traditional physical education lesson program was applied to the control group students, based on the curriculum book for second-grade students (Al-Jassar *et al.,* 1980, 41, 78) for students aged 7-8 years. The number of educational units for this program amounted to 16 educational units over 8 weeks, with two educational units per week on Mondays and Thursdays. The educational unit included a preparatory section, which included educational and practical activities, followed by a concluding section, which included educational instructions and dismissal. Each educational unit lasted 40 minutes.

Field Procedures

1. Exploratory Testing:

The experimental test was conducted on a sample of 10 students, intentionally selected from the research community, on March 15, 2025. This experiment aimed to identify the difficulties and problems that the researcher might encounter while implementing the main physical ability tests for students in the two groups of the research sample. Other objectives of the experimental test included:

A. Determining the time period required to implement the tests.
B. The distances and spacing between the tests.
C. The extent of students' response and interaction with the tests and their suitability for them.

2. The pilot experiment of the program.

The pilot experiment of the kinetic stories program was conducted on a sample of 10 students from the research community on March 16, 2025. The objectives of this experiment were as follows:

A. To verify the validity of the stories.
B. To verify the teacher's ability to implement the lesson.
C. To test the validity and adequacy of the tools used in the research.
D. To determine the time required for the story and the possibility of repeating it as planned in each program.
E. To identify errors and obstacles faced by teachers when implementing the program.

Final Research Experiment

1. Pretests:

Pretests were conducted on members of both research sample groups before the lesson began. The purpose was to determine the physical abilities of the students in both research sample groups over two days, March 23-24, 2025. These tests were as follows:

Day One: Experimental Group
Day Two: Control Group

2. Implementation of the Main Experiment

The two educational program units, totaling 16 educational units for each program, were implemented over (8) weeks, with two educational units per week for each group, and one lesson per educational unit, totaling (40) minutes, on Mondays and Thursdays. The experimental group practiced the kinetic storytelling program, while the control group practiced the program used for the physical education lesson. Students in both research sample groups were taught in the sports activities area of Al-Mawaheb Elementary School for Boys.

3. Post-tests

Post-tests were conducted on students in both research sample groups after the completion of the two programs. This was to determine the level of physical abilities reached by the students in both research sample groups. The tests were conducted over a period of May 24-26, 2025, under the same conditions and context used in the pre-test sample.

Statistical Methods

- Mean.
- Standard Deviation.
- Simple Correlation Coefficient (Pearson).
- T-test for two unrelated means and two equal samples.

4. RESULTS AND DISCUSSIONS

Presentation and discussion of the results of the impact of kinetic stories on developing some physical abilities among students in the experimental group.

Table 2: Statistical parameters of the pre- and post-tests of some kinetic stories for students in the experimental group

Variables	Pretest		Posttest		(T) Value	Sig.
	Mean	SD	Mean	SD		
(15) meter run	21.810	5.149	18.897	2.090	2.666	0.001
Zigzag run	6.550	1.099	12.200	2.307	10.202	0.001
Long jump from standing	2.500	1.732	7.450	2.523	6.020	0.001
Softball throws for the longest distance	1.900	1.803	5.050	1.904	4.730	0.001
Goal scoring	12.300	2.002	14.300	2.002	5.033	0.001

* Significant at a significance level of (0.05)

Table 2 shows significant differences between the average scores of the pre- and post-tests in all physical abilities among students in the experimental group who used movement stories in the teaching process. The calculated t-value for these abilities ranged between (2.666-10.202). This is attributed to the impact of the movement stories used in terms of optimal investment of the actual time allocated to performing physical tasks, which leads to increased actual practice by replaying the game and repeating the attempt for each student. This led to increased ability and activity and the development of these physical abilities. Al-Imam (2001) emphasizes that utilizing lesson time to increase movement performance will provide learners with development in many physical and movement abilities (Al-Imam, 2001, 712). The movement stories included in the proposed program are characterized by joy, happiness, and competition in performance, which increased students' motivation to practice these stories, as students at this stage tend to compete. And to prove their abilities among their colleagues, as Miller *et al. (*1987) point out: “Students between the ages of eight and twelve approximately hate their own games, while challenging and competing with others, whether individuals or groups, is an important incentive at this age” (Miller *et al.,* 1987, 218). As a result of exploiting the students' tendency towards movement and each educational unit of the program containing stories with various objectives, all physical abilities developed as a result of the continuous activity of the students in implementing parts of the educational unit, accompanied by longing, enthusiasm and competition when implementing this story, which was appropriate to the type of environment and the age of the students, and which is characterized by the spirit of movement, work, suspense and competition, in addition to

increasing the opportunity for work, movement and performance and the students' desire to practice a lot in the presence of the teacher, as the abundance of practice and repetition of performance in different forms led to an increase in the accuracy of implementing these stories, in addition to increasing performance, it gives the learner an opportunity to correct mistakes and benefit from the presence of others to increase competition, whether between two students or between groups, which led to the development of these abilities, as (Nassif, 1980) indicates ((The students at this stage learn with disturbance and are able to grasp the appropriate solution to the motor duties in general, and they also respond successfully to correcting the movements according to the given motor duties)) (Nassif, 1980, 228). Thus, all physical abilities developed among the students of this group, and this development is due to the good lessons Organized and varied; the students are constantly moving without getting out of order.

Presentation and discussion of the results of the physical education program used to develop some physical abilities among students in the control group.

Table 3: Statistical parameters of the pre- and post-tests for some physical abilities among students in the control group

Variables	Pretest		Posttest		(T) Value	Sig.
	Mean	SD	Mean	SD		
(15) meter run	21.050	2.512	22.750	1.142	4.957	0.001
Zigzag run	3.994	0.318	3.548	0.199	5.596	0.001
Long jump from standing	1.214	0.151	1.287	0.146	3.217	0.002
Softball throw for the longest distance	11.200	2.397	10.550	1.145	1.061	0.087
Goal scoring	11.950	3.443	13.050	2.438	1.636	0.068

* Significant at a significance level of (0.05)

Table (3) shows the following:
- There were significant differences between the average scores of the pre- and post-tests in the variables (running, jumping, and zigzag running) among students in the control group who used the physical education lesson program in the teaching process. This is attributed to the impact of the physical education lesson program on developing these abilities, which includes small games, action stories, and exercises aimed at developing these abilities. In addition, the school environment is similar to the external environment in terms of the availability of opportunities to practice these abilities to a large extent, whether inside or outside the school. Furthermore, these physical abilities are considered among the prevalent activities among students at this stage, which students tend to practice spontaneously. Training and practicing the running movement leads to the development of leg muscle strength, which in turn is reflected in the development of the level of jumping and zigzag running. The opposite is true when students practice the zigzag or jumping movement, which will also be reflected in the development of the students' running level. Therefore, these movements cannot be separated from each other. These movements have developed in students. Ahmed (1996) notes that "students at this stage experience greater development and growth in their lower extremities than their upper extremities, due to the distinctive use of the latter. Activities focus more on the leg muscles than the arms, and running and jumping at this stage are better than lifting and throwing in general" (Ahmed, 1996, 155). Thus, we can say that this development is due to the impact that the activities typically taught in physical education classes have on developing the strength of the lower extremity muscles. This is also due to the availability of appropriate opportunities to practice these movements, both inside and outside of school. Furthermore, these movements are popular activities that students tend to practice spontaneously and willingly. All of this is clearly reflected in the development of these movements. This is because the physical education program includes activities and exercises that focus on running movements, while neglecting activities that require throwing a softball. The traditional physical education program has focused on developing the muscles of the lower extremities more than the upper extremities, which has affected the level of development of these two movements. In addition, the opportunities available to practice them are few compared to the opportunities available to practice other movements, such as running and jumping. Throwing a soft ball requires strength in the shoulder and arm muscles and accuracy to achieve the longest throw.

- Presentation and discussion of the comparative results between the effect of the kinetic story and the physical education lesson program on developing some physical abilities among the research sample.

Table 4: Statistical parameters of the post-test between students in the experimental and control groups in some physical abilities

Variables	Experimental group		Control group		(T) Value*	Sig.
	Mean	SD	Mean	SD		
(15) meter run	18.897	2.090	22.750	1.142	0.281	0.721
Zigzag run	12.200	2.307	3.548	0.199	4.308	0.001
Long jump from standing	7.450	2.523	1.287	0.149	2.010	0.003
Softball throw for the longest distance	5.050	1.904	10.550	1.145	3.904	0.001
Goal scoring	14.300	2.002	13.050	2.438	8.095	0.001

* Significant at a significance level of (0.05)

Table 4 shows the following:
There were significant differences between the average scores of the experimental and control groups in the running movement. This is attributed to the effectiveness of the two programs used in developing this movement by including running and relay games and activities, which are among the activities most loved and practiced by students spontaneously and willingly. Practice, competition, and races also motivate students to exert maximum effort to achieve success or victory when using competition or rivalry activities. The inclusion of movement stories in the physical education program that includes jumping, skipping, or

hopping led to the development of leg muscles, the effect of which is reflected in the students' running level. In addition, the opportunities available to students to practice running are numerous compared to other movements, as well as the students' spontaneous tendency to practice this movement. Ahmed (1996) indicates that "running is a basic motor movement and is considered one of the activities that students practice spontaneously and are highly attracted to, either to compete with each other or to satisfy their desire to..." Or asserting oneself or challenging oneself. (Ahmed, 1996, 157). Therefore, competition forces students to exert their utmost effort to achieve victory. As a result, the running level of students in both the experimental and control groups improved, and no significant differences were found between the students in this movement level. This is evidence of the effectiveness of the two programs used in developing this movement, as they include games, activities, and competitions specifically designed to develop it. This is attributed to the positive and effective role of the kinetic stories program, which contains a group of diverse and competitive kinetic stories. Each educational unit contains two diverse stories aimed at developing these abilities. The students' practice of these stories in each educational unit led to the development of these abilities, in addition to the repetition of the story and the multiple attempts made by each student. As for the students in the control group, the program applied to them did not include the development of all these physical abilities. It also included small games and dramatic movements, which the researcher believes are less beneficial and effective than kinetic stories, which have a specific goal to achieve and are also characterized by a competitive nature in performance. Moreover, most of the activities that the physical education program is based on are running, jumping, and hopping activities, rather than focusing on other skills. Therefore, the level of these skills developed among the students in the experimental group was better than that of the control group. Thus, the role and effectiveness of the movement stories in developing these skills becomes clear through providing the opportunity for each student to practice the movement and repeat the attempt more than once, in addition to providing the opportunity for competition. Furthermore, the movement stories were implemented in a style that combined competitive performance with joy and pleasure during implementation.

5. CONCLUSIONS

1. The kinetic story program achieved significant improvements in developing physical abilities when comparing the pre- and post-tests of the experimental group students.
2. The kinetic story program outperformed the experimental group students in developing physical abilities compared to the control group.

Recommendations

1. The kinetic story program should be used to develop physical abilities within the primary school curriculum for the first grades.
2. Conduct a pilot study similar to the current research in other aspects and variables.

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