



THE EFFECT OF AN EDUCATIONAL PROGRAM BASED ON BRAIN-DIRECTED MOTOR EXERCISES ON THE SKILL PERFORMANCE LEVEL OF TECHNICAL STAGES AND THE DIGITAL ACHIEVEMENT LEVEL IN THE TRIPLE JUMP EVENT

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Abstract

The study's goal was to ascertain the effects of an educational program focused on brain-directed motor exercises on the skill performance level of the technical stages and the digital achievement level of the triple jump event. The researcher anticipated that there would be a statistically significant difference between the experimental and control groups in the skill performance level of the triple jump phases and digital achievement, preferring the experimental group.

The study sample consisted of second-year students from the College of Physical Education and Sports Sciences at the University of Kirkuk. To achieve the study's objectives, the researcher employed the mean, standard deviation, median, skewness coefficient, kurtosis coefficient, t-test, Pearson correlation coefficient, frequency, and percentage.

After statistical analysis, the researcher concluded the following:

1. The experimental group profited more than the control group from the prepared educational units, which enhanced their comprehension of the triple jump's technical features and boosted their motivation and excitement through brain-directed motor exercises.
2. Based on brain-directed motor exercises, the proposed instructional program had a beneficial effect on the digital achievement level of the triple jump skill.

Based on these findings, the researcher recommended:

1. Adopting the brain-directed motor exercises program when teaching the technical stages of the triple jump.
2. Organizing training courses for faculty members on brain-directed motor exercises.
3. Applying brain-directed motor exercises to various other sports.

Keywords: Brain-directed motor exercises, digital achievement, triple jump.

1-1 Introduction and Research Problem

Humans have been given the gift of intelligence by God, which they must use wisely. Interactions between different body parts, particularly between the brain and the body, are obvious because people operate as a single, cohesive unit. The primary feature that sets humans apart from other animals is our brain, which has infinite potential. These skills must be used appropriately in a variety of areas, though.

Global organizations have been formed in recent years with the aim of activating the brain's non-dominant regions and including them in cognitive and motor tasks. The Brain Gym Association is one of these groups; it focuses on using cognitive skills to improve mental processes, academic performance, and motor skills. When a pupil can distinguish objects and think logically, they perform better than their peers.

Ihsan (2023) claims that a variety of instructional strategies and activities have been developed to support learning in ways that complement brain activity and consistently unlock its potential (Ihsan, 2023,



p.2). According to Nebras Mohammed Younis (2014), an athlete will outperform other athletes if they can use their brain to recognize objects and think logically (Younis, 2014, p.125).

Dennison Paul (2013) outlines the fundamentals of brain-directed motor exercises as follows:

- Physical movements simulate cognitive functions.
- Learning to inhibit (suppress) stress.
- Learning barriers can be overcome through mental sports.
- Observations serve as a personal retrieval tool. (Dennison, 2013, pp. 32-34)

Additionally, **Dennison Paul (2013)** highlights several key approaches in mental sports, including:

- **Water intake:** The required daily water intake is determined by the formula:
$$\text{Body weight (lbs)} \div 3 = \text{result} \div 8 = \text{required cups of water per day}$$

(1 cup = 200 ml).
- **Brain activation points.**
- **Deep, oxygen-enriched breathing.**
- **Physical exercises with reflexive movements.**

Before initiating the learning process using brain-directed exercises, four procedural steps must be considered:

1. **Progressing from easy to difficult** – This prepares the brain and body for learning by involving all bodily systems, leading the learning process from general understanding to specific goals.
2. **Setting clear objectives** – This enhances problem identification, situational analysis, self-monitoring, and problem-solving.
3. **Pre- and post-activity regulation** – This allows learners to manage stimuli and develop a willingness to learn. By adjusting movement from a **low-preparedness** state (initial learning) to a **high-preparedness** state (more advanced learning), the learning process becomes easier, less stressful, and more precise. This also facilitates the transition to real-life applications of learned skills.
4. **Brain-directed motor exercises** – These activate all functional and physical aspects of the learner, integrating **brain and body** by engaging all sensory and cognitive pathways. At this stage, learning barriers are effectively eliminated. (Dennison, 2013, p. 25)

Based on the aforementioned information and the researcher's experience as an athlete and an athletics professor, it was determined that the triple jump event's learning process does not include brain-directed motor workouts. Thus, the researcher made the decision to carry out this investigation.

1-2 Research Objectives

This study aims to examine the effect of an educational program based on brain-directed motor exercises on the skill performance levels of technical phases and achievement in the triple jump event through the following:

- Designing an educational program based on brain-directed motor exercises for students at the College of Physical Education and Sports Sciences at the University of Kirkuk.
- Determining the impact of the program on the skill performance levels of the technical phases of the triple jump and digital achievement levels.

1-3 Research Hypotheses

- The control group's skill performance levels in the technical triple jump phases and digital achievement levels differ statistically significantly between the pre-test and post-test assessments.
- There are statistically significant differences between the pre-test and post-test measurements of the experimental group in the skill performance levels of the technical phases of the triple jump and digital achievement levels.



- There are statistically significant differences between the experimental group and the control group in the skill performance levels of the technical phases of the triple jump and digital achievement levels.

1-4 Research Terminology

- Brain-Directed Exercises:** A set of procedures that include motor exercises, breathing techniques, massage of energy centers or points in the body, hydration, and body reinforcement. These exercises aim to increase the flow of oxygenated blood to the brain and enhance the speed of neural signals between the two hemispheres, allowing them to work more effectively together, leading to improved performance. (*Operational Definition*)

3. Field Research Procedures

3-1 Research Methodology

Because the experimental approach is appropriate for the study's nature, the researcher used it. Two equal groups—the experimental group and the control group—were given pre- and post-tests as part of the study's experimental design.

3-2 Research Population and Sample

The research population consisted of second-year students at the College of Physical Education and Sports Sciences, University of Kirkuk, totaling 198 students (male and female) during the 2023/2024 academic year.

The research sample included seventy male students from the second-year class, after ensuring sample equivalence. Female students were excluded, limiting the study to male students only. The sample was selected from three sections (A, B, and C) based on their regular attendance.

The sample was divided as follows:

- Pilot Study Sample: twenty students**, used to determine the scientific validity and reliability of skill level assessments.
- Main Study Sample: fifty students**, divided into:
 - Experimental Group: twenty-five students**, subjected to the **proposed brain-directed motor exercises program**.
 - Control Group: twenty-five students** following the **standard curriculum set by the college administration**.

This distribution is detailed in **Table 1**.

Category	Number of Students	Percentage (%)
Pilot Study Sample	20	28.58%
Main Study Sample		
- Experimental Group	25	35.71%
- Control Group	25	35.71%
Total Sample Size	70	100%

Statistical Description of the Research Sample

For the goal of equivalency, the fundamental characteristics for the research sample (the subject of the study) were assessed in terms of height, weight, and age to control for any variables that might have an impact on the research methods. This information is shown in Table 2.

Table (2): Statistical Significance of the Research Sample in Basic Variables Before the Experiment

N = 70

Variables	Unit of Measurement	Mean	Median	Standard Deviation	Skewness	Kurtosis
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Age	Year	18.61	19.00	1.20	0.17	1.88
Weight	kg	72.3	72.50	2.54	0.54	-1.14
Height	cm	174.80	174.40	2.36	0.14	-0.47

The results for the entire sample are moderate and not distributed, exhibiting a normal distribution, as can be seen from Table (2), which displays the research sample's initial basic measurements. The skewness values, which are around zero and fall between 0.14 and 0.54, show that the data is symmetrically distributed. Furthermore, the bell curve's fluctuation is deemed appropriate and moderate, not straying too high or too low, as indicated by the kurtosis values, which range from -1.14 to 1.88. This further demonstrates how the individuals of the research group were comparable and equivalent in terms of the fundamental variables before the experiment.

3-3 Tools for Data Collection Used in Research:

A. Measurement of the Skill Performance Level for the Triple Jump Phases Under Investigation:

The researcher assessed the skill performance level through a panel of experts consisting of three faculty members from the College of Physical Education and Sports Sciences, University of Kirkuk. A skill performance evaluation form for the triple jump was used, which included the phases of the skill: (approach, take-off, hop, step, and jump). Each phase was scored on a scale of ten points based on the experts' opinions. The researcher then calculated the mean scores for each phase of the skill performance for the triple jump.

B. Measurement of the Digital Achievement Level for the Triple Jump Skill Under Investigation:

The digital achievement level for the triple jump skill was calculated by measuring from the take-off board to the nearest part of the body in the sand pit.

3-4 Exploratory Study:

Twenty second-year students from the University of Kirkuk's College of Physical Education and Sports Sciences participated in the exploratory study, which was carried out before the educational program was put into place. The overall sample did not contain these students. This study's objective was to determine the scientific coefficients for the validity and reliability tests that were being examined.

Scientific Coefficients for the Skill Performance Level of the Triple Jump Phases and the Digital Achievement Level Under Investigation:

B. Validity:

To determine the validity coefficient for the skill performance level of the triple jump phases and the digital achievement level under investigation, the researcher used the discriminant validity method by performing a comparative end-to-end analysis. This involved calculating the mean differences between the highest and lowest quartiles of the exploratory sample's results, which consisted of twenty students from the research population and outside the main research sample. Table (3) illustrates this process.

Table (3) Statistical Significance of the Differences Between the Upper and Lower Quartiles to Determine the Discriminant Validity of the Skill Performance Levels of the Triple Jump Stages and the Numerical Achievement Level Under Investigation.

Variables	Unit of Measurement	Upper Quartile (N=5)	Lower Quartile (N=5)	Difference Between Averages	"T" Value
Approach	Degree	-S: 6.10, +X: 0.91	-S: 4.25, +X: 0.81	1.85	6.21*



Take-off	Degree	-S: 5.80, +X: 0.84	-S: 3.90, +X: 0.75	1.90	7.35*
Hop	Degree	-S: 5.35, +X: 0.67	-S: 3.85, +X: 0.58	1.50	5.50*
Step	Degree	-S: 4.90, +X: 1.02	-S: 3.20, +X: 0.94	1.70	5.80*
Jump	Degree	-S: 5.50, +X: 1.51	-S: 3.90, +X: 1.24	1.60	4.60*
Numerical Achievement Level	Meter	-S: 9.80, +X: 1.25	-S: 7.60, +X: 1.05	2.20	6.05*

The table provides the following interpretation:

According to the table, the numerical accomplishment level and the performance level of the triple jump skill phases differ statistically significantly between the top and lower quartiles. At the significance level of 0.05 (2.306), the computed "T" values are bigger than the tabulated "T" value, which falls between 4.60 and 7.35. This shows that the variables being studied are valid.

B - Reliability:

The researcher employed the test-retest approach on the same sample of the exploration study (20 students) in order to determine the reliability coefficient for the numerical accomplishment level and the performance level of the triple jump skill phases. A week following the initial application, the variables were retested, and the correlation coefficient between the exploratory sample's first and second applications was computed, as indicated in Table (4).

Table (4): Shows the reliability coefficient by calculating the correlation between the first application and the retest of the performance level for the phases of the triple jump skill and the numerical achievement level under study (N=20).

Variables	Unit of Measurement	First Application		Reapplication		"R" Value
		M	SD	M	SD	
Approach	Degree	5.25	± 0.87	5.32	± 0.92	0.92*
Takeoff	Degree	5.04	± 0.74	4.99	± 0.69	0.94*
Hop	Degree	4.86	± 0.74	4.62	± 0.68	0.84*
Step	Degree	4.30	± 0.94	4.42	± 0.98	0.85*
Jump	Degree	4.57	± 0.57	4.39	± 0.47	0.81*
Numerical Achievement Level	Meter	8.35	± 1.36	8.25	± 1.32	0.92*

Table (4) demonstrates a statistically significant relationship between the numerical achievement level and the first application and retesting of the triple jump phases' skill level. The stability of the variables under study is indicated by the computed values of (r), which range from 0.81 to 0.94 and are higher than the tabular value of (r) at a significant level of 0.05.

3-5 Brain-Directed Motor Exercises Program

After reviewing previous studies and scientific references, the researcher designed the brain-directed exercises program. The proposed program was then distributed to a group of experts specializing in motor



learning, sports psychology, and sports training (track and field specialization) to evaluate the program and assess the extent to which scientific principles were followed. Their feedback was taken into consideration.

Program Goal: The goal of the brain-directed exercises program is to improve the skill level in the triple jump by performing certain physical exercises along with accompanying procedures (deep breathing, massaging certain energy points in the body, drinking enough water, and body enhancement). These activities help increase the amount of oxygenated blood reaching the brain, activate both brain hemispheres to work together, and stimulate the sixth area responsible for precision, from where nerve signals are sent to the spinal cord and nerves, activating the muscles to perform the movements.

Program Content: The brain-directed exercises program includes four key elements:

1. Drinking a quantity of water before, during, and after performance, depending on the situation.
2. Brain points or keys in the body are energy points distributed throughout the body, which are activated by moving the fingers and applying light pressure on them.
3. Deep breathing (oxygen-enriched) through breathing exercises that increase the intake of air into the lungs.
4. Physical exercises of a counteracting nature, such as moving the right arm and left leg simultaneously.

Implementation Method: The student begins practicing the brain-directed exercises program under the supervision of a faculty member at the start of the track and field lecture after the warm-up, and during the designated exercise time. The program begins with drinking water as needed, following the formula related to body weight, which is as follows:

Body weight in pounds $\div$ 3 = Result

Result $\div$ 8 = The amount of water in cups the individual needs daily

(Note: 1 cup = 200 milliliters)

(Chester, Wolfsont, 2012 : 25)

The procedures are then carried out according to the specified program for 20 minutes in each session, lasting for a period of ten weeks, with three sessions per week. It is important to note that the students are introduced to the program and taught how to perform the exercises, as well as the locations of the energy points in the body that will be worked on. The students are trained in how to perform simple massage on these areas before the start of the training program.

3-6 Main Study:

Pre-Test Measurement:

The pre-test measurements were conducted, and the following tables present the statistical description of the research sample data regarding the skill performance level of the triple jump phases and the digital achievement level before the experiment.

Table (5) illustrates the statistical description of the skill performance level for the phases of the triple jump and the digital achievement level in the pre-test measurement.

Tests	Unit of Measurement	Mean	Median	Standard Deviation	Skewness Coefficient	Kurtosis Coefficient
Approach	Degree	5.44	5.50	0.84	-0.24	0.87
Takeoff	Degree	5.21	5.00	0.59	-0.91	-0.47
Hop	Degree	5.02	5.00	0.69	-0.62	-1.25
Step	Degree	4.42	4.50	0.74	-0.39	-0.34
Jump	Degree	4.61	4.50	1.21	0.17	1.15



Digital Achievement Level	Meter	8.42	8.30	1.51	0.51	1.09
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The data is moderate, non-scattered, and follows a normal distribution, as can be seen from Table (5), which deals with the homogeneity of the research sample data in terms of the skill performance level for the triple jump phases and the digital achievement level. The values of the skewness coefficient, which range from -0.91 to 0.51 and are near zero, show this. Furthermore, the values of the kurtosis coefficient fall between -1.25 and 1.15, indicating that the normal curve's fluctuation is within an acceptable range and does not significantly deviate from the norm. This attests to the research sample's homogeneity in the variables under investigation.

Equivalence Between the Two Groups (Control - Experimental):

Table (6): Equivalence Between the Control and Experimental Groups in the Basic Variables Before the Experiment

n1=n2=25

Basic Variables	Control Group		Experimental Group		Difference Between Means	T-Value	Significance Level
	M	±SD	M	±SD			
Age	18.60	3.07	18.75	2.08	0.15	0.74	0.41
Weight	72.02	5.87	72.58	6.61	0.56	1.01	0.31
Height	174.60	1.71	175.00	1.03	0.40	0.81	0.76

Significant at the 0.05 level = 2.011

It is evident from Table (6), which presents the statistical significance of the basic variables for the experimental and control groups before the experiment, that there are no significant differences at the 0.05 level. This indicates that the two groups are equivalent in the basic variables before the experiment.

Table (7): Equivalence Between the Control and Experimental Groups in Skill Performance Levels of the Triple Jump and Digital Achievement Before the Experiment (N1 = N2 = 25)

Variables	Unit of Measurement	Control Group (Mean ± SD)	Experimental Group (Mean ± SD)	T-Value
Approach	Degree	5.39 ± 0.84	5.28 ± 0.82	1.21
Takeoff	Degree	5.41 ± 0.69	5.45 ± 0.75	1.63
Hop	Degree	5.31 ± 0.74	5.25 ± 0.69	0.89
Step	Degree	4.36 ± 0.87	4.22 ± 0.73	1.34
Jump	Degree	4.71 ± 0.91	4.61 ± 0.84	1.01
Digital Achievement	Meter	8.26 ± 1.42	8.18 ± 1.40	0.84

The T-value at a significance level of (0.05) = 2.011

It is evident from Table (7), which presents the statistical significance of skill performance levels for the triple jump phases and digital achievement for both the experimental and control groups before the experiment, that there are no statistically significant differences at the 0.05 level. This indicates that both groups are equivalent in the research variables before the experiment, ensuring fair comparisons in subsequent analyses.

Programming Implementation:

Twenty-five students in the experimental group participated in the suggested program, while the other twenty-five students in the control group adhered to the college's conventional curriculum. Over the course of



eight weeks, the experimental group received two teaching units per week as part of their educational program. In the meantime, the control group was instructed using the course instructor's planned curriculum.

Post-Measurement:

After completing the program's implementation period, post-measurements of the study variables were conducted on the research sample by both the researcher and the instructor.

3-7 Statistical Treatments Used in the Research:

- Mean
- Standard Deviation
- Median
- Skewness Coefficient
- Kurtosis Coefficient
- T-test
- Pearson Correlation Coefficient
- Frequency and Percentage

4- Presentation and Discussion of Results:

4-1 Presentation of Results:

4-1-1 Presentation of Pre- and Post-Test Results in Skill Performance Levels of Triple Jump Phases and Numeric Achievement, and Improvement Percentage for the Control Group (Table 8)

Table (8): Statistical Significance of Differences (T-test) Between Pre- and Post-Test in Skill Performance Levels of Triple Jump Phases and Numeric Achievement, and Improvement Percentage for the Control Group (N = 25).

Variables	Unit of Measurement	Control Group Pre-Test (Mean $\pm$ SD)	Control Group Post-Test (Mean $\pm$ SD)	T-value	Improvement Percentage
Approach	Degree	5.39 $\pm$ 0.84	6.41 $\pm$ 0.94	4.21	18.92%
Take-Off	Degree	5.41 $\pm$ 0.69	6.49 $\pm$ 0.78	3.94	19.96%
Hop	Degree	5.31 $\pm$ 0.74	6.55 $\pm$ 0.71	4.81	23.35%
Step	Degree	4.36 $\pm$ 0.87	5.84 $\pm$ 0.84	5.37	33.94%
Jump	Degree	4.71 $\pm$ 0.91	5.87 $\pm$ 1.02	4.95	24.63%
Numeric Achievement Level	Meter	8.26 $\pm$ 1.42	8.92 $\pm$ 1.74	3.99	7.99%

The value of (t) at a significant level of (0.05) = 2.064.

The findings in Table (8) make it clear that the means of the pre-test and post-test scores for the control group differ statistically significantly at the (0.05) level in favor of the post-test mean in terms of the improvement percentage, numeric achievement level, and skill performance level of the triple jump phases.

4-1-2 Displaying the Results of the Pre-Test and Post-Test in Skill Performance Level of the Triple Jump Phases, Numeric Achievement Level, and Improvement Percentage for the Experimental Group (Table 9).

Table (9) shows the statistical significance of the T-test between the pre-test and post-test in skill performance level of the triple jump phases, numeric achievement level, and improvement percentage for the experimental group (N = 25).



Variables	Unit of Measurement	Pre-test (Mean $\pm$ SD)	Post-test (Mean $\pm$ SD)	T-value	Improvement Percentage
Approach	Degree	5.28 $\pm$ 0.82	8.59 $\pm$ 0.74	12.64	62.69%
Take-off	Degree	5.45 $\pm$ 0.75	8.02 $\pm$ 0.69	10.54	47.16%
Hop	Degree	5.25 $\pm$ 0.69	7.94 $\pm$ 0.81	9.86	51.24%
Step	Degree	4.22 $\pm$ 0.73	7.15 $\pm$ 0.12	10.63	69.43%
Jump	Degree	4.61 $\pm$ 0.84	8.12 $\pm$ 0.91	14.21	76.14%
Numeric Achievement	Meter	8.24 $\pm$ 1.40	9.85 $\pm$ 1.83	7.84	20.42%

The calculated T-value at a significance level of 0.05 is 2.064.

Table (9) makes it clear that the experimental group's pre-test and post-test mean scores differ statistically significantly at the 0.05 level, favoring the post-test mean in terms of numeric achievement level and skill performance level of the triple jump phases. The improvement percentage varied from 20.42% to 76.14%, and the computed T-value ranged from 7.84 to 14.21.

4-1-3 Presentation of the results of the post-test in skill performance level of the phases of the triple jump and numeric achievement level, and the improvement percentage between the control and experimental groups:

Table (10) Shows the statistical significance of the T-test differences in the post-test for the skill performance level of the triple jump phases, numeric achievement level, and the improvement percentage between the control and experimental groups (N1 = N2 = 25).

Variables	Unit of Measurement	Control Group	Experimental Group	T-Value	Improvement Percentage
		Mean $\pm$ SD	Mean $\pm$ SD		
Approach	Degrees	6.41 $\pm$ 0.94	8.59 $\pm$ 0.74	4.21	34.01%
Takeoff	Degrees	6.49 $\pm$ 0.78	8.02 $\pm$ 0.69	5.74	23.57%
Hop	Degrees	6.55 $\pm$ 0.71	7.94 $\pm$ 0.81	4.91	21.22%
Step	Degrees	5.84 $\pm$ 0.84	7.15 $\pm$ 0.12	5.32	22.43%
Jump	Degrees	5.87 $\pm$ 1.02	8.12 $\pm$ 0.91	7.21	38.33%
Numeric Achievement Level	Meters	8.92 $\pm$ 1.74	9.85 $\pm$ 1.83	3.45	10.43%

The T-value at a significance level of 0.05 = 2.011

The results of Table (10) clearly show that the experimental group's mean post-test scores differ from the control group's at the 0.05 level in terms of both the experimental group's numerical achievement level and the skill performance levels of the triple jump phases. The percentages varied from 10.43% to 38.33%, and the computed T-values ranged from 3.45 to 7.21.

4-2 Discussion of the Results:



Based on the results from Tables (8), (9), and (10), it is evident that there was statistically significant improvement in the performance of both the experimental and control groups between the pre-tests and post-tests, with post-test results being superior. The researcher attributes these results to the commitment of the sample members to the time allocated for learning and the repetition of the technical stages according to the exercises prepared for them, whether by the subject instructor or the researcher. This commitment contributed to the development of their abilities and knowledge of the technical stages in the triple jump activity by linking theoretical aspects with practical ones, which contributed to improved performance and the digital achievement level.

This result is supported by Ihsan and Mutasim (2023), who stated that the repetition and continuous practice of skills help individuals connect the parts of a skill, thus increasing fluidity (Ihsan and Mutasim, 2023, p. 15). Furthermore, there was noticeable improvement between the post-test results of both groups, with results favoring the post-test of the experimental group. This indicates the effectiveness of the performance of the experimental group, which followed a brain-oriented movement exercise program. The gradual progression in linking technical stages from easy to difficult, combined with the use of brain-oriented movement exercises, helped in setting goals, analyzing problems, and engaging in self-monitoring and problem-solving.

Keith Hyatt (2007) emphasized that adherence to a structured brain exercise system would lead to more effective learning behavior, even though the theoretical foundations of brain exercises failed to support views on the stimuli of these exercises. Similarly, Kent (2014) supported this notion by stating that brain-oriented movement exercises are an innovative learning method. Extensive research on the role of physical movements in enhancing learning abilities has led to global recognition of these exercises, which are now used in over eighty countries and translated into forty languages, being taught in various schools (Kent, 2014, p. 5).

Moreover, Chester and Wolfson (2012) emphasized that human mental capabilities and potential are not fully tapped into. Mental abilities require proper exploitation in all fields to increase focus (Chester, 2012, p. 12). Thus, using brain-oriented movement exercises in the program prepared by the researcher activated all functional and physical aspects of the learners, unifying the mind and body. These exercises engaged all sensory aspects and capabilities for interaction with all parts of the brain, leading to improvements in the technical stages and the digital achievement level of the triple jump activity.

This indicates that brain-oriented movement exercises have a positive impact on both performance and physical outcomes, enhancing the overall learning experience.

5- Conclusions and Recommendations

Conclusions:

Considering the research findings, the researcher concluded the following:

1. The prepared educational units had a significant impact on the experimental group, contributing to increased knowledge of the technical stages of the triple jump. Additionally, they provided excitement and engagement through the application of brain-oriented movement exercises, more so than in the control group.
2. The proposed educational program, based on brain-oriented movement exercises, positively influenced the digital performance level of the triple jump skill.

Recommendations:

1. Adopting a brain-oriented movement exercise program for learning the technical stages of the triple jump.
2. Organizing training courses for faculty members in the field of brain-oriented movement exercises.
3. Applying brain-oriented movement exercises to various other sports.



4. Conducting similar studies on different athletic events.

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