Proximus Journal of Sports Science and Physical Education
Volume 2, Issue 4, April, 2025
https://proximusjournal.com/index.php/PJSSPE
ISSN (E): 2942-9943

THE EFFECT OF EDUCATIONAL MODELS ON DEVELOPING SOME PHYSICAL AND SKILL ABILITIES IN FOOTBALL FOR DEAF AND DUMB PLAYERS

Maytham Mohsin Habeeb
Directorate of Misan Education, Ministry of Education of Iraq
maythamalbtaat78@gmail.com
Munadhil Adil Kiasm
Imam Kadhim Faculty of Islamic Sciences University
munadil.adil@iku.edu.iq

Abstract
The research sought to create exercises utilising educational models and to assess their effect on the enhancement of specific physical talents and skills. In theoretical studies, the researchers addressed educational models and their significance, referencing a prior study, and employed the experimental approach utilising a fundamental design known as the design of two equivalent groups. The sample was divided into two groups of ten players each; the control group followed the standard curriculum, while the experimental group adhered to the same educational curriculum but utilised instructional models. Additionally, the use of suitable methods, instruments, and apparatus for research protocols and the selection of assessments for specific football talents under investigation. The researchers first administered pre-tests, subsequently implemented the educational models, and then conducted post-tests under identical conditions to the pre-tests. Following this, the research results were analysed using their statistical methods, leading to several conclusions. Notably, the group that engaged with the educational models exhibited a positive influence on the enhancement of certain physical abilities (speed and speed-related strength) and skills (passing, dribbling, shooting, and ball control). The standard curriculum positively influenced the enhancement of physical abilities. A key recommendation from the researchers is to utilise educational models within educational institutions to cultivate specific physical and skill competencies in football, as well as to generalise these models for teaching deaf and mute players football skills and improving their performance.
Keywords: educational models, physical,skill abilities, football, deaf and dumb, players.

Introduction

Football is the most popular sport globally, practiced by various age groups across specialised schools, educational institutions, universities, clubs, national teams, and both genders, including those with disabilities (deaf and mute) (Kimball, 2021). Success in this game necessitates the player's physical attributes, aligned with the evolving demands of field play. Abd Al Jabbar, Chnani, and Werytha (2021) assert that each sport possesses distinct physical prerequisites that influence performance levels, which in turn determine success in matches and competitions. Furthermore, they emphasise the critical importance of physical conditioning for football players; a superior physical state enables greater exertion while conserving energy (Pawso The enhancement of players' physical condition is achieved by implementing specialised scientific programs to attain optimal performance levels, which is the objective of sports education and training across numerous athletic disciplines (Krustrup & Parnell, 2019). Bjørndal and Gjesdal (2020) emphasised that sports education and training enhance achievement levels when athletes aspire to excel in various sports, facilitated by the coach's ability to augment the player's efficiency and physical preparation to attain peak performance. Sports programs for individuals with disabilities (deaf and mute) are crucial for the promotion of sports development

Proximus Journal of Sports Science and Physical Education
Volume 2, Issue 4, April, 2025
https://proximusjournal.com/index.php/PJSSPE
ISSN (E): 2942-9943

and societal progress, as they have emerged as significant indicators of civilisation and advancement. Prabakaran and Annadurai (2022) indicated that sports programs for individuals with disabilities (deaf and mute) contribute to societal development across multiple domains, extending beyond mere personality enhancement to serve as a crucial foundation for their societal integration. Saad Yassen (2020) noted that individuals with disabilities (deaf and mute) who engage in appropriately tailored sports programs regularly and with relative intensity, according to their capabilities and vitality, can mitigate the adverse effects of their disabilities and foster a positive societal perception of themselves. Khan and Jose (2021) asserted that training programs are the most effective means to enhance the physical capabilities of impaired individuals (deaf and mute) and empower them to fulfil their demands. Sports training programs enhance the essential physical capabilities required by footballers with disabilities (deaf and mute) and seek to augment their skills. This game necessitates that individuals with disabilities (deaf and mute) exhibit various physical capabilities, including endurance, strength, speed, agility, and flexibility, as well as the enhancement of both aerobic and anaerobic capacities. Additionally, the fitness regimens for players must commence well in advance of the sports season (Ramirez-Campillo et al., 2020). Kretchmar et al. (2023) emphasised that football necessitates significant physical exertion, impacting various bodily systems, including the circulatory and respiratory systems, the nervous and muscular systems, as well as energy conservation and thermoregulation processes. The advancements in motor learning have led to an exploration of alternative models for teaching and learning methodologies, aiming to enhance this discipline under conditions that may frequently contradict the existing curriculum (D'Elia, Mazzeo & Raiola, 2018). This is marked by the persistence of conventional curricula, despite their obsolescence in both content and style, with all curricula aiming to achieve effective learning and to identify methods for enhancing the learning process (Wijngaards-de Meij & Merx, 2018). This has led most countries worldwide to subject curricula and teaching methods to modification and development, highlighting the necessity of employing contemporary approaches and techniques in education that consider individual learning quality and enhance efficiency and effectiveness (Westera, 2019). Numerous educators have begun to reevaluate the curriculum aimed at equipping learners with the essential knowledge and skills required for a successful teacher, who is proficient in their subject matter, adept in contemporary pedagogical techniques, and knowledgeable about their application and the construction of educational scenarios tailored to the diverse needs and characteristics of the learner (Peterson et al., 2018). Football necessitates a high degree of precision, concentration, and the timely dissemination of information, which are essential for skill mastery and fundamental to the learning process in the sport (Al Behadili& Kasim, 2022; Zayer, 2022). This game relies on fundamental skills as a crucial foundation for advancement, both in educational and training contexts. The educational model encompasses the teaching methodology employed for skill acquisition and includes a pedagogical approach that acts as a framework along with designated activities (Mitchell, Oslin & Griffin, 2020). The timing of performance should align with the learners' capacities, precisely delineating the roles of both instructor and student to accomplish cognitive and emotional objectives in education. This encouraged academics to investigate the influence of the educational model on the acquisition of certain technical skills and physical qualities in football.

Search problem

The problem addressed in this study is the inadequate level of physical abilities and skills in football among deaf and mute players. This deficiency is attributed to the lack of contemporary strategies, as evidenced by the findings of Azhar, Kim, and Salman (2018) and Harvey, Gil-Arias, and Claver (2020), which indicate that the educational landscape is predominantly characterised by traditional methods and strategies that fail to facilitate the acquisition and enhancement of physical and skill-based competencies in football for deaf and mute players. Despite the significance of the educational modules strategy and its effective contribution to the

Proximus Journal of Sports Science and Physical Education
Volume 2, Issue 4, April, 2025
https://proximusjournal.com/index.php/PJSSPE
ISSN (E): 2942-9943

educational process, it has not received adequate attention from researchers in the field of pedagogical methods for teaching fundamental football skills to the deaf and mute, particularly in the specialised football school for the deaf and mute in Maysan Governorate. According to recommendations from prior studies, including Mahedero et al. (2021) and Yang et al. (2021), the implementation of educational modules in teaching and training is advocated due to their efficacy in enhancing players' physical and skill competencies. The game of football is defined by its diverse fundamental talents, which are essential for the development of a proficient learner, and this mastery relies on precise and judicious execution. The researchers have observed a significant decline in the performance levels of players at the Specialised School of Football for the Deaf and Dumb in Misan Governorate regarding passing, bouncing, scoring, and rolling skills. The educational process remains reliant on a singular approach, namely the method of explanation and demonstration, wherein the coach elucidates the skill and performs a model for the novices. The coach assumes a predominant role in the educational process, a method that restricts the learner's opportunities for active participation in the educational context. The pursuit of experiences can result in negative outcomes and a diminished focus on the educational component of the learning process, despite its significance. This neglect may stem from a failure to acknowledge individual differences among learners, potentially contributing to a decline in their technical skills. This study aims to elucidate the influence of educational models on the development of specific physical and skill-related skills in football among deaf and mute players at the Specialised School in Misan Governorate.

Research Objectives

The research aims to:

1. Identify the impact of educational models in developing some physical and skill abilities in football for deaf and dumb players.

Research hypotheses

1. Educational models have a positive impact on the development of some physical and skill abilities in football for deaf and dumb players.

Research Areas

Human Areas: Players of the Specialized School for the Deaf and Dumb in Misan Governorate .
Spatial Areas: Stadium of the Specialized School for the Deaf and Dumb in Misan Governorate .
Time Areas: The period from 31/10/2024 to 2/1/2025.

Methodology

Research Methodology

The researchers used the experimental method in one of its basic designs called the "design of the two equivalent groups" due to the suitability of this design to the nature of the research problem .

Research sample: The research sample was selected from football players aged (13-15) at the Specialized School in Misan Governorate for the Deaf and Dumb for the year 2024-2025, the number of sample members reached (28) players and (10) players per group after the players over the age of (15) years were excluded, as well as the players who participated in the exploratory experience.

Homogeneity of the research sample: To avoid the factors that affect the results of the experiment, and so that the researchers can refer the differences to the experimental factors and in order to achieve homogeneity between the members of the two groups, the researchers used the statistical method (torsion coefficient) between the average age, height and weight as shown in Table (1).

Table 1: Shows the homogeneity of the research sample with the torsion coefficient (+_3).

Variables	Unit of measurement	M	Median	SD	Coefficient Convolution

Proximus Journal of Sports Science and Physical Education
Volume 2, Issue 4, April, 2025
https://proximusjournal.com/index.php/PJSSPE
ISSN (E): 2942-9943

Age	Year	14.76	14.8	1.26	0.08
Height	Meter	155.24	150.8	10.35	0.48
Weight	Kg	52.1	51.80	8.62	1.77

Table (1) shows that the sample was homogeneous in the variables of age, height and weight, as the value of the torsion coefficient ranges between (+_3) and this indicates the homogeneity of the sample members.

Equivalence of the two research groups: After identifying the experimental and control groups and in order to achieve parity between the members of the two groups, the researchers used a test (t) for physical abilities and skills as shown in Table (2).

Table 2: Shows the equivalence of the experimental and control groups in the physical and skill abilities of the pre-tests.

Variables	**Unit of measurement**	**Experimental groups**		**control groups**		**T**
		M	**SD**	**M**	**SD**	
Speed	Snd	27,12	1.7	26.75	1.88	0.38
Speed characteristic force	Frequency	21,05	5,32	20.27	4.55	0.70
Agility	Snd	9,05	2.33	9.75	1.97	1.1
Flexibility	CM	77,75	9.30	79.05	8.93	0.73

Table (2) shows that the equivalence was calculated and when comparing the calculated value of (t) with the tabular value of (2.53) under the degree of freedom (18) and the level of error (0.05), it was found that it is less than the tabular value of (t) in all the variables of the study and this indicates the equivalence of the experimental and control groups.

Means of collecting information (research tools and devices):

Means of collecting information:

The researchers used the following means in collecting data for the research:

- Arab and foreign sources.
- Personal interviews.

Research Devices and Tools:

- Legal Football court.
- Football (15) balls.
- Metal tape measure.
- Adhesive for planning and marking test areas.
- Electronic stopwatch type (Casio) number (2).
- Whistle.
- 4 wooden terraces.
- Signs and flags.
- Data registration form.

Search Tests

Physical tests

First: Flexibility Test

Test name: Arm lifting test from prone position (Ashworth et al., 2018).

Test purpose: to measure the ability to raise the arms up from a prone position .

Proximus Journal of Sports Science and Physical Education
Volume 2, Issue 4, April, 2025
https://proximusjournal.com/index.php/PJSSPE
ISSN (E): 2942-9943

Necessary tools: A pedestal divided into units and fixed vertically on the ground, taking into account the beginning of numbering from the bottom of the post, and attached to the post a small beam parallel to the ground and easy to move up and down.
Performance Description: The laboratory takes a prone position on the ground with the arms extended wide shoulders and the laboratory grasps the post and lifts it up as much as possible while keeping the mouth in contact with the ground and extending the elbows and wrists.
Second: Test the strength characteristic speed of the arms (30) seconds (Pihlainen et al., 2018).
Test name: Push Up Test from Front Support (30) seconds
Test Show: Measurement of the Speed Characteristic Force of the Muscles of the Arms
Necessary tools: space to lie down, then lean on the arms
Performance Description: The tester takes a forward support position on the ground and flexes and extends the arms to the maximum possible number within 30 seconds .
Conditions for testing: No stopping during performance is observed straightening the body during performance the need to touch the chest to the ground when bending the elbows and fully straightening the arms when climbing.
How to record: Records the number of repetitions within 30 seconds.
Third: Speed Test (Altmann et al., 2019).
Test name: Test maximum speed 40 m.
Purpose of the test: to measure the maximum speed.
Necessary tools: stopwatch, whistle, registration form, team.
Recording method: The distance traveled is measured in the nearest millisecond.
Fourth: Fitness Test (Dugdale et al., 2019).
Test name: Agility test(3-3-6-6-9).
Purpose of the test: to measure the agility of football players .
Necessary tools: legal football field without network, electronic stopwatch.
Performance specifications: The tester stands behind the starting line of the stadium and when he hears the start signal, he runs in a straight direction to touch the attack line (6 m) with the right hand, then turns around to run towards the starting line (6 m) and touches it with the right hand, then turns around to run towards the halfway line (9 m), then turns around to touch the attack line (3 m), then turns around to run towards the midline (3 m) to cross it with both feet .
Registration method: The time during which the specified distance has been traveled according to the route is recorded for the laboratory.
Skill tests
First: Passing skill test (handling)
Test name: Handling towards a small target (10 m) away .
Objective of the test: Measurement of handling accuracy.
Tools used: 5 footballs, small target measuring 60 x 60 cm, tape measure, adhesive tape.
Conducting the test: The starting line is drawn with a length of 1 meter and at a distance of 10 meters from the small goal and the five balls are placed on the starting line and when the start signal is heard, the tester scores these balls towards the small target by taking the right place at the starting line and as follows:
Registration: The score is calculated by the total score obtained by the laboratory from handling the five balls as follows:

1. (2 degrees) for each correct attempt enters the small target.
2. (1 degree) If the ball touches the post or crossbar and does not enter the goal.

Proximus Journal of Sports Science and Physical Education
Volume 2, Issue 4, April, 2025
https://proximusjournal.com/index.php/PJSSPE
ISSN (E): 2942-9943

3. (zero degrees) in case the ball goes out of the small goal .
4. The degree limits are from (zero to 10 degrees).

Second: the test of Juggling the ball (Raastad, Aune & Van Den Tillaar, 2016).
The objective of the test: to measure the player's sensitivity to the ball, and his ability to control it.
Tools: Football field, radius 03 meters.
Test procedures: The tester stands in the center of the circuit and at the start signal lifts the ball from the ground and bounce within the boundaries of a circle with feet or just one foot, the tester makes two attempts.
How to score: The player is recorded for the number of times the dribble is recorded by the test supervisor that ends with touching the ball is for the ground.
Third: Goal Shooting Test (Schulze et al., 2018).
Test objective: Measure the player's accuracy in aiming at goal
Pitch and tools: penalty area, the goal is divided into 5 parts or equal sections by strips depicting the five balls from the penalty area.
How to perform: The tester corrects the ball in the specified place, where each section of the goal is given a number with a deviation, the first ball is aimed at the number one, the second ball is directed at the number two, and so on.
Scoring: A score is given for each correct shot and the ball that goes to the unaimed section is not counted and the limits of grades from zero to five 05 degrees are not counted.
Fourth: Dribbling skill test .
Test name: Roll between 5 signs round trip.
The objective of the test: is to measure the ability to roll speed by changing direction.
Tools used: A line 2 meters from the first sign and four consecutive signs determine the distance between them one and a half meters and the footballs of the whistle stopwatch .
Testing: After the tester hears the start signal, the tester quickly rolls the ball between the pillars and returns to the starting line .
Recording: Time is calculated for less than 1/100 of a second.
Research procedures: The research procedures were represented by pre-tests and the training method used on the experimental group and then conducting post-tests.
Pre-tests: were executed for the research sample pertaining to 31/10/2024.
Educational curriculum: The educational curriculum corresponding to 7/11/2024 was implemented for a period of seven weeks and ended on Sunday, 26/12/2024.
Post-tests: Following the execution of the educational program, post-tests were administered to the study sample on 2/1/2025.
Statistical means: - For the purpose of processing data statistically, the following statistical laws were inquired:

1. Arithmetic mean
2. Standard deviation
3. Percentage
4. Torsion coefficient
5. T-Test for symmetrical samples
6. T-Test for asymmetric samples
7. The law of the rate of development

Results
Examining, evaluating, and deliberating on the Results of physical fitness assessments

Proximus Journal of Sports Science and Physical Education
Volume 2, Issue 4, April, 2025
https://proximusjournal.com/index.php/PJSSPE
ISSN (E): 2942-9943

The test (T) for symmetrical eyes was employed to ascertain the differences between the arithmetic means of the pre- and post-tests for each group individually, in order to evaluate the impact of the educational curriculum on specific physical abilities. The percentage of development was computed to determine the degree of improvement observed in each physical ability.

The (t) test for asymmetric samples was employed to ascertain the differences in the arithmetic means of the post-tests between the two groups, aiming to determine the existence of significant disparities in their impact on physical abilities. Subsequently, these findings were analysed scientifically, supported by both Arab and international sources and references.

View, analyze and discuss speed test results

Table (3) presents the results of the speed test for the research sample in both pre- and post-tests. The findings indicate a significant difference, with the arithmetic mean of the differences between the pre- and post-tests for the experimental group being (9) and a standard deviation of the differences at (1.07). The calculated t-value of (8.41) exceeds the tabulated t-value of (2.14) at a degree of freedom of (14) and an error level of (0.05), signifying a significant difference between the pre- and post-tests. Additionally, the percentage of improvement was (31.99%). The arithmetic mean of the differences in the control group was 6.13, with a standard deviation of 0.72. The calculated t-value was 8.51, which exceeded the tabulated t-value of 2.14, indicating a significant difference between the pre- and post-tests, while the percentage of improvement was 22%.

Table 3: Shows the arithmetic mean and standard deviation of the differences and the calculated and tabular values of (T) in the pre- and post-tests of the experimental and control groups of the speed test

Groups	The difference between the two tests		Value T Calculated	Value T Tabular	Ratio Development %
	M	SD			
Experimental	9	1,07	8,41	2.53	31,99 %
Control	6,13	0,72	8,51		22 %

For the purpose of knowing the truth of the differences of the arithmetic means between the results of the experimental and control groups, they presented the results as shown in Table (4).

Table 4: Shows the arithmetic means, standard deviations, and calculated and tabular values of (T) for the experimental and control groups in the post-speed test

Groups	**The difference between the two tests**		**Value T Calculated**	**Value T Tabular**
	M	SD		
Experimental	19,13	4,35	1,59	2.53
Control	21,73	4,63		

The research sample's results in the post-test speed assessment revealed a mean of 19.13 seconds with a standard deviation of 4.35 for the experimental group, and a mean of 21.73 seconds with a standard deviation of 4.63 for the control group. The calculated T value was 1.59, which is less than the tabulated T value of 2.53 at 19 degrees of freedom and a significance level of 0.05, indicating no significant difference between the two groups. The researchers ascribe this advancement to the calibre of the exercises employed, their efficacious impact, and the nature of their implementation at maximum or semi-maximum intensity within the briefest possible duration, contingent upon the competitive format among player groups. It is established that speed

Proximus Journal of Sports Science and Physical Education
Volume 2, Issue 4, April, 2025
https://proximusjournal.com/index.php/PJSSPE
ISSN (E): 2942-9943

training is conducted at the onset of the training session, immediately following the warm-up phase, with critical components in football including acceleration, deceleration, feinting, and directional change speed.

View, analyze, and discuss agility test results

Table (5) presents the agility test results for the research sample in both pre- and post-tests. The findings indicate a notable difference, with the arithmetic mean of the differences between the pre- and post-tests of the experimental group at (0.53) and a standard deviation of the differences at (0.6). The calculated value of (T) is (0.88), which is less than the tabulated value of (T) at (2.14), suggesting no significant difference. The percentage of improvement was (59%). The arithmetic mean of the differences in the control group was 0.66, with a standard deviation of 0.59. The calculated T value was 1.12, which is less than the tabulated T value of 2.53, indicating no significant difference between the pre- and post-tests. The percentage of development was 6.16%.

Table 5: Shows the arithmetic mean and standard deviation of the differences and the calculated and tabular values of (T) in the pre- and post-tests of the experimental and control groups of the agility test

Groups	The difference between the two tests		Value T Calculated	Value T Tabular	Ratio Development %
	M	SD			
Experimental	0,53	0,6	0,88	2.53	59 %
Control	0,66	0,59	1,12		6,16 %

To ascertain the veracity of the discrepancies in the arithmetic means between the experimental and control groups, the findings were presented as depicted in Table (6).

Table 6: Shows the arithmetic means, standard deviations, and calculated and tabular values of (T) for the experimental and control groups in the agility post-test.

Groups	**The difference between the two tests**		**Value T Calculated**	**Value T Tabular**
	M	SD		
Experimental	10	4	1,28	2.53
Control	11,53	2,2		

The researchers attribute the absence of differences in agility performance to the correlation of the post-test fitness results, which yielded an arithmetic mean of 10 seconds and a standard deviation of 4 for the experimental group, and an arithmetic mean of 11.53 seconds and a standard deviation of 2.2 for the control group. The calculated T value of 1.28 was less than the tabulated T value of 2.53 at 18 degrees of freedom and a significance level of 0.05, indicating no significant difference between the two groups.

Komarudin et al. (2022) asserts that agility encompasses various capabilities, including motor response speed and transitional speed, which contribute to the development of the nervous system. Salmela (2018) emphasises that agility training should commence in the early stages to facilitate the acquisition of rapid movements and positional changes of the body in both aerial and terrestrial contexts, thereby ensuring the potential for further enhancement of this trait through sustained training in advanced stages.

View, analyze and discuss the results of the test of the strength characteristic of the speed of the arms

Table (7) presents the results of the strength characteristic test concerning the arm speed of the research sample in both pre- and post-tests. The findings indicate a significant difference, with the arithmetic mean of the differences between the pre- and post-tests for the experimental group being (4.73) and a standard deviation of the differences at (1.98). The calculated value (T) was (2.38), which is less than the tabulated value (T) of (2.53) at a degree of freedom of (18) and a significance level of (0.05), indicating a significant difference between the pre- and post-tests. The percentage of improvement was (19.94%). The arithmetic mean of the

Proximus Journal of Sports Science and Physical Education
Volume 2, Issue 4, April, 2025
https://proximusjournal.com/index.php/PJSSPE
ISSN (E): 2942-9943

differences in the control group was 3.2, with a standard deviation of 2.1. The calculated T value was 1.52, which is less than the tabulated T value of 2.14, indicating no significant difference between the pre- and post-tests, while the percentage of improvement was 10.62%.

Table 7: Shows the arithmetic mean and standard deviation of the differences and the calculated and tabular values of (T) in the pre- and post-tests of the experimental and control groups to test the strength characteristic of the speed of the arms

Groups	The difference between the two tests		Value T Calculated	Value T Tabular	Ratio Development %
	M	SD			
Experimental	4,73	1,98	2,38	2.53	19,94 %
Control	3,2	2,1	1,52		10,62 %

To ascertain the discrepancies in the arithmetic means between the experimental and control groups, the data are shown in Table (8).

Table 8: Shows the arithmetic means, standard deviations, and calculated and tabular values of (T) for the experimental and control groups in the post-test of the velocity-characteristic force of the arms

Groups	**The difference between the two tests**		**Value T Calculated**	**Value T Tabular**
	M	SD		
Experimental	26,46	6,18	0,24	2.53
Control	27,28	10,61		

The research sample results for the strength characteristic of arm speed in the post-test revealed an arithmetic mean of 26.46 repetitions and a standard deviation of 6.18 for the experimental group, while the control group exhibited a mean of 27.28 repetitions and a standard deviation of 10.61. The calculated T value was 0.24, which is less than the tabulated T value of 2.53 at 18 degrees of freedom and a significance level of 0.05, indicating no significant difference between the two groups.

The researchers attribute the significant development observed in the experimental group to the performance of force in accordance with the kinetic trajectory of the skill being trained. Valerii, Mykhailo and Taras (2021) assert that training on fundamental skills relies on the relationship between force and the motor velocity of the involved muscles, which has facilitated progress. Consequently, the researchers recommend allocating a substantial portion of the training time to enhancing muscle strength and achieving maximum output during training sessions.

View, analyze, and discuss resilience test results

Table (9) presents the results of the flexibility test for the research sample in both pre- and post-tests. The findings indicate a notable difference, with the arithmetic mean of the differences between the pre- and post-tests for the experimental group being (4.93) and a standard deviation of the differences at (6.15). The calculated value (T) was (0.8), which is less than the tabulated value (T) of (3.25) at a degree of freedom (9) and a significance level of (0.05), suggesting no significant difference between the pre- and post-tests. The percentage of improvement was (5.56%). The arithmetic mean of the differences in the control group was 5.4, with a standard deviation of 3.62. The calculated T value was 1.49, which is less than the tabulated T value of 2.14, indicating no significant difference between the pre- and post-tests, while the percentage of improvement was 5.8%.

Groups	The difference between the two tests		Value T Calculated	Value T Tabular	Ratio Development %
	M	SD			

Proximus Journal of Sports Science and Physical Education
Volume 2, Issue 4, April, 2025
https://proximusjournal.com/index.php/PJSSPE
ISSN (E): 2942-9943

Experimental	4,93	6,15	0,8	3.25	5,56 %
Control	5,4	3,62	1,49		5,8 %

To ascertain the actual variations in the arithmetic means between the experimental and control groups, the findings were presented as depicted in Table (10).

Table 10: Shows the arithmetic means, standard deviations, calculated and tabular (T) values for the experimental and control groups in the post-test Flexibility.

Groups	**The difference between the two tests**		**Value T Calculated**	**Value T Tabular**
	M	SD		
Experimental	93,8	24,65	0,6	2.53
Control	98,46	17,29		

The post-test results of the research sample in the flexibility assessment revealed an arithmetic mean of 93.8 cm with a standard deviation of 24.65 for the experimental group, and a mean of 98.46 cm with a standard deviation of 17.29 for the control group. The calculated T value of 0.6 was less than the tabulated T value of 2.53 at 18 degrees of freedom and a significance level of 0.05, indicating no significant difference between the two groups. The researchers ascribe the absence of notable differences to the variability of flexibility across different games, the challenge in quantifying the requisite flexibility for each player, and the influence of age on muscle elasticity, noting that the range of spinal flexion peaks during the juvenile phase and subsequently diminishes with age (Read et al., 2018).

Presentation, analysis and discussion of the results of skill test capabilities

Viewing, analyzing, passing test results

Table (11) presents the test results (passing) for the research sample in both pre- and post-tests. The findings indicate a significant difference, with the arithmetic mean of the differences between the pre- and post-tests of the experimental group reaching (16.6) and a standard deviation of the differences at (2.12). The calculated value (T) of (7.83) exceeds the tabulated value of (T) at (3.25) with a degree of freedom of (9) and an error level of (0.05), signifying a significant difference between the pre- and post-tests. Additionally, the percentage of improvement was (65.53%).

The arithmetic mean of the differences in the control group was 5.73, with a standard deviation of 2.87. The calculated T value was 1.99, which is less than the tabulated T value of 3.25, indicating no significant difference between the pre- and post-tests, while the percentage of improvement was 45%.

Table 11: Shows the arithmetic mean and standard deviation of the differences and the calculated and tabular values of (T) in the pre- and post-tests of the experimental and control groups of the pass test.

Groups	The difference between the two tests		Value T Calculated	Value T Tabular	Ratio Development %
	M	SD			
Experimental	16,6	2,12	7,83	3.25	65,53 %
Control	5,73	2,87	1,99		45 %

To ascertain the discrepancies in the arithmetic means between the experimental and control groups, the data are reported in Table (12).

Table 12: Shows the arithmetic means, standard deviations, calculated and tabular values of (T) for the experimental and control groups in the post-test Passing

Groups	**The difference between the two tests**		**Value T Calculated**	**Value T Tabular**
	M	SD		

Proximus Journal of Sports Science and Physical Education
Volume 2, Issue 4, April, 2025
https://proximusjournal.com/index.php/PJSSPE
ISSN (E): 2942-9943

Experimental	41,93	8,27	2,05	2.53
Control	31,8	9,86		

The post-test results of the research sample in the scrolling test revealed a mean of (41.93) with a standard deviation of (8.27) for the experimental group, and a mean of (31.8) with a standard deviation of (9.86) for the control group. The calculated T value of (3.04) exceeded the tabulated T value of (2.53) at a degree of freedom of (18) and a significance level of (0.05), indicating a statistically significant difference between the two groups. The researchers attribute the distinct advancement of the experimental group over the control group to their emphasis on this skill during the educational units. The passing skill is a crucial learning competency that involves utilising players' technical abilities to effectively deliver the ball to a teammate, ensuring interdependence and coherence in a sequential manner, devoid of any interruptions or fragmentation, thereby rendering the skill a cohesive unit (Caicedo-Parada, Lago-Peñas & Ortega-Toro, 2020).

Viewing, analyzing, Juggling ball test results

Table (13) presents the outcomes of the ball Juggling test for the research sample in both pre- and post-tests. The results indicate a significant difference, with the arithmetic mean of the differences between the pre- and post-tests for the experimental group at (25.86) and a standard deviation of the differences at (0.24). The calculated value (T) was (107.75), which exceeds the tabular value (T) of (3.25) at a degree of freedom (9) and a significance level of (0.05), signifying a notable difference between the pre- and post-tests. The percentage of improvement was (68%). The arithmetic mean of the differences in the control group was 18.06, with a standard deviation of 2.69. The calculated T value was 6.71, which exceeded the tabulated T value of 2.14, indicating a significant difference between the pre- and post-tests, while the percentage of improvement was 45.79%.

Table 13: Shows the arithmetic mean and standard deviation of the differences and the calculated and tabular values of (T) in the pre- and post-tests of the experimental and control groups of the juggling test

Groups	The difference between the two tests		Value T Calculated	Value T Tabular	Ratio Development %
	M	SD			
Experimental	25,86	0,24	7,75	3.25	68 %
Control	18,06	2,69	6,71		45,79 %

To ascertain the veracity of the disparities in the arithmetic means between the experimental and control groups, the data were presented as depicted in Table (14).

Table 14: Shows the arithmetic media, standard deviations, calculated and tabular values of (T) for the experimental and control groups in the post-test ball juggling

Groups	**The difference between the two tests**		**Value T Calculated**	**Value T Tabular**
	M	SD		
Experimental	64,4	8,07	1.6	2.53
Control	57,53	13,96		

The research sample's post-test results revealed an arithmetic mean of 64.4 and a standard deviation of 8.07 for the experimental group, while the control group exhibited a mean of 57.53 and a standard deviation of 13.96. The calculated T value was 1.6, which is less than the tabulated T value of 2.53 at 18 degrees of freedom and a significance level of 0.05. This indicates no significant difference between the two groups. The researchers attribute the absence of a significant difference between the experimental and control groups in the post-test, despite their improvement. The pre-test emphasises the escalating repetition of this skill in every educational or training module, whether during warm-ups or gameplay. Hakman et al., (2018) and Al

Proximus Journal of Sports Science and Physical Education
Volume 2, Issue 4, April, 2025
https://proximusjournal.com/index.php/PJSSPE
ISSN (E): 2942-9943

Behadili& Kasi, (2022) asserts that it is the primary skill a player must acquire, as it is the first skill they encountered and practiced prior to mastering other skills in the game.

Viewing, analyzing, goal shooting test results

Table (15) presents the scoring test results for the research sample in both pre- and post-tests. The findings indicate a significant difference, with the arithmetic mean of the differences between the pre- and post-tests for the experimental group being (17.7) and a standard deviation of the differences at (3.13). The calculated value of (T) is (8.94), which exceeds the tabulated value of (T) at (3.25) with a degree of freedom of (9) and an error level of (0.05), signifying a significant difference between the pre- and post-tests. Additionally, the percentage of improvement was (54.64%). The arithmetic mean of the differences in the control group was 6.84, with a standard deviation of 3.98. The calculated T value was 2.01, which is less than the tabulated T value of 3.25, indicating no significant difference between the pre- and post-tests, while the percentage of improvement was 34%.

Table 15: Shows the arithmetic mean and standard deviation of the differences and the calculated and tabular values of (T) in the pre- and post-tests of the experimental and control groups of the scoring test.

Groups	The difference between the two tests		Value T Calculated	Value T Tabular	Ratio Development %
	M	SD			
Experimental	17,7	3,23	7,83	3.25	54,42 %
Control	6,84	3,98	2,01		% 34 %

To ascertain the actual differences in the arithmetic means between the experimental and control groups, the data are reported in Table (16).

Table 16: Shows the arithmetic means, standard deviations and calculated and tabular values of (T) for the experimental and control groups in the scoring post-test

Groups	**The difference between the two tests**		**Value T Calculated**	**Value T Tabular**
	M	SD		
Experimental	42,04	6,05	3,03	2.53
Control	42,9	8,75		

The research sample results from the post-test scoring indicated an arithmetic mean of 42.04 with a standard deviation of 7.16 for the experimental group, and a mean of 42.9 with a standard deviation of 8.75 for the control group. The calculated T value was 3.03, exceeding the tabulated T value of 2.53 at 18 degrees of freedom and a significance level of 0.05, indicating a statistically significant difference between the two groups. The researchers attribute the emergence of the clear development of the experimental group from the control group to the researchers' focus on this skill during the educational units, as the scoring skill is one of the basic skills for learning in every game or event, which is to invest the technical capabilities of the players to score towards the goal. Consequently, researchers assert that the implementation of pragmatic methods and strategies in education is essential, as it facilitates the acquisition of skills in the most efficient manner, thereby minimising time and effort for learners, particularly when practicing a skill for the first time. It fosters learner encouragement and instills confidence in the technical skills required, resulting in superior and more rapid performance within the experimental group (Al Behadili& Kasim, 2022; García-Ceberino et al., 2020).

View, analyze and discuss ball dribbling test results

Table (17) presents the outcomes of the ball rolling test for the research sample in both pre- and post-tests. The results indicate a significant difference, with the arithmetic mean of the differences between the pre- and post-tests of the experimental group being (24.75) and a standard deviation of the differences being (0.23).

Proximus Journal of Sports Science and Physical Education
Volume 2, Issue 4, April, 2025
https://proximusjournal.com/index.php/PJSSPE
ISSN (E): 2942-9943

The extracted calculated value (T) of 9.64 exceeds the tabular value (T) of 3.25 at 9 degrees of freedom and a significance level of 0.05, indicating a significant difference between the pre- and post-tests, with a development percentage of 57%. The arithmetic mean of the differences in the control group was 17.05, with a standard deviation of 2.58. The calculated T value was 5.60, exceeding the tabulated T value of 3.25, indicating a significant difference between the pre- and post-tests, while the percentage of improvement was 34.68%.

Table 17: Shows the arithmetic mean and standard deviation of the differences and the calculated and tabular values of (T) in the pre- and post-tests of the experimental and control groups of the ball dribbling test

Groups	The difference between the two tests		Value T Calculated	Value T Tabular	Ratio Development %
	M	SD			
Experimental	24,75	0,23	8,64	3.25	57 %
Control	17,05	2,58	5,60		34,68 %

To ascertain the veracity of the variations in arithmetic means between the experimental and control groups, the results are reported in Table (18).

Table 18: Shows the arithmetic media, standard deviations, calculated and tabular values of (T) for the experimental and control groups in the post-test dribbling the ball

Groups	**The difference between the two tests**		**Value T Calculated**	**Value T Tabular**
	M	SD		
Experimental	64,4	8,07	1,6	2.53
Control	57,53	13,96		

The results of the research sample in the ball rolling test in the post-test were (64.4), with a standard deviation of (8.07) for the experimental group and (57.53) number, (13.96) for the control group and extracting the calculated value (T) of (1.6) was smaller than the tabular value (T) of (2.53) under the degree of freedom (18) and the level of error (0.05) and this indicates that there is no significant difference between the two groups. The researchers attribute the absence of a notable difference between the experimental and control groups in the post-test, despite their improvement from the pre-test, to the increasing repetition of this skill in each educational or training unit, whether during warm-ups or gameplay. Saad Hammad posits that it is the primary skill a player must acquire, as it is the first skill they learn and practise before mastering other skills in the game. Nunes and Wilcox (2024) stated that the active engagement of the learner in the ongoing interaction with the educational program necessitates selecting the appropriate trajectory that facilitates continuity and enhances learning efficacy (Hall, 2018). The researchers assert that the enhancement observed in the experimental group is attributable to the guide's educational models, which effectively equip learners with substantial information retained in memory. When executing the skill, learners access the information presented in the guide, engaging numerous cognitive processes (Mitchell, Oslin & Griffin, 2020). In educational frameworks, which provide learners the chance to amalgamate their motor skills for fundamental competencies within a singular task, this aligns with Glaude (2022)s assertion that each group member possesses a designated role and must fulfil it, thereby assuming responsibility for the assigned task, necessitating the coordination of group members' efforts. The researchers attribute the superiority of the experimental group to the model's educational program, as well as the use of fixed and moving flexes for dribbling skills, which significantly enhanced scientific knowledge and practical applications.

Conclusions

Proximus Journal of Sports Science and Physical Education
Volume 2, Issue 4, April, 2025
https://proximusjournal.com/index.php/PJSSPE
ISSN (E): 2942-9943

Based on the statistical analyses of the test results pertaining to various physical talents and skills, the researchers arrived at the following conclusions:

1. The group that inquired about the educational models had a positive impact on the development of some physical abilities (speed and strength characteristic of speed) and skill (handling, drifting, scoring and dribbling).
2. The group that used the standard approach had a positive impact on the development of speed and handling capacity.
3. There were no significant differences for the experimental and control groups in the agility and flexibility tests.
4. The development rate of the experimental group members was better in physical abilities and skills compared to the control group members who obtained a lower development rate.
5. The highest rate of development in physical abilities was the share of speed among the members of the experimental group, and handling for skill abilities.

Recommendations

1. It is essential to utilise instructional models inside educational institutions to enhance certain physical and skill competencies in football .
2. Promotion of educational models for teaching football skills to deaf and mute players and enhancing their performance capabilities.
3. Highlighting the significance of teachers and trainers in the assessments utilised by researchers as a metric for evaluating physical and skill competencies.
4. The necessity to invent various educational and training tools that enhance technical performance and precision in fundamental abilities.

References

1. Abd Al Jabbar, S. M., Chnani, R. A., & Werytha, N. A. R. (2021). Design and Regulation of a Specialized Test According to the Phosphogenetic Energy System for Deaf and Mute Football Players. *Annals of the Romanian Society for Cell Biology*, *25*(6), 6171-6181.
2. Al Behadili, H. J. H., & Kasim, M. A. (2022). Developing Ball Dribbling And Passing Skills Using The Integrative And Reciprocal Methods Of Emerging Footballers. *International Journal of Revolution in Science and Humanity*, *10*(2), 13-20.
3. Al Behadili, H. J. H., & Kasim, M. A. (2022). Effects Of A Training Program For The Plyometric On The Harmonic Abilities And Muscular Ability Of Football Players. *European Journal of Interdisciplinary Research and Development*, *6*, 60-69.
4. Al Behadili, H. J. H., & Kasim, M. A. (2022). The Implications For Learning Of Transferring On Passing Skills In Junior Football Players. *Open Access Repository*, *8*(9), 39-49.
5. Altmann, S., Ringhof, S., Neumann, R., Woll, A., & Rumpf, M. C. (2019). Validity and reliability of speed tests used in soccer: A systematic review. *PloS one*, *14*(8), e0220982.
6. Ashworth, B., Hogben, P., Singh, N., Tulloch, L., & Cohen, D. D. (2018). The Athletic Shoulder (ASH) test: reliability of a novel upper body isometric strength test in elite rugby players. *BMJ Open Sport & Exercise Medicine*, *4*(1), e000365.
7. Azhar, S., Kim, J., & Salman, A. (2018). Implementing Virtual Reality And Mixed Reality Technologies In Construction Education: Students'perceptions And Lessons Learned. In *ICERI2018 proceedings* (pp. 3720-3730). IATED.

Proximus Journal of Sports Science and Physical Education
Volume 2, Issue 4, April, 2025
https://proximusjournal.com/index.php/PJSSPE
ISSN (E): 2942-9943

8. Bjørndal, C. T., & Gjesdal, S. (2020). The role of sport school programmes in athlete development in Norwegian handball and football. *European Journal for Sport and Society*, *17*(4), 374-396.
9. Caicedo-Parada, S., Lago-Peñas, C., & Ortega-Toro, E. (2020). Passing networks and tactical action in football: A systematic review. *International Journal of Environmental Research and Public Health*, *17*(18), 6649.
10. D'Elia, F., Mazzeo, F., & Raiola, G. (2018). The core curriculum in the university training of the teacher of physical education in Italy.
11. Dugdale, J. H., Arthur, C. A., Sanders, D., & Hunter, A. M. (2019). Reliability and validity of field-based fitness tests in youth soccer players. *European Journal of Sport Science*, *19*(6), 745-756.
12. García-Ceberino, J. M., Gamero, M. G., Feu, S., & Ibáñez, S. J. (2020). Differences in technical and tactical learning of football according to the teaching methodology: A study in an educational context. *Sustainability*, *12*(16), 6554.Hakman, A., Vaskan, I., Kljus, O., Liasota, T., Palichuk, Y., & Yachniuk, M. (2018). Analysis of the acquisition of expertise and mastery of physical skills for performing techniques by young footballers. *Journal of Physical Education and Sport*, *18*, 1237-1242.
13. Glaude, M. (2022). *Athletes' Perspectives of Group Dynamics in Professional Gridiron Football*. McGill University (Canada).
14. Hall, J. (2018). Developing expert performance in sport: integrating working memory training into football coaching.
15. Harvey, S., Gil-Arias, A., & Claver, F. (2020). Effects of teaching games for understanding on tactical knowledge development in middle school physical education. *Journal of Physical Education and Sport*, *20*(3), 1369-1379.
16. Khan, M. A., & Jose, T. (2021). Comparative study of physical fitness and physiological parameters between deaf/dumb and blind students of Amravati University. *Edu Sportivo: Indonesian Journal of Physical Education*, *2*(2), 76-84.
17. Kimball, R. I. (2021). "As Good as the Best": Gallaudet Football and the Battle against Normalization at the Turn of the Twentieth Century. In *The History of American College Football* (pp. 16-36). Routledge.
18. Komarudin, K., Suharjana, S., Yudanto, Y., & Kusuma, M. N. H. (2022). The different influence of speed, agility and aerobic capacity toward soccer skills of youth player. *Pedagogy of Physical Culture and Sports*, *26*(6), 381-390.
19. Kretchmar, R. S., Dyreson, M., Llewellyn, M. P., & Gleaves, J. (2023). *History and philosophy of sport and physical activity*. Human Kinetics.
20. Krustrup, P., & Parnell, D. (Eds.). (2019). *Football as medicine: Prescribing football for global health promotion*. Routledge.
21. Mahedero, M. P., Calderón, A., Hastie, P., & Arias-Estero, J. L. (2021). Grouping students by skill level in mini-volleyball: Effect on game performance and knowledge in sport education. *Perceptual and Motor skills*, *128*(4), 1851-1871.
22. Mitchell, S. A., Oslin, J. L., & Griffin, L. L. (2020). *Teaching sport concepts and skills: A tactical games approach*. Human kinetics.
23. Nunes, N. A., & Wilcox, K. (2024). Bridging theory and practice: The Chat Club's influence on Football Studies education. *Academic Journal of Sports Science & Medicine*, *2*(2).
24. Pawson, T. (2025). *The football managers*. Taylor & Francis.
25. Peterson, A., Dumont, H., Lafuente, M., & Law, N. (2018). Understanding innovative pedagogies: Key themes to analyse new approaches to teaching and learning.

Proximus Journal of Sports Science and Physical Education
Volume 2, Issue 4, April, 2025
https://proximusjournal.com/index.php/PJSSPE
ISSN (E): 2942-9943

26. Pihlainen, K. A. I., Santtila, M., Häkkinen, K., & Kyröläinen, H. (2018). Associations of physical fitness and body composition characteristics with simulated military task performance. *The Journal of Strength & Conditioning Research*, *32*(4), 1089-1098.
27. Prabakaran, G., & Annadurai, R. (2022). Effect of Aerobic Training on Selected Physical Variables of Deaf and Dumb Children. *International Journal of Physical Education Sports Management and Yogic Sciences*, *12*(1), 35-42.
28. Raastad, O., Aune, T. K., & Van Den Tillaar, R. (2016). Effect of practicing soccer juggling with different sized balls upon performance, retention, and transfer to ball reception. *Motor control*, *20*(4), 337-349.
29. Ramirez-Campillo, R., Alvarez, C., Gentil, P., Loturco, I., Sanchez-Sanchez, J., Izquierdo, M., ... & Granacher, U. (2020). Sequencing effects of plyometric training applied before or after regular soccer training on measures of physical fitness in young players. *The Journal of Strength & Conditioning Research*, *34*(7), 1959-1966.
30. Read, P. J., Oliver, J. L., De Ste Croix, M. B., Myer, G. D., & Lloyd, R. S. (2018). Landing kinematics in elite male youth soccer players of different chronologic ages and stages of maturation. *Journal of Athletic Training*, *53*(4), 372-378.
31. Saad Yassen, R. (2020). The Effect of a Tutorial Programme Using Interactive Video on the Aspects of Learning Some Gymnastics Skills Within Deaf and Dumb Pupils. *Assiut Journal of Sport Science and Arts*, *2020*(1), 20-45.
32. Salmela, V. (2018). *Effects of agility, change of direction and combination training on agility in adolescent football players* (Master's thesis).
33. Schulze, E., Mendes, B., Maurício, N., Furtado, B., Cesário, N., Carriço, S., & Meyer, T. (2018). Effects of positional variables on shooting outcome in elite football. *Science and Medicine in Football*, *2*(2), 93-100.
34. Valerii, N., Mykhailo, V., & Taras, C. (2021). Aspects of Increasing Efficiency of Young Football Players Physical Training Process.
35. Westera, W. (2019). Why and how serious games can become far more effective: Accommodating productive learning experiences, learner motivation and the monitoring of learning gains. *Journal of Educational Technology & Society*, *22*(1), 59-69.
36. Wijngaards-de Meij, L., & Merx, S. (2018). Improving curriculum alignment and achieving learning goals by making the curriculum visible. *International Journal for Academic Development*, *23*(3), 219-231.
37. Yang, C., Chen, R., Chen, X., & Lu, K. H. (2021). The efficiency of cooperative learning in physical education on the learning of action skills and learning motivation. *Frontiers in psychology*, *12*, 717528.
38. Zayer, M. A. M. (2022). Preparing special exercises to develop target speed with short distances and some basic skills in junior football players. *SPORT TK-Revista EuroAmericana de Ciencias del Deporte*, 9-9.