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THE EFFECTIVENESS OF THE COGNITIVE ACCELERATION STRATEGY IN LEARNING THE SKILLS OF HANDLING AND SUPPRESSION IN FOOTBALL FOR PEOPLE WITH MILD DISABILITIES

Maytham Mohsin Habeeb
Directorate of Misan Education, Ministry of Education of Iraq
maythamalbtaat78@gmail.com

Abstract
The present study sought to develop an educational program utilising the cognitive acceleration technique to teach handling and suppression skills in football for individuals with disabilities (deaf and mute). The study aimed to discern the distinctions between the experimental and control research groups in acquiring these two skills, as well as to compare the outcomes of the post-tests for both groups. The researcher employed an experimental design featuring two equivalent groups with pre- and post-tests. The research cohort comprised 24 players of Specialized School for Deaf and Dumb Football in Misan Governorate for the year 2024-2025. The researcher selected 20 players, allocating 10 to the control group and 10 to the experimental group as the primary sample, while 4 additional s players were recruited for the exploratory experiment. The findings indicated a beneficial impact of the cognitive acceleration strategy on the acquisition of handling and suppressing abilities in the experimental group, in contrast to the control group that employed the conventional method. The cognitive acceleration model shown a beneficial effect on improving the reflective thinking abilities of the experimental group players on handling and suppressing skills.
Keywords: Cognitive Acceleration, Handling And Suppression Skills.

Introduction

Currently, the globe is experiencing numerous scientific and technical revolutions that have significantly influenced the trajectory of education, a fundamental instrument for establishing a robust scientific foundation (Richta, 2018). We require imaginative and inventive folks, which necessitates contemporary schooling to enable their contributions to the swift transformations occurring globally (Skinner, Smith, & Swanson, 2018). Education is essential for the advancement of nations and individuals, facilitating the achievement of their ambitions and desires (Hozhabri, Sobry & Ramzaninejad, 2022). This advancement has resulted in the proliferation of many pedagogical approaches and strategies, significantly enhancing the development of science (Thomas, Bailey & Engeness, 2023). To achieve the intended objectives, the learner must amass a substantial volume of continuously updated information and possess the ability to procure accurate and pertinent data, thereby transforming it into genuine knowledge (Siedentop, Hastie & Van der Mars, 2019). To formulate more effective and impactful educational strategies for deaf and mute learners, it is imperative that they acquire knowledge that equips them to navigate new situations, utilise it to alter perspectives, make decisions, and cultivate innovative approaches to enhance learning, thereby enabling them to attain varied objectives through education (Maher, 2021). Consequently, employing an appropriate method for learning significantly improves the connection between educators and players in the educational process (Invernizzi et al., 2019). This technique emphasises their development and direction to foster independent learning, so enhancing the learning process and rendering it a crucial and successful component (Siedentop, Hastie & Van der Mars, 2019). The cognitive acceleration strategy is a significant educational method that has demonstrated efficacy in improving learning outcomes. This concept represents a novel educational approach, stemming from cognitive development research, and has been integrated into educational programs for learners

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(Mitchell, Oslin & Griffin, 2020). Cognitive factors, particularly those associated with cognitive failure, have garnered significant interest from educational scholars, as they are deemed a potential catalyst for various instances of social, academic, and other forms of maladjustment (Woods & Butler, 2020). These factors also influence the variations among learners in the velocity of their perception, their engagement with sensory and cognitive stimuli, and their reaction time to such stimuli (Hodges et al., 2021). The category of deaf and mute children constitutes one classification of individuals with special needs, as they encounter difficulties in learning, which may stem from inadequate or sluggish learning capabilities, or other factors associated with education, psychology, social circumstances, or health (Tanure Alves et al., 2024). Teaching them cannot be conducted using the same methods employed with typical children; rather, it necessitates specialised educational approaches, including devices and assistive tools, that enhance clarity and facilitate the educational process, thereby stimulating the learner's interest and augmenting their enthusiasm (Khalil & Hantira, 2022). The significance of the present research is clear in addressing the requirements of physical education for this demographic by developing an educational curriculum centred on descriptive sign language to instruct abilities in handling and suppression in football. The research is to examine the effects of this cognitive acceleration approach on learning abilities at the Al-Amal Institute for the Deaf and Dumb for individuals aged 14 to 15 years.

Search problem

The research problem emerged from the researcher's consistent observations on the advancement of the educational process, particularly in private institutions for the deaf and mute. Conventional approaches are predominantly utilised, which may not be broadly embraced by pupils, since they adhere to a singular approach that diminishes their active engagement in learning and application. Despite considerable progress in pedagogical techniques, there is a necessity for additional strategies focused on the organisation of activity and rest periods. These circumstances compelled the researcher to investigate the application of contemporary learning methodologies, including cognitive acceleration (Maher, 2021; Saad Yassen, 2020). by thoroughly integrating them, with the objective of gaining and mastering the abilities of handling and suppressing in football for deaf and mute kids aged 14-15 at Al-Amal School for the Deaf and Dumb.

Research Objectives

1. The research aims to prepare educational units with the strategy of cognitive acceleration in learning the skills of handling and suppression in football for the deaf and dumb
2. Identify the impact of the cognitive acceleration strategy strategy in learning the skills of handling and suppression in football for the deaf and dumb

Search Hypotheses

1. There is a positive impact of the cognitive acceleration strategy in learning the skills of handling and suppression in football for the deaf and dumb

Research Areas

Human Areas: The players for ages (14-15) years at Al-Amal School for the Deaf and Dumb.
Spatial Areas: The square inside the school.
Time Areas: for the period from 12/8/2024 to 25/9/2024.

Methodology

Research Methodology

The researcher employed the experimental method as the most suitable approach to address the research problem, as it effectively tests causal relationships and represents a rigorous method for resolving numerous scientific issues in practice (Andrew, Pedersen & McEvoy, 2019).

Research population and sample

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This section reflects the community of origin or model upon which the researcher bases the entirety and focus of their work. The researcher designated the subject of his study as the players of Specialized School for Deaf and Dumb Football in Misan Governorate for the year 2024-2025. The cohort comprised 24 players aged 14 to 15 years. Following the utilisation of 4 players for the exploratory experiment, 20 players remained, who were evenly divided into two groups: 10 players in the experimental group and 10 players in the control group.

Means of data collection:

To fulfil the research aims and acquire precise and accurate data, the researcher employed the following methods and instruments:

1. Arab and foreign scientific sources and references.
2. World Wide Web (Internet).
3. Personal Interviews.

Used Tools & Devices

1. Electronic computer number (1).
2. Canon cameras (2).
3. Signs.
4. Footballs (10).
5. Football Arena.
6. Tape measure in centimeters.
7. Whistle.

Field Procedures for Research

Description of the tests:

First / test of handling the ball in the direction of asmall tambourine at a distance of (10 m) (Pangrazi & Beighle, 2019).

Test objective : handling .

- **Tools used.**
  1. Legal footballs .
  2. Signs .
  3. Tape measure
  4. A small target with dimensions (100 x 75) cm.
- **Method of performance:** The student stands with the ball at a distance of (10 m) from the goal and when hearing the signal, the student handles the ball and is fixed towards the goal.
- **Registration method:** The laboratory is given (3) attempts, where two grades are given for the successful attempt, one score for the attempt that touches the crossbar and zero for the failed attempt.

Second / test to stop the movement of the ball from a distance of (6) until inside a square (2) meters (Zayer, 2022).

- **The objective of the test**: to suppress and control the suspension of the movement of the ball.
- **Tools used**: legal football, thenumber five, a square with a side length of (2) meters draws a line at a distance of (6) meters from the square.
- **Performance:** The tester stands behind the specified test area or the tester who advances to the test area tries to stop the movement of the ball and go again and so on and the tester repeats the five consecutive movements.

1. The movement of the ball must be stopped within the limited area of the test.
2. If the laboratory makes a mistake in throwing, try again.

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3. The attempt (correct) is not counted in any of the following attempts.
4. If the tester does not succeed in stopping the movement of the ball.
5. If the laboratory passes the specified area for selection.
6. If the ball touches the arm while stopping its movement.

❖ **Scoring method** :

- (2) score for each correct attempt and from the first touch, one degree for each correct attempt and from the second touch, (zero) if the ball goes out of the area specified for the test.
- (2) degree (each) correct attempt. (10) Scores of the sum of the five correct attempts .

Exploratory Experience

An exploratory experiment is characterised as a preliminary study undertaken by the researcher on a limited sample prior to the major research, aimed at evaluating research methodologies and instruments (Garton, Ratti & Giudice, 2020). To achieve precise results, the researcher performed an exploratory experiment for the experimental group of football skill assessments, comprising four pupils, on Wednesday, August 14, 2024.

Pre-tests

The pre-tests were administered to the two research groups (experimental and control) prior to the implementation of the educational curriculum, with the pre-test done on Thursday, 15/8/2024.

Main experience

The researcher, after consulting experts in football and pedagogy, developed exercises based on the cognitive acceleration strategy aimed at enhancing fundamental football skills. Additionally, a series of instructional films demonstrating typical performance skills, along with explanations of the performance stages for each skill and a collection of images depicting technical skill execution, were created. The researcher designed educational exercises aligned with the motor capabilities of the players (deaf and mute). The educational program comprised eight units, delivered at a rate of two units per week (Sunday to Wednesday), with each unit lasting 35 minutes, implemented from August 18, 2024, to September 20, 2024.

Post-tests

Upon concluding the implementation of the units utilising the cognitive acceleration strategy, post-tests were administered to both the control and experimental groups on Sunday, September 22, 2024, at 9:00 AM, in the same location and under the identical conditions as the pre-measurement.

Statistical Methods

The researcher employed the statistical software SPSS-23 to analyse and extract the data.

1. Arithmetic mean.
2. Standard deviation.
3. Standard error.
4. Test (T).

Results

Presentation of the results of the pre- and post-tests of the control group for the studied variables:

Table 2: Shows the results of the tests of the control research group

Variables	Unit of Measurement	Pre-Test		Post-Test		T	Sig
		M	SD	M	SD		
Handling	**Degree**	**3.52**	**1.417**	**6.69**	**0.919**	**4.042**	0.002
Suppression	**Degree**	**3.51**	**0.911**	**7.11**	**0.995**	**5.121**	0.001

Presentation of the results of the pre- and post-tests of the experimental group of the studied variables:

Table 3: Shows the results of the tests of the experimental research group

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Variables	Unit of Measurement	Pre-Test		Post-Test		T	Sig
		M	SD	M	SD		
Handling	**Degree**	3.17	1.43	5.14	1.41	2.92	0.006
Suppression	**Degree**	3.82	1.61	5.25	1.48	3.06	0.005

Presentation of the results of the post-tests of the control and experimental groups of the studied variables:

Table 4: The results of the tests show the control and experimental groups

Variables	Unit of Measurement	Control		Experimental		T	Sig
		M	SD	M	SD		
Handling	**Degree**	5.14	1.41	6.69	0.919	4.92	0.000
Suppression	**Degree**	5.25	1.48	7.11	0.995	3.06	0.000

Discussion of the results:

The results, illustrated in Tables (2) and (3), indicate significant differences in the handling and suppression skills of football among deaf and mute players between the pre- and post-tests, favouring the post-tests of both the control and experimental groups. The researcher attributes this notable difference in the control group to the influence of the standard educational curriculum implemented by the teacher, alongside the players ' consistent engagement in their education. Tadesse (2019) affirms that experts, despite varying scientific and practical backgrounds, agree that an educational program, grounded in scientific principles for organising and structuring the learning process, will invariably enhance performance. This enhancement is contingent upon the implementation of suitable and incremental exercises, acknowledgement of individual differences, optimal repetitions, effective intervals, and oversight by specialised trainers within conducive educational environments regarding space, time, and resources utilised. (Al Behadili & Kasim, 2022; Suppal, 2021). The findings displayed in Table (3) regarding the handling and suppression skills tests in football for players with hearing and speech impairments indicate significant differences between pre- and post-assessments, favouring the dimensional measurements of the experimental group. The researcher posits that the cognitive acceleration strategy can be effectively utilised and applied, as evidenced by the educational units presented. The educational component encompasses the presentation of ideas and concepts related to knowledge and skills, while the applied segment has been carefully developed through exercises aligned with the educational program, adhering to the strategy of cognitive acceleration, which is pivotal to the educational process. This issue enhanced the performance levels of players with cognitive impairments, necessitating individualised attention from the researcher and considerable flexibility in their learning and comprehension processes. This approach activated their cognitive abilities and facilitated higher-level thinking in response to presented situations, while minimising errors in skill execution and reducing instances of oversight and distraction. The educational units facilitated the advancement of scientific reasoning through student discussions and analyses of various scenarios. Majeed, Ashour, and Hussein (2024), along with Özer Şanal and Torun (2024), affirm that lessons structured according to the cognitive acceleration strategy are intended to promote the progression of thought from the visual to the abstract stage in cognitive development. Instruction utilising this technique incorporates specific classroom management, characterised by active learner engagement and dialogues between the educator and players through small group collaboration (Al Behadili & Kasim, 2022; Mitchell, Oslin & Griffin, 2020). The studies indicate that the educational curriculum, incorporating specialised exercises, enhanced the level of tension and excitement among learners (Liu, 2021). Repetitive actions paired with enthusiasm serve as a productive element, and amplifying this form of engagement strengthens the

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efficacy of retained motor programs (Wu, Gao & Xiang, 2024). Brusseau et al (2020) stated that the diversity and innovation in physical education teaching methods are essential for fostering an atmosphere of enthusiasm and enjoyment for learners, hence facilitating rapid learning and successful mastery of sports motions and activities (Tariq & Sergio, 2025). The curriculum provided players ample time to practise and refine their skills, enhancing the quality of information and the efficiency of retrieval in alignment with the intended motor objectives (Mitchell, Oslin & Griffin, 2020). The brain functions as a substantial processing and storage entity, retaining programs and motor patterns for execution in alignment with acquired skills, while systematically organising motor programs (Al Behadili & Kasim, 2022; Williams, 2025). The findings presented in Table (4) indicate that the primary aim of the research was accomplished, demonstrating the experimental group's superiority over the control group in acquiring the abilities of handling and rolling a football among deaf and mute players . The researcher ascribes this superiority to the cognitive acceleration strategy employed in the study, together with the periodic and continual implementation of competitive activities. The researcher asserts that the subpar performance associated with the teacher's method stems from the provision of precise instructions to pupils, which obstructs their capacity to articulate their thoughts freely. In contrast, the cognitive acceleration technique positions the student at the core of the learning process, with the teacher's function confined to providing guidance (Danijela, 2021).

Conclusions

1. The results indicated a beneficial outcome for the members of the experimental group who employed the cognitive acceleration technique in acquiring abilities related to handling and suppression in football for deaf and mute children.
2. The control group is developing skills in learning to manage and suppress football for players .
3. The experimental group employing the cognitive acceleration technique in learning football handling and suppressing abilities for deaf and mute pupils surpassed the control group in dimensional assessments.

Recommendations

1. Implementing research in alignment with the cognitive acceleration plan for various events and competencies.
2. Organise the course content utilising an educational design that aligns with the cognitive acceleration technique and adheres to the established educational objectives of other sporting events.

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