

# The Mechanisms of Selection of Academically Excellent Pupils in Sport (A Field Study in Some Primary Schools in Constantine and Bordj Bou Arreridj)

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## Abstract:

The aim of this field research is to clarify the epistemological, theoretical and methodological background applied in the selection of talented students in sport. It also aims to shed light on the mechanisms and methods underlying the process of selecting physically excellent students at primary school level. The importance of this research lies in highlighting the importance of selection in the field of sport, as it serves the purpose of early identification of students with inherent and specific abilities, directed towards appropriate sporting activities that will enable them to reach high levels and potentially elite levels.

Consequently, it is necessary to provide them with the appropriate care to develop their talents and enrich them academically. In order to verify this, a descriptive-exploratory approach was used, which involves studying the phenomenon as it exists in reality, providing an accurate description. The study sample consisted of 10 teachers specialising in sports activities, who were purposively selected. In terms of data collection tools, semi-structured interviews were found to be more responsive to the research variables. Their reliability was calculated using the "Lauchey" equation. Data were collected and analysed using frequencies and percentages.

It was concluded that the process of sports selection goes through different stages, using specific criteria, and requires a certain amount of time depending on the type of sport. The most important factor remains the selection process during the early years of a student's athletic talent, allowing the talented child to develop their abilities and achieve maximum performance at an early age.

**Keywords:** Physical activity; Talented pupils; Excellent pupils; Selection.

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## Introduction:

Research and attention to gifted students is an essential process in any sound educational system that aims at development and progress in achieving desired goals. Supporting and nurturing the creative individuals among them is a necessary duty for all social institutions, as they are a valuable asset that should be preserved. Talent is a phenomenon that can be developed in individuals if they

are provided with appropriate conditions that enable them to enhance their abilities and potentials through fruitful interaction with their surroundings (Mohamed, 2018, p.19). Developed countries pay great attention to this category and consider it an indicator of cultural progress, as they consider the process of identifying and recognising them as a fundamental pillar for developing their abilities and benefiting from them in different areas of life.

Physical education and sport is one of the fundamental and important areas associated with education and youth, as it is considered a vital outlet. Therefore, it is important to focus on it, to work on its development based on clear scientific foundations, to pay attention to the gifted in this field, to develop and refine their talents, and to achieve high levels of performance in any sporting activity linked to proper scientific planning. The preparation and training period may last several years in order to bring beginners to an integrated level of technical performance, which can only be achieved by selecting and discovering exceptional beginners in the early stages of development. The selection process is considered to be a precise process in the preparation stages, through the testing of their physical, functional and psychological abilities, as well as the measurement of anthropometric characteristics specific to the particular skill activity (Bastuti, 1997, p.78).

In the past, the selection process was based on factors such as chance, observation, and personal experience.

However, with scientific progress and advancement, researchers in various fields have focused their efforts on determining scientific methods and approaches in the process of selecting gifted individuals and guiding them to appropriate sporting activities that match their abilities, enabling them to achieve the best and highest levels.

Selection in the field of sport is important and necessary, especially for those who excel in sport, as its main objective is to nurture and care for them. Therefore, the current study aims to explore the mechanisms of selection of physically gifted students. Research questions:

- Do physical education teachers rely on age as a factor in sport selection?
- Do PE teachers use specific criteria in sport selection?
- Do sports selection methods differ according to the type of sport?

#### **Previous studies:**

A study conducted by Fannoush Naseer titled "The Role of School Sports in Selecting and Guiding Students with Athletic Talents to Elite Practices" aimed to answer the following questions:

- What considerations should be made to make school sport a source of selection of young talent and a fundamental support for elite sport?
- How can school sport be elevated to elite level?

The aim of this study was to shed light on school sport and find optimal and effective ways to select and guide talented students, and to draw the attention of physical education teachers to the importance of selection and guidance.

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The researcher used a descriptive method and the sample consisted of secondary school physical education teachers.

**Study variables:** Selection, physically gifted child, physical education teacher.

Method and tools:

**Theoretical study:** Reviewing all bibliographic data and relying on sources, references and similar elements of research.

Questionnaires were used as a tool to collect data and information.

Another study by Yousefi Fathi and Rasoul Nouraddin entitled "Requirements of Talent Selection Processes and Their Application in School Sports at the Intermediate Level" aimed to answer the following questions:

Do physical education teachers understand the selection process?

The aim of this study was to identify the requirements used in the selection of talented individuals in school sport, including physical, psychological and biological determinants, and to identify the scientific bases.

The researcher used a descriptive method and the sample consisted of secondary school physical education teachers.

Study variables: Sport selection, physically gifted child, physical education teacher.

Method and tools:

**Theoretical study:** Review of all bibliographic data and reliance on sources, references and similar elements of research.

Questionnaires were used as a tool to collect data and information.

#### **- Comments on the studies:**

From the presentation of previous studies, it is clear the relationship between them and the current study, as most of these studies revolve around adopting a scientific and objective basis in the process of selecting athletic high achievers. In this study, however, we will try to look more closely at the mechanisms of athletic selection.

**1. In terms of objectives:** It can be observed that there is a common goal among these studies, which is to follow modern scientific principles and apply specialised tests in the process of selecting talented athletes. However, there are secondary objectives that vary between the studies.

**2. Sample:** The studies included physical education teachers, but there was a difference in the type of educational level.

**3. Subject matter:** Although the formulation of the subject is different, there is agreement on the variables, as the studies shared the following variables: selection, gifted child, physical education teacher.

**4. In terms of methodology:** The classroom methodology was used because of its suitability and the nature of the subject. The current study also used the same methodology to suit its nature.

**5. In terms of tools:** Questionnaires were used as a data collection tool. However, in our current study we used semi-structured interviews conducted with a group of primary physical education teachers.

**6. Regarding the findings:** Most studies agreed on the importance of the selection process as a suitable scientific tool and the need to apply it based on scientific principles. Selection is considered to be the optimal and practical solution to overcome randomness in the selection of sporting excellence.

## **I. Athletic talent:**

### **1. Definition of talent:**

In everyday language, it means to give something that you can take and acquire.

In technical terms, it is a high level of awareness, sensitivity and ability to understand perceptions that are transformed into emotional and intellectual experiences.

It is a phenomenon that can be developed in individuals if they have the appropriate conditions that allow them to develop their abilities and dispositions through fruitful interaction with the environment in which they live.

It is also considered to be above average, or in other words, the result of specific abilities. This result is obtained through averages, and this applies to all areas of life: language, mathematics, sports, art and others.

Renzunlie (1978) defined talent or excellence as the product of the interaction of three characteristics:

- Above average general mental ability.
- A high level of commitment to the task.
- A high level of creativity.

**2. Gifted child:** This refers to a child who exhibits behaviour in cognitive, intellectual and physical areas that far exceeds that of his or her normal peers. This requires educational intervention to enrich and develop these abilities, and ultimately to achieve the maximum potential allowed by their abilities and skills. Alternatively, it refers to a child who has extraordinary abilities or exceptional performance that distinguishes them from their peers in one or more areas valued by society, especially in the areas of intellectual excellence, creativity, innovation, academic achievement, and motor skills (Zaytoun, 2016, p. 20). They belong to the group of students with special needs, and we need to meet their needs like other students, based on the principle of equal opportunities in society. When using the term education, it is possible to say that there are several terms for the gifted: the gifted, the creative, the talented, the genius.

### **3. Definition of selection:**

Linguistically, selection means to choose something.

Terminologically, it is the process of choosing suitable people or things. It is a term used in all human, scientific, technological, medical and sporting fields and is synonymous with the word choice.

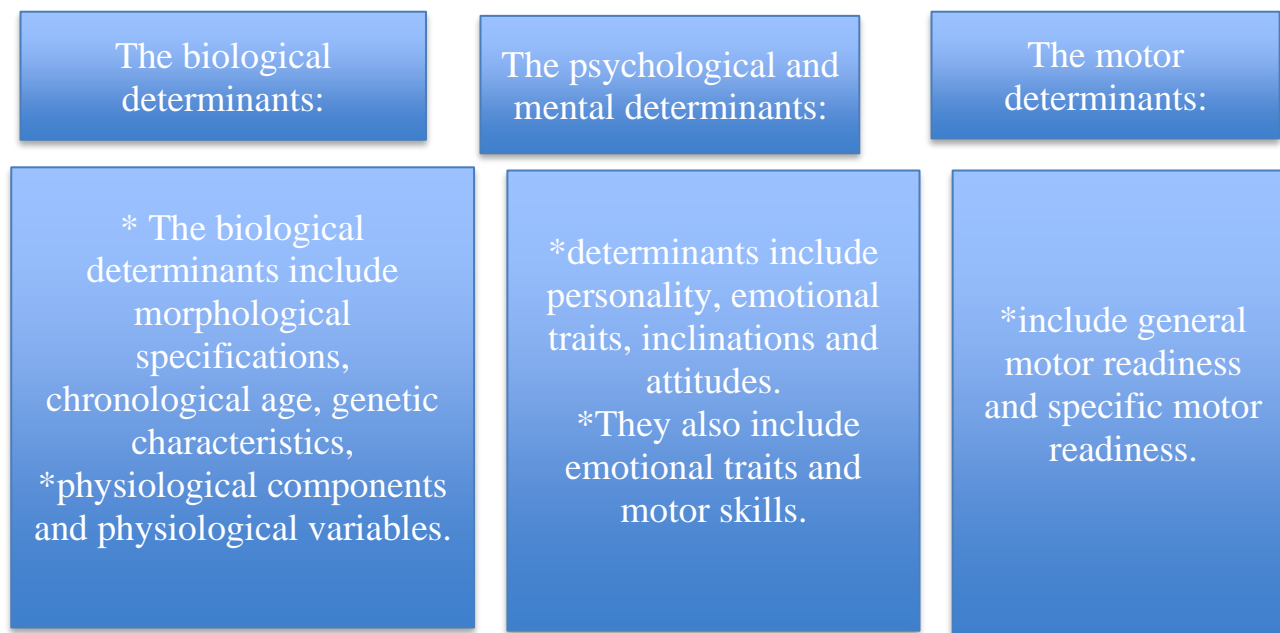
**4. Selection in sport:** It is the process of finding individuals within a large population who have the potential to demonstrate high ability in a particular sport (Richard, 1998, p. 115).

**5. Selection objectives:**

The selection process achieves several sporting objectives, the most important of which are:

- To identify at an early stage the best young sportsmen and sportswomen in order to promote them at an early stage to a higher level or to maintain them at that level for as long as possible.
- To guide beginners to the sport that best suits their potential, physical ability, aptitude and orientation.
- Identify the typical characteristics (physical, psychological, functional and physical) required for sporting activities.
- To direct efforts and potential towards the best beginners who are expected to reach higher levels.
- Developing the level of the sport by improving the performance of the best beginners (Mohammed, 2018, p. 21).

**6. Sport selection determinants:** These are the factors that select students who excel in sports, including:



(Al-Hawi, 2004, p. 48)

**7. Stages of sports selection:** The sport selection process is divided into three main stages, each with its own objectives and requirements. Each stage depends on the others as they are interrelated, overlapping and influencing each other. These stages are

**7-1 Initial selection stage:** This stage involves the initial identification of talented beginners. Its aim is to determine the health status of beginners and their medical fitness to participate in sport.

It also aims to assess the initial level of physical, skill, morphological, functional and personal attributes. It reveals the potential of beginners and predicts their future performance if they continue to participate effectively in the sport or activity. This stage is particularly important as it allows beginners to participate in physical education, taking into account their interests and preferences for the type of sport they wish to pursue.

**7-2 Specialised Selection Stage:** Specialised selection is the most complex type and involves several specialised assessments, measurements and tests to objectively evaluate advanced beginners. Its aim is to select the best beginners among those who have passed the tests of the first stage and to direct them to the specific sport or activity that corresponds to their potential, after a training period of between one and four years, depending on the type of activity or sport.

**7-3 Qualifying selection phase:** The aim of this stage is to accurately determine the characteristics, abilities and potential of the individual after the completion of the second stage of training and to select the most competent beginners to achieve a high level of sport. This stage focuses on measuring the level of morphological and functional characteristics necessary to achieve high performance. It is the stage that reveals the beginner's ability or potential to achieve high sports results. (Mohammed, 2018, p. 25)

## II. Method and tools:

### 1. Study Method:

Given the nature of the study, an exploratory descriptive method was adopted as the most appropriate for this type of study. This method aims to describe and explore the data as they are in reality, providing the basis for interpreting and analysing the results.

**2. Study Community:** The study community consists of teachers specialised in physical education.

**3. Study sample:** The sample was purposive and included 10 specialised physical education teachers at the primary level.

**4. Study limitations:** Every study, regardless of its type or methodology, has boundaries that must be respected. In the present research, its procedures were carried out within specific temporal, spatial and epistemological boundaries that distinguish it from others.

**4-1 Spatial boundaries:** This study was conducted in some primary schools in the provinces of Constantine and Bordj Bou Arréridj.

**4-2 Temporal boundaries:** The study was carried out in January 2023.

**4-3 Epistemological limits:** This research is an attempt to identify the difficulties faced by undergraduate students in formulating the problem and constructing the hypothesis. It adopts a pedagogical approach to explore and study the phenomenon, with the aim of understanding the subject of the study.

**5. Study instrument:** Due to the nature and importance of the subject of the study, a semi-structured interview was chosen as the data collection instrument as it is the most appropriate for this study.

**6. Validity of the study instrument:**

In order to assess the validity of the study instrument, Laoche's equation was used to calculate the coefficient of agreement between the raters regarding the presentation of the paragraph or question for the studied attribute:

$$S_{vr} = \frac{n - N/2}{N/2}$$

$S_{vr}$  = content validity according to Laoche's equation.

$n$  = number of raters who agreed that the statement measures the attribute.

$N$  = total number of raters.

After applying the equation, a validity coefficient of 0.80 was obtained, indicating high validity, as shown in the following table:

A table showing the calculation of the validity of the study instrument.

Statistical methods used:

- Due to the nature of the study, content analysis using the Parsons method was used to analyse the content, relying on frequencies and percentages within and outside the axis to determine the position and influence of the axis among other axes.
- Frequencies and percentages.
- Laoche's equation to calculate the validity of the instrument.

**8. Study questions:**

- 1- What are the different methods you use to select sports talent?
- 2- What criteria do you use to select sporting talent?
- 3- Is language ability one of the criteria in the selection process?
- 4- Do you use the same selection mechanisms for all sports?
- 5- What is the appropriate age for sports selection?
- 6- What is the duration of the selection process?

**III. Results and discussion:**

Number	Main Axis	Sub-axes	Number of	Percentage inside the axis	Result	Percentage outside	Result

			repetition s			the axis score	
01	The methods used by specialist sports teachers to select people with athletic talent.	Selection by stages (first elimination - second selection by teaching techniques - final selection by competition) Selection by tests (physical - morphological - cognitive-motor - technical) Selection by type of sport (Individual: Physical assessments - Strength tests - Speed tests. For team sports: Competitions between teams)	7 4 2	53,58% 30,77% 15,38%	100%  	9,21% 5,26% 2,63%	%17,1
02	The criteria used by specialist sports teachers to select	Notes: Tests: (Cooper Endurance Test - Yoyo Intermittent Recovery	3 7 4	21,43% 50% 28,57%	100%  	3,95% 9,21% 5,26%	18,42%  



	people with athletic talent.	Test - VOmax Measurement - Speed Measurement) Use of equipment: (hurdles - cone - ball)					
03	Is language proficiency part of the selection criteria?	Yes (Necessity of understanding the instruction - Important) Additional factor only	9 1	90% 10%	100% 	11.84% 1.35%	13.15% 
04	Use the same mechanisms for selecting all sports	Between 10-12 years old. Between 6-9 years old. Between 4-5 years old.	7 4 1	58,33% 33,33% 9,99%	100% 	9,21% 5,26% 1,31%	15,78% 
05	The appropriate age for selecting athletically talented individuals.	Between 10-12 years old. Between 6-9 years old. Between 4-5 years old.	7 5 3	46,67% 33,33% 20%	100% 	9,21% 6,58% 3,95%	19,74% 
06	The necessary duration for the sports selection process.	From 5-6 sessions. From 2-3 months. From 1-3 years.	5 4 1 1 1	41,67% 33,33% 8,33% 8,33% 8,33%	100% 	6,58% 5,26% 1,31% 1,31% 1,31%	15,77% 

		It depends on the coach's experience. According to the type of sport.					
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#### The axis of the appropriate age for sports selection:

Based on the results obtained from the table, it can be observed that 19.74% of the physical education teachers confirmed that the appropriate age for talent selection is between 10 and 12 years, with a percentage of 46.67%. In some sports, such as gymnastics, the appropriate age range is between 4 and 6 years, which represents 33.33%. The selection between 6 and 9 years was 20%. Wistowski suggests that the age range for beginners in individual sports is between 11 and 13 years, while in team sports it is between 10 and 12 years. For gymnastics and swimming, the age range is between 6 and 7 years (Mohamed, 2018, p. 24). This confirms the first hypothesis, which states that physical education teachers rely on the factor of age when selecting sports talents.

#### The axis of criteria used in the selection process:

The results show that 18.42% of the sports teachers use tests in the selection process, which represents 50%. Some also use a combination of tools and methods, representing 28.57%, while others rely on observation, representing 21.43%. Abu Alaa and Ahmed Omar also confirm that in the process of selecting sports talents, tests and organised observation are used to measure the growth of morphological and functional characteristics, the speed of development of physical and psychological characteristics, and the child's mastery of sports skills (Radwan, 1998, p. 112). This fulfils the second hypothesis, which states that physical education teachers use tests in the process of selecting physical talents.

#### The axis of methods used in the selection of sports talents:

From the results obtained in Table 1, it can be seen that 17.10% of the sports teachers confirm that the process of selecting sports talents goes through stages, that is, 53.85%. The selection is made on the basis of a series of physical qualifications in 30.77% of cases, and through selective choices in individual sports (speed, strength, etc.) and team sports (competition between teams) in 15.38% of cases. Many researchers in the field of sport agree that the process of selecting physically talented individuals goes through stages, with the first stage being preliminary selection, followed by a specific selection stage, and finally the qualification stage (El-Hawi, 2004, p.42).

#### The axis of using the same selection mechanisms for all sports:

The results in Table 1 show that 15.78% of the sports teachers state that the selection mechanisms vary according to the type of sport, i.e. 58.33%. They converge in general tests at a rate of 33.33%,

while others state that the selection mechanisms vary in psychological criteria at a rate of 8.33%. Each sport activity requires specific characteristics in its practitioners (physical requirements, physical and motor skills, psychological and mental factors, social and cultural aspects) (El-Hawi, 2004, p.37). This fulfils the third hypothesis that the mechanisms of sport selection vary according to the type of sport.

#### **The axis of language control in the selection process of sports talents:**

The results in Table 1 show that 13.15% of the sports teachers consider language control to be one of the selection criteria, i.e. 90%. Only 10% consider it to be an additional factor. Thornidike confirms that talented individuals have a high level of verbal and intellectual fluency, spontaneous flexibility, and the ability to quickly understand, pay attention, and perceive the essence of things (Al-Zaytoun, 2016, p.60).

#### **The axis of the duration of the selection process of sports talents:**

The results in Table 1 show that 9.19% of the physical education teachers indicated that the necessary duration of the selection process is between 5-6 sessions, which represents 41.67%, between 2-3 months, which represents 33.33%, and between 1-3 years, which represents 8.33%, depending on the type of sport and the experience of the coach.

#### **IV. Conclusion:**

From the analysis of the table results, it can be concluded that the process of selecting sports talents is based on a number of principles, steps and factors, including:

- Selection of sports talents at an early age, usually between 10 and 12 years old, especially in sports such as gymnastics and swimming, where the selection age ranges from 4 to 6 years old.
- The selection of physically talented individuals is done through precise tests that measure abilities in a scientific and modern way.
- There are three main stages in the selection process: pre-selection, secondary selection and final selection.
- Language control is considered one of the criteria for selecting sports talents, as it facilitates communication, understanding the coach's instructions and their application.
- Selection mechanisms vary according to the type of sport (individual or team).
- The duration of the selection process for sports talents ranges from 5 to 6 sessions in order to ensure an accurate selection.

Therefore, it is emphasised that sports administrators in general and physical education in particular should use modern and appropriate scientific methods in the process of selecting sports talents if they want sports practice to develop and flourish in our country. The focus should shift from quantity to quality, with the aim of improving the quality of athletes and paying attention to the sports selection process, especially in primary schools, which is the appropriate age to identify

skills and talents. It is also important to improve the quality of those involved in the process, especially teachers, through continuous training to benefit from the latest developments in the field of sport.

Furthermore, such studies should be disseminated to a wider group of teachers to ensure an accurate and comprehensive understanding of the process of selecting sporting talent. Researchers have highlighted the importance of focusing on talent selection and developing a guide that physical education teachers can use to facilitate the selection process. Proper sports selection is the only gateway and pathway to identify sports talent and guide them towards appropriate sporting activities. The category of talented individuals is a valuable asset that needs to be maintained, nurtured, developed and refined. The selection process allows for the proper identification of true talents who can make a difference in the future, honour the country and take sports in our country to a higher level and proudly represent our flag in national and international arenas.

### Appendix:

Table of validity of the tool:

N°	Statement	Measured	Not measured	Item Validity
01	What are the different methods you use to select sports talent?	06	00	01
02	What criteria do you use to select sporting talent?	06	00	01
03	Is knowledge of languages one of the selection criteria?	04	02	0.33
04	Do you use the same selection mechanisms for all sports?	06	00	01
05	What is the appropriate age for selecting sporting talent?	06	00	01
06	How long should the selection process take?	05	01	0.66
Validity of the tool:	0.83			

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