

# Research on the Talents Selection of Football Players Based on Big Data

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**Abstract:** Football is known as the "Most Popular Sport in the World", and the charm of football is unmatched by any other sports. With the rapid development of modern football, the degree of specialization of training is becoming higher and higher, and the selection of excellent reserve talents has been paid with more attention. In particular, the integration of sports and science and technology enables the competition, training and talents selection more scientific. The development of big data has provided us with evidence for the scientific and rational selection of reserve talents in football. This study analyzes the advantages and restrictions of talent selection of football players under the background of big data. The application methods of talents selection of football players is summarized with the aim to serve the talents selection of football players in China and promote the development of football in our country.

## Introduction

Since the founding of the People's Republic of China, China has always attached great importance to the development of football. After a period of study and exploration, China has embarked on the road of football professionalism [1]. Compared with the development of football of other countries; the development of football professionalism in China is at a low level, which is caused by the lack of a large number of professional football players in China. Although the development atmosphere of football in China is relatively weak, our country has been learning from the advanced ideas of developed countries in football. Especially along with the deep understanding of football sports and related research and the advent of big data era, the talents selection of football players is integrated with science and technology. Besides, the potential football players can be exploited by the use of information data provided by big data to create a sound environment for the cultivation of football talents.

## 1. The Advantages of Talents Selection of Football Players Based on Big Data

### 1.1 Data of Talents Selection by Dynamic Collection

Under the background of big data and with the continuous development of information technology, mobile phones, tablets, smart watches and other devices can be used to continuously collect and transmit all kinds of material related information through the Internet and the Internet of things, which is especially true to the talents selection of football players. In addition, a large amount of information and data collected over a long period of time forms a dynamic database [2]. In this database, relevant personnel can filter the effective information on talents selection of football players, so as to solve the problem in static data and shortsighted measurement data in the traditional index. For example, mobile phones and computers can collect information for a short period of time, but the information can be collected all day, and the continuity of information collection can be guaranteed, which creates better conditions for the indicators in talents selection.

### 1.2 Prediction of Laws on Changes and Development of Football Players

In the past, the development potential of football players was predicted mainly by the changing

trend of indicators. However, there are defects in this method, and there is a certain error between the law reflected by sampling statistics and the law of object, and the collected data is static, which makes it impossible to accurately predict the development potential of football players [3]. The integration of big data and the talents selection of football players makes the collection and storage of information data of football players meet the current needs, and the speed of data analysis and timeliness of results are greatly improved. For example, if you want to measure the height range of football players across the province on the campus, you need to measure each person and then the maximum and minimum values can be picked. Such method is not accurate, but the introduction of big data can improve the efficiency of data analysis to get the results in the shortest time.

### **1.3 Considerable Talents Selection Data Assets**

With the help of modern technology, the tactical level of football players can be comprehensively collected and analyzed, which breaks the consideration of the tactical level of football players in traditional closed scenes [4]. The collection and use of big data information can be used to establish a reliable range for soccer selection. Within this scope, the players needed by the team can be quickly found, and the football player database can be formed accordingly. The athlete information provided in this database is a valuable "data asset", which not only provides reliable information for the selection of football players in relevant sports departments, but also has important value for the development of the whole sports industry. Thus, the construction of selection mode of football player can improve the success rate of talents selection, thus a high-value "data asset" can be formed.

## **2. Limitations in the Selection Mode of Football Players Based on Big Data**

### **2.1 Static Index Data**

Juvenile football players are as the object in talents selection, and physical or individual characteristics in each stage are different to certain extent, while the data collection of talents selection index of football athletes is very complicated, thus it is difficult to collect index data that is consistent to the requirements in real time manner, which the existing reference data is subject to effectiveness. For example, the height index of football players, football players, in their teenage stage, are generally in the school period. After entering school, it is difficult to keep a continuous record of their height data, and it is hard to establish a corresponding and complete height growth curve, and the condition of maturity of the players fails to be reflected in a timely manner.

### **2.2 Short-sightedness of Measurement Data**

Generally speaking, the recorded data of talents selection mainly reflect the level of football players at a certain time point, which cannot be directly used as the main basis for judging whether they are talents in football sports or not [5]. The shortsightedness of the measurement data leads to the lack of professionalism in the selection of football players. For example, some adolescents at early puberty could be selected early, while those at late maturity were eliminated, reflecting the relationship between anthropometric data at a specific age and athletic ability. However, if we ignore the characteristics of its changes, it is likely to cause misjudgment in selection of football players, leading to the lack of professionalism in the talents selection of football players.

### **2.3 Uncertainty of the Function Mechanism**

In terms of talents selection, some innate factors, such as physical, psychological and intellectual factors, are difficult to be changed. However, the acquired factors are characterized with variety due to the individual differences [6]. The innate factors cannot be changed, while the acquired factors can make up for the comprehensive quality level through learning and training. For example, some

football players with no obvious innate advantages are motivated to reach unexpected levels after training. However, due to the complexity of acquired factors, talents selection of football players is affected by various factors in practical cases, such as measurement technology, development level of data statistics technology and so on, which will affect the talents selection of football players.

## **2.4 Closed Smart Assessment**

In term of the smart assessment of football players, the evaluation of their skill level and tactical understanding and application level are assessed [7]. This index plays a key role in short-term performance level and long-term development potential of football. Because in the process of practical considerations, it is difficult to determine environment for assessment, enclosed test is usually used as the standard for data collection and evaluation. Influenced by the individual differences of football players and physiological conditions, the data information collection and continuous tracking were more difficult, and the achievement of short-term cannot be used as main basis to judge the professional level of football players, as a result, it is hard to observe the potential development of football players.

## **3. Application Method of Football Player Selection Mode Based on Big Data**

### **3.1 To Determine the Scope in Talents Selection**

The characteristics of big data determine that the talents selection of football players is extensive, but in order to select professional football players, it is necessary to determine the scope in talents selection, so as to obtain more professional football players. The selection of football players in campus can be made in a relatively narrow scope, the most of the members are amateurs, professional football players share a relatively small proportion, and universities should do more publicity. The limitations should be decreased by expanding the scope in talents selection to attract more independent football enthusiasts, thus increasing scope of talents selection. As a result, the outstanding and professional football players can be obtained.

### **3.2 Proceeding from the Athlete's Physical Condition**

The development path of football professionalism has a high requirement on the comprehensive quality of players, which not only requires their physical quality to reach certain standard, but also pays more attention to their weight, physical coordination and other data [8]. Therefore, in the selection of football players, their physical conditions and other aspects of football players should be taken into consideration. Through the fair assessment of their physical conditions, the players with high comprehensive quality can be selected. When assessing football players, it is necessary to test their sports endurance, sprint speed, etc., and their vital capacity and respiratory rate should be assessed. The data obtained will be reviewed in accordance with the indicators stipulated by the state, so as to select the appropriate athletes. In addition, physical examination should be conducted in the selection process to avoid the hidden diseases of athletes.

### **3.3 Accurate Athletic Ability of an Athlete**

Football is a systemic sport, and athletes' athletic ability is a key part, which can directly affect the results of their follow-up sports training [9]. The selection of football players is conducted with information collection to select more excellent and potential players. In this process, it is necessary to test multiple capacities in sports of athletes, such as speed, explosive power and endurance, etc. After the test, the data will be collected and sorted out. Through the analysis of these data, they will be included into the selection criterion so as to effectively judge each football player's athletic ability. For example, the sitting forward bend is used to test the athletes' human flexibility. Through the collation and analysis of the test data, their athletic ability can be judged.

### 3.4 Cultivation of Capability in Comprehension and Absorption

An excellent football player should be equipped with abundant professional theoretical knowledge, and they should show good performance in comprehension. Excellent football players can quickly understand the theoretical knowledge conveyed by the coach, while football players with poor comprehension ability will be difficult to become a qualified player due to the difficulty in absorbing the theoretical knowledge conveyed [10]. Therefore, in the selection of football players, the understanding and absorption ability of football players can be taken as an indicator of investigation. In the selection of football players, attention should be paid in select personnel with strong understanding and absorption ability. Secondly, the psychological quality of football players is very important. In the selection of football players, comprehensive evaluation should be conducted according to the collected data and information, and comprehensive statistical analysis should be conducted from the indicators such as their physical condition, understanding ability and psychological quality, so as to select the football players that meet the requirements and make contributions to China's football.

### 4. Conclusion

Above said, the advantages and disadvantages of each indicator in the selection of football players can affect the quality of football players. China gives more emphasis on football and higher requirements are put forward in the selection of football players. Under the background of the big data, the analysis on the advantages and limitations in the talents selection of football athletes is conducted to understand the importance of talents selection. Proceeding from the current actual situation, the selection method of football players is summarized to choose the football players who meet the requirements, so as to promote the development of football sports in China.

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