

Designing Template for Talent Identification and Development in Sport

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Abstract

The debate on whether there is anything called “talent” has been laid to rest. It has been verified that there are indeed some talented individuals. Identifying talent has many benefits. So, identifying and developing talented individual in all human domains, sport inclusive, has become a big business. If an organization is to stay ahead of its competitors, such entity must recruit and develop talented individuals. Unfortunately, there are yet no accurate and objective means of identifying talented individuals, be it in sport or other domains. It is more difficult in sport because of its complex and dynamic nature. The purpose of this study therefore, is to propose a template for identifying and developing sport talents.

Key words: Talent; Talent identification; Talent development

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INTRODUCTION

“Talent” is a word with many interpretations. The review of related literature of the word indicated that scholars strongly debated whether there is such a thing called

“talent”. However, Howe, Davidson, and Sloboba (1998) verified the reality of talent. Also, Snyder, Mulcahy, Taylor, Mitchell Sachdev, and Gandevia (2003) in their study provided solid evidence that there are individuals that are talented in a domain. Talent is described as the adequate aptitude or ability of an individual that is above the normal average. It is a special and natural ability or capability for achievement or success. Talent designates the outstanding mastery of systematically developed ability, called competencies (knowledge and skills), in at least one field of human activity to a degree that places a person at least among the top 10% of age peers who are or have been active in that field (Gagne, 2011). Moon (2003) referred to it as the exceptional natural ability and capability to attain goal. Relating talent to sport, he was of the opinion that athletic talent must be exceptional natural ability to perform a sport-related task. A child who is talented is thought to show promise, is gifted and possesses innate abilities with the potentials to excel (Young, 2006). Encarta Dictionary defined talent as an unusual natural ability to do something well, especially one that can be further developed by training.

Talent identification, therefore, can be described as the process of recognizing participants with the potential to become elite players. This process entails predicting performance over time by measuring physical and sociological attributes as well as technical abilities. It takes into account the development of the most important and indispensable parameters for success in sport. The idea that talented individual can be identified in a given domain is not new. The beginning of researches in this area can be traced to 1950s (Abbott, Button, Pepping, & Collins, 2005). They maintained that the earliest successes made in this area came from countries of the Eastern bloc such as German Democratic Republic, the Soviet Union, Romania and Bulgaria with Australia, China and the United States demonstrating more recent success. All

efforts being made by scientists to find accurate means of identifying talented individual are yet to achieve desired result. Baker and Schorer (2010) remarked that despite the international attention given to issues of talent identification, it remains an under-researched topic. Abbott (2005) commented that present process of talent identification is fundamentally flawed.

Research has shown that proper identification of athletic talent has many benefits (Gray & Plucker, 2010). It reduces wastes - time, energy, material and money. Whether it is in education or business, or in the pursuit of sport and recreation, talent identification and development are crucial issues. Talented people play a great role in the economic prosperity of a nation (Shavinina, 2012).

The elements of talent identification and development according to Gagne (2011) are:

- 1) Enriched curriculum/training;
- 2) Clear and challenging excellent goals;
- 3) Selective access criteria;
- 4) Systematic and regular practice;
- 5) Regular and objective assessment of progress; and
- 6) Personalized accelerated pacing.

After talent identification, the next line of action is talent development. Though, it should be seen as a continuum. It is in vogue today in all domains of human endeavours. Organizations are continually searching for effective methods to identify and develop the best performance for the future. Talent development as regards sport can be viewed as a process whereby coaches, sport scientists and administrators help players to realize their full potentials. It is the strategies, means and courses of action taken by the sport stakeholders for a successful talent nurturing. Talent development is the progressive transformation of outstanding knowledge and skill in a specific field (Gagne, 2011). According to Gagne (2009), it is the systematic pursuit by talentees, over a significant period of time, of a structured program activity. To Dai, Den, and Speerscheider (2012), it is the process involving prolonged formal and informal learning in one, or multiple domains, with highly committed efforts, deliberate practice, and extended problem solving and self-improvement resulting in a unique set of specialized knowledge, skill and descriptions responsible for:

- 1) Outstanding performance in the domain requiring execution of advanced skills and problem-solving;
- 2) Production of novel and useful ideas and products;
- 3) Major contribution to a particular field of human endeavour, be it in intellectual, practical or artistic in nature.

Oleksandr, Chin, and Wilson (2007) itemized the benefits of talent identification and development program as follows:

- 1) Provide talented individual with opportunity to develop their sport skills;

- 2) Optimize the potential for all individuals to achieve sporting success;

- 3) Provide adequate stimulation for continued participation; and

- 4) Steer children away from the sport they are not suited for.

From an economic standpoint, professional sport industry depends on successful talent identification and development of athletes (Gray & Plucker, 2010). Thus, they are critical issues for the future development and sustainability of elite sports in a given country. The quality may influence both domestic and international success of country's elite sports (Hadavi et al., 2009)). To achieve success in talent development, one need to understand the factors which contribute to the evolution of talent (Gublin, Oldenzel, Weissensteiser, & Gagne, 2010). They argued that there are a number of individual elements that can affect athletes' progression and transition along the performance continuum. According to them, these elements are natural ability, social environment, development sporting experiences, chance factors, coaching support and resource provision, sport commitment and mental toughness.

There is also debate as to the appropriate age and location for talent identification and development. Hamati et al. (2013) suggested that the age to identify talent is 8-12 years. Williams and Reilly (2000) agreed that identifying talent at early age gives room for better development. Gray and Plucker (2010) supported that talent identification should be targeted at the youths. Gagne (2011) in his work titled, "Thou shall intervene... earliest" expressed that late identification of talent might lead to consolidation of undesirable behavior. He was therefore of the view that talent identification should be done at the early stage as this will help to compensate for negative effects of natural conditions. Concerning the appropriate location for talent harvesting, Hamati et al. (2013) pointed to educational institutions as the best place. According to them, institution of learning is the place where the largest number of youths can be accessed.

The purpose of this study therefore, is to propose a template for talent identification and development in sport that is objective and sustainable. This is because it is difficult to draw conclusion with practical utility of each of the present methods (natural and Scientific methods).

There are two major types of talent:

- General Motor Talent: These are children who learn motor skills faster than other. They have a wider and easier motor repertoire than average.
- Specific Talent: They are children who have specific skills for a given sport and learn these skills faster than other. They have wider and easier motor repertoire for that specific sport than average.

1. METHODS OF CONDUCTING A TALENT IDENTIFICATION PROGRAM

There are two “classical” types of talent identification (Unierzyski, 2006). They are natural system and scientific methods.

1.1 Natural System

This is a situation where an athlete is identified by an expert coach. Experience has shown that using “the coach’s eye” to identify talented player is very good. However, the reliability is doubtful.

1.2 Scientific Methods

In applying scientific methods, player is selected because he/she possesses the inherent physical, mental capabilities for a given sport. The results of these tests have a high level of reliability and validity and can help reduce the time taken to find talented players. Experience has shown that using only scientific approach without looking at a player as human being and not taking into consideration factors, which are difficult to measure, often does not work for multi-dimensional sports. Scientific methods may not take into account the “intangible” elements that influence talent as well as the social implications needed for developing talented players. It is therefore suggested that the two methods-natural and scientific- be employed during talent identification and development in order to achieve the stated goals.

2. PROPOSED TALENT IDENTIFICATION METHOD

The proposed talent identification method is known as “Clone Method”. Clone is a word borrowed from biological sciences. According to the Encarta Dictionary, clone is a genetically identical organism: A plant, animal, or other organism that is genetically identical to its parent, having developed by vegetative reproduction from a bulb, cutting or other part, or, in experimental conditions from a simple cell. It further referred to clone as a copy of hardware or software that is functional copy of another. This method seeks to combine the element of natural and scientific methods highlighted earlier.

It recognizes the multi-dimensional nature of sport talent. Unlike the natural and scientific methods, it has a control mechanism which serves a standard or benchmark against which results can be measured. It thus provides a clear strategic/objective for talent identification and development program. The method becomes very necessary because it will achieve better results and reduce wastage.

2.1 Clone Method

This method is simple and can help formulate template for talent identification and development in all sport.

Stage I: A body comprising of sport scientists should be formed. This body will include coaches, psychologists,

exercise physiologists, biomechanists/performance analysts and measurement and evaluation experts etc..

Stage II: This body of experts will sift data from former champions in specific sport. The information gleaned will point to the qualities that made the former champions excel. The average result of the former champions examined will be interpreted to form the template and standard for control for future talent identification and development program. The higher the number of champions examined, the more reliable and objective the result will be.

Stage III: All the athletes identified will be subjected to scientific training in a conducive environment.

The qualities that determines individual talent in particular field focus on the roles of biological factors (nature), experience, practice and learning (nurture) (Baker, Bagats, Bush, Strauss, & Schorer, 2012).

At stage I and II, information on the under-listed is very important

- Antecedents and background, personal interview with player and their family.
- Psychology: Behaviour, personality, motivation, mental characteristics needed in tennis, interest and determination of the youngster.
- Physiology: Height, weight, body, somatotype, blood type and other anthropometric/biometric measurements.
- Health: General health condition of the player.
- Motor: Jump, speed, agility, throw, catch and coordination.
- Heredity: Players inherited physical, mental and emotional characteristics from their parents. These inherited characteristics should be recognized by the coach. Many of these characteristics can be modified by systematic training, but the extent to which they can be changed and modified will be limited by the inherited potential. Not every player has the inherited potential to be Olympic Champion. All players have the ability to make the most of what inherited potential they do have (Thompson, 1991).
- Technical: Observation of the sport techniques and overall skills.
- Environmental condition: Environmental conditions must be well managed in order to be developed by the talented individual to get his/her threshold.

The information listed above can be collected through interview of individual champion athlete or their coaches, media reports, video and computer-based applications.

Information on training age, chronological age, genetic, social, physical, mental and psychological factors are very critical to success in sports (Pynes, Gardner, Sheehan, & Hopkin, 2005). Having database on these elements will help Sport Associations/Federations to carry out effective talent identification and development program. Ajibua (2011) remarked that with the help of computers, it is possible to construct the model

characteristics of champion athletes. Also, it is possible to calculate the anthropometrics and morphological indices of champion athletes in sport and use those yardsticks as criteria for identifying and developing athletes into various sports (Hazir, 2010). Elliot (1999) reported the morphological indices for women runners in the 1,500 m event as determined by Vladimir, V. Kuznatsor of the now defunct Soviet Union as follows.

Table 1
Sample of Morphological Indices for Champion Athlete

Age	-	21-27 years
Body height	-	1.62-176 m
Body weight	-	47.60 kg
% Body fat	-	5.87 ± 1.0
Body fat tissue (relative)	-	11.51 ± 0.80
Body fat tissue (absolute)	-	23.72 ± 0.75
Total lung volume	-	4.5 -5.0 litre
Maximal Oxygen intake	-	68-73 ml/kg
Dimension of heart		
(absolute volume)	-	700- 000 cm ³
(relative volume)	-	13.0-16.0 cm ³ /kg
Volume of blood circulation		
per beat	-	150 ml
or stroke volume	-	30 litres/minute
Haemoglobin	-	13 mg %-15 mg %

The above indices show that the Union had a model for 1,500 m for female athletes which they could compare their up-coming athletes with. It is therefore not a surprise that female athletes from Russia and Eastern European countries have for a long time been dominating the middle distance races. This Clone method is an improvement on Vladimir, V. Kuznatsor work. He examined just a champion athlete, but the clone method is using pool of champion athletes for objectivity.

Bloom (1985) conducted a study to understand how world-class talent is developed. They interviewed 120 people who had achieved in the field of art, sport, music and academics. It was revealed that successful individuals had very similar learning and development stages. Thus, the clone method in line with Bloom position suggests that learning and development stages of ex-champions or current champions are identified to form a template for talent identification and development in sport.

2.2 Measurement of Identifying Talented Player

According to Crespo and Reid (2009), the under-listed steps can be used to identify talented players in sport.

1) Physical Test: Jump test, throw test, hand-eye coordination test.

2) Physiological test: Height, weight, arm span, ectomorphism, fat percentage in muscle etc..

3) Psychological test: Motivation, self-confidence and self-esteem, attention-concentration, personality, intelligent test etc..

4) Technical Test: skill accuracy, observation, consistency and tactical use of shots in tactical situations.

3. FACTORS THAT INFLUENCE TALENT DEVELOPMENT

Talent development is the provision of an optimal learning and training environment for the realization of talent (Unierzyski, 2006). It thus means that having natural talent is not an end but a means to an end. There are other factors that are critical for talent development in sport. These are facility, equipment and apparel, personnel, organization (structure) and competition.

3.1 Facility

Facilities enable program and events to take place. The role of facility in assisting talent development appears more prominent and pertinent during developmental stage of a tennis player. It has the capacity of motivating a player to continue to play the game even when faced with challenges.

3.2 Equipment and Apparel

Equipment and apparel innovation has pressed the boarder of sport performance. No sport is played today without an equipment and apparel. It has long been observed that high quality equipment can engender talent development. The use of too heavy equipment and oversize apparel will prevent correct learning of the basic techniques in tennis.

3.3 Competition

This is an important component for the development of all levels of sport participation and the achievement of peak performance. An exciting, dynamic and well-managed event will help develop talent in sport.

3.4 Good Personnel

To achieve the goal of talent development at the grassroots in Nigeria, there is the need to have committed coaches and organizers. According to Alla and Ajibua (2010) coaches as well as sport organizers are very critical to talent identification and development. Other indices of talent identification and development are by themselves passive agents. Their functionality depends on the human factor. Thus, it is very important that trained coaches are employed to develop and maintain talent development programs, as coaches have impact on their players' enjoyment and continued participation in their sport programs based on their interaction with them. The quality of experts saddled with the responsibility of managing talent development program will determine to a large extent the success or failure of such program at the grassroots. To improve the quality of the personnel, they should be exposed to latest scientific researches in sport by attending seminars and conferences. This will also motivate them to give their best.

3.5 Organization

An organization can be described as a coordinating unit of an establishment, manned with the right kind of expertise to achieve the progress envisaged. With respect to talent development in Nigeria, it is important that a structure is put in place that will be supervised by professionals that have been trained in art and science of coaching and sport administration. Unless this is done, it may be difficult for any talent identification program to succeed. This to me is one of the major problems of sport development in Nigeria.

3.6 Weather Condition

This is very important. Weather affects human beings: It determines the equipment, facility and apparels to be used during sport performance. It also affects diet and flow of performance activity.

CONCLUSION

Due to the variety of quality that an athlete should possess to reach elite level, it is very difficult, probably impossible, to recognize talent based on a single observation by one person during a single testing/identification event. Therefore, it is important for each Sport Association or Federation to develop and use its own talent identification program and link it with athlete development and coaches education systems, which should act together as one integrated body.

REFERENCES

Abbott, A., Button, C., Pepping, G. J. & Collins, D. (2005). Unnatural selection, talent identification in sport. *Non-linear Dynamic, Psychology and Life Science*, 9, 61-68.

Adokiye, A. (2014, January 26). Science of talent, excellence development. *The Punch Newspaper*.

Ajibua, A., & Momoh, D. M. (2010). Total quality management approach: A requirement for rapid sport development in Nigeria. In J. F. Babalola (Ed.), *Optimal health performance: The basis of human movement education in the 21st century*. A Book of Reading in Honour of Prof. V. C. Igbanugo. Dep.t of Human Kinetics and Health Education. University of Ibadan.

Ajibua, M. A. (2011). Exploring data mining for accelerated sport development in Africa. *Journal of Education, Faculty of Education University of Ilorin*.

Alla, J. B., Ajibua, M. A., & Athanatius, A. (2010). Certification of Nigeria coaches: A national coaching development program. *International Journal of Research in Education*, 2(9), 96-100.

Baker, J., & Schorer, J. (2010). Identification and development- Introduction to special issue. *Talent Development & Excellence*, 2(2), 119-120.

Baker, J., Bagats, S., Bush, D., Strauss, B., & Schorer, J. (2012). Training differences and selection in a talent identification system. *Talent Development & Excellence*.

Bloom, B. (1985). *Developing talent in young in young people*. New York: Baltantine Books.

Crespo, M., & Reid, M. (2009). Talent search and talent detection-introduction. *ITF Coaching Education Series, USA*.

Elliot, B. (1999). *Training in sport: Applying sport science* (pp.122-130). New York: John Wiley & Sons.

Gagne, F. (2011). Academic talent development and equity issue in gifted education. *Talent Development & Excellence*, 3(1), 3-22.

Gublin, J. D., Oldenziel, K. E., Weissenstener, J. B., & Gagne, F. (2010). A look through the rear view mirror: Development experiences and insight of high performance athletes. *Talent Development & Excellence*, 2(2), 149-164.

Gray, H. J., & Plucker, J. A. (2010). "She's a natural": Identifying and developing athletic talent. *Journal of Education of the Gifted*, 33(3), 361-380.

Dia, D. Y., & Speersneider, F. (2012). Cope and grow: A model of affective curriculum for talent development. *Talent Development & Excellent*, 4(2), 181-199.

Hadavi, F., & Zarifi, A. (2009). Talent Identification and development model in Iranian Athletes. *World Journal of Sport Sciences*, 2(4), 248-253.

Hazir, T. (2010). Physical characteristics and somatotype of soccer players according to playing level and position. *Journal of Human Kinetics*, 26, 82-95.

Hemati, J., Eslani, S., & Najafi, M. (2013). The study of existing program and design talent identification suggestions in soccer players in Khuzestan. *International Journal of Sport Studies*, 3(3), 246-267.

Howe, M. J. A., Davidson, J. W., & Sloboba, J. A. (1998). Innate talent: Reality or myth? *Bahvioural and Brain Sciences*, 21, 399-442.

Moon, S. M. (2003). Personal talent. *Higher Ability Studies*, 14(5), 5-21.

Oleksandr, K., Chin, M., & Wilson, N. (2007). *Talent identification in Malaysia*. National Sports Institute.

Paynes, D., Gardner, K., Sheehan, K., & Hopkins, W. (2005). Fitness test and career progression in AFL football. *Journal of Science and Medicine in Sports*, 8(3), 321-332.

Rivas, D. S. (2006). Selection of talented tennis players: The RFEET women tennis project. *ITF Coaching and Sport Science Review*, Issue 39.

Snyder, A. W., Mulcahy, E., Taylor, J. L, Mitchell, D. J., Sachdev, A., & Gandevia, S. C. (2003). Savant-like skills exposed in normal people by suppressing the left fronto- temporal lobe. *Journal of Integrative Neuroscience*, 2, 149-158.

Shavinina, L. V. (2012). The emergence of a new research direction at the intersection of talent and economy: The influence of gifted on economy. *Talent Development & Excellence*, 4(1), 65-88.

Thompson, P. J. L. (1991). *Introduction to coaching theory* (pp.5-6). International Amateur Athletic Federation, Monaco.

Unierzyski, P. (2006). Foundation for talent identification and player development program. *ITF Coaching and Sport Science Review*, Issue 39.

Williams, A. M., & Reilly, T. (2000). Talent development in soccer. *Journal of Sports Science*, 18, 657-667.