

IDENTIFICATION OF YOUNG TALENTS IN SPORT

Milan Čoh¹ and Milan Žvan¹

¹Faculty of Sport, University of Ljubljana, Slovenia

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SUMMARY

The identification of talented athletes and their timely inclusion in the training process in the sport which most suits their abilities is one of the most demanding processes in modern sports science. Incorrect decisions are frequent and usually very painful. Elite sport is a field of human creativity which Slovenians value highly. In relation to the size of the population, Slovenia is one of the most successful "sports countries" in the world. Due to a decreased biological basis, a well-meaning and professional approach is necessary in the selection of individuals for a particular sport. The Faculty of Sport has developed certain expert systems and methods of evaluation and identification of talented children, whose purpose is to help parents and experts make the right decisions when it comes to introducing children to sport. These methods were based on the application of specific tests for determining individual motor skills. A battery of 13 morphological tests, 14 tests for special motor skills and 3 tests of the motor skill of running were used. It was determined that special tests of explosive strength and speed had the greatest predictive power for talented children. It should be pointed out that, despite the technology and state-of-the-art methodology used in the measuring procedure, it is impossible to predict talent with absolute certainty, let alone future sports achievements. The human body is an exceptionally complex system which is determined by numerous unpredictable factors. There is no doubt that the results of professional methods can be used as guidelines in the process of selection of an individual for a particular sport.

Key words: talent, sport, first choice, selection, elite sport.

Correspondence author

Milan Čoh
milan.coh@fsp.uni-lj.si

INTRODUCTION

The identification of individuals talented for sport and their timely inclusion in the sports training process is one of the most demanding procedures in professional sports and sports science. There we find many incorrect decisions which can be quite painful. Elite sport is a field of elite human creativity, which we highly value and respect. Success in sport depends on many factors which originate from the athlete himself or his environment. The genetic potential of the athlete and his development, the adequate and systematic training process, a high degree of motivation, good professional and pedagogical work are all factors which in the end enable success in sport. Selection is one of the basic characteristics of sport. The initial choice – selection or talent identification is a universal interdisciplinary field involving genetics, kinesiology, biomechanics, sports medicine, physiology and developmental psychology. Initial selection is closely bound to talent – the talent of an individual. Who is gifted, who is talented? Giftedness is a broad concept, talent is a narrower concept. Gifted students are those who show exceptional success in numerous fields of activity. Talented students are those who show potential and exceptional success in one field of activity (George, 1997). How do we recognize the gifted-talented child, male or female? How do we identify giftedness, sports talent, by means of which instruments and tests do we recognize gifted children, do we even recognize true sports talent? How do we recognize talent for a certain sport? These are classic questions to which kinesiological science and professional sport cannot provide quite precise answers. The identification and development of sports talent is an exceptionally complex problem, that numerous authors disagree on (Balyi, 2002; Vaeyens, Matthieu, Williams, Philippaerts, 2008).

Talent in sport is defined by genetically inborn morphological characteristics, psycho-motor and functional abilities, cognitive and social characteristics and motivation. The development of these abilities and their realization is quite dependent on the parents, school, club, coach, the immediate and wider surroundings (Renzulli, 1986). The authors J. Baker, S. Cobley, and J. Schorer in their book: "Talent identification and development in sport" define talent in soccer based on four groups of predictors: anthropometric predictors, physiological-motor predictors, psychological predictors and sociological predictors (Figure 1).

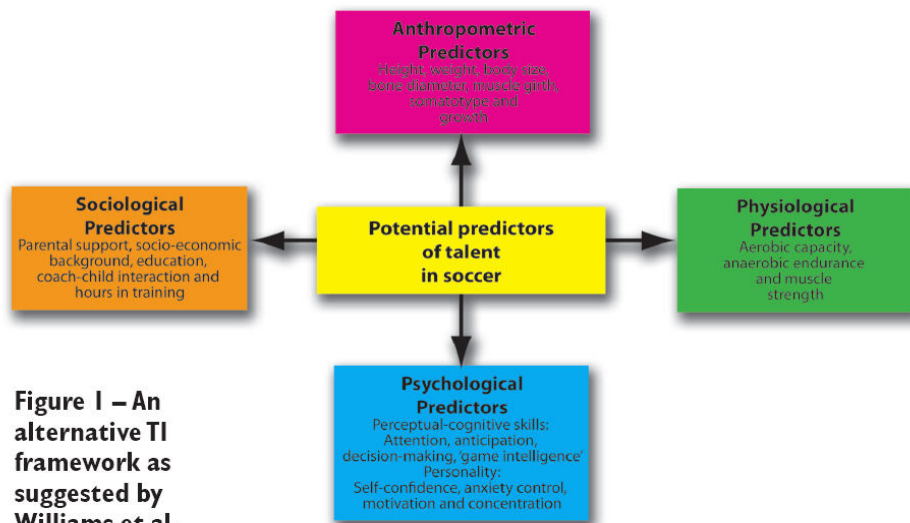


Figure 1 – An alternative TI framework as suggested by Williams et al.

Figure 1: Predictors of success in football

According to Malina (2010), talent in sport is a combination of above-average biomotor abilities, creativity and internal motivation. Gifted children generally have several characteristics in common. They include: similar patterns of behavior, the environment as the key for the realization of their giftedness, a loss of motivation if the giftedness is not adequately achieved, experiencing the world and their surroundings in a different way than their peers, different needs, and working with them is a great challenge, a great effort for the parents, teachers and coaches. In the end, talented children deserve gifted coaches and teachers.

The most important characteristics of gifted children are:

Cognitive skills:

- Logical – divergent thought
- Exceptional imagination
- Precise perception
- Good and quick memory
- Intellectual and motor efficiency
- A sense of humor

Education:

- Success at school
- A broad education
- A well-developed vocabulary
- Quick reading and calculation skills
- Motor intelligence
- Artistic talent

Motivation:

- High levels of aspiration
- Curiosity
- Strong interests
- High general efficiency

Social-emotional skills:

- Non-conformism
- Independence
- Empathy
- Asocial behavior

IDENTIFICATION OF TALENTED ATHLETES

The problem of identifying children with a talent for sport is very complex. Talented children as a rule show above average ability in numerous fields. Able children quickly show multi-lateral talent. Sport is just one of their possible choices. Is the early inclusion of talented children or children in general in individual sport even useful? Is early specialization useful? Sports practice does not provide clear answers. The problem of “young champions” lies in their quick burnout, the lack of motivation, injury and a sense of being tired of training. The results in their early phase of development are no guarantee of their competitive success later on in their sports career. Many talented individuals finish their career due to inadequate, monotonous and over-dimensional training, which leads to injuries and the absence of the need for internal motivation. Contrary to that, some athletes begin to take part in sport quite late, and still achieve elite results (Pietro Mennea, who once held the world record in the 200 m sprint, Jelena

Isimbajeva, the Olympic champion in pole vaulting, Matic Osovnika who was the best “white” sprinter in the world in 2007).

Today there are numerous methods of identification and selection of children with a talent for sport. The most simple and basic is the natural method – spontaneous selection. The selection of children based on this method relies on the current competitive results of individuals. These results might be a consequence of various amounts and training intensity. Sports results can also be a consequence of quicker biological maturity, and not a consequence of talent. Between calendar and biological age we might find a difference of two years or more. This method has been proved to be quite unreliable. Biological age can prove to be a great advantage or a great handicap for a young athlete. Biological age generates motor potential which is manifested through competitive results. As a rule, they are only temporary. Winners in their youth are not winners at a mature age (Malina, 2010).

The other group of methods of identification and selection of children are scientific methods. Several methods are used all over the world. The most important include:

- Talent Identification and Development Programmes in Sport (TIDPS)
- Talent Intelligence, Personality, Skills – TIPS
- Speed, Understanding, Personality – SUPS
- Differentiated Model of Giftedness and Talent - DMGT
- Talent – SLO

We must also conclude that these methods are not highly reliable. There is no method based on which we might be able, with certainty, to predict the results of an athlete when he reaches a more mature age. This only proves how identification, selection and prognosis of success in sport is a complex problem. Success in sport depends on a series of internal and external factors. A combination of motor skills, psychological factors, cognitive abilities, biological and psycho-social development affect the various rates and dynamics of the sports development of an individual.

EARLY SPECIALIZATION OF CHILDREN IN SPORT

Is it useful and necessary to include children in sport at an early age? There are many examples of negative practice. Early specialization does not provide the

expected positive results. Many talented children who were exceptionally successful in a certain sport when they were young did not repeat the same success later on. There are some exceptions. Tiger Woods began playing golf when he was 3 years old, Novak Đoković began tennis at the age of 4, Andre Agassi began beating his peers at the age of 6. Early inclusion in sport is actually a trend in modern sport. The competition between various types of sports for young talented athletes is great. Early sports specialization is tied to specific training and specific load, and one of the consequences of such training among young athletes are injuries. Early specialization means pressure from the environment, coach, and parents to achieve top results. This creates further pressure, a state of heightened sense of responsibility and stress for the young athlete. On many occasions coaches and over-ambitious parents have quite unrealistic expectations when it comes to the results their children can achieve. When the main imperative is success and winning, then training must be intense, specific, one-sided, and this leads, sooner or later, to injuries or being tired of training and sport in general. This is a professional error, young athletes must experience training and competitions in both a rational or emotional manner. One-sided training does not enable the development of broad motor preparation, which is the basis of later specific training.

The main reasons for early specialization include (according to Skof, 2016)

- Models of sport in former communist countries
- The role of parents and their ambitions
- Exceptional talent
- Sports scholarships and other benefits
- "Manager" scholarships
- Early financial contracts with young athletes
- Sponsorship deals with the sports industry
- Sports categorization
- The influence of the media

The risks of early specialization include:

- Social isolation – the segregation of young athletes
- Excessive dependence on sports results
- Burn out syndrome
- The absence of a possible education

- Manipulation on the part of the coach and parents in terms of achieving “goals”
- The absence of internal motivation for training and competition
- The syndrome of being tired of sport
- Endangering the development and health of the young athlete
- Micro-injuries and specific injuries

MODELS OF DEVELOPMENT OF ATHLETES

The road to achieving top sports results is long, difficult and uncertain. On average this process lasts from 8 – 10 years, which means approximately 10.000 hours of training. Models of athlete development differ from the aspect of the specific nature of individual sports. Except for the classical model of development of athletes through early specialization, the divergent model is being used increasingly more in the world, with later specialization. In that model of development of athletes, in the beginning a widespread multi-lateral training is called for (Bompa, 2000), a wide range of exercise, taking part in various types of sport, the development of basic motor and functional abilities. The emphasis is on the human holistic approach to training children. Training must be play, which is based on motivation and positive emotions (Malina, 2010; Skof, 2016). The divergent model is based on modern principles of neurophysiological development of the nervous system of children. The intellectual development of children is most intensive from the age of 3 to 7. The intellectual capacity of individuals depends on the number of neurons and the number of connections between them – synapses. Neurons and synapses create a neural network, into which motor programs are built as a consequence of movement. The biological potential of children is directly related to the amount of motor programs. Different sports stimulate the development of a greater number of motor programs in this way, which represents the foundation for motor intelligence.

One of the most famous models of long-term development of athletes is the Canadian model, designed by I. Balyi (Image 2). This model predicts 5 phases in the development of athletes:

1. Fundamentals
2. Learning to Train
3. Training to Train
4. Training to Compete
5. Training to Win



Image 1: Long-term athletic development program (Balyi, 2002)

EXPERT SYSTEMS OF SELECTION OF YOUNG TRACK-AND-FIELD ATHLETES

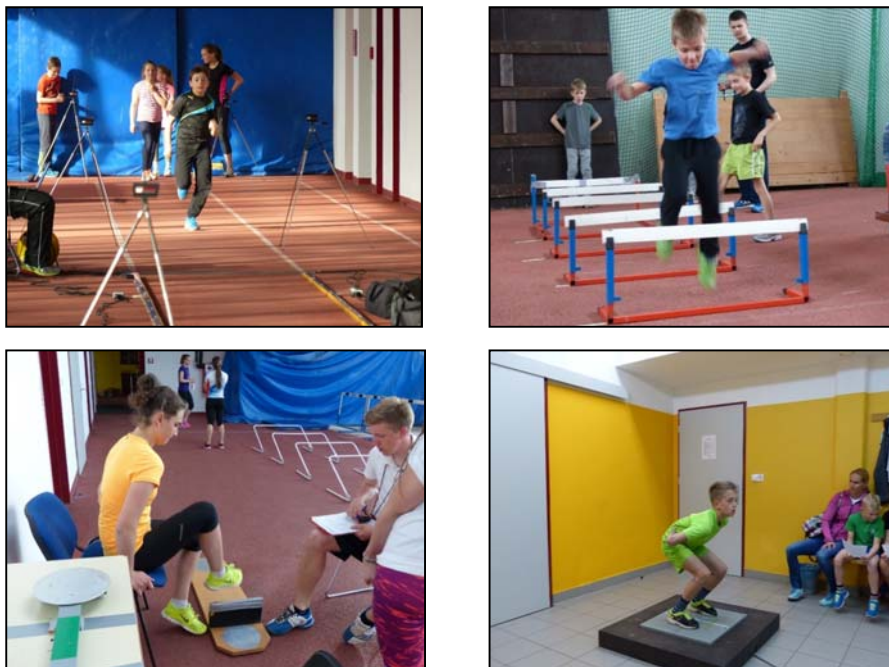


Image 2: Tests of special athletic motor skills

At the Faculty of Sport in Ljubljana, so far we have developed several expert systems for the identification of young talented athletes for certain sports. One of the was the "Expert system for selection of young track and field athletes". The sample of participants consisted of 281 male and female students, aged 10 to 15. The testing was carried out in collaboration with the Athletics Association of Slovenia in the track and field clubs in Ljubljana, Kranj, Celje, Velenje and Maribor. We used a battery of tests to identify their talent for track and field (Image 2):

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ИДЕНТИФИКАЦИЈА МЛАДИХ ТАЛЕНАТА У СПОРТУ

САЖЕТАК

Идентификација талентованих појединаца у спорту и њихово правовремено укључивање у тренажни процес у спорту који највише одговара њиховим способностима, један је од најзахтевнијих процеса у савременој спортској науци. Погрешне одлуке су честе и обично веома болне. Врхунски спорт је област људске креативности који Словенци веома високо вреднују. У односу на величину популације, Словенија је једна од најуспешнијих "спортских земаља" у свету. Због смањене биолошке основе, добронамеран и професионални приступ је неопходан у идентификацији појединаца за

одређени спорт. Факултет за спорт је развио одређене експертне системе и методе за процену и идентификацију талентоване деце, чија је сврха да помогне родитељима и стручњацима да доносе исправне одлуке које се тичу увођења деце у спорт. Ове методе су засноване на примени специфичних тестова за утврђивање индивидуалних моторичких способности. Коришћена је батерија од 13 морфолошких тестова, 14 тестова специјалних моторичких способности и 3 теста моторичких способности трчања. Утврђено је да су специјални тестови експлозивне снаге и брзине имали највећу моћ предвиђања за талентовану децу. Треба истаћи да је, упркос технологији и методологији state-of-the-art у поступку мерења, немогуће предвидети таленат са апсолутном сигурношћу, а камоли будућих спортских достигнућа. Људско тело је изузетно сложен систем који је одређен многим непредвидивим факторима. Несумњиво је да се резултати стручних метода могу користити као смернице у процесу избора одређеног спорта за појединца.

Кључне речи: таленат, спорт, први избор, селекција, врхунски спорт.

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