ROLE OF EXPERT COACHES IN DEVELOPMENT OF TOP-LEVEL ATHLETES' CAREERS IN INDIVIDUAL AND TEAM SPORTS

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Abstract
Coach's expert knowledge and experience, as well as scientific acquisitions confirm the importance of the role of expert coaches in the development of careers of potential top-level athletes in individual and team sports. It is very important for the expert coach to know how to make and insist on demands that are prime in stimulating the development of athlete's potential. From the motor learning and training theory's point of view, athlete's development is a continuous process. The role of expert coaches in athlete's development in individual and team sports primarily includes stimulating the development of athlete's personality and his understanding of a particular sport, skill development, upgrading the level and the number of motor programmes, and encouraging the development of selective decision-making and decreasing the reaction period. The specificity and individualisation of the training-competition process enables the athlete to achieve optimal development of genetic potential and total efficacy in a particular sport. A top-level teacher and/or coach encourage continuity in learning and in perfectioning technical-tactical knowledge and skills, development of competitive experience, and psychosocial development of athlete's personality as a discontinuous process. Empirical research confirms that athlete's career is determined by genetic factors, the process of sports preparation and also by lifestyle in all periods of his development.

Key words: role, coach, selection, development, sport

Introduction
The process of development of athlete's genetic potential and total efficacy in a particular sport depends upon coach's management of sports preparation. The accompanying detection, identification and selection of talent demand an interdisciplinary approach (Wyllleman, 2005). In the process of sports preparation, the role of expert coaches in particular sports is to develop in an athlete a balanced technical-tactical, conditioning, psychosocial and also competitive and theoretical preparation.

Coach's expert knowledge and experience point out that experts' stand according to which for a successful sports preparation in individual and team sports it is crucial to create a balance between all programs of sports preparation for individual development periods as well as each phase of preparation in annual and multiannual periodisation seems adequate. Particularly important is the balance between the training and competitive load and recovery, the balance between correction of detected mistakes and the intensity of the training and competitive load, and also the promotion of total efficacy in individual and team performance (Trninić, 2006). Additionally, expert coaches, the expert and scientific team in practical associative interaction apply a transdisciplinary approach. Likewise, in individual and team sports have a common feature in the process of sports preparation which is an integrated approach to the sports preparation process. All this serves the purpose of developing athlete's potential and upgrading his total efficacy in a particular sport. A training programme must stress the physiological systems used to perform a particular activity in order to achieve specific training adaptations. Top-level teachers and/or coaches apply the integrated approach on sports preparation, and in doing so stimulate an effect of interaction between different training systems, which is bigger then the sum of individual effects. In the long-lasting process of sports preparation directed at the development of athlete's total efficacy, the higher the level of competition, the more important to apply evaluation and analysis of total actual quality of athletes (figure 1), as well as a specific situational and individual training. The term actual quality implies the achieved level of total efficacy in a particular type of sports (Trninić, 1996; Trninić, Perica & Dizdar, 1999; Trninić, Dizdar & Dežman, 2000; Trninić, Dizdar & Dežman, 2002). Evaluation of genetic potential and actual quality has a direct usage value in guidance and specialisation of athletes, in determining the momentary state of athlete's total fitness, and in selection (Trninić et al, 2008a).
The profile of athlete's actual quality is important for rational and efficient management of the sports preparation process, tracking changes in actual quality, selection of an appropriate tactics model (Trninić et al., 2008b), and for tactics in guiding individuals and/or group in competition (figure 1). Wylleman (2005) states that when researching development of a sporting career, one shouldn't focus solely on athlete's development from scratch or in terms of a particular sport, but also on other areas of their lives (e.g. academic, psychosocial and professional).

Stimulating athlete's development includes overcoming problems and challenges of each career period. Also, successful adaptations from one category competition to another, and adaptations on the progression of the training and competitive load are a precondition to reaching the master phase that is chronologically different among sports. Thus, for example, the master phase can easily end at the age of 18 or 19 for gymnasts, and on the other hand can be just the beginning of the master phase for a rower (Wylleman, 2005).

Research on expert coaches in individual and team sports

Csikszentmihalyi et al. (1993) affirmed and explained three common characteristics of coaches that helped in forming athletes. First of all, the coaches were successful because they enjoyed what they did and encouraged their athletes to express their potential. Secondly, the coaches created optimal conditions of learning. The third characteristic of these coaches was their ability to understand athletes' needs. On the other hand, Salmela (1996) and Bloom (1997) conducted research on expert coaches of team sports. Testing was conducted on a group of experts chosen by strict criterion, and coaches that lead teams of ice hockey, field hockey, volleyball and basketball. They used a testing technique similar to the one used by Côté and associates (1995, 1996). The goal of Salmela's research was to reach a collection of knowledge that is simply called knowledge corpus of tested coaches, and to discover if there are some universal laws for all coaches and sports from the scientific-research point of view. The researchers were interested in evolution from athlete, novice coach, to expert coach.

Furthermore, which expert experiences and knowledge these coaches had in common, and what are their common philosophies in fields of organisation, training and competition? Bloom (1997) also conducted tests on coaches of team sports, but this research didn't involve experiences of coaches as athletes or novice coaches. It was focused on identifying the characteristics, knowledge and strategies of expert coaches, and on the conceptualisation of relations between these categories. Received results underwent objective analyses based on scientific methodology.

Relation coach-athlete in individual and team sports

Relations between athletes and coaches aren't stable. Competitive success and failure significantly influence this relationship (Tušak & Faganel, 2004). Besides that, the factors that affect the coach-athlete relationship are: sports type, competition level, athlete's age, and coaches and athletes sex (Barić, 2007). Tušak et al. (2003) state that the relation between athlete and coach is exceptionally important, and that the coach isn't responsible only for athlete's successful career, but also that his relation to the athlete can produce termination of athlete's career.
Furthermore, the relation between coach and athlete can be explored from a psychodynamic, personality, behaviouralist, cognitive, socio-psychological and interaction point of view. Also, Tušak et al. (2003) point out that the structure and dynamics of the relation between the athlete and the coach is insufficiently explored, and that to process the mentioned quality of the relationship we need an interdisciplinary and a multidisciplinary approach that takes into account, not only the coach and the athlete, but also interaction and situation. Researches have confirmed the hypothesis that the factors that influence the quality of relations between athletes and coaches are inter-related (Barić, 2007). It is assumed that coach's personality, expert qualification, innovative creativity, communication skills, leadership behaviour style, emotional control, ability to motivate on one hand, and athlete's personality on the other, chosen sport branch, athlete's sex and experience make the most important factors that determine the relation between the coach and the athlete. The third and fourth factors that affect the coach-athlete relationship are the influence of the current situation they are in, and their interaction (Bloom, 2002; Trninić, 2006; Barić, 2007). Poczwardowski, Barott & Heinschen (2002) apply the quality approach in exploring the athlete-coach relation. Here they distinguish a positive and a negative coach-athlete relation. The positive coach-athlete relation is visible in their intense verbal and non-verbal interaction during exercise, competition, or in any other situation. On the other hand, a negative coach-athlete relation is visible in reduced interaction that occurs only in situations of necessity during common activity towards specific sport goals. There are no tendencies in making effort to better their communication and nurturing their socialising. In this case, it is a strictly professional relationship; their communication is formal and minimised, restricted to sport-specific information. Athletes feel pressure and avoid direct eye contact, feel uncomfortable, down, and misunderstood. Serpa (1999) explains how coach's anxiety can generate inadequate coach-athlete communication, and can be a source of stress and anxiety. The style of coach's leadership behaviour affects emotional and motivational climate in the training process, and influences communication processes, as well as interaction between all members of a sports team (Serpa, 2001). Successful athletes have some common characteristics, but at the same time, every athlete has an individual personality, that demands an individual approach, communication skills and specific interventions in the sports preparation process (Tušak et al, 2003).

Differences in communicative modes between the coach and the athlete for different sports (alpine skiing, dressage, karate, soccer), are confirmed by the Culver et al (2001) research. Barić (2007) implies that the democratic type of coach would be more autonomous in assisting (Mageau & Vallerand, 2003; Vallerand, Deci, & Ryan, 1987) and his/her expectations, goals and demands expressed in a more flexible and more communicative way. The coach who controls and includes orientation on the outcome requires respecting his/her authority, provides external stimulus and reward for success (or punishment for failure) (Mageau & Vallerand, 2003). Since coach's influence is one of the most important factors that create the motivational climate, we can assume a compatibility of coaches and the motivation of their athletes and structures of direction towards a goal. Compatibility can be seen and understood as a level of agreement between situational demands and actual behaviour of athletes and coaches, on one hand, and a level to which they mutually meet their needs. If the goals, convictions, even personalities of athletes agree with those of their coaches, interaction will be satisfactory to both sides, resulting in positive mutual climate (Kenow & Williams, 1999). The level of competition is the second factor that affects the coach-athlete relation. Older athletes that attend higher levels of competition are more likely to have bigger respect for the coaches (Chelladurai, 1980). Probably the coaches and athletes who take part in higher level competitions may have higher motivation for making firmer assemblies because the risks and gains are bigger (Taylor & Willson, 2005). It should be noted that there are discrepancies, e.g. top-level tennis (Raimer & Toon, 2001). The third factor that markedly influences coach's leadership behaviour is athlete's age.

The coaches that work with younger athletes should take into account their development characteristics, and coach's role should be advisory. He takes over the role of a surrogate-parent. For coach's successful leadership behaviour it is necessary to create an adequate relationship with young athlete's parents, because in the contrary, an inadequate relationship can disrupt the coach-athlete relationship and the whole process. The fourth important factor is athlete's and coacher gender that, especially in case of different genders, can influence the quality of coach-athlete relationship. With different genders of the coach and athlete, it is preferred to have an advisory type of relationship, whereas in case they are of the same sex, more emphasis is on social support behaviour (Taylor & Willson, 2005, Raimer & Toon, 2001).
Role of expert coaches in advancing fitness and development of top-level athlete’s careers

The most important tasks of coaching are spotting talent, affirming the development level of athlete’s potential, choosing athletes for particular selections, and forming and enforcing development programmes aimed at development of athlete’s performance and competition efficacy. Considering that the athletes are carriers of the competition result, their selection and development are the basic goals of expert work. In team and individual sports, the coach must know how to incorporate into his assessment the data gotten through objective, scientifically verifiable methods, that is, how to link the objective and subjective assessment that make a synthetic judgement. Omitting any of these components might lead to wrong assessments and interpretations of athlete’s potential (Trninić et al, 2008b). During the development of young athletes, there are probably several plateaus one comes across. In the puberty phase, young athletes go through multivariant preparation and are at the beginning of an organised system of competition (Bompa, 2000a). For example, in the puberty and post puberty phase, the demands in the criterion for athlete evaluation system, the level of teaching and training, and taking part in competitions are intensified (Bompa, 2000b). The beginning of master phase for most talented and top-level athletes in team sports relates to the transition from the junior to the senior selection, which is the most delicate and responsible area of coach’s action in definite development of total actual quality and competition efficacy of athletes (Trninić et al, 1999, 2000; Dizdar, 2002). It is assumed that in different stages of sports perfectioning, as well as in different levels of competition not the same anthropologic factors are as relevant for determining actual athlete quality and competition efficacy (Dežman et al, 2001a, 2001b). Each phase of development of athlete’s actual quality on different levels of competition has its own hierarchy of anthropological determinants according to relevance for athlete’s performance, as well as for competition efficacy (Trninić, 1995; Trninić et al, 1999; Dizdar, 2002). This is why a differential approach is necessary for evaluating prognostic value of relevant anthropologic characteristics of athletes and tempo of growth of athletes’ total actual quality (Trninić, 2006).

In individual sports, under the influence of training (e.g. in swimming), an appropriate anthropological assembly is created, which determines accomplishment of top-level results (Pavić et al, 2008). Unlike individual sports, top results in team sports are primarily determined by athlete selection, an adequate tactics model, rational managing, sports preparation and leading athletes and/or team at competition. In figure 2, we presented the role of expert coaches in development of top-level athletes. It is primarily visible in the evaluation of genetic potential and momentary actual athlete quality, since the source of information is a function of managing the strategy of development and the lifestyle of the athlete, and managing the process of sports preparation. Additionally, expert coaches apply three mutually connected technologies of training. The first technology encompasses creating top-level athletes, the second creating top-level teams, and the third creating top results. The learning and training process of an individual athlete and/or team is primarily based on the condition of fitness and situational indicators that are most important for a particular athlete. For this reason the general situational approach in sports science is the most important basis on which the evaluation system of athlete’s potential and total efficacy in team sports lays. Similarly, Trninić (2006) states that coaching activity in the process of sports preparation can be examined from the aspect of evaluating athletes and selecting teams, organising club’s expert work and managing athlete development, by applying new methods and training systems, and through preparation and leading athletes and/or teams. Finally, expert coaches have a goal to form self-managing, selectively decision-making, self-tutoring, self-training and self-motivating athletes.

![Figure 2. Role of expert coaches in development of top-level athletes](image-url)
In figure 3, we presented the four modules: coach's role, area of activity, coach-athlete relation, and coach's personal characteristics. It is obvious that the expert coach, from the role aspect, must simultaneously be the educator, pedagogue, expert, psychologist and leader. Managing athlete's career demands the coach to cooperate also with the sports psychologist who has the knowledge and the competence in the area of lifestyle management (Lavalle et al., 2001; Wylemann & Lavalle, 2004; Wylleman et al., 2004). Trninić (2006) claims that in order to rationally manage the process of sports preparation, the expert coach in individual and team sports must at the same time be a diagnostician (a connoisseur of measuring instruments and interpretations of measuring results), a prophet (one who knows the possibilities of advancement and reaching the upper limits of actual quality of a particular athlete), programmer (the one who applies the acquired results in forming the sports preparation system) and a plan and sports preparation programme implementer (connoisseur of expert work, that is, the training implement mode). Additionally, to predict the level of actual quality and competitive efficacy of a particular athlete, we need to be familiar with particularities of a particular athlete, the difference between potential and actual quality in particular sports (possibilities of progress), knowing the optimal rate of training and matches for a certain age in a particular cycle of preparation. Also, the coach must have an insight into the biological and chronological age, the state of integral preparedness of the athlete and the possibilities of development and changing relevant capabilities and skills for a particular sport.

So, the most important questions that require precise answers: how much and how certain characteristics of genetic potential affect athlete’s efficacy, and how high is the importance coefficient of criteria for a particular sports activity.

If those two questions are answerable, the training can be focused on significant determinants of competitive efficacy and achieve the ultimate goal of sports preparation. That goal is shown as a specific sports adaptation of an athlete to the demands of a particular sport. Still, a rational execution of selection, preparation and athlete and/or team leading, that make an undividable whole, is determined by data gathered from systems of potential evaluation, athlete's performance and competitive efficacy. Therefore, what, why and when to estimate is the grounds of a system of athlete selection, optimal integral preparation and guiding particular athletes and teams.
Conclusion

The development of potential top-level athletes' careers is a long-lasting, continuous, systematic, gradual and complex transformational process. The role of expert coaches is specific in all development stages of athletes. Also, expert coaches must have abilities and skills in manipulating selective activities, work methods, and also the distribution and dosing of training and competition load. Planning, programming and execution of training must be based on the laws of athlete's total potential and total efficacy development in a particular sport. Expert coaches have many tasks within their role in professional sports that are made obvious in connecting expert knowledge and experience and cognitions in contemporary sports science in function of bettering athlete's performance and competition efficacy. Contemporary sports demand upgrading of all relevant variables for a particular sport, and encouraging specific adaptation processes within the cycle of sports preparation. The role of expert coaches is also the forming of combined training systems that stimulate complex and specific adaptation processes responsible for athlete's performance and competitive efficacy. The role of expert coaches in a certain type of sport (individual or team) refers to the qualities of decision-making, ability to transfer knowledge in the process of learning and training, in interventions when guiding individuals and/or group, in managing the sports preparation process, and in the strategy of reaching programmed set goals. Probably the integrative approach to sports preparation has an advantage in stimulating athlete's holistic development. Development of top-level athletes' careers requires encouragement and supervision of factors that have, not only an indirect, but also a direct influence. Therefore, coach's expert knowledge and experience manifests in managing athlete's career. Also, coach's influence can manifest on coach's lifestyle and, finally, can determine the continuity of development or the end of athlete's career. Managing athlete's career demands coach's cooperation with the sports psychologist who has knowledge and competence in the field of lifestyle management. Expert experience in working with top-level athletes shows that an inappropriate lifestyle can cause big talents to become "eternal" talents. The contemporary process of sports preparation is based upon specialised and scientific cognitions, which are a result of an interdisciplinary and a multidisciplinary approach. Along side expert coaches, the expert team must include various specialists of the sports profession and, if possible, a scientific team that will always have a tendency to influence application of new teaching, learning and exercise methods. In practical action, a transdisciplinary approach is required, that is, the members of the expert team share roles and systematically exceed the boundaries of separate disciplines.

References


ULOGA EKSPERTNIH TRENERA U RAZVOJU KARIJERE VRHUNSKIH SPORTAŠA
U POJEDINAČNIM I MOMČADSKIM SPORTOVIMA

Sažetak
Ekspertno znanje i iskustvo trenera kao i znanstvene spoznaje potvrđuju važnost uloge ekspertnih trenera u razvoju karijere potencijalnih vrhunskih sportaša u individualnim i timskim sportovima. Pritom je vrlo važno da ekspertni trener zna postaviti i inzistirati na zahtjevima koji su primarni u poticanju razvoja sportaševa potencijala. Sa gledišta teorije motoričkog učenja i vježbanja, sportašev razvoj je kontinuiran proces. Uloga ekspertnih trenera u razvoju sportaša u individualnim i timskim sportovima u prvom redu obuhvaća poticanje razvoja sportaševe ličnosti i njegovog razumijevanja pojedinog sporta, razvoj vještina, unapređivanje razine i broja motoričkih programa i poticanje razvoja selektivnog odlučivanja te smanjivanje vremena reagiranja. Specifičnost i individualizacija trenažno-natjecateljskog procesa omogućuje približavanje sportaša optimalnom razvoju genskog potencijala i cjelokupne uspješnosti u pojedinom sportu. Vrhunski učitelj i/ili trener potiče kontinuitet učenja i usavršavanja tehničko-taktičkih znanja i vještina, razvoj natjecateljskog iskustva kao i psihosocijalni razvoj sportaševe ličnosti koji je diskontinuirani proces. Empirijska istraživanja potvrđuju da je sportaševa karijera određena genskim čimbenicima, procesom sportske pripreme kao i stilom života u svim razdobljima njegova razvoja.

Ključne riječi: uloga, trener, selekcija, razvoj, sport

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