

CONCEPTS OF DEVELOPING GROUPS IN SPORTS GAMES

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Review paper

Abstract

The success rate of a group's (team's) development concept mostly depends on management capabilities, the quality of professional work represented through team assembly, determining precise norms, roles and status of the group members (team players), selecting players for a specific position and role in the game, and forming an adequate game organisation. This is manifested in the way that the complete player's potential and actual quality is employed in the game tactics model. Team assembly, preparation and individual game management includes operative tactics, that is, anticipating possible occurrences during the game, therefore anticipating possible actions and player substitutions. However, the concepts of group or team development should be grounded on combining a professional and scientific approach, which is evident in the integration of the subjective and objective estimates of the players and the entire team. The situation approach in the applied kinesiology is the most important because it is the base for the evaluation system of the player's potential and the team's and player's quality, as well as encouraging synchronized and collective team players' actions in the game. In modern sports games it would be optimal, in the concept of the team development and the competition success rate, to form a team with polyvalent players, as well as players that can efficiently play two or more positions both in the attack and defence phase. Bearing this in mind, it is also important that the manager knows how to form and insist upon the demands that are of the highest priority for the sport, as well as efficiently develop and enforce strategies for improving group cohesion. The manager's leadership capabilities of directing individuals and groups are today essential for team success.

Key words: concept, development, individual, group, algorithm, game tactics model

Introduction

The influence of the expert team managers on the player and team development is significantly determined by the sportsmen's roles in the team, by the level of their recognition, comprehension, acceptance and performance of given roles in the game, and also by quality in-game cooperation, since it defines emotional and motivational climate in a sports group. Sports teams are a living dynamic system designated by constantly changing interaction processes (Trninić, 1995, 1996; Lebed, 2007). Group's (team's) development concept includes a system of mutually connected roles and relations between team members. All of this shows the functional interdependence of the players who play different positions in the game (Trninić, 1995, 1996; Lebed, 2007). Team sports players are taught and trained for different systems of assistance in attack and defence phases, which undoubtedly encourage functional relations in the team.

It is probably important to encourage team orientation in the system of interrelated roles and define behavioral norms in the process.

Structured norms affect team members' integration and are applied in order to specify the behavioral codex of group members, thus helping to keep behavioral consistency of the group (Partridge & Stevens, 2002). It is critical, for any group or team that the members take up the appointed roles, and at training or at a competition that they fulfill the high demands put up within team roles. Therefore, role perception (perception of what is expected from an individual in a certain situation) is important for adequate behavior and effectiveness of a player and of a whole team (Partridge & Stevens, 2002). Likewise, role clarity and role acceptance are the precondition for an efficient player and team performance. From the perspective of scientific research, ditto also induces development of team spirit and cohesion (Silva & Stevens, 2002; Cox, 2005). Further more, Jacob and Carron (1997) established that the main factors that contributed to the status of sports teams are competition experience, performance ability and players' roles in the team. It should be emphasized that the evaluation of sports-specific variables and actual player quality must never be used to determine differences between players, because it might undermine team relations (Riley, 1993).

Expert knowledge and experience of top class trainers and managers shows that a team can be competitively successful even with a low level of emotional relations (friendship), but a high level of functional relations or cooperation quality (Marković, 2002).

Factors affecting sportsman's performance and competition efficacy of players and team

Many factors affect the sportsman's performance and competition efficacy, and are multiply inter-related (fig.1). The first three factors are: the competence of the head coach and coaching team (the performance creativity, the competence of knowledge transfer according to the demands of a particular

sport), the level of development of potential and of the team and their actual quality. These factors affect the process of sports preparation. In order for the coach and the team to fulfill their goals, it is crucial that they are provided with adequate conditions to organize the process of sports preparation, a stimulating wider environment, appropriate relations within the club, adequate managing and organization system, expert policies and logistics. Therefore, the sportsman's performance and competition efficacy in team sports are determined by interaction of a wide scale of factors which are intertwined in a unique manner in every sports institution. Figure 1 shows how managing the process of group development is just one of the factors that define a sportsman's performance and ultimate competition efficacy (Trninić, 2006).

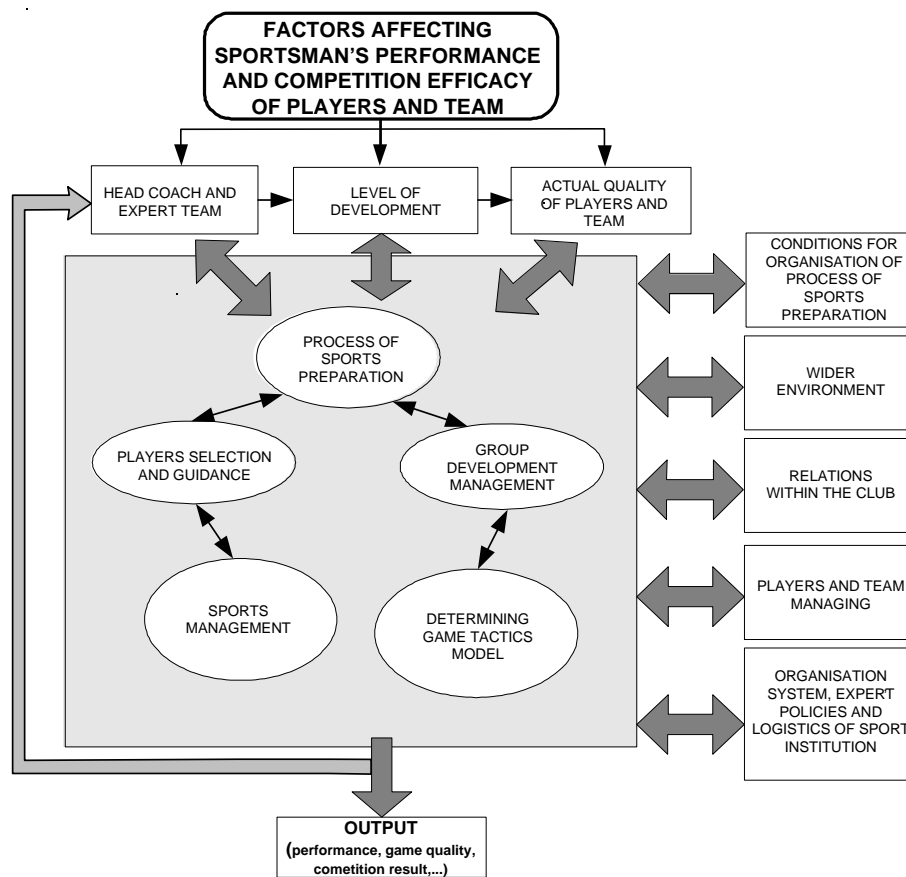


Figure 1. Factors affecting sportsman's performance and competition efficacy of players and team

Figure 1 also shows that the output, e.g. the affect of the sports preparation process acts as feedback for the coach and his coaching team. There is a bidirectional relation at work that enables rational managing of the sports training, thus affecting the group development concept. Thereby, being familiar with the two types of feedback (knowledge performance and knowledge results) greatly accelerates the

correction of the sports preparation process and enables a systematic approach to solving potential problems. Expert knowledge and experience tell us that problems of particular sports should be solved directly dealing with the main reason of inefficient individual and team performance of the sport at hand. In such situations the expert team makes decisions about specific exercise of particular phases of

the course of the game (Trninić, 2006). We can conclude that it is the quality of the integral sport preparation that determines whether the levels of development of the potential and the team and their actual quality will advance. This approach to the whole integral sport preparation shortens the time of optimal individual and team performance development enables reaching quicker sports accomplishments. It is evident that the mentioned factors are dynamic categories in reciprocal, bidirectional and mutually dependent relations in a certain sports context. Sportsman's performance and competition efficacy are based on its multi-causal nature, where the basic idea is that the variables are reciprocally determined (Philips & Orton, 1983). That is why investigations in sports science have to be unconditionally interdisciplinary.

Team or group development concept

Player roles enable the development of a team's dynamic system of the game (Lebed, 2007; McGarry & Franks, 2007). Team sports are characterised by relations of cooperation and conflict among the participants, but also the uncertainty in relation to behavior of co-players and opponents (Trninić, 1995, 1996, 2006; Lebed, 2007; McGarry & Franks, 2007). Incorporating players into a team is a real challenge for the manager, and in practice it sometimes gets pretty difficult to achieve. The team and its game system demand organized cooperation, achieved by synchronization of actions of all players in a team, under terms when the goal is to disturb cooperation among players of the opposing team. Cooperation within the team and confrontation with players of the opposing team are the core of team sports. It is based on mutual assistance, and its purpose is to accomplish one's own game tactics model. The members of a sports team are often multi-connected: informally as friends (social cohesion), and formally by team roles (Petrovski, 1983, acc. to Cox, 2005). The teams differ by the level of cohesion and by complete potential and actual quality of their players.

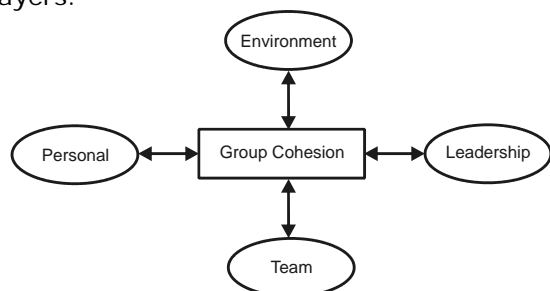


Figure 2. Scheme of interdependence of the factors that affect group cohesion and vice-versa (Carron & Hausenblas, 1998)

That aside, it is difficult to maintain cohesion of a constantly changing team, which is under influence of personality factors, team structure, environment and leadership. In interactive or team sports, group cohesion affects the team and vice-versa (fig.2). It is evident from the scheme that the first factor that affects group cohesion is environmental (Mullen & Cooper, 1994). The second factor is made out of personality attributes, and the third is leadership ability. The fourth factor that contributes to group cohesion is the team factor – a stabile model of interaction between team members. Team factors include development phases, team stability, norms and status (Johnson & Johnson, 1997). The sports profession and practice are well aware that group cohesion changes during the season of competitions, and changes are possible even between games, since the player's perception depends on a number of internal and external factors that keep changing (Marković, 2002). This fact requires that all players' group cohesion perception is measured many times during the competitive season. For a regular evaluation of group cohesion, a multi-dimensional questionnaire is used (The Group Environment Questionnaire, Carron, Widmeyer & Brawley, 1985). Hypothetically speaking, the lesser the number of players in a team, the greater is the responsibility of an individual player, and vice-versa. We can also assume that in sports games with less players involved, such as basketball (5 players), ice-hockey or volleyball (6 players), relationships between team members have a much bigger influence on team's success than it can be said in sports like football, where a team is made up out of 11 players. Everything that happens to a team, and all the processes that take place inside - all depends on relations (micro-social structure) between all the team members (fig.3).

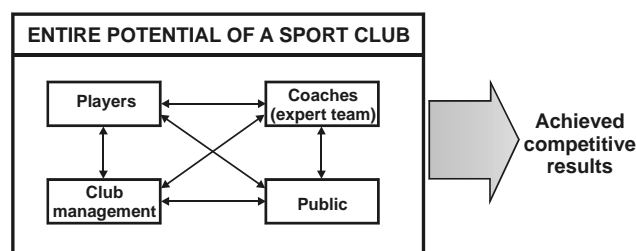


Figure 3. The structure of mutual relations between players, coaches, club management/ administration and the public (Trninić, 2006)

It is important to say that the influence of interrelations on sports success is far greater in team than in individual sports (Landers & Lüschen, 1974). Therefore, to build an efficient team, it is not enough to have a high-potential team or an expert manager, but team unity (cohesion).

The term group structure implies a continuous validity of interaction between team members (Johnson & Johnson, 1997) that is common to all groups. Group structure has an important usage in team cohesion development (Carron, 1988). From the situational management theories point of view (Fiedler & Garcia, 1997), the team management success rate depends on interaction of management style and some situational variables. The professional team managers, basically, discuss 4 main structural constants: group development, group roles, norms and status (Partridge & Stevens, 2002). Group development can be described as a process in which a group of minimally connected individuals eventually form a cohesive unit (Brower, 1996). That is a dynamic continuous process. The linear model (fig.4) assumes that team's development linearly undergoes 5 phases (Tuckman, 1965; Tuckman & Jensen, 1977; Tušak, Misija, Vičić, 2003). Team development progresses successively without returning to the previous phase. In phase one (forming), a team is formed based on complete potential and actual player quality evaluation, where players get more closely acquainted with their co-players and the team managers. It is necessary to evenly structure the team according to positions and to optimize technical and tactical activities of the players in relation to their overall potential. In this phase, team goals and sports training system that enables achievement of the set goals are determined. Tasks and roles of particular players within the game tactics model are set at the same time. Problems in the initial phase of team development (forming) can appear when team members can't identify with their team-mates (Partridge & Stevens, 2002). In phase two (storming), the roles within the team are defined and clarified, and tension and conflicts emerge from the players' attempt to take on a wanted position, role and status. It is critical, in order for the team to function efficiently, that the managers reveal real and hidden antagonisms within the team, and also to selectively intervene, with the objective being enhancement of the whole team's homogeneity. The managers and trainers have a great role in assisting the team to resolve conflicts of interest and beliefs (Partridge & Stevens, 2002). In phase three (norming), the clarity of roles, mutual respect between members and group cohesion are enhanced. Team members communicate more openly, and a collective effort to achieve group goals is improved. The players begin to understand, accept and perform their tasks better within the roles and positions appointed to them. It is necessary to encourage a players understanding of the role and game in multiple positions in attack and defence.

Roles, norms and behavioral rules (that improve cooperation between the players) are determined within the phases and the game tactics model. Tactical discipline, tactical responsibility, and cooperation are focused on achieving common goals (Trninić, 2006). Most players accept team norms, roles and goals. In phase four (performing) of the group structure development, the team coaches and managers is determined to encourage player's focus on specific team goals (Partridge & Stevens, 2002), as well as to enhance timeliness in team performance. Team roles are completely recognised, and a high cohesion level is reached. An ability to recognise different situations in the game without manager's intervention is stabilised, and cooperation quality is induced. In this phase, the peak of the synergy effect between the players and the manager is accomplished, and mutual relations within the team are stabilised. Phase five (adjourning) is characterised by players' goal shifts and whole team dissolutions. Dissolution can occur in two cases. Most commonly it occurs when a team undergoes planned adjourning (Partridge & Stevens, 2002). But it can also happen spontaneously. Certain players choose to stay in the team, but others choose to leave and join a different team. Regardless of the group development used, the researchers generally believe that the groups go through the five phases (Robbins, 1992; Wheelan & Hochburger, 1996). The time spent in each phase is different for each group.

2. The cyclic model (fig.5) differs from the linear model in the final, fifth phase which is appointed by the terminal phase under the assumption that the team has begun to break up. This model emphasises that every team is set to adjourn from the very beginning.

3. The oscillation model (fig.6) points out that external factors, like the surrounding and events in the team, can significantly affect its development. Therefore, it is not of essence that the team progressively develops through phases since development constantly oscillates from cohesion to in-cohesion, and vice versa (Budge, 1981, occ. to Tušak, Misija, Vičić, 2003). The most successful teams are successful in the cohesion phase (performance).

For the authors, the oscillation model is a frame or structure that represents reality, that is, the group or team development process. It is because in team sports it is necessary to modify tasks within a certain role of a player, or possibly gradually reconstruct the team, based on the situational training and competition feedback.

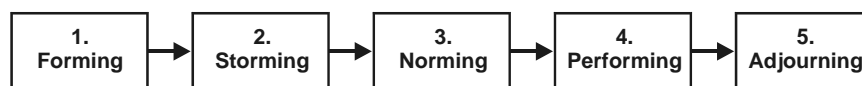


Figure 4. Linear model of group or team development

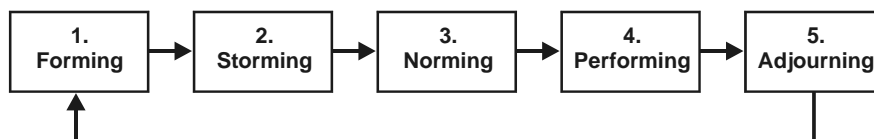


Figure 5. Scheme of the cyclic group or team development model

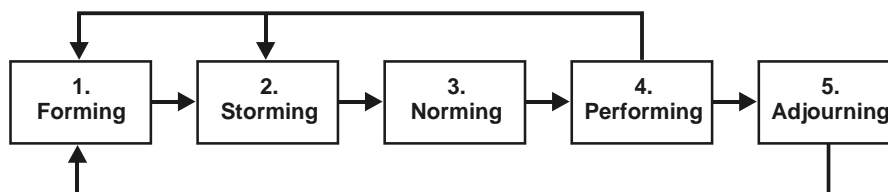


Figure 6. Scheme of an oscillation model during group or team development

A successful manager must recognise and anticipate events in the team, and how he responds to different conflicts, that is, how he establishes team cohesion in such situations (Tušak, Misija, Vičić, 2003), how extensively he selects tasks and roles of players regarding their complete potential and actual quality in the game, are issues of crucial importance. In phase one of forming or putting up a team, a manager or trainer must establish: what certain players can play, which game tactics model the players can successfully realise, who can be the key-player, which positions and roles in the game are appropriate for certain players, and which game configurations are adequate to perform certain game systems. If superior results are desirable, the first rule of a quality player selection for the following season is the evaluation of their complete potential and actual quality in relation to the demands of the sports game. Here, we must answer the question of what is the difference between player potential and actual real quality in defence and offence, and what can be improved in order to achieve top-quality for a certain player and the whole team (Trninić, 2006).

Algorithms of team assembly/construction

Probably the most difficult as well as most significant manager's task within the concept of team development is the assemble or team construction (fig.7). Here presented is a specific sequence of operations usually employed by experts in problem solving, decision making and stand creation that lead to an appropriate team assembly.

It is crucial for the team coaches and managers to answer the following questions: Which players are key-players? Which players have the highest potential in certain game positions? How can certain players be most effective? How do players adapt to the game tactics model and team structure? Which player type is of greatest value to the team? Which players can be most efficient in high-pressured competitive situations? Which players most efficiently control the rhythm of the game? Which experienced and quality player could become team leader, and as such encourage young players to grow their complete potential? Which of the inexperienced players are potential key-players, especially in visiting matches, where the young players rarely use all of their opportunities? Which cadet and junior players have the biggest potential for the senior team? Which of the players are most perspective and which are currently the best? Besides that, it is important to define optimal positions for players (estimate one's current position and systems of attack, defence, and communication that fit the complete potential and actual player quality best (Trninić, Perica, Dizdar, 1999). Based on their medical status, test results, situation efficiency and real quality and psycho-social features assessment, players' profiles are made and compared to model profiles for a given position (Dežman, 1988). If we have players of proximate values and structure of real game quality in particular positions in the team, then the level and stability of some psycho-social characteristics become the key-criteria in selecting players for the team. Valuable criteria for the final construction of an successful team are, as

follows: efficient functioning of a player in a state of temporary organism imbalance, consistent situation efficiency in a competitive period, efficiency in a state of fatigue and irregular game contacts (contact sports) and the ability to perform even the hardest tasks in offence and defence, as well as player's alert to rectify made mistakes in the game's situation resolving, and finally, to take responsibility in

the deciding moments of the game. An optimal team should be consisted of players who have the ability to play multiple positions in attack and defence. That kind of team is difficult to compose. Creating a team that would be efficient and well balanced, where particular types of players perform diverse tasks and roles in the game is an extremely complex task for the team coaches and managers.

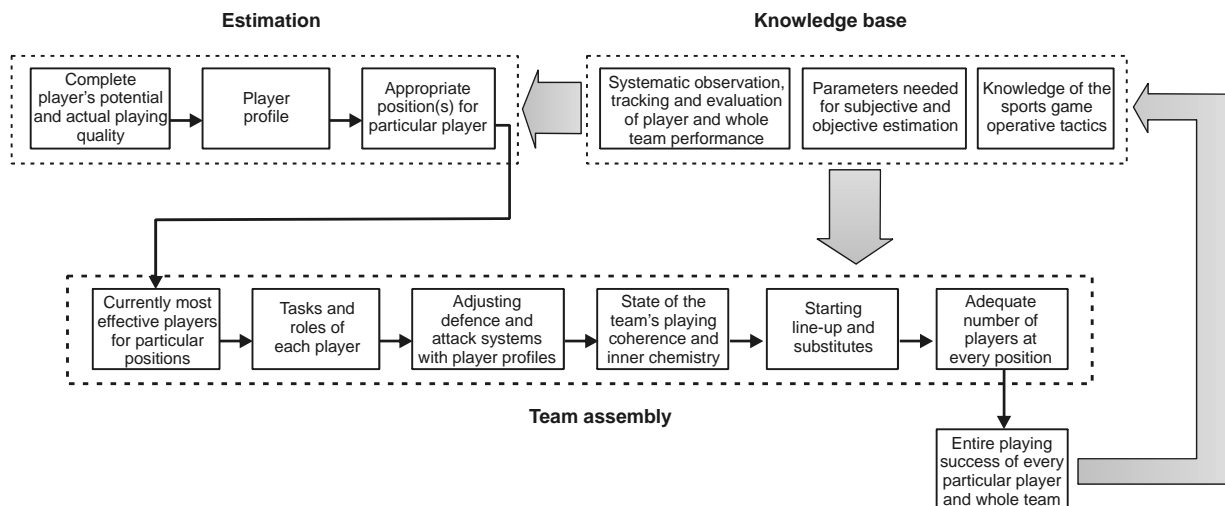


Figure 7. System of team assembly

The final selection of players for the team is defined through five important factors. One needs to define: 1) the best players for particular positions at the moment; 2) appropriate tasks and roles for each player according to his complete potential and actual quality, but also according to the whole team's needs; 3) adequate systems of offence and defence for particular configurations; 4) starting line-up, replacements and possible position changes in the game (to keep the quality of the game and team) and 5) an optimal number of players at all positions (to assemble a successful team). And finally, every manager/coach must be able to answer the question which players can play in situations of high-pressure competitiveness, which configurations most successfully control game rhythm and which configurations play quickly and dynamically within the assistance system in phases of defence and offence.

Conclusion

Group or team development is primarily based on leadership abilities, quality of expert work evident through actions such as team forming, determining precise roles, norms and status of the members (players) of a group (team), selecting players for particular positions and roles in the game, and also, forming an adequate game organisation. In the process, an appropriate player selection and team forming, as well as a team's game concept

follow some basic principles: simplicity of resolving situations in the game and a well-balanced individual and collective outplaying the rival. It has been proven by many scientific investigations, that characteristics of team members have an important influence on team performance and its success in competitions. Subsequently, one of the major qualities of a successful manager or coach is the ability to encourage functional relations (quality of cooperation) and a strong feeling of team cohesion. This is defined through one's style in decision-making, mode of knowledge transfer and compatibility between coach and athlete. The mentioned variables affect the level of group cohesion, besides the environment and individual attributes of group members. Also, it is relevant to select creative players in different positions within the team structure, because they, as well as the versatile ones, are crucial for a successful game. They are the ones who upgrade the game of each team member and create conditions for team development and achieving wanted results. Creativity, cooperation, game comprehension, tactical discipline, tactical responsibilities, and other desirable specific characteristics are important, if not critical factors, in the final player selection for the senior team. The purpose of this paper was to affiliate particular scientific research with expert knowledge and experience, and to lay out basic concepts of influence on group development, accentuating the importance of phases in team assembly

and cohesion in the strategy of magnifying collective team efficiency, and team construction in team sports. From the sports science point of view, the relations between predictors (a level of relevant abilities, attributes, knowledge, skills and habits), criteria (real player quality) and situations in the game are very dynamic. The complexity and dynamics of those relations, and the complexity of the problem of predicting team development and competition success rate for a single player or an entire team, are what makes coaching extremely challenging. We should also mention some practical problems, such as determining and analysing tasks

required by certain positions and roles in the game, and also problems of predictors based on these requirements, predictors that must be prognostically valid. A quality selection and team forming are based on: choosing predictors to determine the total player's potential, the standards of the total situational effectiveness of a certain position in the game, analysing of what the game in a certain position demands – in concord with the demands of a particular team sports game and the vision of its development, specific qualities, essential criteria for real player quality evaluation in particular positions in the game.

References

- Brower, A.M. (1996). Group development as constructed social reality revisited: The construction of small groups. *The Journal of Contemporary Human Services*, 336-344.
- Carron, A.V. (1982). Cohesiveness in sport groups: implications and considerations. *Journal of Sport Psychology*, 4, 123-138.
- Carron, A.V., Widmeyer, W.N. & Brawley, L.R. (1985). The development of an instrument to assess cohesion. *Personality and Social Psychology Bulletin*, 21, 572-580.
- Carron, A.V. (1988). *Group dynamics in sport*. London, Ontario: Spodym.
- Carron, A.V. & Hausenblas, H.A. (1998). *Group dynamics in sport*. Morgantown, WV: Fitness Information Technology.
- Cox, R.H. (2005). *Psihologija sporta: koncepti i primjene*. Jastrebarsko: Naklada Slap.
- Dežman, B. (1988). *Določanje homogenih skupin na osnovi nekaterih antropometričnih in motoričnih razsežnosti pri mladih košarkarjih*. (Doctoral thesis). Ljubljana: Fakulteta za telesno kulturo.
- Fiedler, F.E. & Garcia, J.E. (1987). *New Approaches to Leadership, Cognitive Resources and Organizational Performance*. New York: John Wiley and Sons.
- Jacob, C. S. & Carron, A. V. (1997). The sources of status on sport teams. *International Journal of Sport Psychology*, 27, 369-382.
- Johnson, D. W & Johnson F. P. (1997). *Joining together: Group theory and group skills*, 6th ed. Needham Heights, MA: Allyn & Bacon.
- Landers, D. M., Lüschen, G. (1974). Team Performance Outcome and the Cohesiveness of Competitive Coacting Groups. *International Review for the Sociology of Sport*, 9, 57-71.
- Lebed, F. (2007). A dolphin only looks like a fish: Players' behaviour analysis is not enough for game understanding in the light of systems approach – a response to the reply by McGarry and Franks. *European Journal of Sport Science*, 7(1), 55-62.
- Marković, G. (2002). *Analiza mikrosocijalne strukture juniorskih košarkaških ekipa*. (Magistarski rad) Zagreb: Kineziološki fakultet Sveučilišta u Zagrebu.
- McGarry, T., & Franks, J.M. (2007). System approach to games and competitive playing: Reply to Lebed (2006). *European Journal of Sport Science*, 7(1), 47-53.
- Mullen, B. & Cooper, C. (1994). The relation between group cohesiveness and performance: An integration. *Psychological Bulletin*, 115(2), 210-227.
- Partridge, J. & Stevens D. E. (2002). *Group Dynamics: The Influence of the Team in Sport*. In book Silva, J. M., Stevens, D. E. (2002), *Psychological Foundations of Sport*. Pearson Education Company, Boston.
- Philips, D.C. & Orton, R. (1983). The new causal principle of cognitive learning theory: Perspective on Bandura's „reciprocal determinism“. *Psychological Review*, 90, 158-165.
- Robbins, S. P. (1992). *Essentials of Organizational Behavior*, 3rd ed. Englewood Cliffs, NJ: Prentice Hall.
- Trninić, S. (1995). *Strukturalna analiza znanja u košarkaškoj igri*. (Doktorska disertacija) Zagreb: Fakultet za fizičku kulturu Sveučilišta u Zagrebu.
- Trninić, S. (1996). *Analiza i učenje košarkaške igre*. Pula: Vikta.
- Trninić, S., Perica, A. & D. Dizdar (1999). Set of criteria for the actual quality evaluation of the elite basketball players. *Collegium Antropologicum*, 23 (2), 707-721.
- Trninić, S. (2006). *Selekcija, priprema i vođenje košarkaša i momčadi*. Zagreb, Vikta-Marko.

- Tuckman, B. W. (1965). Developmental sequences in small groups. Psychological Bulletin, 63, 384-399.
- Tuckman, B. W. & Jensen, M. A. (1977). Stages of small group development revisited. Group and Organisational Studies, 2, 419-427.
- Tušak, M., Misija, R., Vičić, A. (2003). Psihologija ekipnih športova. Ljubljana: Fakulteta za šport.
- Wheelan, S. A. & Hochburger, J. M. (1996). Validation Studies of the Group Development questionnaire. Small Group Research, 27,(1), 143-170.

KONCEPT RAZVOJA GRUPA U SPORTSKIM IGRAMA

Sažetak

Uspješnost koncepta razvoja grupe (momčadi) ponajviše ovisi o sposobnosti vodstva, kvaliteti stručnog rada koja se očituje u postupcima sastavljanja momčadi, određivanju preciznih uloga, normi i statusa članova (igrača) u grupi (momčadi), u selekciji igrača za pojedinu poziciju i ulogu u igri te u oblikovanju adekvatne organizacije igre. To se očituje u načinu iskorištavanja cjelokupna igračeva potencijala i stvarne kvalitete u modelu taktike igre. Sastavljanje momčadi, priprema momčadi i pojedinačno vođenje utakmice uključuje operativnu taktiku, tj. predviđanje onoga što bi se na utakmici moglo dogoditi, stoga i predviđanje mogućih akcija i izmjena igrača. Koncepti razvoja grupe ili momčadi bi morali biti utemeljeni na povezivanju stručnog i znanstvenog pristupa koji se očituje u integraciji subjektivne i objektivne procjene igrača i cijele momčadi. Situacijski pristup u primijenjenoj kineziologiji je najvažniji jer se na njemu temelji sustav procjenjivanja igračeva potencijala te stvarne kvalitete i igrača i momčadi, kao i poticanje usklađenog i zajedničkog djelovanja članova momčadi u igri. U suvremenim sportskim igrama optimalno bi bilo, u konceptu razvoja ekipe i natjecateljske uspješnosti, oblikovati momčad koja ima polivalentne igrače, te igrače koji mogu uspješno igrati dvije ili tri pozicije u fazi obrane i napada. Uza sve to vrlo je važno da trener zna postaviti i inzistirati na zahtjevima koji su primarni u ljestvici prioriteta za pojedini sport, učinkovito razvijati i provoditi strategiju unapređivanja kohezije grupe. Trenerova liderska sposobnost za upravljanje pojedincom i grupom danas je presudna za uspješnost momčadi.

Ključne riječi: koncept, razvoj, pojedinac, grupa, algoritam, model taktike igre

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