

INNOVATIVE METHODOLOGIES IN DIDACTICS OF MOTOR AND SPORTS ACTIVITIES

METODOLOGIE INNOVATIVE NELLA DIDATTICA DELLE ATTIVITÀ MOTORIE E SPORTIVE

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Abstract

The training of athletes through a correct structuring of the methodological aspects of training plays a key role in the pedagogical-didactic field. In team sports games, with reference to football, a new operational methodology, which allows the synergy of playful and tactical aspects, can represent an adequate means for a better transfer of skills in a teaching that uses the playful aspect as a vehicle for learning. In an essentially tactical sport, in consideration of cognitive and neuro-didactic aspects such as the perception, analysis and decision making of motor actions that translate into effective execution in sports practice. The most significant elements of this innovative methodology, called Ludo-Tactics, are recognized and described in order to be able to provide a different perspective from the traditional one but equally useful in the training process.

La formazione degli atleti attraverso una corretta strutturazione degli aspetti metodologici dell'allenamento riveste un aspetto chiave in ambito pedagogico-didattico. Nei giochi sportivi di squadra, in riferimento al calcio, una nuova metodologia operativa, che consente la sinergia di aspetti ludici e tattici, può rappresentare un mezzo adeguato per un miglior transfert di competenze in una didattica che utilizza l'aspetto ludico quale veicolo di apprendimento in uno sport essenzialmente tattico, in considerazione di aspetti cognitivi e neuro-didattici quali la percezione, l'analisi e la presa di decisione di azioni motorie che si traducono in una esecuzione efficace nella pratica sportiva. Vengono riconosciuti e descritti gli elementi più significativi di questa metodologia innovativa, denominata Ludo-Tattica, al fine di poter fornire una prospettiva diversa da quella tradizionale ma altrettanto utile nel processo di allenamento.

Keywords

Methodology, Didactics, Tactics, Playful Aspects, Training

Metodologia, Didattica, Tattica, Aspetti Ludici, Allenamento

Introduction

The educational and sporting dimension come together in the search for operational methodologies that make it possible to connect the pedagogical aspects to the more specifically practical ones present in motor activities and sports, both individual and team. This in-depth study highlights the connection of both playful and tactical elements within a collective game, such as football, in which, through the interaction of the different components, new forms of organizational training principles are recognized. The aim of developing, consequently, innovative solutions in the teaching of sports games.

Scientific research in the psycho-pedagogical field has amply demonstrated the effectiveness of play from the didactic point of view and of learning processes starting from the active principle inherent in the game: the learning by doing strategy, which is one of the educational approaches of action learning, it is used in sports to allow the learning of the specific dynamics of a competition through practical action, as the game manages to activate thought and action, mind and body, intelligence and emotion, according to that embodiment process widely thematized by phenomenology and cognitive sciences (Isidori, 2019; Farnè, 2016). The playful aspects that characterize the didactic-pedagogical dimension have been the subject of study for several years by various international scholars (Bulgarelli & Nicole, 2018). The game has been recognized as the most significant learning vehicle for the current generation of athletes and, widely shared, it turns out to be the motto that the real master was the game and this for the simple reason that everything that is learned with joy remains forever (Munafò, 2019; Bianchi & Gori, 2020). For this reason it can be considered that, both for the training of a young player and for the specialization and training of players in adulthood, the study of the playful and tactical aspects summarized in the composition of the neologism Ludo-Tactics, in which there is the fusion of the term Ludo, intended as an abbreviation of the ludic noun, with the term Tactic, it intends to represent an original cue to name a new teaching methodology that uses the game as the main vehicle for learning in a sport such as football, in which the tactical aspect appears to be among the predominant elements of the discipline.

1. Processes of Interaction and Tactical Training

The study of the two components, namely the playful sphere and the tactical sphere, considered within a pedagogical-educational dimension, begins with the description of the interaction processes, which can be useful for understanding the social field of action. Between the people involved in the activities and leads us to the development of motor interaction in a didactic key. Specifically, in the case in which a subject carries out a motor action without interacting with others, a situation arises where the attention of the single individual is placed on the environment or objects, but not on other people (Ligabue & Farnè, 2020; Palumbo, Minghelli & Pallonetto, 2020). This type of movement, for example, includes all games of individual skill or sports in which one remains in the lane, which basically do not involve exchanges of any kind with other athletes during the performance. In the event that duels take place between individuals or teams, socio-motor exchanges are created characterized by the presence of two different interactions: the cooperative one between teammates and the oppositional one towards the opponents, or mixed in the case of team activities. If there is no competition, the interactions are said to be cooperative. These categories, since they provide a key to reading the possible relational motor experiences, make us understand that, in order to experience the full range of socio-motor situations, it is necessary to set up activities not only in relation to sports technique, but also in relationships (Sannicandro, Colella & Limone, 2020; Bortolotti, 2019). They can be decisive within a team group in a systemic vision regarding the methodological-didactic

aspects to be addressed. The team, in fact, must be considered as a complex adaptive system, i.e. a system made up of numerous elements that interact with each other in a non-linear way and that constitute a single, organized and dynamic entity, capable of evolving and adapting to the environment, in a multi-ecological training perspective (Raiola, Tafuri & Paloma, 2014; Masala, Lazzaro & Iona, 2021). The search for connection between theoretical and practical aspects in teaching also invites us to take into account that football, the team sporting activity with the largest number of players globally, it is a sport whose definition refers to a sport with a high coordination coefficient, acyclical but also mainly tactical, in which the athlete's skills develop in a situational context, be they individual, departmental or collective (Kacialin, 1988); you cannot approach the game of football, as well as any other team sport, without starting from an early age to know and develop its appearance and tactical thinking, which more often than not is improved simply by playing. Only through specific training, based on real game situations, will it be possible to train a thinking athlete. A footballer who, in a fraction of a second, will have to be able to perceive, analyze, decide and finally execute precisely, with the aim of achieving a cognitive and neuronal capacity that allows to obtain the best solution in that context and to economize and optimize the technical gestures. All operational proposals should be aimed at achieving this goal. It is essential to understand that in a match the player, in order to perform a technical gesture, needs a series of information to be processed quickly by combining quality and speed in motor actions (Cusano, Donini, & Madonna, 2019). The cognitive sphere, therefore, plays an essential role in the performance of a footballer and the game is the most specific tool with which we can train it. The methodological and operational indications of Ludo-Tactics are connected, in terms of training, to a neurodidactic approach and start from the assumption that the brain to carry out finalized actions (conscious and unconscious intentions) uses the system of mirror neurons. During the training sessions it is necessary to solicit in the players the same intentions that we want to be realized in the match. The neurons that are activated in carrying out an analytical exercise, in a stable or partially unstable environment, i.e. a simplified one, are not the same ones that are activated to perform the same gesture in a situational context, in which our intentional action depends on the cooperative behavior of the our teammates and the oppositional behavior of the opponents (Damiani, Colzani & Paloma, 2018). We always move, in the game of football, as in life, not in a preordained way with respect to the environment, but according to the environment and context. Ludo-Tactics prefers a global methodology over analytics. The analytical exercise separates the "way of doing something" from the "purpose for which it is done" and allows only a coded learning of certain structures, which will hardly be usable in the real development of the game. When a technical gesture is learned in a situation detached from the reality of the game, neurons different from those operating during the race are activated: in this way, the neuromotor specificity necessary for the skills learned can be used profitably in the competitive context of the race is lacking match.

The methodological implications related to the tactics suggest to train in different spaces from the real ones and with a limited number of players; this can help us to reproduce and understand micro-situations of the game but, in order for our didactic intervention to be effective, it is then necessary to recreate the events and conditions that usually occur in the real game spaces of the game; in fact, the possibilities of action within small spaces appear to be different from those offered by the entire playing field (Ferrari, 2007). We then consider the variations in space-time relationships, the different time available to make the most appropriate choice, the different force necessary to perform a motor action in a large space compared to a small one, the impossibility of developing high speeds in spaces. tight from a conditional point of view and, moreover, the reduction in the number of players determines a limitation of the possibilities of interaction, with a consequent decrease in the complexity of the game (Bangsbo,

1994; Sgrò, Bracco, Pignato & Lipoma, 2018). Games in small spaces are therefore simplifications which, although useful from a preparatory point of view, as they facilitate the understanding of the principles of the game by the players, are not sufficiently correlated with the reality of the race. The method of learning by imitation suggests that: "at all ages and at every level of competence, the more the athlete has the opportunity to play, comparing himself with his teammates and opponents, the more evidently he absorbs those positive stimuli that push him to perfect his gestures, which could lead him to competitive success. The trial-and-error learning mode suggests that the more practical experience the player acquires, the greater the chance that he or she will respond correctly to the problems in which he is immersed, namely the race. It is only through experience, and not through the necessary verbal explanations, that the player can learn to understand, through the mirror system, the intentions of their teammates and to recognize and anticipate those of their opponents (Ascione, Di Palma & Rosa, 2019; Tirino, 2021). In football, the greater the number of players involved, the higher the unpredictability of the game. The more variables to keep under control, the greater the complexity and consequently the cognitive-emotional commitment of the players. The complex collective construction of the game that is carried out through the coordinated movements of two or more players has its basis in rules of interaction that refer, in the final analysis, to the principles of the game related to the individual tactical-technical skills in order to operate in adequate playing spaces and densities, defined by the ratio between the number of athletes and the space available; it is important to recognize, through experience, the intentions of teammates and those of the opponents, in order to be able to anticipate possible developments in the game; solving problems in complex environments and contexts, or rather "problem solving" strategies for situations in which, due to the innumerable possible interactions between the agents in the field, the development of the game cannot be predicted with certainty (Sarsini, 2012). In order to facilitate the interaction processes, the recognition and sharing of access codes (non-verbal language) will allow for better self-organization of the players, with a consequent increase in exercise intensity; in order to achieve real integration between the players, it is necessary that during the training sessions they are able to interact with each other as much as possible, making them play together for a long time. Ludo-tactics bases its roots on these arguments and on the same game principles of Tactical Periodization, a training method of Portuguese origin, which places the interactions that occur between the players at the center of the training process, those that occur with the environment and the ability of the team system to adapt to the continuous changes of the surrounding environment.

2. Methodological-Didactic Aspects

The Ludo-Tactics methodology provides, as its main objective, the creation of a game model through the understanding and application of certain individual and collective behaviors. The athlete, therefore, is the main protagonist of the training process because he must learn and subsequently reproduce the rules of the game that will allow him to always implement the right behavior (tactical intention and / or technical gestures) in relation to the occurrence of a certain situation. game (problem). His cognitive area will therefore be greatly solicited and stimulated. Generally, the teaching-learning process is deductive (I demonstrate, you execute). In fact, many coaches prefer to focus on automatisms. In this way, however, a "mechanical mechanism" is promoted by causing the condition whereby feedback replaces the phase in which the player thinks and processes information. On the contrary, the purpose of this methodology is to create habits by giving the players themes and rules of behavior (individual and collective) which, after a cognitive process of perception-analysis-decision and therefore of thought, they will put into being. So let's talk about "phenomenology", that is the coach's

finger printing (de Lima and Silva, 2018). To apply this methodology, it is necessary to use the cognitive resources of the individual, allowing the players to acquire transversal and functional skills. This is achieved through an inductive teaching-learning method based on free exploration, guided discovery-research and problem solving. In this way, the player is placed at the center of the entire training process and it is he himself who relates to and solves a specific problem (of a tactical nature) relating to different game situations (Tamarit, 2007; Del Bò & De Sio, 2018).

The operational methodological proposals have the function of presenting models of situational exercises. The coach should be able to build exercises that are able to have an impact on the development of individual skills and collective game principles (Cusano & Fidanzio, 2018; Fredella & Marzocchi, 2021). In developing an exercise, the coach should design scenarios similar to the reality of the game, bearing in mind some basic concepts that we list:

- The phase or phases of the game on which you want to place the primary emphasis
- The moment of the game within the phase
- The primary objectives and game principles that you want to pursue during the exercise
Which and how many players to employ
- Behaviors to be solicited
- The space or area of the field in which to carry out the exercise
- Conditional orientation of the session

Once these parameters have been taken into consideration, situational exercises can be carried out, taking into consideration that the field will be able to give us indications that we should grasp promptly, varying spaces, times and other parameters, where necessary, even during construction. . The Ludo-Tactics methodology is very flexible with regard to the objectives referred to the age groups as it is believed that, beyond the chronological age, the parameters to be taken into consideration in drafting the design of the activities, are rather linked to factors such as biological age and related physical development, degree of development of coordination and conditional skills, degree of maturity and level of development of tactical thinking, degree of understanding of the game, level of individual technique, degree of individual tactical skills, degree of skills in the various others spheres: relational, cognitive, psychological (Garofalo, 2021). The levels of understanding of the game on a collective level, the quality of interactions between players and the previous knowledge, skills and competences achieved on a collective level will also be assessed. In the initial evaluation, only the conditional aspects can be monitored through objective tests, but taking only these data as a reference will give us an absolutely incomplete view. If we take speed into consideration, for example, in football it does not just mean how long it takes the pupil to cover a certain distance; it also has to do with the speed of choice, with the motor anticipation capacity that leads him to perceive and then decide in advance which way to go or what to do, aspects that cannot be measured objectively and repeatable under the same conditions, but that we may be able to subjectively assess through careful observation, noting impressions and sensations of any progress. A similar argument could be made for the ability to resist; it is not certain that those who have had better results in the tests then have greater ability to carry on the game model for the entire duration of the race (Wein, 2007). This ability to last, in fact, depends on various factors including the internalization of the game principles and the ability to manage and, in a certain sense, endure tactical and cognitive fatigue. This discourse becomes even more evident if we refer to the cognitive, relational sphere, or tactical skills, for the evaluation of which, only systematic observation can represent an adequate, albeit subjective, tool. Systematic

observation is an evaluative survey that is carried out by turning attention to the behavior actually implemented in a given situation, faithfully recording the information sought; it operates simultaneously with the unfolding of the facts, striving to grasp the dynamics within the context considered. Systematic observation has very specific objectives, defined a priori and is carried out on previously designated subjects. It provides for the preventive development of a planned system for collecting and classifying information, which allows, subsequently, the analysis of the collected data. It represents only food for thought on the basis of which the coach can draw up a new card adapting it to their needs (Pereni & Di Cesare, 1997; Sibilio, 2012). The evaluation that we will note at the beginning of the year, in the first observation period, is called the initial evaluation. During the course of the season there are intermediate moments in which we will focus on evaluating the progress of the boys. These moments represent ongoing evaluation. Finally, the final evaluation will also be carried out, in the final period of the season and it will be a valuable contribution to provide a copy of the evaluation sheet to any new coach for the following season.

Conclusion

Just as play initiates complex mental activities and favors the development of symbolic functions, develops intellectual synthesis and allows an individual to achieve his integration into the environment (Rosati, 2011), Ludo-Tactics, in the sporting context, can be posed as a methodology that makes the game the main training tool and considers the improvement of interactions, through the development of sport-specific collective game principles, the main objective of the training process. The multi-perspective approach used, with respect to the conceptualities of the playful and tactical dimensions, in football, a sport with the highest number of practitioners and with the characteristics of a complex adaptive system, aims to provide new orientations for educational research in training area of teaching-learning processes oriented to the sciences of motor and sports activities, in connection with topics addressed to the educational-didactic-training-evaluative part of the scientific-disciplinary area that deals with the methods and teaching of sports activities. The development of avant-garde themes aims to represent a contribution to the formation of innovative methodologies as a function of continuous updating and research perspectives in the sector.

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