

METHODOLOGICAL, PEDAGOGICAL & DIDACTIC EXCHANGE WITH THE PLAYER. OPTIMIZATION OF THE DECISION-MAKING SYSTEM IN YOUTH FOOTBALL.

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Abstract: Preliminary considerations. Through the analysis of football both at the general level of competition and at the level of individual matches we can confirm that unpredictability constitutes the defining characteristic of the sport. Football is based on a series of perceptual-cognitive demands. These form the basis of our intervention as coaches since the tasks and play situations in football are predominantly perceptual-cognitive and take place in a constantly evolving setting. Before this observable reality, there is a clear answer as to what the backbone of our methodology should be: the optimization of this decision-making system in an attempt to overcome upon the traditional PAD + E (Perception - Analysis - Decision + Execution) and allow for concepts such as cognition, emergence, emotion, etc. (Damunt & Guerrero, 2018), which are closely linked to neuro training.

Essentially, we're talking about adapting to the reality of football, which, if not the most complex of all sports, ranks high among them. As far as we've been able to observe, football is the sport with the highest degree of uncertainty; it is a chaotic discipline for two main reasons:

- Coordination is executed by a non-dominant limb: the legs. This point alone is already a clear indication of just how complicated it may be for players to take decisions in advance, to anticipate decisions, at least in close proximity to the ball.
- The same non-dominant limb in charge of executing the coordinative structure of the motor action is, at the same time, also responsible for moving the body through space and shifting its axis.

These two points justify the impossibility of basing our adaptation of football-specific decision-making on processes of anticipation of decisions. In other words, we must train our players to handle the implicit variability inherent to our sport, and we can do so through implicit learning. We'll attempt to structure the optimization of what is commonly referred to as players' "instinct", which is absolutely capable of undergoing training and processing in order to improve players' "reactions" in close proximity to the ball (spaces of intervention and mutual assistance). It would be beneficial to help players build their intervention based on their feelings within these spaces of operational action - feelings that are crucial to the immediacy of the motor solutions demanded by this unpredictable sport that does lend itself to the projection of preliminary, tactical solutions.

Decision-making. When dealing with how the decision-making system of our players works, a good starting point would be understanding that, as we've already mentioned, rather than choices (the old PAD + E process) we should be talking about emergences, decisions that come to pass "instinctively" or emotionally prioritized. As regards PAD + E, until now the decision-making system has been interpreted from a rather Cartesian and reductionist point of view, also in football. Recent studies on the matter have demonstrated that this does not happen in football. By taking a closer look at the complex reality of our

sport, we can speak of a perception-action cycle in which both processes not only occur at the same time but also interact with each other (through self-organization), thus leading to the emergence of a given decision without the mediation of a managing body (adapted from Pol, 2011). When designing our training tasks, it's also important to bear in mind the emergence system for emotions and the processes of re-adaptation and somatic marking (Damunt & Guerrero, 2018). In short, we must respect a key aspect of our interaction with players: flow, which is stimulated by implicit learning (Guerrero & Damunt, 2017). In addition to these ideas, it's important to remember that action - especially in spaces of intervention - is often taken unconsciously and the result thereof is later consciously assessed. Pol (2011) points out that brain activity on the plane of consciousness appears on average 206 ms after muscular activity begins in "decision-making" situations.

Contextualized and constrained intervention

Taking into consideration Professor Seirul•lo's thoughts, there is a fundamental principle that we must adhere to when interacting with players: the prioritization of structural modifications of tasks and procedures over the use of verbal and gestural corrections and instructions. The first, incite players to adopt certain behaviour required for the task, thus giving rise to deep adaptive learning that is much more resistant to time, space and mental pressure.

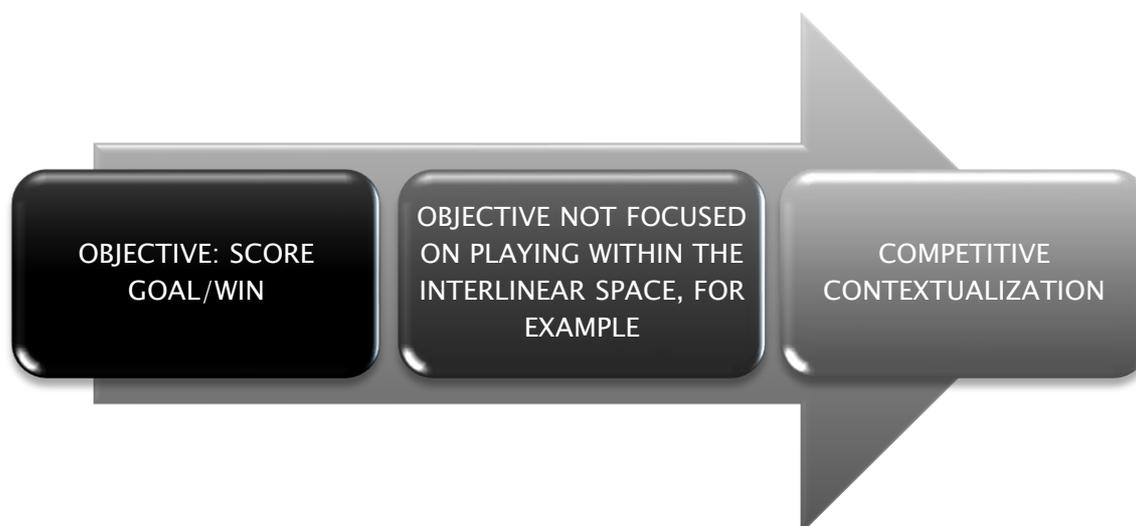
Rather than instructions, key points, we speak of reflection guidelines that will help players think about their motor execution. The number of objectives (key points) to be considered through such guidelines should be limited to eight per regular session (75'), for example, and can, of course, be reduced even more so depending on the quality and efficiency of the constraints and variables used during the session. To optimize this training process, it's also important to bear in mind the need to limit intervention from coaches through instructions (key points) that enhance declarative learning (knowing how to articulate behaviour or describe the tactical or coordinative problem, etc.) rather than procedural learning (knowing how to behave in a certain way or how to solve a certain tactical or motor problem, etc.). But the main source of information should not be verbal instructions from the coach but rather what players perceive from the context designed by the coach, which should be duly constrained so that players repeatedly find themselves in the situations meant to be optimized. In this regard, provocative rules created for the acquisition of content are much more important than guidelines for reflection and, especially, instructions. Our goal is to create a predominantly implicit, rather than explicit, process based on task variations rather than instructions from the coach.



In addition to increasing athletes' autonomy, it has been demonstrated that implicit learning guarantees greater retention, stress management and adaptation to change (Liao & Masters, 2002). Applying these methodologies leads coaches and athletes to develop new skills that allow the former to transfer control and power to the latter in favour of their autonomy and self-management (Sebastiani & Blázquez, 2012). The instructions given by a coach or feedback offered by a trainer often fail to achieve the desired results. This is because intentions and conscious control of movement are mere constraints that intrinsically and extrinsically interact with the task (adapted from Seifert & Davids, 2012) and are usually ineffective or

insufficient in the creation of new, efficient synergies that allow players to adapt to the tactical and motor demands of the game (adapted from Balagué, Torrents, Pol & Seirullo, 2014). Professor Balagué adds that instructions and orders promote the connection between intention and action or instruction and action rather than between perception and action. This limits the efficiency and autonomy of players during competition and even leads to higher rates of injury since it generates a lack of motor coordination that results in, in the best case scenario, losing the ball or, in the worst case scenario, potential injuries as players' decisions come into critical conflict with the coaches' instructions at the time of execution. Sometimes giving instructions matches the intention of the player and corresponds with the demands of the game but when it doesn't, the player receives a double constraint (that of the game or the player's intention and that of the coach's intention). A coach's instructions may conflict with the individual possibilities of players and their internal logic. In such cases, we're creating a conflict within the player and failing to respect his feeling-action cycle (Guerrero & Damunt, 2017).

At this point, we must ask: are we constraining the player to facilitate the emergence from himself of naturalized behaviours adapted to the proposed situation? Or are we limiting his actions so that only those we deem valid based on our game model come to pass? As training coaches, we must ensure that provocative rules don't lead players to play by the rule, focusing their intervention on the didactic content and the tactical behaviour at hand, but that they lead players to adapt to the context - and also adapt the context to players.



Facilitating contexts (such as through provocative rules or by establishing numerical superiorities, etc.) is different than simplifying contexts by proposing a combination play, for example. We must be adept at creating learning contexts, not at teaching our players but at allowing them to learn through constraints, thus enhancing the emergence of new adaptive behaviour. It would also be interesting to avoid providing too much stability during tasks. It's good to change aspects such as superiorities and inferiorities, how and who kicks off the play, when a repetition ends, what information is offered and what is not, to allow for greater possibilities of exploration during a given task or training session. "Coaches must use non-linear teaching, that is, they must consider constraints within the learning process to promote the development of skills in the individual, thus turning coaches into facilitators of exploration activities in the search for the most appropriate solutions to the problem at hand" (Damunt, Guerrero & López, 2016).

Conclusion: It is well known that players must react during a match, at least when in close proximity to the ball, where it is not possible to take decisions in advance using the old PAD process as there is simply

not enough time. In these spaces, players must practice with regard to their emotions, implicit learning, etc. Coaches must allow and promote players' flow so they can take decisions based on their instinct and intuition. Although the case has often been made that such elements are part of a player's DNA, they are, in fact, potentially trainable.

We must teach through implicit learning and take the emotional path, since it results in a much deeper type of learning that is much more resistant to the characteristic time and space pressures of football, in front of other types of learning, such as repetition, memorization, teaching methods based on instructions and demonstrations from the coach, repetitions, significative learning, modelling, etc. We must break away from these linear and Cartesian paradigms to interpret training and the practice sessions of our young players in a different way, thus facilitating the creation, or better yet, the emergence of efficient, self-sufficient players. In short, we must work towards the emergence of autonomous players.

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