Module 4. Training analysis - Coaching staff intervention

The training process on the field is a key situation where we must manage information between players and coaches. As we have mentioned before, we cannot directly manage this knowledge, but we can manage the information available in playing contexts that we design, as well as facilitate the learning process so that this information becomes knowledge. Everything we do outside of training is aimed at improving the development of the players on the field. The most important knowledge comes from playing, therefore the field is where we must really manage it. All of our interventions should be geared towards training on the field. However, in order to optimize the training process, we must also generate conditions outside of this context. This would include training preparation in terms of designing exercises, group activities with the players, etc.

In a company, a knowledge management system of the future brings the information to the worker right when he/she needs it, so it's not necessary to search for it in databases, intranet, etc. That's what the training process is all about; giving the player meaningful information just when he/she needs it. The two main mistakes a coach can make are based on his/her information management. That is, giving the player information that he/she doesn't need and withholding the information that he/she does need. From this point of view, we will analyze the coach's interventions during the development of the exercises at both the static and dynamic level, with the aim of providing the player with the necessary information at the right time. The coach will try to avoid unnecessary messages; adding value to the messages he/she provides, recognizing the player's need for internal feedback and how he/she can manage it, etc.

Since training is essential for knowledge management, we will discuss the type of interventions by the coach before, during and after the session, as well as before, during and after the training exercise. The session and the exercise comprise the two minimum units of time within which the coach interacts with his/her players on the field.

4.1. Analysis of the session (stages within the session)

The session is a didactic block with common content in the various stages and exercises. Next, we will analyze the potential interventions by the coach in each of these stages of the session and the respective consequences.

4.1.1. Pre-session. Interventions before going out on the field

A pre-session is carried out prior to training, where we can perform a number of dynamic activities and interventions, with the aim of preparing the players to improve their development during the session. It usually takes place in the locker room, setting the scene for discussion, with the aim of inviting the player to participate in reflecting on the action and evaluation of these dynamic activities. The type of dynamic activities can be highly varied, but the objective should always be focused on encouraging reflection by the player. It is a good opportunity for the player to externalize this tacit knowledge and express him/herself. The coach evaluates this process of externalization in order to help the player express those concepts or ideas that he/she cannot clearly externalize.

We should make use of audiovisual graphic tools such as whiteboards, videos, etc. In this regard, the player will be able to access a source of information that is not readily available during the session. The visual tools allow for the transmission of certain situations of play or behaviors in a much clearer way, with the image itself generating debate and reflection. When these situations occur in the training session, the player will be able to understand their meaning because he/she is familiar with such stimuli, even theoretically. If these appear for the first time during the training session, it would be much more difficult for the player to visualize them and pay attention to the details. However, as they have been presented to the player in graphic form during the pre-session, he/she understands them in a much more meaningful way.

It is a good opportunity to present the content and objectives of the subsequent training session. The coach can comment on certain aspects, describe in detail the exercises and how they work, etc. In addition, as was previously mentioned, the coach will be able to use audiovisual and graphic tools to explain the exercises, so that their functioning will be made much clearer and explained in less time. With the presentation of the pre-training session, it is possible to save time for the session and facilitate its continuity. The transition between exercises will be much faster, less time will be needed to describe them, and it will be easier to focus on aspects of play during the presentation of the exercises rather

than on their functioning, as they were previously explained, etc. This continuity is essential in order to produce the adaptations that we want to see in the players, and for the training to be truly meaningful. This continuity leads to conditional adaptations as a result of the pace of training, which is based on less breaks and less break time. In addition, there is an increase in the number of specific experiences of the players, thus providing greater opportunities for learning within the game.

Another potential intervention during the pre-session involves reviewing the individual objectives of each player, so that he/she can manage his/her individual areas of focus during the training. It is very difficult for the coach to manage all of the information related to the individual objectives of each player. However, if we let each of them focus on their own objectives, we will facilitate autonomous learning, and the coach will simply manage the information that arises from the players' needs on their own initiative. The player will pay attention to the most relevant stimuli according to his/her own objectives, and will discuss any doubts with the coach. In this regard, the coach doesn't have to handle as much information, but instead manages key information in accordance with the player's needs. An interesting way to make it easier for each of the players to focus on their individual goals would be to hang each player's "wheel of life" in the locker room. A wheel of life is a figure showing each player's individual goals and self-assessment. Therefore, before starting the training session, they should review their individual goals and areas to focus on during the session.

It is also important to foster the necessary conditions so that the player participates in the session in an optimal way. These conditions involve the acquisition of skills and emotions. Establish training as a challenge and give the player responsibilities to take on, facilitating a better development of the training session. We can make reference to competitive rankings within the week or session, link the session to the following match, etc.

We should make the most of the locker room, but we are not always able to do so. A priori, it is a space for players, whereas the coach is seen as an "intruder". We can design activities based on this assumption. Having a whiteboard in the locker room is necessary for this type of activity. We could ask questions on the board, so that the players collaboratively respond without the coach being present. It would also be useful to display this inside the locker room before the coach comes in to start his/her pre-session intervention. In this regard, the players could review the upcoming training session and discuss it when the coach is not present. This would also set the stage for the coach's intervention prior to the training session. Therefore, instead of explaining how the exercises work and describing them, the coach could ask questions about each exercise, as the players will have previously reviewed them.

The training session is incorporated into a weekly cycle, designed in accordance with a previous game that has resulted in the need for

various modifications (or to give continuity to and strengthen), and the subsequent game that must be adapted in order to win. This situation forces the coach to link the training session with the previous one before proceeding to design it. In addition, in order to present the training session as a challenge, we should link the session with the game plan. Talking about the opponent before starting the training session can create the necessary conditions for the player to approach the exercise in a much more meaningful way.

Finally, one of the most important interventions that the coach can make before the training session itself has to do with the conversations he/she has with the players. In order for the players to convert information into knowledge through learning, it is necessary to get to know them. Know their motivations, needs, expectations, perceptions of their performance, family situation, education, etc. Before training, the coach might choose to have these individual, informal conversations with the players. It is important to take advantage of these windows of opportunity to better adapt to the needs of soccer players and facilitate their learning experience.

4.1.2. During the session. Interventions on the field

When it comes to managing knowledge within the session itself, we have to deal with a number of important variables. We are not going to analyze how knowledge is managed within the minimum unit of time; that is, the exercise, as this will be analyzed at a later time.

It is important to ensure the continuity of an enriching experience within a training session. We understand continuity in training not as successful playing time in the session, but as achieving highly effective learning time. The main source of learning for the player is the game itself, but it is not the only source. If the game is not properly developed, the player's learning experience will be hindered. The player's learning goes beyond the specific experiences, although these have the greatest impact. If the player does not correctly connect to the game, his/her teammates and opponents, then he/she will be training erroneously. If these experiences are not corrected, nothing is learned. Error is an element that should appear within the learning process, but not exclusively or repeatedly. Errors must appear in order to be corrected. When the player trains in an erroneous way, the experience does not lead to meaningful learning. In this case, the best thing to do is to stop and pause the session, and guarantee the continuity of learning within the session. We have to understand that pausing once in a while allows us to train more and train better. If the information available in the game is not properly managed to be able to turn it into knowledge, we must intervene in order to change this. We may need to introduce new information that makes it easier for this to become knowledge. We have to manage information in such a way that it becomes knowledge through the learning process.

It is important to understand the session as a didactic block. The entire session should be based on common objectives from which exercises are designed. A session is not a collection of exercises, but the integration of these. We must think of the periodization of exercises that will lead to more comprehensive learning. From here, complex progression appears. The principle of complex progression addresses the need to link exercises, so that we can manage more complex scenarios over time. With the progress of the training session and the experiences within it, we will prepare the player to interact within more complex environments. This is why the initial exercises must be less complex than the subsequent ones. The only way to integrate these exercises and add more complex scenarios as the session progresses is to start with common objectives within each exercise. If the exercises are very diverse in content, they will be disjointed, thus hindering complex progression.

We believe that the principle of vertical alternation facilitates this complex progression within the session. Alternation refers to the modification of the training plans. We use the horizontal concept to address periodization content within the weekly cycle, taking all sessions into account. We use the vertical concept to discuss the content of a single training session. The training plans make reference to the network of connections, where the areas of focus are established within a context of learning, as well as the way of gaining knowledge (consciously or unconsciously) with either the coach or the player as the protagonist.

The best way to incorporate the training session is to start with a conscious macro context that contextualizes any individual, group or collective intervention within the collective framework or game plan. Within this conscious macro context, the coach would be the protagonist: he/she would provide a piece of information and would manage the context, etc. Then, the exercises will be developed on a micro scale, either on a conscious or unconscious level, so that the player focuses on individual aspects that are previously contextualized. We then continue with meso content, where the focus is on group, sector or cross-sectoral relationships. We add more complexity to the playing context, starting with an overall contextualization and the development of individual actions and interventions that allow for greater success. Lastly, we address macro situations once again, but in an unconscious way. In other words, the exercises are fully completed and the players are the protagonists of their own learning experience.

In this regard, we arrive at a more real and complex situation after having presented them with a great deal of information about the collective framework of the team, as well as indicating which individual actions and interventions they must carry out in order to be most successful, and how they must behave with respect to their close or sectoral relationships. This ensures that team play works in the best possible way. Understanding the session as a didactic block, where the different exercises share a common objective, and incorporating the different

learning situations so that more complex scenarios can be implemented as the session progresses, we believe that information management can facilitate this conversion into knowledge.

Focusing once again on the continuity of the session, we should discuss a number of variables that take up training time without adding any value. It is important that we correctly manage and organize the spaces and materials where the exercises are carried out, to avoid wasting time when assembling or disassembling the equipment or during transitions between exercises.

Depending on what will be worked on within the exercise, it is highly likely that there will be areas on the field where this content has a greater impact, due to its specificity and transfer within the reality of the game. This must be taken into account when setting up the exercise. Once we identify where we can set up each exercise for greater impact, we must assess whether this structure facilitates the continuity of the session. This can force us to assemble and disassemble cones, which is time consuming, or it can provide us with more effective time management if the only thing we have to do when moving from one exercise to another is to move to another space. On the other hand, we recommended setting up the session as much as possible before the players come onto the field to train. In this regard, once they join the training session, we can attend to their needs instead of moving around cones.

It is often impossible for us to set up the entire training session beforehand, so we must dedicate a portion of our time within the session to assembling and disassembling exercises. Inter-set intervals are a tool that allows us to make the most of the time we have, which at first might seem ineffective. While some members of the coaching staff assemble or disassemble the equipment for an exercise, another might set up a quick exercise where the players can carry out another activity. This exercise is also time consuming, in addition to the player's activity. The exercise needs to be set up and explained, and the player must adapt to its functioning; ultimately learning from it. With all of the time it takes, we must make it an effective tool. That's why we have to ensure that the player gets used to performing inter-set intervals. If we manage to have the exercises already set up, and the player has frequently performed them, then we won't need to explain them and the player won't require as much time to adapt. It is the same for key exercises. If we create these conditions for the development of inter-set intervals, they will become an essential tool for effectively making use of the transition time between exercises.

In addition, these transition times are often intended for players to rest and hydrate. It might be useful to accompany them when they take a drink break in order to start conversations with them, ask them about their perception of the exercise, discuss significant aspects, etc. All of these conversations and discussions about the game are carried out in an informal context, where the player is much more receptive to listening

and expressing his/her tacit knowledge. Conversations are also sources of learning, which the player needs.

4.1.3. Post-session. Interventions carried out after completing a training session on the field

At the end of the training session, we have a short time in which to manage the information to turn it into knowledge. Within this short period of time, it is helpful to link the training session and the content developed with both the subsequent session and the game plan. It is important to facilitate horizontal progression in terms of complexity and learning. Upon completing a training session, we can create conditions that facilitate the development of the subsequent session. In addition, it is important that players connect the content and interventions within the training session to the reality of competition. This connection will make it much easier for them to acknowledge the relevance of the content, thus facilitating their learning. If the players are able to see the importance of the aspects worked on, their commitment to the exercise will surely be greater. The player's commitment to the exercise is beneficial to both autonomous and collaborative learning, including what is learned from the coach. It is important that we link the content developed within the session with both the game plan and the subsequent training sessions.

On the other hand, this period of time can be used to review the aspects built upon during the training session, reflect on them, etc. Any type of dynamics can be used to review or reflect on the content of the game. In order for the players to have a positive attitude towards this type of activity that does not involve playing, it is important that we introduce variability; both in the typology and the management of the dynamic activities. We can observe better attitudes as a result of the variability in the activities, and they also allow the players to have a prominent role within them. It's not the coach who reviews everything that's been carried out, but the player who reflects on it. It is an opportune moment to encourage collaborative learning and group reflection. The leading role of the players within this process of reflection does not mean that the coach does not have any kind of responsibility. The coach must guide the entire process so that the appropriate reflections are made. He/she will have to manage the dynamic activities so that they are fun and conducive to learning. The prominence of the player enables the coach to take on other responsibilities that are conducive to learning.

Finally, once the session is over and the players head to the locker room, the coach has the opportunity to talk to them. These conversations can be formal or informal. It is important to combine both in accordance with the players' needs. Speaking individually with players at the end of the

training session is a way to get to know them better in a shorter amount of time. Getting to know the player is essential to foster learning. More formal chats can also be aimed at addressing certain attitudes. They can be used to draw the player's attention to changing some of his/her attitudes. Their attitudes are either catalysts for or obstacles to learning. On the other hand, we might aim for more informal conversations that will allow us to access other types of information. Informal conversations can create a safe environment for the player to share more information with the coach. These formal and informal conversations can deal with aspects of the game, attitudes, external aspects, etc. These can be a helpful tool, since they allow us to make the most of another learning source and get to know the player better.

Table 1: Intervention by the coach in the different stages of the session

Pre-session	During the session	Post-session
• Reflective participation of the player, based on the performance and evaluation of exercises. • Presentation of the session: objectives, description and functioning of each exercise, etc. Gain time in the session and facilitate subsequent continuity. • Make use of graphic and audiovisual tools • Review each player's individual objectives for the subsequent management of areas of focus • Produce the necessary conditions for the player to participate in the session (emotion/acquisition). • Locker room dynamics without the coach present (blackboard in locker room required) • Link the session to the previous one and to the game plan (horizontal progress) • Individual and informal conversations with players to perceive their needs	• Ensure continuity of acquisition in the session, maximizing meaningful learning experiences. Sometimes stopping means training more • Complex progression within the session, based on common objectives in each exercise • Vertical alternation (Conscious Macro, Micro, Meso, Macro) managing times and areas of focus • Management/organizatio n of spaces and materials to avoid wasted time in exercise transitions (assemble/disassemble) • Decide whether to carry out inter-exercise activities to make the most of better transition times between exercises (between-exercise activity as a habit) • In transitions between exercises, with rest and hydration, join the players to informally discuss certain aspects and aim for conversations about the game	• Link the session with the subsequent one and with the game plan (horizontal progression) • Refreshe r activity of key aspects developed in the session and variability in the management of the post-session activities. • Formal or informal individual chats (conversations)

Source: Prepared by the authors.

4.2. Analysis of the exercise, minimum time unit (stages within the exercise)

We can identify several stages within the training exercise. The first is the presentation of the exercise, where we explain its functioning and present certain information for the player to be able to perform it. There is also the time that the player needs to adapt to the exercise. In this stage, the player is primarily focused on the functioning of the exercise. Once he/she has mastered the exercise, he/she starts playing and stops practicing. His/her behavior is much more natural and specific. It is at this moment that the exercise becomes useful. During this period, meaningful learning takes place. Players are primarily focused on the game and can discover available information within the exercise. As a result, they adapt to that environment and modify some of their behaviors. Then, the exercise ultimately becomes redundant. The amount of learning decreases as the players adapt to the exercise, and the context does not provide them with anything new. Once the player's learning diminishes, the exercise becomes redundant. At this point, the coach must decide whether to switch exercises or introduce variability by modifying different constraints. The coaches must manage the information with the aim of reducing the time needed to present and adapt to the exercise, increase its usefulness, and be able to detect when it has become redundant. In this regard, we will be able to increase meaningful learning time. Next, we will discuss some of the possibilities that the coach has to better manage the different stages.

4.2.1. Presentation of the exercise

This is the stage in which the coach explains how the exercise works so that the players can perform it. We should minimize the amount of time spend on this, since there is less opportunity for learning in this stage. The way in which the coach presents the exercise can minimize this time, or by introducing exercises that players are already familiar with and do not require instructions.

In this stage, we can establish the information that the player will use to perform the exercise. We have to think about what kind of information the players can discover on their own, and what kind of information we have to give them. The amount of information with which he/she performs the exercise will affect the amount of time required to adapt to it. We also want to minimize the adaptation period. We understand that any kind of information related to the functioning of the exercise does not lead to much learning. If the player lacks this type of information, the

adaptation period will increase and the player will try to discover information that is not very meaningful. Therefore, we should present as much information as possible regarding the functioning of the exercise.

However, we can also present the player with certain information related to the game itself and his/her participation in it. We will have to be very careful with the amount of preliminary information that we give to the player. The player's discovery of this type of information will generate knowledge. In this regard, we must reflect on the aspects that the player can discover autonomously. We should provide him/her with the right amount of information that does not limit his/her exploration of the context, and which facilitates this discovery. We should avoid delaying when the exercise becomes most useful. As coaches we might make two common mistakes: giving the player information he/she doesn't need, and withholding information that he/she does need. When it comes to deciding what preliminary information, we should provide to the players, we need to think about the limits of the exercise and which aspects we need to tell them about, so that the players focus on these, as such aspects will rarely appear on their own. In this regard, the tactical-technical foundation of the intervention is essential. The foundations for the intervention refer to those aspects that the player focuses his/her attention on, and his/her playing actions. Rather than obligating or prohibiting, these instructions suggest that the player should develop certain behaviors. These foundations must be assessed by the coach when designing the exercise, and should be presented to the player in order to condition his/her participation and modify behaviors. In addition, information on the objectives of the exercise must also be presented to the players. It is important to link training situations with the reality of competition and the respective learning process. Players should know the purpose of each training scenario.

When presenting certain information to the player, we must remember that everything he/she discovers on his/her own will lead to more meaningful learning. However, meaningful learning is not only achieved when it comes from within the player, but also when the player takes ownership of it. That is, we can provide the players with certain solutions, which they internalize by making them their own, so that the learning process is also meaningful. We must also bear in mind that the discovery of certain information by the player usually takes more time. From this perspective, our objective is to achieve efficiency and effectiveness in training. Effectiveness is related to meaningful learning, while efficiency is related to the amount of time it takes. If the player has the ability to extract information from the designed game scenario and turn it into knowledge, it would be a mistake to present him/her with certain information. Through their autonomous learning, they will be able to incorporate situations that they observe within the environment and achieve meaningful learning, thus converting that information into knowledge. However, if the player does not have the ability to access the information that we want him/her to discover, then the best way for the

player to incorporate it and turn it into knowledge is by presenting it to him/her. We should contemplate these assumptions in order to decide which information we should present to the players beforehand, and which information we will allow them to discover as the game unfolds. In addition, it is important to emphasize that the information revealed should be linked to the needs of each player. We must customize the information given to the players prior to performing the exercise. The needs and abilities of each player differ, so we cannot produce the same conditions for all of them.

In order to speed up the process of presenting the exercise, it is worth making the most of audiovisual or graphic resources, such as a whiteboard or video. In addition, a theoretical explanation of the exercise can facilitate understanding of its functioning. We need to think about how we can get players to better understand how the exercise works, and spend less time on that process. The use of images and video can facilitate our work, but making the players the protagonists of the presentation of the exercise is essential. If we organize them according to the social structure that we have assembled, and then explain the exercise, the players will participate more actively and learn quickly. Thus, we will achieve our goal of spending very little time on presenting the exercise, and in that short period of time be able to facilitate the conditions for its development. This will allow us to minimize the adaptation period and maximize its usefulness.

Finally, when presenting the exercise, we establish the conditions so that it is performed at all levels. This is also true for the player's perceptions during the game and his/her commitment to the exercise. We recommend creating competitive contexts that force the player to commit to training. In the presentation of the exercise, we will comment on the ways to score, and show the player that this will be recorded, which can have an impact on a competitive classification or titles, etc. It is a way of creating a certain context of stress that is similar to the experience of a competition.

4.2.2. Dynamic activities (without stopping the exercise)

When intervening as coaches, we must be careful not to prioritize the external information we provide to the player over the information that he/she can discover autonomously or collaboratively. The main source of information for the player should be the game. Our goal should be to prepare the player to pay attention to a greater number of playing elements and stimuli. The perception of these surroundings will be developed based on tactical communication, giving a tactical meaning to the different elements that conform it. The development of tactical communication allows the player to manage a greater amount of

information autonomously or collaboratively. Using this tool, we will ensure that the main source of information for the player is the game. In addition, it will significantly condition our intervention during the exercises. Now, we must assess how much information players can manage autonomously or collaboratively, in order to address other aspects. We should avoid overlapping information and conveying too many messages. On the one hand, we will be able to focus on the information that players cannot access on their own, and players and coaches will have a greater amount of information available in the game. On the other hand, we could decrease our intervention by creating a much more natural context that more closely reflects the reality of competition, in which the players take on the responsibility of managing most of the information. The opportunities that the players have to manage such information will help us direct our intervention towards certain aspects.

In addition, with the development of tactical communication, the player will be better equipped to process the coach's messages. This allows the messages to be much more complex. However, the coach must adjust the complexity of the message to the player's ability to process it. The greater the complexity of the message, the greater the ability required by the player to process it. Any act of communication requires adaptation between sender and receiver. The coach cannot send a message that the player cannot process. In this regard, the coach will adjust the complexity of the message, contemplate how much information he/she can convey to the player, and how much time he/she will need to spend on the message for the player to correctly process it. In addition, the coach must be aware of the two common mistakes he/she might make: giving information to the player when he/she does not need it, and withholding information from the player when he/she does need it. Therefore, in order to adjust the complexity of the message, the coach will decide whether it is necessary to transmit all of that information to the player. The coach must provide information to the player when he/she cannot discover it or access it on his/her own. Whenever the player has access to certain information, the coach should give him/her the opportunity to explore the context and try to discover it. As tactical communication evolves, the player will have a better ability to discover any information on his/her own.

On the other hand, the level of specification that the coach can use through these messages will also increase with the development of tactical communication. He/she will be able to focus on much more specific aspects at a level of detail that the player has no access to. The greater the level of detail of information, the greater the ability to convert it into knowledge. General information often involves superficial knowledge that is not actually important. However, when the level of detail is greater, the information is usually relevant and implies in-depth knowledge. Information with a high level of specification adds value for the player. As mentioned above, the development of tactical

communication allows for the use of more complex messages. This makes it easier to not only optimize messages and add more value, but to shorten them as well. In terms of information management, it allows us to transmit a more complex message or information with a greater level of detail. However, it also allows us to have better time management. We don't need such long messages to share certain information, so the length of messages is reduced.

An improved ability to manage information autonomously and collaboratively alters the information management within the exercise. On the one hand, not having to provide as many messages allows the coach to make use of these for greater impact. If the coach provides certain information in any situation of play in training, it is difficult for the players to see it as relevant. However, using messages sparingly means that players receive less external information, so they will see it as being more important. On the other hand, excess information overwhelms the player because he/she is not able to process it. The player becomes overwhelmed not by excessive information, but by excessive messages. With the development of tactical communication, coaches can use less messages that are shorter as well, so the players receive these more positively. As mentioned above, given the players' increased ability to manage information, the coach can respond in two ways: either allow the players to take responsibility for as much information as is available in the context, or present information that the players are not able to access. This second option does not necessarily imply that the coach should use messages sparingly, but rather modify the content and level of detail.

Table 2: Example of tactical communication 1

Tactical communication - Moment without the ball	
Prepare	In the event of a ball behind you, prepare to run (orientation, control assigned man, overtake, etc.).
Join	Reduce distance from a teammate to avoid his/her intervention (if last, defensive line, etc.).
Weak side	Adjust shifting of defenders on the opposite side of the ball (maintain amplitude, close, etc.).
High/Medium/Low	Determine height of 1st line of pressure when we have a certain formation
Momentum	Recognize moments of pressure when there is some sort of advantage. Offensive formation
Orient	Make the rival team move around within the spaces that interest us to avoid progression, to put pressure on them, etc.
References	Recognize your assigned man and defend without losing sight of him/her. Active defense assessing the player (assessing is not marking)
Adjust	Recognize a certain degree of disorganization at the micro, meso or macro levels, and counterbalance that situation
1 vs 1	Recognize when we are interested in a challenge after detecting positional or qualitative superiority + context ball recovery
Jump	Exit the line in the event of receiving the ball with space/time + balance line in response to a jump
Wait for it	Defensive timing in a situation with some type of inferiority. Stay within the lines
Perimeters	Force opponents to play in larger defensive perimeters (allow return to defensive shape, avoid progression, reorganization)
Overtake	Defensive line loses ground (to protect, to reduce space behind them)
Attacking non-assigned man	Defender recognizes when to advance to a non-assigned man, assessing the situation of his assigned man
Slide	Stay with your assigned man until the play is finished, or until achieving a greater formation.
Trajectories	Attacking trajectories of non-assigned players, avoiding progression (perimeters), reducing speed, etc.
Intermediate	Reduction of spaces behind lines of pressure + prevent unmarked players from receiving the ball.
Gaps	Recognize penetration gaps in one's own defensive block and defend them (close gap)
Change	Change of opponent when he enters into an external zone (make sure your teammate has it under control)

Source: Prepared by the authors.

Table 3: Example of tactical communication 2

Tactical communication - Moment with the ball	
Heights	Occupation of different heights (in front and behind the ball). Depending on the possessor
Axes	Occupation of different axes (mainly in front) depending on the possessor. Facilitate diagonal passes
Subject	Retain the position so that assigned players (as well as non-assigned players) also retain it, generating space for teammates.
Mobilize	Modify position so that assigned players (as well as non-assigned players) also modify it, generating space for teammates.
Facilitate	Recognize when the possessor has space (or needs it), without going to the supporting player nearby, taking it away.
Trajectories	Plot out supporting trajectories in order to receive the ball (diagonals, semicircles, etc.).
Profiles	Adjust body orientation for the subsequent action (usually reception of the ball). Search for motor superiority
Patience	Move around without the objective of immediate progression. Do not leave after the 1st intervention of 1st build-out line
1 vs 1	Meet a challenge after recognizing positional or qualitative superiority + context of losing the ball
Amplitude	Adjust offensive structure in width: 1 or 2 in outside lanes, maximum amplitude vs optimal amplitude
Separate	Offer pass lines that are not close by. Give space to possessor for timing when releasing the ball
Distances	Adjust relational distances (even if not as a receiver) to communicate without being exposed.
Third man	Development of third man concept to advance, maintain, etc. Provide information about roles
Engage assigned man	Possessor engages an odd player and builds free man reception + stay in communication
Compensate	Players in the collaboration-opposition stage spaces adjust location, thinking of possible loss
Free / alone	The possessor identifies him/herself as a sweeper when his/her orientation does not allow him/her to obtain information.
Intermediate	Occupation of spaces behind lines of pressure + positioning to receive (depending on possessor and opponents)
Gaps	Recognize penetration gaps in opponent's defensive block and attack them (engage, inside pass, deep pass)
Move out of lane	Recognize when opponents have accumulated in a space (risk of loss) to advance through another space
Recognize	The player identifies his/her context and role within the action (3rd man, free man, engager, distant, etc.).

Accelerate	Accelerate the game to make the most of superiority, attain interactions of depth

Source: Prepared by the authors.

If we understand the player as the protagonist of his/her own learning experience, and the coach as a mere facilitator, it is important that the coach's interventions are aligned with this idea. In response to a playing situation, players can receive feedback on an external or internal level. Through the use of their messages, coaches provide external feedback, while players develop internal feedback at the proprioceptive level. This internal feedback is essential because it comes from the player him/herself, and can easily be transformed into meaningful learning. It is important that coaches allow this internal feedback to take place. The player needs certain resources to make effective use of this feedback. The development of tactical communication allows the player to individually extract much more information about his/her intervention in the game. The coach can encourage the player's internal feedback through silence, internet or delayed feedback, etc. However, he/she must reflect on the effectiveness of the impact of that internal feedback, as well as external feedback. Depending on the player's abilities, the effectiveness of his/her internal feedback will vary. From this point of view, the use of internal or external feedback should be prioritized according to the player's needs. As time goes by, in terms of the stimulation of playing, the expression of internal feedback is enabled, but external feedback loses its impact. By losing perspective on the stimulation of playing, the coach's message loses influence over time. The coach's should be skilled at adjusting the timing of his/her intervention. He/she should know when to send a message to facilitate the player's learning. The conversion of certain information into knowledge is not enabled by maximizing the impact of internal or external feedback individually and in isolation. The coach's objective should be to maximize the impact of both the internal and external feedback. It is the overall impact that we must maximize. As time goes by, internal feedback is improved, but the impact of external feedback is reduced. In addition, depending on the abilities and needs of the player, one type of feedback may have a greater impact than the other. With these two approaches, the coach must adjust the timing of his/her message in order to maximize the overall impact.

When giving any message to the player, we must remember that the game is the main source of information for him/her, but there is also an external source of information in the form of the coach's messages. From this point of view, the player might not correctly participate the game, or is not able to extract the relevant information available while playing. That source of information is not useful to him/her, and at that moment the coach must step in to provide the information that the player needs.

Since the player is not able to extract much information from the playing context, the coach typically provides a lot of information.

In this case, the coach can use very complex messages to dynamically interact with that player. However, the player does not often have the ability to process such a complex message. As the player requires a lot of information, but cannot process a highly complex message, the coach can extract the player from the exercise to give him/her the message in greater detail. This type of intervention is both dynamic and static. This is a dynamic intervention for the rest of the players, as the coach does not stop the exercise in order to pass on the message. The only person whose participation in the game is limited is the player to whom the message is addressed. With that particular player, it is a static intervention. The player is removed from the game because he/she is unable to focus on the game and the message simultaneously. When the dynamic message is very long, if the player tries to exclusively focus on the message, he/she is likely to be distracted by the game. If we extract the player and pause his/her participation in the game, he/she will focus solely on the message. In addition, we will have more time to deal with all of the information that is necessary for the player. We will use this resource when it is more important for the player to listen than to play.

On the other hand, this intervention has a certain impact on the rest of the players. The network of relationships is modified when a player suddenly stops participating. Through this resource, we can manage situations of high instability that are produced by extracting a player from the exercise. We can take advantage of it to work on situations of numerical inferiority, greater instability, etc.

Through this type of intervention, we can observe a highly relevant effect within the training session. The intervention focused on a particular player can have an impact on the rest. With this type of intervention, the message we give to the player is not perceived by the rest of his/her teammates, but the modification generated in the context forces them to adapt to a more unstable situation. On the other hand, through the messages that we give during the exercise that are aimed at specific players, we can have a certain impact on the rest of their teammates. This will enable us to manage specific situations in a more beneficial way. The emotional impact of the message must be adapted to the needs of the players and their particularities. It is important to know the player in order to communicate properly with him/her. The emotional implication of the message can inform the player of the importance that we as coaches place on that specific situation. However, not all players are prepared and able to deal with emotional messages. Those specific situations that do not allow us to intervene with a high emotional impact on some players can be resolved through the messages we give to other teammates. To show the importance of a certain situation, we need the message to have an emotional impact. We can direct the more emotional messages towards certain players who can process them, and through

these players, we can then communicate to everyone the importance we attach to certain aspects. It is important to target messages to specific players, but use them to influence all players on the team.

To conclude, the coaches' interventions should not only be in response to what happens during play. The exercises have objectives and needs that must be addressed, which do not often emerge from the game itself. If the messages are only intended for situations in situ, all of these aspects will not be dealt with within the exercise. It is necessary to plan messages in accordance with the objectives and requirements of the exercise. This message planning must be delegated among the coaching staff. Each member of the coaching staff should focus their attention on certain aspects in order to avoid overlapping messages or information. We can't focus solely on the unpredictability of the exercise and managing the "here and now". It is important to pay attention to the pedagogical aspect of the exercise and plan messages accordingly. Planning messages involves their delivery, the main points and the content. It also involves how we are going to communicate about certain situations, which terms to use, etc. Prior preparation of certain messages will make it easier to manage the "here and now" when such situations arise, and will make it possible to meet the needs that do not appear in the game. Organizing how we deal with all the information available when playing by assigning roles among the coaching staff will also facilitate the dynamic intervention. We cannot manage the information available during the exercise with our intuition. This unpredictability is important, along with the pedagogical aspect.

4.2.3. Static interventions (stop the exercise)

Static interventions are those that occur when the exercise is stopped in order to communicate a message. There are various reasons:

- Communicate the need to correct something.
- Rest between sets or move between exercises.
- Other reasons.

Regardless of the cause that leads to a static intervention, we must generate conversations or include messages within them. The times when the athlete isn't playing does not imply that he/she cannot learn. As we previously discussed the aspects related to transitions between exercises, we will now focus on static interventions caused by the need to give some kind of message, or to correct something that may have come up while playing.

It is crucial to know when to stop the exercise. If we stop playing, it is because the player will not be able to simultaneously pay attention to the activity and to our message. Moreover, the information he/she will receive from our message is much more relevant than the information

obtained through playing. For the learning process to take place, the player must turn certain information into knowledge. If the player is playing but lacks the ability to extract the relevant information from this, it will be difficult to convert the information into knowledge. In those moments, the external source of information, the coach, is more important. The game thus produces a number of specific experiences that are not enriching for the player. The continuity that we want to produce in the training session has nothing to do with playing, but rather with learning. Stopping the exercise and providing the player with the relevant information is a way of presenting him/her with an enriching experience. We have to be able to detect the point at which we should stop the exercise. To do this, we must recognize when the player is not able to extract the relevant information from the playing context. Stopping the continuity of play when it generates learning experiences is a big mistake.

On the other hand, if the playing experience is not enriching, it is not always because of the player's inability to extract information from the context. Sometimes it is the context that does not provide any relevant information for the player. In these situations, the coach must be able to modify the constraints in order to adapt the exercise to the player's needs. It is essential for the coach to recognize that the cause of these unnecessary experiences that are generated during play has to do with the configuring elements of the game, and not the player's lack of ability. Without that awareness, the coach will stop the exercise to provide information to the player when he/she doesn't need it, making a common mistake. In this regard, the player will interact incorrectly with the game, and the experiences will still not be enriching. Modifying constraints and introducing variability into the context are key to creating new learning experiences while playing.

There are times when enriching experiences are not produced in the exercise because the player takes longer than normal to adapt to it. In such cases, a modification of constraints would not be beneficial to the player. The coach must also be able to realize that in those moments, he/she should not intervene, but rather give the player more time to adapt to the exercise. The coach cannot interpret the exercise as being useful if the player is still adapting to it. The way that the coach intervenes during the player's adaptation period differs from when the exercise is performed during its most useful stage, in which the player's learning is enhanced. If the coach is unsure about the stage of the exercise, he/she might intervene in an inopportune way and as a result, hinder the player's learning experience.

During static interventions, the coach has more time to manage certain information. It might be useful to build spaces for reflection, rich in interrogative feedback. In this case, we should encourage the participation of as many players as possible, as well as their collaboration within these dynamic activities. These are situations in which the players

express their tacit knowledge and allow the coach to become aware of their perceptions while playing. In this regard, the coach obtains valuable information, which he/she does not have access to within his/her role as an observer or facilitator.

This interrogative feedback must be planned, not in terms of which questions to ask the players, but to know which answers we should prioritize. Players may not respond in the way we want them to. If we don't plan our responses, interrogative feedback will lead to the type of learning regarding what players might achieve, but not what they should achieve (although this may be one and the same). The objective of the coach will be to guide them so that the players are able to learn what is really important. However, the coach should not have a closed mind or assume that he/she is the only one with solutions. Players may reflect on something and come up with novel solutions that were not previously thought of by the coach, but which are equally valid. It is important to record these new responses from the players. If they perceive that these solutions are taken into account, they will feel that they are protagonists of their own learning experience, and their attitude will improve. Message planning and activities are carried out with interrogative feedback, along with any type of message the coach conveys when he/she stops the exercise.

If they are not playing and the coach has some extra time, audiovisual and graphic tools can be used to better exemplify and accelerate learning. This will also serve as a resource that allows the player to give feedback to the coach and be more precise in expressing him/herself. These tools can also be used to capture new solutions that players have found and expressed through tactical communication. Within static interventions, it is important for the coach to know how to manage the players' responses.

As was previously mentioned, when explaining tactical communication as an element that enables greater effectiveness and efficiency in training, we must reduce static interventions whenever possible. They take up too much time and overshadow the main source of information for the player: the game. Although it is a resource that we should use in specific situations, through tactical communication we will aim to turn the pauses in the exercise into dynamic interventions, whenever possible. With the evolution of tactical communication, the player's ability to process messages increases and allows us to use more complex ones, so we won't need to stop exercises as often to be able to communicate similar information.

4.2.4. Post-exercise

In this regard, the coach's most important intervention is to identify when the exercise becomes redundant, in order to conclude it. If the exercise

continues to create learning experiences, and the players have not yet internalized the key aspects while playing, then the exercise cannot be considered finalized. We are used to managing the duration of exercises with our stopwatch in hand to see how long we have dedicated to the training session. We believe that the best way to manage the duration of exercises is to detect whether the specific experiences that emerge as a result are no longer enriching or significant for the player. The objective of the exercises is for the player to gain specific knowledge, and if this is not achieved, then we cannot rely on the stopwatch. There is no better way to manage the duration of exercises than to meet the needs of the player.

Once we have concluded the exercise, we can begin the post-exercise activity. It is important to review some key details or aspects that appear in the activity. The aspects to be reviewed in the post-exercise activity should be planned in advance. These should be linked to the objectives and requirements for which we design the exercise. In fact, if certain aspects do not appear within the exercise as we had hoped, we can focus on these once the exercise is finished and cause them to appear, even on a conscious or declarative level. It is useful to perceive the players' feelings and their perceptions of what they have learned during the game. The information that the players give to the coach comes from the reality of the game, which the coach cannot directly access because of his/her role. Within the players' perceptions, it is important to address the problems or doubts raised while playing, and try to solve them jointly and collaboratively. It is very difficult to complete a training exercise with certainty. Doubts and uncertain situations are common. It is important to manage these with the players in order to make the most of this opportunity for learning.

Starting with the objective of the exercise and linking it to the reality of competition can foster the player's commitment to it. A poorly designed exercise is one in which the player does not perceive or visualize the game. For the exercise to be transferable, it must be linked to the game plan. When it comes to reviewing the details once the exercise is completed, it is important to make reference to the reality of competition in order to foster learning. Establishing the content or learning process of the players is closely linked to the importance that they attach to those aspects. Linking the content to the game plan is a way of getting players to see it as more important, and helps ensure their learning process.

Finally, the exercise is integrated into a session that forms part of a didactic block. It is important to encourage progression within the session and to link the previous exercise with the subsequent one. Referring to the objectives in common between the two exercises might facilitate this progression. Linking one exercise to another will lead the player to believe that the previous exercise has prepared him/her for the following one.

Table 4: Examples of intervention in the different stages within the exercise

Presentation of exercise	Dynamic interventions	Static interventions	Post-exercise
• Information available for the player to perform exercise: - Function of exercise - Objectives and tactical-technical foundations of intervention • Which aspects can the player discover independently? Provide impartial information so as not to limit context exploration and discovery by the player • Scoring + recording to create a competitive context and manage players' perceptions • Make use of audiovisual or graphic resources (whiteboard, video, etc.) to speed up the process of presenting the exercise. • Theoretical experience of the exercise to ensure comprehension on a functional level	• The main source of information for the player must be the game. Prepare the player so that he/she attaches meaning to the greatest number of elements and stimuli (tactical communication) • Give a complex message only when the player needs that information and cannot discover or access it on his/her own • How much information are players able to handle independently/collaboratively? Do not overlap information, save messages, etc. • Allow the player to make use of his/her internal feedback (silence, internet or delayed feedback, etc.). • Message planning + management of here/now • Distribution of roles and areas of focus of TC (planned) • Extract the player from the exercise for prolonged	• Spaces for reflection where interrogative feedback abounds • Message planning and dynamics • Use audiovisual and graphic tools (video, whiteboard, etc.). • Know when to stop the exercise: the continuity of non-acquisitive experiences is worse than stopping and providing acquisitive messages • Modify constraints to adapt the exercise to the players' needs. The ability to recognize that the solution to problems lies in the modification of constraints and not in providing more time for adaption. Increase variability by modifying constraints • Reduce quantity and duration upon optimizing the dynamic interventions (complexity of message) • Manage player responses to corrections/messages provided	• Review of details, key aspects, objectives, players' perceptions, etc. • Approaching/resolving problems and doubts • Link the exercise with the reality of competition (game plan and transfer) • Identify when the exercise is losing steam or becomes overwhelming and experiences are no longer meaningful, in order to conclude it. • Encourage progression by continuing with another exercise when one ends

	messages (listen → play) • Tactical communication to shorten and optimize messages and add value • Degrees of precision of messages • Emotional impact of messages • Saturate the quantity/frequency of messages and not their information/complexity • A message given to a player has an impact on the rest • When? Timing. Windows of opportunity + player's needs	• Planned interrogative feedback in the form of questions and answers + record new answers from players Micropause and macropause	

Source: Prepared by the authors.