UEFA A Licence

The Role of the Winger - From the Numbers to the Training Ground

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Summary

There is a different level of reflection that arises from the study of the numbers. As the football game structure becomes clearer and more defined in a theoretical point of view (will we ever understand its complexity?), the quest for the algorithms that could give us a better control over the outcome becomes more intense. The Norwegian Centre of Football Excellence has been working in the report Kompetansekrav i Rolle. Such report has been providing the clubs and coaches’ with an insight on top team and top players performances in the most high rated football competitions (Champions League, World Cup and European Championship). A large amount of match videos have been analyzed, discussed and dissected into the most pragmatic information possible. In Kompetansekrav i Rolle a vast and multi-faceted set of resources and references are integrated in an overview of each player position on the pitch, their role definition and specific competence. We decided to have the winger as the object of our study and analysis. The wingers are a cultural trait in Portuguese football. There are some characteristics in the role of the winger that provide that immediate rush of emotion when they are in the center of the game, reason why the role of the winger is one of the most exciting objects of study that we can choose in the modern football context. To add up, the playing style from Rosenborg has been established particularly during the ninety’s when the club knew his best period in national and international competitions. The system of play hasn’t met any considerable changes since then. At the moment, the club has adopted a bak til røttene trend and this has repercussions at all the levels in the club. Naturally, it goes through the development of players in the youth system as well as player recruitment. Our expectation was that this report could have a contribution to strengthen the concepts and the practices designed for the development and recruitment of the young players that not only perform the role of the winger, but as to many other positions and roles. There is a time and place for different learning styles. Many factors such as the players’ level of expertise, their training age, playing level will affect the approach taken. Still, the methods used in every coaching course and coaching sessions rely deeply in the explicit learning style and at first, this appears the logical approach as it provides a methodical approach to teaching and subsequently checking for understanding or learning by the player. Giving rules to follow prior to and during practices or games and questioning afterwards are explicit methods that we regularly have acknowledged. There are an increasing number of coaching methods being developed to use implicit learning techniques such as Constraints Based Coaching and Teaching Games for Understanding, but coaches need to understand the reasoning behind these methods. We include the theme of implicit learning and non-linear pedagogy to attempt to present a way to approach training apart from the “conventional way”.

This report is divided in five chapters. To better define the limits of this study it was important to approach the concepts that were going to be discussed. Therefore, at first we have worked on the concepts of implicit and explicit learning, non-linear pedagogy, as well as which elements should we consider when we are designing and planning games or exercises in football. Secondly we have focused on our problem definition and research questions. Two objectives were defined for this report: a) to translate the information provided by NCFE to a pragmatic training approach on the pitch; b) through the processing of the previous point, create and organize conditioned games that could enhance incidental (implicit) learning in the wingers. We have focused on the information that has been collected and analyzed by TFS in reference to the project Kompetansekrav i rolle, and we dissected it and created a matrix of conditioned games to achieve the reference attributes for the winger. To conclude this report we discussed its end product and reviewed the limitations of this study. We concluded with the evaluation of the whole process of its writing and we have drawn our expectations on the impact of this study for the coaches’ practice.
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I. Introduction

Football is a cultural phenomenon. Is the only sport that we can actually call truly global. Working professionally in football has become more and more demanding in the last decades. But football is not only a cultural phenomenon; it has become an industry with broader proportions. Football is a business: transfers, sponsorships, TV rights, merchandising, stakeholders and owners. As this football business environment gets more complex outside the pitch, inside the pitch - and particularly on the training ground - the demands are higher. We are now dealing more and more with numbers. It is a permeable process between the suits and tie and the tracksuit. As the data collection and analysis around the teams' and players' performance become more detailed, the scrutiny is faster and more judgmental. The numbers chemistry from the suit and tie side are shifting and are more and more concentrated on the tracksuit side. And the head coaches are Maxwell's demon in this process, controlling the opening of the door that makes this shifting possible.

Football coaches are prisoners of numbers. Three points, one point, zero points. Three goals, two goals, zero goals. The numbers for points on the championship table are the sum of many other equations that lead to the sound of victory or the silence of defeat. The large numbers after ninety minutes are the result of the inter-dynamic of many others that took place during every second of the match and every second of the training, matches and seasons previous to that. And we are more aware of that. Things are, therefore, more complex. Still, this complexity that the numbers express involves so many variables that it becomes hard to cope with such delude of information. Naturally, some of us chose to ignore the existence of such variables and become resistant to all type of new information. The decision making remains intuitive and based on feelings of previous experience.

Research on the intuitive thinking has been showing us on the last decades that it is not as linear and simple as once thought, and definitely not as complete as a decisional process has we tend – or want – to believe. Using arguments like my experience tells me, or we have always done it like this, hidden in I am a kind of an intuitive coach, are just not enough anymore. It does not mean that we should not rely on our intuition – we have to! –, but instead that we should be aware that: a) deliberate thought is needed whenever there is time for that; b) using only our intuition (I feel like...) always in our decision making can lead us to errors that we could avoid if the chosen mode of thought was another. Intuition is not a shield to use against the fact that we do not need to study anymore nor reflect deeply about the situations. It is a powerful mind tool to use at the right time in the right place.

We believe that is important to close the gap between what science knows and what we do in football. Engaging in the task that we purpose here serves that belief. However, what we want to discuss in this report is only a fraction of the immensity of scientific evidence provided by academic or institutional research in football. It's not our intention either to serve a dichotomy of right or wrong, good or bad. In education and learning there are space and time for different approaches and styles. The most important message from our report is to show that everything should be considered and that better decisions – on an off the field – are drawn with more and better information, independently from the source (conscious or nonconscious).

We will also be encouraged by new advancements in learning theory, supported by neurobiology, neuroscience, educational sciences and psychology and challenge the conventional coaches practices on the training ground. The product of our work will be shaped by matching the reference numbers of the football elite level concerning the wingers and an approach to training through an implicit perspective, taking into account the theoretical arguments of non-linear pedagogy.
A) Why should we look for (and to) the numbers in football?

There is a different level of reflection that arises from the study of the numbers. As the football game structure becomes clearer and more defined in a theoretical point of view (will we ever understand its complexity?), the quest for the algorithms that could give us a better control over the outcome becomes more intense. There are conceptual mainframes on how to divide the game into its playing moments (offensive organization, defensive organization, offensive transition, defensive transition, set pieces), phases of play and dynamic (critical points of change like time of play, scoring or numerical advantage). Using and applying this knowledge, each coach, club or team, can create their own principles of play (what to prioritize, when and how) and shape a playing style so that the outcome could better serve their objectives. This playing style can then be operationalized in the season planning of the training cycles, sessions and exercises, so that the players can experience more frequently what is expected from them. The numbers analysis can feed and serve this process in different moments. In the three last seasons of the UEFA Champions League (2011/2012, 2012/2013, 2013/2014) 38.9% of the goals were scored after a moment of offensive organization, 32.8% were scored after an offensive transition (counter-attack or fast break) and 25.7% were scored after a set piece (corner or free kicks). If we are preparing our team to play in such competition in the 2014/2015 season, what can we take from this information? Should we prioritize the offensive organization or the offensive transition of our team? How to prepare the team to defend more efficiently? How much should we focus on set pieces, both offensive and defensive? These are few of the many possible questions that are coming from the data collection above. This type of information is one drop in a vast ocean.

It’s important to refer as well that the numbers that we study need a clear definition of the context that it serves. This means that the numbers that we use as reference should be applied in the regularity of the situation from which they were extracted. It doesn’t seem logical to us that the numbers that we get from a certain level or a specific competition are used as a reference for different levels or competitions. When we decide to use the World Cup numbers we turn our level of analyze, as well as possible inputs, back to the level where the numbers are coming from. If we want to develop the winger for Tippeliga, then we need the reference numbers from such level of competition.

Therefore, it is not the purpose of this report to dive into all the data collection or to analyze every significant aspect of modern football. It would be a too long and to dense task and one that, at its end point, would be already obsolete. Modern football is tomorrow. Still, the numbers are there. The main question is what to see, why and for what end. The challenge that we purpose ourselves is to how to translate all the information available into practical and pragmatic inputs in our tasks of planning, delivery and evaluation of the training cycles, sessions or exercises. It is in this direction that we chose to drive into. Even so, there are different pathways that are going to be defined as long as we go further with our intentions. There are many possible ways to engage in this translation from numbers to practice and we are choosing one of them. It’s probably “less conventional” pathway.

Still, the process is the most important and that is the legacy that we hope to establish. It’s not about what we are attempting to do, but how we are doing it. We also hope that further attempts to follow our path can make the process better and more consistent. At the end of our report we hope to extend further our expectations.
B) The Winger

António Simões, José Alberto Costa, António Oliveira, Fernando Chalana, Diamantino Miranda, Paulo Futre, Luis Figo, Ricardo Quaresma, Simão Sabrosa, Nani, Cristiano Ronaldo. Half of these names are strange to Norwegian ears, but they are so present in the memory of football fans in Portugal. They were or are all wide players (mainly wingers). The wingers are part of our national football legacy. They are natural one-on-ones’ with magical tricks and a starving desire of beating several players in the same play. I’ve grown with some these names in my imagination. There are not that many situations when the people in the stands leave the comfort of their seats for brief moments. When a goal is scored or when the eminence of it is perceived (1 v GK) are two of those situations. It is logical, as the goal is the ultimate explosion of emotions in a game (for both sides). Still, there is also something happening when a winger gets the ball on his flank. Suddenly we can feel glimpses of hope - and fear - in the stands. Almost as powerful as an imminent goal chance. The crowd knows that the game can change in those next seconds. Magical things are about to happen. A flamboyant dribble, a lightning change of speed or a clean-cut crossing can take the crowd to ecstasy. The story of the wingers in Portuguese football begins long before Luis Figo or Cristiano Ronaldo. The wingers are a cultural trait in Portuguese football. They are fast and flamboyant dribblers that passionate the crowd. Watching a winger getting the ball in a football match it’s almost like love at first sight. You love unconditionally from that moment, but you can quite explain why. There are some characteristics in the role of the winger that provide that immediate rush of emotion when they are in the center of the game, reason why the role of the winger is one of the most exciting objects of study that we can choose in the modern football context.

Studying the winger has also a practical reason and an immediate output in my own coaching professional development, as Rosenborg BK formation has high demands from the winger role. The playing style from Rosenborg has been established particularly during the ninety’s when the club knew his best period in national and international competitions. The system of play hasn’t met any considerable changes since then. At the moment, the club has adopted a bak til røttene trend and this has repercussions at all the levels in the club. Naturally, it goes through the development of players in the youth system as well as player recruitment. Our expectation is that this report can have a contribution to strengthen the concepts and the practices designed for the development and recruitment of the young players that not only perform the role of the winger, but as to many other positions and roles.

Yet, the wingers are a type of player that have something that it’s uncoachable. They all share a glimpse of creativity and imagination that it’s easier to recognize that to teach. As coaches, we can have an idea of what is important for a certain position on the pitch when it comes to the frequent actions or specific attributes. We can also have a direct instruction or an if-then rule to better exemplify what to expect from the player(s). But it’s more difficult to train and coach those seconds when something unexpected happen and changes the game. The numbers might help us to clarify what is important, but the ultimate creation comes from the player.

C) Data collection and the Norwegian Centre of Football Excellence

The Norwegian Centre of Football Excellence (or TFS Norsk Toppfotballsetenter) has been working for some time now in two main topics: Spillet som Referanse and Kompetansekrav i Rolle. Both reports have been providing the clubs and coaches’ with an insight on top team and top players performances in the most high rated football competitions (Champions League, World Cup and European Championship). A large amount of match videos have been analyzed, discussed and dissected into the most pragmatic information possible. In Kompetansekrav i Rolle a vast and multi-
faceted set of resources and references are integrated in an overview of each player position on the pitch, their role definition and specific competence. We deal with very specific information about a very specific topic that we want to convert in a very specific approach to the practice.

Some of the UEFA A written reports at the Norwegian Football Federation have been approaching similar topics (Holme, 2014; Iversen, 2013; Rushfeldt, 2013; Riisnæs, 2010). However, our intention is to go further on its repercussions in the training ground. More than having a must-do-list or a set of prominent actions, we look for a direct input through the way that the games can be organized so that we can maximize the players learning in this specific role. The main objective in this report is to develop a mainframe that can guide the coaches on the training ground when they are aiming to work on or develop a specific role. In particular when it comes to games and play. The process behind this objective is the most important, but the consequence of this task has to be clear and pragmatic. Only this way it can reach the coaching community. How to go from the reference numbers about the wingers to the input on the training ground?

**D) Implicit learning and non-linear pedagogy**

There is a time and place for different learning styles. Many factors such as the players’ level of expertise, their training age, playing level will affect the approach taken. Still, the methods used in every coaching course and coaching sessions rely deeply in the explicit learning style and at first, this appears the logical approach as it provides a methodical approach to teaching and subsequently checking for understanding or learning by the player. Giving rules to follow prior to and during practices or games and questioning afterwards are explicit methods that we regularly have acknowledged. There are an increasing number of coaching methods being developed to use implicit learning techniques such as Constraints Based Coaching and Teaching Games for Understanding, but coaches need to understand the reasoning behind these methods. We include the theme of implicit learning and non-linear pedagogy to attempt to present a way to approach training apart from the “conventional way”. Both themes are studied in the conceptual framework part of this report and an attempt to organize and create games for the wingers’ training and skill acquisition is the core of our report.

"I don't know how I get through the day — every day — on instinct alone."
E) The objectives and the structure of the report

When the previous subjects are studied and linked with the context of this report, two main objectives are drawn:

a) To translate the information provided by NCFE to a pragmatic training approach on the pitch;

b) Through the processing of the previous point, create and organize conditioned games that could enhance incidental (implicit) learning in the wingers.

The problem definition is defined according to our intentions above. We are capable to preview before we start this report that the translation of the numbers will be possible, as it’s a regular practice in professional and top level coaching environments. The challenge is that normally such translation is applied to a specific playing style or game approach and in consequence to the players involved in such dynamic. We want to do it for one specific role. The second challenge is to achieve this translation in a pragmatic way. We will look for a matrix design that can capture the coaches enthusiasm instead of pushing them way. The second objective is far more complicated to achieve. Traditionally the coaches rely on their direct instruction to enhance the players’ behavior in a set of game situations. Even in training game situations (7v7, 8v8, undertall or overtall), the coach directive approach is seen as strictly necessary for the decision making of the players to be adjusted to what is happening on the pitch. There is no reason for us to believe that in the case of a specific role development it would happen otherwise (go here, do that, cross now). What we believe and is reflected in our second objective is that the efficiency of the actions of the winger (according to the NCFE numbers) can be accomplished with specific game constraints that will enhance the frequency of the desired actions, in an implicit way, and therefore increase the chances of memory retention.

This report is divided in five chapters. To better define the limits of this study it’s important to approach the concepts that are going to be discussed. Therefore, at first we will work on the concepts of implicit and explicit learning, non-linear pedagogy, as well as which elements should we consider when we are designing and planning games or exercises in football. Secondly we focus on our problem definition and research questions. The following two parts are reserved for the methodology presentation and data collection and discussion. We will describe how the research method of the report is and how this process is organized. Then we will focus on the information that has been collected and analyzed through video by TFS in reference to the project Kompetansekrav i rolle, and we will dissect it and attempt to transfer it to practical inputs on the training ground. To conclude this report we will review the limitations of this study as we evaluate the whole process of its writing, we will draw our expectations on the impact of this study for the coaches’ practice and finally, attempt to propose new questions and new angles of research to add more depth to the theme.
II. Conceptual framework

In research-oriented reports and projects it is important to clarify the theoretical background which it has reference to for two main reasons: a) to define the context in which the research is placed and narrowing the angle of approach; b) to provide a conceptual platform to discuss the results and to draw the conclusions. It’s in this framework that we will engage through this chapter. We have selected three main subjects in which our conceptual framework will be based on: the discussion around the dichotomy of implicit and explicit learning, the concepts and challenges of non-linear pedagogy and the nature and structure of the exercises and games in football. It’s important to refer that one of the goals goal of our approach is - as referred in the introduction concerning the numbers and the football world – to close the gap between what science knows and what we do in football. It is also our intention to provoke the alchemy between what science knows in the learning field of study (more particularly in physical education and team and ball sports) and what we do in football. We will make reference to what recent research in psychology, educational sciences and neurobiology has been showing us recently and its repercussion on the training ground. We will use this conceptual framework to somehow justify why we chose to have a transfer from the numbers to the training ground based on conditioned games or games with constraints. For each theoretical approach we will highlight the key aspects for further discussion.

Coaches need to understand how people learn, because coaching and teaching are only effective if they engage learning. If you think that all you have to do is warm them up, tell them, show them and correct them, you won’t be very effective. Learning is more complicated – and more interesting – than that.

Claxton and Allpress (2008)
A) Implicit and explicit learning

In the past ten years, the educational field has learned more about how the brain works than in the previous ninety years. Largely due to the convergence of neuro-science, cognitive psychology and technology, new information is possible, information that for many of us verifies the effectiveness we've enjoyed with students and at the same time radically shifts our models of instruction (Reardon, 1999). One of the areas of research that have received much attention from the field of neuroscience is the study of emotion and memory as well as their relationship to the cognitive processes of the human brain. This is an important area for us coaches to invest our study time into not only because it can guide the way we relate and connect to our players, but also because - as Connolly⁵ argues - the experts are the coaches not the data collectors, so information needs to be relayed quickly and in a manner they can understand. Some of the revelations of research are that emotions are indispensable for rationality, such that one cannot reason without emotions or feelings (Damásio 1994). In addition, research on memory, particularly implicit memory, which deals with nonconscious cognitive processing of past experience, reveals that a great deal of learning takes place outside our working memory and has a tremendous influence on how we look and act in the world (Greenwald & Banji, 1995; Schacter, 1996). Such statements are frequent in the field of neurobiology and psychology which bring to light an explanation of the interdependent relationship that exists between reason and emotions and how decision making can occur outside ones’ conscious awareness. Reason has been traditionally perceived as a high order function located in the neocortical area of the brain (grey matter) operating as a single system, a process based on valid rules of inference like rules of grammar (Johnson-Laird & Oatley, 1992). In contrast, emotions have been viewed as low order functions, separate from reason, located in the subcortical structures (inner layer), apart of the limbic system of the brain. When discussing cognitive processes, emotions are often omitted, considered too elusive, despite their qualifying nature in the process of reason (Damásio, 1994).

In adult learning, Taylor argued in his approach that transformative learning is purported to be highly dependent upon the centrality of experience, rational discourse and critical reflection. However, recent research reveals a process of transformation independent of critical reflection, whereby there is a nonconscious development of thoughts and actions such that meaning structures may become altered outside the participants’ focal awareness (Taylor, 1997). This learning that takes place implicitly provides insight into transformative learning theory, revealing a process less dependent upon the conscious act of reasoning and logic, and similar to understanding the role of feelings and emotions. The author continues in categorizing three ways of implicit memory, naming procedural knowledge has equal to skills and habits, inclusive of perceptual and cognitive abilities, which research has shown can be learned and improved upon outside one focal awareness. Existing neural evidence suggests that skills and habit learning are less dependent on declarative memory and don’t involve the same brain structures. A second form of implicit memory is category-level knowledge, which is the ability to classify information based in natural categories. A third form of implicit memory is conditioning, learning a simple conditioned response, which is best understood in relation to emotions such as fear, where people’s actions in dangerous situations are often based on non-declarative thought (Taylor, 2001). The Annual Review of Psychology has noted that there has been a swing from interest in deliberate strategies to interest in automatic, unconscious processes, reflecting an appreciation that certain situations (e.g. recognition, frequency judgments, savings in indirect task, aspects of skill acquisition, etc.) seem not to depend much on the products of strategic, effortful or reflective processes.
(...)_The truly ridiculous thing is that there are two proven learning styles that every coach should be made aware of, yet hardly any coaching courses makes reference to it despite the fact that the coaching methods they teach rely heavily on one of these methods in particular (Taylor, 2001).

From both authors contributions is important to retain two key ideas: the non-exclusive dependence of learning from consciousness and the role of the emotions in reasoning processes. Such information will be important to relate to the nature of the games that we will purpose for the wingers training and skill acquisition. There are an increasing number of coaching methods being developed to use implicit learning techniques such as Constraints Based Coaching and Teaching Games for Understanding, but coaches need to understand the reasoning behind these methods. There is no point creating a practice that aims for implicit learning and then use explicit cues during the process. It can be a frustrating process for the coach as the explicit methods are so ingrained in our sporting culture and it often takes athletes longer to acquire a skill this way. Once acquired though, the skill is much more stable and resilient to pressure.

We tend to forget actions came before words in our evolutionary history that implicit motor learning is the most natural way for humans to learn motor skills (Reber, 1993).

Coaches cannot play the game for the players and due to their personal differences the way they perform a skill will vary. As a result coaches need to allow players to find their own way of solving the puzzles of how to achieve the sporting outcome required of them. An example of implicit learning would be an athlete performing hill sprints or jumping backwards prior to a sprint which will naturally put them into an inclined body position suitable for accelerations rather than telling them what to do. There is a time and place for everything and an implicit shouldn’t be the only approach. Many factors such as the players’ level of expertise, their training age, playing level will affect the approach taken. Still, the methods used in every coaching course and coaching sessions rely deeply in the explicit learning style and at first, this appears the logical approach as it provides a methodical approach to teaching and subsequently checking for understanding or learning by the athlete. Giving rules to follow prior to and during practices or games and questioning afterwards are explicit methods that we regularly have acknowledged. Approaching training (and coaches education) based on an implicit learning perspective requires critical and creative thinking to shape the training environment and structure the sessions and the exercises in order to produce the desired movement or playing outcome. It also makes it hard for the coach to assess how much the athlete has learnt due to the unclear lines between motor performance and motor learning as We do not directly observe learning; we directly observe behavior (...) we must make inferences about learning from the behavior we observe (Magill, 1993). Another issue that creates some resistance from coaches and coaches-educators in adopting a practice based on implicit learning is because the retroaction from our actions (as coaches) is very slow and it compromises our perspective of how effective training actually is. We don’t know how effective a different approach can be, so we keep having the same practice routine.
B) Non-linear pedagogy and Teaching Games for Understanding

Quantity and quality of practice are crucial to the development of expertise. Teachers and coaches carefully consider the micro-structure of practical sessions to maximize learning opportunities. Recent evidence suggests that children in physical education classes on average spend only 25% of the time actually engaged in physical activity (Chow J., Davids, Button, Renshaw, Shuttlework, & Uehara, 2008). Dividing practice sessions into warm-ups, drills, games and cool downs can limit learning opportunities even more, since only undertaking practice activities that are representative of performance demands will lead to transfer of skills between practice and performance environments. An established concept from ecological psychology, associated with a Nonlinear Pedagogy, is that behaviors of individuals cannot be understood without reference to their specific environments (Chow J., Davids, Button, Renshaw, Shuttlework, & Uehara, 2008). Actions are supported by perceptual information from the environment and, in turn, perception of high quality information is acquired by acting. This assumption has implications for games teachers and highlights the need to ensure congruence of practice environments with dynamic performance environments.

In Teaching Games for Understanding (TGfU), as in Nonlinear Pedagogy, there are no universal rights or wrongs in terms of techniques used or decisions made. That is, there is no emphasis on learners’ acquisition of perceived “optimal movement patterns” for success in team games. The functionality of a particular decision or action is determined by how well it satisfies the constraints of the game.

*Providing performers with multiple opportunities to explore and work out problems for themselves is in line with Bernstein’s definition of practice as repetition without repetition, a key feature in Nonlinear Pedagogy. Creating variability in practice is essential to learners’ exploratory activities during game play and produces flexible and adaptive individuals who can create new solutions to solve typical motor problems.* (Chow J.Y., 2008).

Although most discussions on the validity of TGfU have been focused on the development of game awareness and tactical understanding, its authors did not neglect technical development in their
model. They specified that *when students see the need for a particular kind of skill and are ready for these skills within the context of a game, technical instruction is given* (Werner, Thorpe & Bunker, 1996, cited by Chow J.Y., 2008).

As we stated before, high levels of explicit verbal instruction and directive feedback are the norm in conventional coaching, since beginners in sport are believed to be reliant on conscious control processes in movement. However, Bernstein’s insights on the control of action suggest that most movement behaviors are typically regulated by subconscious processes. Explicit instructions force learners to switch to higher levels of action control and that can lead to performance disruption. In Nonlinear Pedagogy, verbal information is seen as a temporarily imposed informational constraint provided by teachers that can have positive or negative effects on performance. Using explicit instruction directed at conscious control processes in a skill remark might have a negative effect on learning since it is unlikely to direct learners to the regulatory information flows available during games performance. Conversely, more positive instructions might be those that do not specifically prescribe a movement solution but guide exploration and use of implicit learning strategies to allow intrinsic self-organization processes to be enhanced during learning. Forcing learners to attend to inappropriate information sources should be avoided and good practice could constrain individuals to search for the most useful information to underpin their actions and decisions. A useful strategy could be to constrain learners to focus their attention externally on outcomes of movements rather than on internal control processes (Chow J., Davids, Button, Renshaw, Shuttlework, & Uehara, 2008). The use of questioning to guide this search process has been considered an important strategy for developing autonomous, intelligent performers who understand their own performance and can comment verbally on their intentions. In games, learners need to express intentions through actions and providing feedback that is inherent within learning tasks might avoid an over-reliance on extended verbal feedback (Chow J., Davids, Button, Renshaw, Shuttlework, & Uehara, 2008).

**The use of spatial task constraints may be helpful in this regard, where inherent anchoring can be used to shape behavior. In invasion games, the use of spatial markers to create channels through which play must flow can constrain players to create width in attacking play.** (Chow J., Davids, Button, Renshaw, Shuttlework, & Uehara, 2008).

A key skill for pedagogists is to identify the most important performance aspect that an individual or a team needs to work on as they progress through the stages of learning. In our view, different teaching strategies such as tactic-to-skill and skill-to-tactic approaches can each be delivered effectively by adopting a student-centered approach (Hopper, 2002, cited by Chow J.Y., 2008). Whilst these approaches have sometimes been proposed as contrasting strategies, in Nonlinear Pedagogy either may be viable as long as the learner is implicitly challenged within practice to understand the **what to do and how to do it** in relation to particular motor skills. For example, in football, learning to dribble a ball around a set of cones does little to help learners adapt their movement patterns to an active, moving opponent or the actions of their team-mates. Instead skill execution should occur within more dynamic scenarios which either represents task simplifications of actual game skills (i.e., dribbling around initially passive defenders) or that enhance the frequency of such actions (i.e., extra points for a goal after a dribbling). An important point is that the **skills first** approach need not necessarily imply endless skill repetition within drills that have no tactical context. Skills practice must occur within a tactical conceptual setting in representative, constrained small games in a TGfU approach, in a game-like context and not simply through repetition of a movement pattern (Chow J., Davids, Button, Renshaw, Shuttlework, & Uehara, 2008).
During the coordination and control stages of learning, the emphasis in Nonlinear Pedagogy is for learners to be provided with plenty of opportunities to explore and discover important information sources available in the environment to support skill performance and tactical decision making. This search process is important to promote awareness and enhance functional movement variability. (Chow J., Davids, Button, Shuttleworth, Renshaw, & Araújo, 2006).

Importantly, individual differences amongst learners are embraced by a student-centered approach as opposed to the traditional one-way-fits-all philosophy. As learners advance to the control stage they become increasingly able to demonstrate flexible, adaptive behaviors in different performance scenarios. At this time more emphasis may be placed on skill acquisition to satisfy more specific task constraints during performance. Due to subtle changes in feedback and modifications to coordination patterns that are required, the learner now requires opportunities to explore a narrower bandwidth of movement solutions and, in this context, repetition of achieving specific movement outcomes becomes more valuable (Chow J., Davids, Button, Shuttleworth, Renshaw, & Araújo, 2006). In practice, a more pertinent focus is on exploring successful movement solutions with flexibility and variation in the process to achieve a desired outcome.

For example, if a team is making too many mistakes in exploiting scoring opportunities such as rushing shooting opportunities, not moving into space to support the ball carrier or not exploiting width in attack, an important exercise could be to practice small-sided attacking scenarios. Simplified task constraints could provide opportunities for attackers to practice and improve scoring skills involved in shooting the ball. (…) In a football example, one such game would involving playing 5 attackers vs 3 defenders with all players restricted to the middle third of the pitch until an offensive passing option presents itself on either flank to open the game up into the attacking third of the pitch, allowing attacking runs, spreading of play from one end of the field to the other or even pulling the defense away from goal area. In the skill stage, it is important that practice provides opportunities for learners to stabilize effective movement solutions in high intensity, game-like situations. (Chow J., Davids, Button, Renshaw, Shuttlework, & Uehara, 2008)

Designing representative task constraints that guide learners to understand key principles of game playing are key features of TGfU, which are emphasized in Nonlinear Pedagogy. Bunker and Thorpe (1982) suggested that this principle could be implemented by using modification through representation or by modification through exaggeration. In Nonlinear Pedagogy it is proposed that task modifications could be based on an understanding of the key constraints acting on learners in specific games. There is clearly a need for continued applied pedagogical research as principles of Nonlinear Pedagogy will be further refined and developed in the coming years, with growing empirical support from the motor learning literature and beyond. The challenge for researchers is to extend understanding of how practitioners can explore application of Nonlinear Pedagogy theoretical concepts in TGfU and game skill learning in physical education, focusing on individual player’s performance as well as the understanding of game play as a team (Chow J., Davids, Button, Renshaw, Shuttlework, & Uehara, 2008).
C) The structure of exercises and games in football

According to Castelo (2003), the training exercises for football can be classified through a taxonomy that divides them in exercises either oriented for the development of conditional capacities or oriented for the development of tactical-technical general or specific requirements.

The conceptual framework for the football exercises and games organization should always be supported by the game situations and the internal logic of the game should be reproduced or simplified so that its fundamental nature could be kept. Such conceptual framework includes five fundaments: a) reference to real game situations; b) relation to its logical parameters; c) identification of its objectives; d) inter-relation between activity-player-team; e) competitive perspective (Castelo, 2003).

Only the exercises and games for the development of the tactical-technical factors can establish game situations of attack and defense and related transitions, from which the coaches can manipulate its structural conditions (or constraining the game). The objective of such manipulation is to adjust the desired player performance (short term and long term) and their attributes in different levels of development, to the internal logic and complexity of the game (Castelo, 2003). In this dimension, six main structural conditions or constraints can be used: specific rules, playing space, technical constraints, time constraints (physiological and decisional), number (players, actions, touches) and instrumental (training resources).

Designing specific rules for the games and exercises has three main paths: we can simplify the rules of the game and eliminate some prescriptions (such as offside for example), in a way that we can create advantages for pre-determined actions to happen (should our central defenders check their shoulder for information on what is happening in their back?); we can maintain the rules of the game to better consolidate the players behavior according to the competitive pattern; or we can

![Fig. 5 - (Adapted from Castelo, 2003)](image-url)
have the **rules augmented** to enhance the frequency of certain actions and behaviors from the players (i.e. not allowing sliding tackles to make the players stay on their feet in *one-on-one* duels) (Castelo, 2003).

The playing space can be manipulated in four main aspects: the pitch dimensions (*reduced*, *approximate* or *similar*, from the competition standard dimension); geometry (using rectangles, squares, triangles, circles, according to the desired decision making or tactical action); utilization (*independent* - the players are confined to their own space; *common* – the players can use all the available space; *mixed* – only some of the players can use all the space available; *interdict* – unavailable spaces for some players in independent, common or mixed pre-existing conditions); parceling (using only *central corridor*, as this area creates the better conditions to vary the angle of attack or defense – it can be divided in sectors according to the team internal organization: defensive, middle, offensive sectors; using the side corridors, to force the players to use more frequently the side angles of attack or defense) (Castelo, 2003).

The games and exercises manipulations concerning the technical constraints can be also be divided in four main aspects: **using one, two or more goals** (the number and goals position can enhance certain actions more than others, particularly when it comes to parceling the play in specific moments, add a specific direction of play and the optimizing finishing angles); **using non-dominant foot** (optimizing the technical execution with both feet can benefit the players’ decision making as he can achieve a higher level of confidence to play in different angles and situations); **establishing privileged interactions** (optimizing sectorial players interactions – the back four – or vertical players interactions – full-back, winger, striker – independently of the organization of the game or exercise); **forcing the direction** of the actions (interrupting a certain dynamic of the game and change the direction of the game or start a new dynamic – interrupting an offensive organization and set up a counter-attack to test the teams balance) (Castelo, 2003).

To manage the time constraints serves three main purposes: *energy production* (physiological purpose), tactical strategy and tactical decision. In the first one, the management of the time of the game or exercise is related to which energy source we intend our players to use (anaerobic alactic <12”; anaerobic lactic <3”; aerobic – longer duration; mixed – intermittent use of energy production processes). In a strategic perspective, the time management should value the intermediate or final objectives of the exercise so that the strategical thinking of the players can be modified (scoring on the early or final seconds of the game, for example). To influence the tactical decision, we can reduce or augment the time in which a particular game situation should be solved. With this purpose we can have a constraint on the number of touches per action (*less touches=less time*), on the team passing play (*less passes=direct approach=less time*) or on the time provided for the building up phases of the play (*rush the play into the offensive half* or close to the goal).

When we use the numbers as a game constraint we can refer to three particular aspects: the number of players taking part on the game, the number of touches on the ball per player or the number of player interactions. Defining the **number of players** can happen in even, inferiority or superiority relations between the teams that are taking part of the game (5v5, 5v3, 3v5, 4v4+1). The superiority or the inferiority relations might be total (5v3 game) or partial (7v7+1 or superiority or inferiority relations in certain areas of the pitch – side corridors, 16m box, etc.). The manipulation of the number of the players can have a strong link with the pitch dimensions when we pretend to influence the time of the actions. We can also enhance a limitation on the **number of touches** on the ball for each player taking part of the game. The last constraint about the numbers refers to enhancing some **interactions** in favor of others.
Castelo (2003) go further in his conceptualization about the numbers manipulation in games and exercises, stating that there are some predictable consequences when we introduce these constraints in its organization. **Reducing the number of touches** on the ball (1-2 touches) can have the following effects:

- a) Increment of the players’ information processing and decision making;
- b) Enhancement of the anticipation attributes and makes the players have a solution before they receive the ball;
- c) Optimization of the technical execution (speed);
- d) Enhancement of some tactical-technical patterns in favor of others (passing, receiving, first touch);
- e) Creation of a similar training environment to the logic of the competition level (speed of decisions and actions);
- f) Increment of the rhythm of the game (individually and collectively);
- g) Introduction of an emotional distress to the exercises (reason why we shouldn’t keep it for a long period of time, risking to turning it into a negative aspect);
- h) Inhibition of the optimal solution for the perceived game situation;
- i) Higher propensity to losing the ball and regaining it as well as to individual mistakes.

The limitation on the number of touches can also be **fixed** or **variable**. Each one of these constraints can bring different consequences. When the limitation of the **number of touches is fixed (3 touches):**

- a) Increases the technical execution when the defensive pressing is high;
- b) Decrease the technical execution when the defensive pressing is low;
- c) Forces the players to learn time management with the ball (and before receiving the ball);
- d) Gives more opportunity for the players to express themselves (in relation to reducing the number of touches);
- e) Gives the opportunity to the players to develop their individual responsibility of retaining the ball.

When the limitation of the number of touches is **variable (1 or 4 touches):**

I. Adaptation and adjustment from the tactical-technical behavior according to the game situation;
II. Optimization of the players’ initiative and element of surprise;
III. Difficulty of the defenders reading of the situation and anticipation;
IV. Enhances the time management and the optimal decision making from the attackers;

When there is no limitation on the numbers of touches the players can express more individual initiative and responsibility, use all their technical attributes freely. There is also more room for players’ imagination and creative solutions for the problems that the game brings on each moment.

Finally, Castelo (2003) also includes the manipulation of the interactions between the players and for the teams. It is also possible and effective to have the same limitation prescription for the number of passes that a team is allowed to perform: if we limit the number of passes for each play, normally we accelerate the collective patterns of the team and turn the game more direct. On the other hand, if we increase the number of passes, we turn the game more indirect and focused on the moments of possession. One of the most important aspects of these constraints is that we should always keep the intern logic of the game intact (why should a player pass the ball to a teammate if he is on the goal line one second away from scoring a goal?).
III. Problem definition

The problem definition is defined according to the objectives that we defined in the introduction chapter. With our report we aim to:

a) To translate the information provided by NCFE to a pragmatic training approach on the pitch;
b) Through the processing of the previous point, create and organize conditioned games that could enhance incidental (implicit) learning in the wingers.

The starting questions are mostly related with what and how we intend to achieve such aims:

- How can we translate the data collection about the specific role of a winger into a set of considerations about how to prepare the players for such role?
- What kind of games we believe can maximize the wingers' development?

We are capable to preview before we start this report that the translation of the numbers will be possible, as it’s a regular practice in professional and top level coaching environments. Still, there are some challenges that we can anticipate concerning the first question:

a) Usually such translation from the numbers (or stats) to the training ground is applied to a specific playing style or game approach and in consequence to the players involved in such dynamic. Can we do it for one specific role?
b) The translation should be done in a pragmatic way. How can we design a matrix that can capture the coaches enthusiasm instead of pushing them way?

The second objective is far more complicated to achieve. Traditionally the coaches rely on their direct instruction to enhance the players’ behavior in a set of game situations. Even in training game situations (7v7, 8v8, undertall or overtall), the coach directive approach is seen as strictly necessary for the decision making of the players to be adjusted to what is happening on the pitch. There is no reason for us to believe that in the case of a specific role development it would happen otherwise (go here, do that, cross now). What we believe and is reflected in our second objective is that the efficiency of the actions of the winger (according to the NCFE numbers) can be accomplished with specific game constraints that will enhance the frequency of the desired actions, in an implicit way, and therefore increase the chances of memory retention. As to the previous objective, some challenges can be anticipated:

a) How can we control (and evaluate) the impact of the game constraints on the development of the players?
b) How can we decrease the high level of retroaction - time between our input and the desired outcome (the impact of the game constraints is not as immediate as the direct instruction and feedback)?

At the end of our report our expectations are to achieve possible answers to our research questions and to our challenges, or, at least, to provide more sophisticated questions for further research or critical reflection.
IV. Methodology

The Norwegian Centre of Football Excellence (NFCE) or Norsk Toppfotballssenter (TFS) was launched by the Norwegian Football Association and the Norwegian Professional Football League in 2009 as a knowledge-, competency-, and expertise hub that will ensure top international quality on Norwegian elite player development. Since January 2013, the league took over as the sole owner of the Centre, shifting the primary focus towards the development of players in Norway’s 32 elite clubs. Hence, the current result ambition is to establish the Norwegian Professional League among the top-12 in the UEFA club ranking. A detailed look on the NCFE purpose is presented below.

The NCFE report *Kompetansekrav i Rolle* has a decisive impact on how we chose to approach our theme. In such report, information has been collected through video analysis about top players’ performances in the World Cup 2014 in Brazil. A large amount of match videos have been observed, discussed and dissected into the most pragmatic information possible. A vast and multi-faceted set of resources and references are integrated in an overview of each player position on the pitch, their role definition and specific competence. The player roles that this report refers to includes the Goalkeeper, the Central Defender, the Full-Back, The Central Midfielder (and its stereotypes), the Playmaker, the Winger and the Striker. In our report we decided to have a closer look on the role of the winger. As for all the other role analysis, the structure of the report comprehends different (yet
complemental) angles of analysis. Both offensive and defensive attributes for each position are described, as well as specific game situations and the nature and the type of actions. It’s this last aspect that is more important for the methodology of our report. We believe that an in depth study of this set of actions can provide a reference for the organization of exercises and games in training. Video support is set to clarify the phases on the trefase modell that we present below.
The main attributes described by NCFE for the winger are presented above. Our task of translating the numbers for the training ground will only be focus on the offensive moment, more particularly when the winger assists or scores. We reproduced the attributes for that specific moment of the game. Additional information on profiling refers to the different type of wingers. In Kantstereotypi, seven types of wingers are presented: The Speedster, Raumdeuter, 1v1, Roaming Playmaker, The Killer Crosser, The Trickster and The Worker. It is not our intention to study with depth this aspect of our theme, as it depends from variables which description would make our report to dense and away from its main purpose (individual specific attributes, team playing style, team formation, game strategies, etc.). However, this is still information that we can use as a discussion further on. Our methodology is, therefore, based in documentation analysis, literature study that can result in a research-oriented product to use in the coaching practice. For that matter we purpose the construction of the following matrices of analysis.

The NCFE designed a three phase model for each particular action. Such model comprehends the moments before, during and at the end of each tactical-technical execution. Such phases are the title of each matrix.

It was our concern that these matrixes could be designed in a way that all the information analyzed could be concentrated in one single sheet (according to each specific phase or angle). It pretends to offer clear and pragmatic information and a visual help to better exemplify the game organization on the pitch. We will also provide a portfolio attached to our report where all the matrixes – as well as a general overview – will be organized. A digital version of the Excel file will also be one of the attachments.
V. Data Analysis

The NTCE *Kompetansekrav i rolle – Kantspillere* was presented in the 25th *Cupfinaleseminar* in Oslo last November. The report includes 60 slides with statistical information about type of actions, patterns and specific characteristics of the wingers. We have selected the information that is more relevant for the purpose of translating the numbers into the training ground. As we referred before we will only focus on the offensive moments, more particularly when the winger assists or scores. The elements of analysis are presented below.

The wingers’ *Assists* and the *Goals* are analyzed through a *Trefase modell* which aims to divide the wingers’ actions before receiving the ball, with the ball and his last action (passing or shooting). For the *Assists* analysis the Phase 1 – Movement before the ball comprehends two angles of approach: where is the opposition and where does the winger go for the ball; In Phase 2 – From opportunity to reality, the analysis comprehends four elements: distance to pressing, type of action, time with the ball and number of touches; In Phase 3 – The decisive pass, the type of passing, from where is the pass coming and who is receiving the pass (and where) are the elements of analysis. For the *Assists* through *Crosses* analysis, the Phase 1 comprehends the elements where is the opposition and where does the winger go for the ball; In Phase 2 – From opportunity to reality the elements of analysis are the distance to pressing, type of action, time with the ball and number of touches; In Phase 3 – The decisive pass the analysis focuses on the pressing distance, the type of touch and from where is coming the crossing. For the wingers’ *Goals* analysis Phase 1 – Finding the starting position the following elements are analyzed: where is the opposition, starting position in relation to the closest defender, to the area of the pitch and to the space in the opposition structure. In Phase 2 – Conquering the space, we analyze how the winger wins the space and in the Phase 3 we analyze the type of finishing and its areas and target zones.
A) Wingers’ goal assists

Phase 1 – Movement before the ball

Attributes description

1. Finn timing for å komme inn i rom på riktig tid, reposisjoner om nødvendig;
2. Finn optimal “høyde” i rommet og posisjon som skaper tvil hos motstander ift hvem 1.F
3. Søk rettvendt kroppsposisjon før første berøring
4. Søk posisjoner for å utnytte kompetanse (egen, med- og mot - spiller)

Kompetansekrav i roller – Kantspillere (TFS, 2014)

In relation to the opponent

<table>
<thead>
<tr>
<th>Forhold hos motstander</th>
<th>Størrele bakrom</th>
<th>Størrele mellomrom</th>
<th>Numerisk balanse</th>
<th>Bakre ledd</th>
<th>Kommentering</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0-10m 0%</td>
<td>10-20m 52%</td>
<td>5-10m 15%</td>
<td>10+m 30%</td>
<td>-1 51%</td>
</tr>
</tbody>
</table>

Numbers interpretation

When the winger is coming for the ball to perform an assist, half of the times 10-20m separates the defensive line from the goal line (52%).
A minimum of 5m space between the two last defensive lines is needed to trigger the wingers’ appeal for the ball (85%).
The wingers’ movement before an assist is coming mostly when the opposition is balanced (numerical).
The wingers’ movement before an assist is coming mostly when the opposite defense is falling back.
The winger is putting himself into congestioned areas before he receives the ball (68,2%).

Games constraints or conditions

The pitch dimension for the game has to consider a minimum of 10m space in bakrom during the play.
Each team needs a sufficient number of players to form a system with two lines (for the winger to explore mellomrom).
The counter-attack moments should be prevented to happen so that the established attacks are more frequent.
The 84 should be organized and moving close to their own goal.
The area where the ball is should concentrate the majority of the players.

Pitch dimensions: 45x35m - use the box for better attacking reference. Playing against two 11-a-side goals.
Game form: Gk7v7+Gk Formation 1-4-3 or 1-4-1-2
Tactical technical constraint for the teams: 3 players locked in own half when in possession of the ball.
Dutch rule: the game always re-start from the goalkeeper.
Tactical-technical constraint for the teams: Positional defending only allowed in two corridors.
**Where the winger receives the ball**

### KANT - ASSIST ETTER TREFASE MODELL - FASE 1: KOMME PÅ BALL

<table>
<thead>
<tr>
<th>Numbers interpretation</th>
<th>Game constraints or conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>When the winger comes to the ball, he is most of the times towards the goal. His wide positioning can be one of the factors that has a big contribution to this observation. Still, 45% of the areas where the winger move into are in the central corridor (with variable distances to the goal). The majority of the wingers’ movements are in the offensive half. The mellomrom is the only sector with all the areas covered on the moment that the winger gets the ball.</td>
<td>The games should enhance the frequency of the situations where the winger can receive the ball towards the goal (games with direction). Using an extra player for the team in possession of the ball can prevent the defending team from man marking giving more opportunities for the winger to receive the ball facing the goal. The wingers’ actions should happen with higher frequency in the offensive half, spread through every area, but with higher incidence in both corridors and in mellomrom.</td>
</tr>
<tr>
<td>The movement of the winger before he receives the ball to assist varies between a forward run, a wide movement or an inside run. The higher incidence is in the first two movements. Dropping down to receive the ball is also an option, but with less frequency than the three previous.</td>
<td>The pitch dimensions should allow the winger to vary his movements in length and width. Each team needs a sufficient number of players to form a system with two lines (for the winger to be able to explore mellomrom).</td>
</tr>
</tbody>
</table>

### Numbers interpretation

- **Bevegelse i forkant**: 35%
- **Trekker breddt**: 38%
- **Justerer seg midt i rommet**: 23%
- **Dropper ned**: 4%

<table>
<thead>
<tr>
<th>Pitch dimensions: 45x35m - use the box for better attacking reference. Playing against two 11-a-side goals.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tactical-technical constraint for the winger: one touch in the defensive half, free touches in the offensive half.</td>
</tr>
<tr>
<td>Tactical-technical constraint for the wingers: right foot winger on the left and left foot winger on the right (enabling the winger to use mellomrom).</td>
</tr>
<tr>
<td>Game form: Gk+7v7+Gk + Jk. Formation: 1-4-3 or 1-4-1-2.</td>
</tr>
</tbody>
</table>
### Phase 2 – From the opportunity to reality

#### Attributes description
1. **Vær oppdatert på mulige rom og medspiller(e) før første berøring.**
2. **Evne å kontrollere ballen under ekstremt pressede rom- og tidsforhold:**
   - a. Kort avstand mellom ball og kropp; være beredt til å gripe “rett rom til rett tid”
   - b. Kort tid mellom første og andre berøring
   - c. Ro å plukke opp riktig signal og kjenne igjen mønster i spillet/hva skjer, og når.
3. **Finn optimal timing (tid/rom i samhandling)**

#### Opponents’ pressing, type of actions, time with the ball and number of touches

<table>
<thead>
<tr>
<th>Numbers interpretation</th>
<th>The type of actions are diverse. Turning and passing are the less frequent actions of the winger with the ball just before the assist (due to the receiving body angle towards the goal). The two touch type of actions are the more frequent ones (67%).</th>
<th>1-4 seconds is the amount of time that the winger uses with the ball when assisting to goal (77,7%). This can reveal a tactical decision (what to do) before he receives the ball or a tight distance from the defender(s).</th>
<th>60,7% in the assists situations the winger has 1-3 touches on the ball. Still the numbers of touches on the ball are diverse (from 1-9).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Games constraints or conditions</td>
<td>The game should enhance a higher concentration of players around the ball carrier and the winger, but still provide the opportunity to allow enough space between 1A and 1F in some occasions.</td>
<td>The game should enhance all the types of actions from the winger. Some actions can be encouragement than others depending on the player characteristics.</td>
<td>The game should enhance less time and less touches for each player. Quick decision making is required. Smaller pitch dimension and fewer players can provide such type of actions.</td>
</tr>
<tr>
<td>Game form: Gk+5v5+Gk.</td>
<td>Tactical-technical constraints for the players: 1) positional defending only allowed in two corridors; 2) have to use both feet in all actions with more than one touch 3) touch limitation: 1 or 3 touches.</td>
<td>Pitch dimensions: 35x25m. Playing against two 11-a-side goals.</td>
<td></td>
</tr>
</tbody>
</table>
Phase 3 – The decisive passing

Attributes description

1. Evne å forløse riktig rom til riktig tid
2. Ha bredt tilslagsrepertoar med tyngdepunkt på innsidepasning
3. Ha et kamuflerende element
4. Presisjon og optimal vekting av pasningen

Opponents’ pressing, type of passing and from where the winger assists

KANT - ASSIST ETTER TREFASE MODELL - FASE 3: DEN AVGJORENDE PASNING

**Numbers interpretation**

In the decisive pass moment the closest opposition is between 1-2m in 89% of the situations. This numbers can be related with the areas of the pitch where the pass is coming from (last third).

The passing with the inside foot in the most used type of passing used by the wingers when assisting. Half of the decisive passes are camouflaged and its relation with the type of passing becomes logical if we consider the best body angle for its execution (inside foot - camouflage).

The decisive pass is made from the last third in the majority of the situations (91%). The left and central corridors are the most covered areas in this situation.

**Games constraints or conditions**

The game should enhance an intense defensive pressing on the ball carrier. Higher pressing means less time and space for the ball carrier to perform the better passing.

The wingers should be incentivated to use the side corridors. Using side positions as attack starting points can be used as a tool to enhance the use of inside foot for assisting (opposite side as well).

A formation with 2 or 3 lines is needed in a way that the ball carrier has less time and space. It’s also important that each line has enough number of players to cover a higher width (midline with 3 players).

Extra points for first touch finishing in the box (first touch finishing is dependent of top class assist).

Tactical-technical constraints for the wingers team: attack 11-a-side goal and defend two 5-a-side goals in the corners (if the wingers have to defend the sides, then the offensive transition starts with the whole pitch in front of them).

Game form: Gk+8v8.

Suggested formation: (1)-4-3-1.

Pitch dimensions: 40x60m (or full width). Use the box as reference. Playing against one 11-a-side and two 5-a-side goals.
**Who scores after the assist and from where**

<table>
<thead>
<tr>
<th>KANT - ASSIST ETTER TREFASE MODELL - FASE 3: DEN AVGJORENDE PASNING</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hvem scoret malene som kantspillere assisterte?</strong></td>
</tr>
<tr>
<td><img src="image1.png" alt="Graph" /></td>
</tr>
</tbody>
</table>

### Numbers interpretation

The striker is the player that scores the most when the winger is assisting. The opposite wingers, the midfielders are other players that also have some prominence on scoring when the winger is assisting. A relation between the type of assist and who is scoring would be a variable that could contribute more for a pattern recognition. Independently from who is scoring, the finishing areas when the assist is coming from the wingers are mainly inside the box and within a privileged finishing angle towards the goal.

### Conditions and rules for games (frequency of actions and suggested conditions)

The interaction between the winger and the striker should be prioritized in the game. The finishing inside the 16m box should be prioritized in the game, particularly when the winger is assisting.

**Game form:** Gk+6v6+Gk + 2 jkrs. Suggested formation: (1)-2-3-1.

**Tactical-technical constraints:**
1. First touch finishing goal inside the 16m box=extra points;
2. Wingers are used as jokers;

**Pitch dimensions:** 50x40m using box as reference. Playing against two 11-a-side goals.
B) Wingers’ crossing situations

Phase 1 – Movement before the ball

Attributes

1. Finn timing for å komme inn i rom på riktig tid, repositions om nødvendig;
2. Finn optimal ”høyde” i rommet og posisjon som skaper tvil hos motstander ift. hvem 1.F;
3. Søk rettvendt kroppsposisjon før første berøring;

Kompetansekrav i roller – Kantspillere (TFS, 2014)

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<thead>
<tr>
<th>Numbers interpretation</th>
<th>In the majority of the situations when the winger is moving before crossing the ball the B4 are falling towards their own goal.</th>
<th>Before the crossing the winger is moving into areas were there is a normal or small concentration of players (is the small concentration due to switch of play?).</th>
<th>When the winger is moving into a crossing position the opposite team is balanced in the majority of the situations.</th>
<th>The distance in mellomrom is in most situations 5-10m (higher than observed for the assists). Potentially, when the crossing is coming the distance between lines (b4 and midline is 5-10m).</th>
<th>The distance behind the defensive line is mostly between 10 to 20m. This distance gives the winger opportunity to vary the type of crossing.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conditions and rules for games (frequency of actions and suggested conditions)</td>
<td>The game should provide the opportunity for the winger to explore the defensive lines vertical movements (push up/fall down).</td>
<td>The defensive concentration on the center of the game should vary so that the winger can experience different relations of time and space.</td>
<td>The counter-attack situations should be avoided in the game (fast transitions against unbalanced opposition), so that the winger can experience playing against established and balanced defensive structures.</td>
<td>The game should enhance fast breaks (fast transition moments against balanced and organized opposition). The defensive line is organized, but the remaining lines are unstructured (more space i mellomrom ?)</td>
<td>The games’ playing area should provide the opportunity for the winger to take advantage of a 10-20m distance in bakrom.</td>
</tr>
<tr>
<td>Tactical-technical constraints: 1) Dutch Rule adaptation - the game re-starts with coaches ball on the sideline; 2) delimited side corridors; 3) Defending team can only play in two corridors; 4) Game</td>
<td>Game form: Gk+6v6+Gk. Suggested formation: 1-3-3 or 1-2-3-1.</td>
<td>Pitch dimensions: 40x40m using box as reference. Playing against two 11-a-side goals.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Where the winger receives the ball and movement before the ball

### KANT - INNLEGG ETTER TREFASE MODELL - FASE 1: KOMME PÅ BALL

| Numbers interpretation | When the winger is moving into crossing positions he is always facing the goal. His movements are mostly close to the sidelines and on the last third. The movements to get the ball on the inside left areas of the pitch are observed in 16% of the situations. The inside right areas have no observed situations. | The former movements of the winger are mostly to create width and to move forward on the pitch. The relation between the areas to where the winger is moving and the type of movement is coincident (width=sidelines). |
| Conditions and rules for games (frequency of actions and suggested conditions) | The game should enhance the situations where the winger can receive the ball towards the goal. His movements on the last third and in the side corridors should be prioritized. | The game should have adjusted dimensions to provide a high frequency of two type of movements from the winger (verticality and width). |

| Game form: Gk+2v2+Gk + 2 Jk. | Playing against two 11-a-side goals. | Tactical-technical constraints: 1) Dutch Rule - the game re-starts with Gks’ ball; 2) delimited side corridors; 3) wingers as the jokers on the sidelines; 4) touch limitation for the wingers (1-3). | Pitch dimensions: 20x45m using box as reference. |

---

Game form: Gk+2v2+Gk + 2 Jk.
Playing against two 11-a-side goals.

Tactical-technical constraints:
1) Dutch Rule - the game re-starts with Gks’ ball.
2) Delimited side corridors.
3) Wingers as the jokers on the sidelines.
4) Touch limitation for the wingers (1-3).

Pitch dimensions: 20x45m using box as reference.
Phase 2 – From the opportunity to reality

Attributes

1. Vær oppdatert på mulige rom og medspiller(e) før første berøring;
2. Evne å plukke opp riktig signal og kjenne igjen mønster i spillet/hva skjer, og når;
3. Evne å kontrollere ballen under ekstremt pressede rom- og tidsforhold:
   a. Kort avstand mellom ball og kropp; være beredt til å gripe “rett rom til rett tid”
   b. Kort tid mellom første og andre berøring
   c. Ro
4. Finn optimal timing (tid/rom i samhandling)

Kompetansekrav i rolle – Kantspillere (TFS, 2014)

Pressing, type of actions, time with the ball and number of touches

<table>
<thead>
<tr>
<th>Numbers interpretation</th>
<th>When the winger receives the ball for the crossing the defensive pressing is most of the times 2-3m away (67%).</th>
<th>The type of actions is diverse and variable, but with particular incidence on one touch crossing or crossing after dribbling (56%).</th>
<th>There are not many observed situations where the winger has the ball more than 5”. The 1” and 2” situations can favor the one touch crossing and receive-crossing.</th>
<th>76% of the observed situations the winger is using four or less touches on the ball before the crossing. Do other situations mean individual actions before the crossing?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conditions and rules for games</td>
<td>The game should enhance a defensive pressing on the winger in the moment of the crossing.</td>
<td>The game should provide the opportunity for the winger to use different actions before the crossing.</td>
<td>The game should increase the speed of the wingers’ decision making in the crossing situation (how and when to cross?).</td>
<td>The game should provide the opportunity for the winger to link the number of touches to the type of crossing (early perception of the finishing opportunities?)</td>
</tr>
<tr>
<td>Pitch dimensions: 60x45m using box as reference. Playing against two 11-a-side goals.</td>
<td>Game form: Gk+7v7+Gk. Formations: 1-4-3 or 1-3-1-3.</td>
<td>Tactical-technical constraints: 1) delimited side corridors; 2) goal after a backwards crossing=extra points; 2) Dutch Rule - the game re-starts with Gks’ ball; 4) touch limitation for side corridors=1 touch.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Phase 3 – The decisive passing

Attributes
1. Evne å forløse riktig rom til riktig tid;
2. Ha bredt tilslagsrepertoar med tyngdepunkt på innsidepasning;
3. Ha et kamuflerende element;
4. Presisjon og optimal vekting av pasningen.

From where on the pitch, pressing and type of crossing

<table>
<thead>
<tr>
<th>KANT - INNLEGG ETTER TREFASE MODELL - FASE 3: DEN AVGJORENDE PASNING</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Numbers interpretation</strong></td>
</tr>
<tr>
<td>In the crossing moment the defensive pressing towards the winger is at 1-3m distance, with more incidence on 1m (44%) and 2m (38%) distances.</td>
</tr>
<tr>
<td>The inside foot is the type of touch more used in the crossing moment. 44% is crossing on the ground and 38% is crossing with... In 40% of the situations the crossing has a camuflage element.</td>
</tr>
<tr>
<td>The winger is crossing with higher incidence on the last third. Ca. 30% of the crossing is inside the 16m box. The area with more incidence is outside the box within an horizontal line from the penalty mark.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Conditions and rules for games (frequency of actions and suggested conditions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The goals after a crossing should be prioritized in the game. Such condition can increase the defensive pressing in a crossing attempt.</td>
</tr>
<tr>
<td>The wingers should have the opportunity to roam into both corridors to take advantage of the best positioning to cross with the inside foot. The number of finishing options should also be enhanced so that the winger can add a camuflage element to his crossing.</td>
</tr>
<tr>
<td>The game should enhance the wingers’ crossing from pre-defined zones (and to pre-defined target zones?). A variation of early/late crosses and outside/inside 16m box.</td>
</tr>
</tbody>
</table>

Pitch dimensions: 30x45m using box as reference.  
Tactical-technical constraints: 1) 2 delimited side corridors where only the jokers can play at maximum 2 touches; 2) Dutch Rule - the game re-starts with Gks' ball; 3) first touch goals=extra points;  
Playing against two 11-a-side goals.  
Game form: Gk+4v4+Gk + 2 Jkrs (winger).
Where the crossing is going, who is scoring and where

### KANT - INNLEGG ETTER TREFASE MODELL - FASE 3: DEN AVGJORENDE PASNING

<table>
<thead>
<tr>
<th>Hjem scoret på innleggene?</th>
<th>Innlegg til hvilket rom?</th>
<th>Hvor scoret de fra?</th>
</tr>
</thead>
<tbody>
<tr>
<td>66%</td>
<td>22%</td>
<td>12%</td>
</tr>
</tbody>
</table>

### Numbers interpretation

- In 56% of the crossing situations from the winger, the striker is the player that is scoring. The opposite wingers represent 31% of the situations and the midfielders 12%.
- The winger uses the last defensive line as a reference for where to place the crossing. 44% of the crossing is to use the space between the defenders in the line, 44% of the crossing is between the Gk and the defensive line and 13% of the crossing goes in front of the defensive line.
- When the winger is crossing the goals are scored inside the 5m box (ca. 44%) and in the central area of the 16m box (50%). 6.3% of the goals scored after crossing are outside the box.

### Conditions and rules for games (frequency of actions and suggested conditions)

- The interaction between the winger and the striker should be prioritized in the game.
- The game should provide the opportunity for the wingers to cross from different areas. Early or late crosses can enhance its direction and vary the target zone.
- The game should prioritize the finishing inside the 16m box after crossing, but still provide the possibility for finishing outside of the box.

### Pitch dimensions: 30x50m using box as reference.

- Tactical-technical constraints: 1) 2 delimited side corridors where only the wingers can play at maximum 2 touches in the attacking phase; 2) Dutch Rule - the game re-starts with Gks’ ball; 3) goal in the 5m box=extra points; 4) goal outside the 16m box=extra points.
- Playing against two 11-a-side goals.
- Game form: Gk+5v5+Gk.

<table>
<thead>
<tr>
<th>McLelland’s Point</th>
<th>McLelland’s Point</th>
<th>McLelland’s Point</th>
</tr>
</thead>
<tbody>
<tr>
<td>25%</td>
<td>25%</td>
<td>25%</td>
</tr>
<tr>
<td>15%</td>
<td>15%</td>
<td>15%</td>
</tr>
<tr>
<td>10%</td>
<td>10%</td>
<td>10%</td>
</tr>
</tbody>
</table>
C) Wingers’ scoring sequence

Phase 1 – Finding the scoring space

Attributes

1. Søk posisjon som gir deg tilgang til scoringsrommet;
2. Søk posisjon som kamuflerer inngang til scoringsrom;
3. Reposisjoner deg - når situasjonsbildet endres;

Kompetansekrav i rolle – Kantspillere (TFS, 2014)

In relation to the opponent

<table>
<thead>
<tr>
<th>KANT - SCORINGSSEKVENSE ETTER TREFASE MODELL - FASE 1: FINNE UTGANGSPOSISJON</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bakle lodd</strong></td>
</tr>
<tr>
<td>B4 Fuller</td>
</tr>
<tr>
<td>B4 Stør bak</td>
</tr>
<tr>
<td>B4 Pusher ut</td>
</tr>
<tr>
<td>Annent</td>
</tr>
</tbody>
</table>

**Numbers interpretation**

- When the winger is starting to move to his scoring position, the last defensive line is falling back towards their own goal (71%).
- The winger starts his movement to score mostly when there are low concentration of players (42%). Still, 52% of the times the area around the ball is congestioned.
- In 25% of the times the winger takes advantage of the unbalance in the opposition when moving into scoring positions. Still, for 75% of the times the other team is numerical balanced.
- When the winger is starting to move into a scoring position, the distance between the defensive line and the midfielders line is variable, although there is more incidence on a 5-10m distance. In 50% of the times the winger is moving into scoring position, the space behind the defenders has between 10 to 20m. However there is also a large incidence of the wingers’ movements when the bakrom has more than a 30m distance to the goal line.

**Conditions and rules for games (frequency of actions and suggested conditions)**

- The game should provide the opportunity for the winger to explore different levels of defensive concentration. However, in both situations achieving a finishing position should be the main focus.
- The winger should have the opportunity to explore the space between and behind defensive lines. The distance to the goal should be adjusted to the fact that exploring both spaces are rewarded with a finishing opportunity.

**Pitch dimensions:** 30x40m using box as reference.

**Tactical-technical constraints:**

1) Dutch Rule - the game re-starts with Gks’ ball; 2) Zonal surplus (opposition team from the winger has one more player in defensive half).

**Playing against two 11-a-side goals.**

**Game form:** Gk6v5+Gk.
Direct opponent and from where the winger finds the finishing space

### Numbers interpretation

<table>
<thead>
<tr>
<th>Utgangsposisjon</th>
<th>Utgangsposisjon - Sone</th>
<th>Utgangsposisjon - Rom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utgangsposisjon - ifht. motsander</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The wingers’ scoring starting position is mostly on the offensive half with a high incidence in the central corridor (89%).

The wingers’ scoring starting position before scoring has diverse incidence (6 areas). However, the higher incidence is in the space in the last defensive line (34%) and in mellomrom (55%).

### Conditions and rules for games (frequency of actions and suggested conditions)

- The game should enhance the opposition relation between the winger and the opposite wide player, particularly the fullback. It’s important that the winger can have a similar type of resistance in training as he has in the match.
- The game should give the opportunity for the winger to prioritize the play in the offensive half.
- The winger should have the opportunity to explore different spaces in the game, but with intention to go to the goal whenever possible. Two defensive lines should be organized.

#### Tactical-technical constraint: 1) Man marking zones - offensive half or defensive half (mixed defensive method);

<table>
<thead>
<tr>
<th>Pitch dimensions: 30x40m using box as reference.</th>
<th>Playing against two 11-a-side goals.</th>
<th>Game form: Gk+5v5+Gk. Formations: 1-2-3 or 1-3-2.</th>
</tr>
</thead>
</table>

- In the wingers’ starting position to scoring the closest players are the wide players (fullbacks, wingbacks, wingers). Still in 18% of the times the closest player is the central midfielder (is the winger starting from inside?).
- The wingers’ scoring starting position is mostly on the offensive half with a high incidence in the central corridor (89%).
- The wingers’ starting position before scoring has diverse incidence (6 areas). However, the higher incidence is in the space in the last defensive line (34%) and in mellomrom (55%).

#### Pitch dimensions: 30x40m using box as reference.

- The game form is Gk+5v5+Gk. Formations: 1-2-3 or 1-3-2.
- The winger should have the opportunity to explore different spaces in the game, but with intention to go to the goal whenever possible. Two defensive lines should be organized.

- The winger should have the opportunity to explore different spaces in the game, but with intention to go to the goal whenever possible. Two defensive lines should be organized.
Phase 2 – Conquering the scoring space

Attributes
1. Kamufler inngangen til scoringsrom;
2. Finn optimal timing (tid/rom i samhandling);
3. Lese ballbanen og justere bevegelse underveis.

Kompetansekrav i rolle – Kantspillere (TFS, 2014)

Type of actions

KANT - SCORINGSSEKVENSE ETTER TREFASE MODELL - FASE 2: VINNE SCORINGSROM

<table>
<thead>
<tr>
<th>Numbers interpretation</th>
<th>Pitch dimensions: 20x40m (whole box width).</th>
<th>Game form: Gk+1v2+Gk.</th>
<th>Playing against two 11-a-side goals.</th>
<th>Tactical-technical constraints: 1) the game restarts from diagonal angles; 2) touch limitation - max 3 touch.</th>
</tr>
</thead>
</table>

To conquer the scoring space the winger uses 6 different type of actions with a significant incidence in almost all of them. The ones that are more frequent are a high intensity run, a change of rythm and pace, his accurate positioning in the space and multidirectional movements.

The game should provide the opportunity for the winger to focus on different ways to conquer the space and to use his different attributes. The area of play should have an adjusted dimensions to the type of actions that are required. Such actions have different physical and tactical-technical demands.
Phase 3 – Finishing

Attributes

1. Handling & handlingsvalg for siste berøring(er) ved scoring.

   Kompetansekrav i rolle – Kantspillere (TFS, 2014)

Pressing, repertoire, number of touches

**KANT - SCORINGSEKVENSE ETTER TREFASE MODELL - FASE 3: SCORINGEN**

<table>
<thead>
<tr>
<th>Pressavstand ved 1. berøring</th>
<th>Tilslagsrepertoar</th>
<th>Antall touch ifht. område</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inside</td>
<td>47%</td>
<td>20%</td>
</tr>
<tr>
<td>Vist</td>
<td>31%</td>
<td>27%</td>
</tr>
<tr>
<td>Udde</td>
<td>2%</td>
<td>10%</td>
</tr>
<tr>
<td>Healing</td>
<td>11%</td>
<td>30%</td>
</tr>
<tr>
<td>Annet</td>
<td>9%</td>
<td>12%</td>
</tr>
</tbody>
</table>

Numbers interpretation

- When the winger is scoring the defensive pressing on the moment of the first touch is mostly between 1-2m (84%)
- The winger is scoring more often with his inside foot (47%) and with his instep (31%).
- The winger is scoring more on first touch as the distance to the goal gets closer (80%-56%-25%). On the opposite hand, the scoring after two touches happen more often as the distance to the goal gets further (20%-30%-37.5%). Only between 5-16m and outside the 16m box the winger is using three touches to score (11%, 12.5%). Four or more touches are used with high incidence outside the 16m.

Conditions and rules for games (frequency of actions and suggested conditions)

- The game should provide an intense defensive pressing on the moment of finishing.
- The game should provide a higher frequency of positions roaming so that the winger can look for the best area to finish with his inside foot or instep.
- The game should provide the opportunity to adjust the type of finishing (and the number of touches) to specific areas on and around the 16m box.

- Pitch dimensions: 30x20m using the box as reference.
- Game form: Gk+4v4+Gk.
- Playing against two 11-a-side goals.
- Technical constraints for the winger: one touch finishing inside 16m box=extra points; 2) Long shot finishing (outside 16m box)=extra points.
Zones of finishing and targeting

<table>
<thead>
<tr>
<th>Numbers interpretation</th>
<th>Conditions and rules for games (frequency of actions and suggested conditions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The wingers are scoring 82% of their goals inside the box. 74% of this goals are in privileged finishing angles towards the goal.</td>
<td>The wingers are placing their shots in every area of the goal. However the highest incidence is in low placed shots (64%). The right low corner is the area with higher incidence. We have no information if it is the close or the far corner from the shooting position.</td>
</tr>
<tr>
<td>The game should provide the opportunity for the winger to attempt finishing inside the box in every possible angle. However, the area of play should consider also the area on the edge of the box.</td>
<td>The winger should be incentivated to shot and hit the target, as the incidence of the area where the shots are placed is broad. However, the low corners and the low placed shots should be prioritized (play safe finishing?)</td>
</tr>
</tbody>
</table>

**Pitch dimensions:** 20x20m using the box as reference.

**Game form:** Gk+3v3+Gk.

**Playing against two 11-a-side goals.**

**Technical constraints for the winger (and for all players?):**
1) shots out of target=10'' suspension;
2) goal with non-dominant foot=extra points.
VI. Discussion

A) Matching the report objective(s)

When we started our report two objectives where defined: a) to translate the information provided by NCFE to a pragmatic training approach on the pitch; b) in the processing of the previous point, create and organize conditioned games that could engage the wingers in a process of implicit learning. The NCFE report refers to the game situations observed in the World Cup 2014. It’s very important to define this context. Within this information we can read the more frequent actions from elite level wingers performed in one of the highest levels of competition in the football world. Reading this type of information provides a reference for the development of a role that we expect can decide a football match. Our initial thoughts about the translation of this information to the training ground guided us to create a game centered approach that could enhance the type of actions that are more effective at top level. Several points of discussion emerge from this starting point. We want to underline two of them that are useful to approach in our discussion:

a) Why not read the wingers’ references and create a training approach where the attributes are trained isolated, hoping that the sum of such isolated parts could create the necessary “package” for the matches?

We could more pragmatically observe where in the pitch the crossing is more frequent and/or effective and organize an exercise that can promote a certain amount of repetitions that can enhance its reproduction in a game situation. We could also observe how is the winger scoring more often and where and, like the previous example, promote another exercise that could engage the winger in such repetitive action. The game, however, is made of players’ decisions that, once occurring in a chain of events, will permanently influence one another and result in the game play. When we isolate the training from such chain of events and only attempt to reproduce its isolated parts, we put at risk the development of a repertoire that can be used effectively in the game, when the game has its various demands. The picture from Mordillo’s football skills can be a good illustration of this skill isolation. Therefore, our intention was to invest our energy in creating game constraints that could enhance the frequency of the actions that we pretended to use as references for the wingers. Nonetheless, because individual differences amongst learners are embraced by a student-centered approach as opposed to the traditional one-way-fits-all philosophy, it’s important that the individual execution that rates the performance can remain open and adjustable to the players’ particular motor patterns. As learners advance to the control stage they become increasingly able to demonstrate flexible, adaptive behaviors in different performance scenarios.

The second angle in this discussion is the emotional distress that we need to add to the training. Has we already stated in our conceptual framework definition, the game is the situation in training that we know the players will be emotionally involved. The level of engagement in training can be achieved in various and different ways, but playing a game will more naturally add an emotional distress that is necessary to experience when we prepare the players for a formal competition. A game centered approach to training is the logical way to embrace Damásios’ lessons on reason and emotion. We need our emotions to decide better and more effectively. The high variability of the games and exercises are, therefore, a tool to achieve a more effective decision making in our players. Although Castelo (2003) acknowledges different types of exercises in his taxonomy, when it comes to the development of tactical-technical factors and the relation to the game, his suggestions are based mostly in how we can manipulate the game to achieve the objectives that we define. Finally, is also important to underline that a game centered approach to training has also the openness of letting
something happening that was not previously under prediction. The game situation that we aim to train can be reinvented by the players. As stated by Chow (2008), *creating variability in practice is essential to learners’ exploratory activities during game play and produces flexible and adaptive individuals who can create new solutions to solve typical motor problems.* One of the advantages that we have by organizing games in an implicit perspective with the goal of developing the winger is that we allow that something new and unexpected solution can be created. The numbers that we analyzed towards the balance of the opposition and the level of organization (concentration and distance of the defensive line to the goal) both when the winger is assisting and scoring, have shown us that in most of the situations the teams are balanced. We have observed a normal or high concentration around the ball and a defensive line falling towards their own goal. This level of defensive challenge sometimes can only be broken by some magic element that is taken from the wingers’ own repertoire. This is valid for the assists and for the goals. Therefore, a low demand on explicit instruction on how things should be done and a higher focus on *this is the game, play it,* can, in fact, enhance the desired creative outcome. We aim to develop in the winger the same problem solving capacity as the Mordillos’ Goalkeeper... but within the rules of the game.

b) Why not use the wingers’ references to create a check list of *what to do, how to do it, when and where,* engage the players in its practice during training and evaluate their performance from that process?

A large number of football players are educated to being told what to do. *If-then* rules are, in fact, what the majority of the football coaches recognize has their main responsibility (no research data on this matter, but an own intuition). Therefore, it’s quite normal that the players like the coaches that are clear in the message of what, how and when to do a certain action. The circle is closed when we acknowledge that our energy investment is this type of messages and information is higher than for any other coaching tool. There is nothing wrong in this assumption. Our belief is that it’s not complete and it shouldn’t be exclusive in our work. As we become more proficient in a certain task our energy demands decrease. Research in neurobiology has shown that the activity pattern associated to a task changes as the capacity increases, with less brain areas involved (Kahneman, 2012). This would justify *if-then* rules and the check list method. However, Kahneman (2012) continues, *the more intelligent individuals have less energy needs to solve the same problems (...) the general law of minimum effort applies either as to cognitive as to physical engagement. This law states that if there is various ways of achieving the same objective, people will take the less demanding action.* Then the question becomes more sophisticated. What kind of proficiency to we want to develop in the winger (and in the players)? Where do we want the players to use less energy? In the actions that they already know but, due to the unpredictability of the game, might not be necessary? Or in the routine of reading a situation and, according to it, chose the most effective (and economical from the energy point of view) action to solve the problem? We believe that players like Pirlo (2013) to whom *I think therefore I play* and everything is about geometry, an approach such as ours would be the most effective.
When it comes to our second objective for this report is important to refer that it’s very difficult to draw the line from what is explicit and implicit in terms of coaching input. Even in the situation that we put ourselves into: we are organizing games so that we can get what we want from it without showing explicit evidence of it. How much of that process is implicit if the outcome that we want from our game is somehow pre-defined? The players can learn in an implicit way (hopefully with A-AI moments), but the object of learning is manipulated beforehand. Are we organizing a game with explicit pre-defined outcomes to be learned in an implicit way? 1) We want the winger to move into mellomrom and take advantage of that space when it’s large enough for him to assist to goal – an explicit input; 2) we organize a game where that situation has a higher probability to happen – an explicit input; 3) the inside cut actually happens often during the conditioned game – implicit learning; 4) The movement to use mellomrom becomes automatic and a playing habit – job done?

The second challenge of translating the numbers to the training ground in a game centered approach is that, once our input has an implicit nature we have to be persistent and consistent in its pursue over time. This resilience is essential for two main reasons: a) because the outcome of the game might not be coincident to the outcome that we predicted; b) because the outcome is not immediate. The games are not exclusive from its starting objectives. There are other capacities that are developed alongside the ones – we expect – could become more frequent. The situation might occur that the frequency of the actions that the game enhances is different from the planned ones. It’s important to recognize when this happens and readjust the constraints of the game. We have to be both flexible and humble through this process. Flexible enough to change, adapt and adjust, and humble to recognize our mistakes. We will fail a certain amount of times until we get the most approximated version to realize our intentions. The interesting part of coaching is once you get it you have to adjust it again, as the only constant in the game is the change itself. That said, it’s important to underline that some of the game constraints that we suggest are not “tested” yet. Even the ones that are more or less usual in our practice might not achieve the desired outcomes in some situations. The matrix of games that we suggest is, therefore, just the beginning.

The practice delivery that includes the games in our matrix should also consider that there are variables that can be added and that were not object of our planning. Training delivery variables like the games placement in the session (Del 1? Del 2? Hoveddel?), sequence of progressions and training elements such as the types of energy production that the coach is aiming to are some of the examples. The variables that we manipulated can, therefore, be adjusted to the intentions of each coach. The pitch dimensions and the number of players can have a big impact on the energy production processes, for example. A couple of meters added to the width or length can produce significant different outcomes. The numbers and the pitch dimensions that we have defined for each game were focused almost exclusively on the tactical technical outcomes.

In Rosenborg BK, the game centered approach is not something new. Nils Arne Eggens’ methodology was strongly based in game play. Although the session themes had a technical nature, the games were organized in a similar way that we suggest that some of the games in our matrix are organized (particularly the games with side corridors and extra players)\(^1\). However, what we provide with our matrix is a fundament more around why that about what. The main focus is more on why do we organize the games the way that we do, with the constraints that we create, and less on what games do we do. The variability is present is both cases, but the propensity principle\(^1\) is more present on the first than in the second.
B) Difficulties, challenges and limitations

In our problem definition we anticipated two main challenges: a) how could we control (and evaluate) the impact of the game constraints on the development of the players; and b) how could we decrease the high level of retroaction - time between our input and the desired outcome (the impact of the game constraints is not as immediate as the direct instruction and feedback). We have no answer to such challenges. However, the level of reflection provided by our work on the matrixes can enhance the answer to such challenges. When such games are delivered in training we can have a clearer idea on its efficiency, but we will only see the big picture when we use such a training approach over time. Then, the possible adjustments and (re)adaptations of each game will improve its utility and contribute for a better assessment of the development of the players and particularly the ones who perform the role of the winger.

Some of the challenges that we can suggest for the future are positioned in two different levels: analytical and practical. The games that were created could benefit with a process of correlative analysis of the information: what are the differences in each phase according to the winger intentions (scoring and assist)? What are the similarities? How is the analyzed game situations created? What is happening for those structural distances and positioning to occur? Which interdependent relations are created (is the mellomrom 10m when the winger is assisting because the striker had a diagonal movement?)? The analyzed situations are isolated from these elements. With information about what happens before or after each action from the winger we could take the step further of designing games and exercises that deal with a higher complexity due to the players’ interactions variable. On the practical level an interesting challenge would be how do we articulate the development of the role of the winger with other specific roles’ development? How much do we focus on the game organization particularly for wingers, when the teams’ playing style is the most important aspect to prioritize? How can we achieve such balance? This last challenge can also be understood as one of the limitations of our matrix. It refers exclusively to the wingers or is it attached to the reference attributes? Some of the attributes of the winger are similar to the ones of a full-back or to an offensive midfielder. Can the games be used to serve the reference attributes, independently from the role?

At which level these games should be introduced? Which progressions should be used? Is it important that the role of the winger is developed in early ages? If we want to develop a winger that is playing in Tippeliga can we use the same references? The number of questions can be multiplied by how much curiosity and interest we have in this theme. Is the main limitation of this study the higher number of questions it raises than the answers it provides?
VII. Conclusion

A) The report End Product

Changing is difficult. Particularly in the situations when we tasted some success by doing what we have always have done. When it comes to coaching, this change has an extra challenge not only because we experience the unknown, but also because we have no guarantees that what we are changing is going to makes us better and, more particularly, to have a positive influence our results. The consequence of changing is drawn every weekend in 90 minutes. As we presented in the conceptual framework chapter, the conventional way of coaching engages mostly in an explicit perspective, with rigid recommendations about how everything should be done and what exactly should happen... from the technical demands to the tactical outcomes. It’s not our intention, neither from our report, to affirm that this is wrong, but to state instead that it’s not all completely right. What we try to show is that there is other way – and with more impact on learning – that should not only be acknowledged, but actually used. During this UEFA A course we had the chance to listen to education experts such as Lars Tore Ronglan stating that we should use different ways to reach our players and to maximize learning. It was also very clear along the course that we should use mostly the game and playing situations to influence our players. The amount of practical sessions that we engage into is a good example of that. Still, the demands that we all have had during those practical sessions were underlined exclusively by an explicit approach to learning. Situations as stopping the play, directive instruction or questioning about the solutions that we already had were the most incentivized and rewarded type of coaching. What we attempt to achieve with these matrixes that are the end product of our work is to present an alternative way of approaching the practice. We can influence the players’ development and the team way of playing just by manipulating the variables of the exercises and games and by creating specific constraints. The number of players or of specific actions, the pitch dimensions and its geometry, technical constraints or rules and scoring are elements of the games and exercises organization that can take out for the training the situations that we need to see more often.

A part of the games that we suggest are recognizable for some coaches and new to others, and we don’t presume that we have created something really original in this task. What we think that is consistent is that we managed to connect intentions into a product and pre-defined objectives to a way to realize them on the pitch. Just as we all coaches do in our session planning. A large part of the rules, conditions and constraints of the games that are suggested have been part of previous sessions in different teams, for different levels of competition and various age groups (with the adjusted level of complexity). Some of them work really good, some of them don’t. Some of them are easy to recognize by the players, some of them take some time. It’s certain that the winger as not been the object of such conditions and constraints. Usually, such games manipulation is used to achieve a certain playing style or a way to interpret a moment or phase of the game. Yet, we have no reason not to trust how effective it can be.

We are not sure of how much the coaches are going to find our matrix a good working tool. Even so, we design it for them. One of our intrinsic goals in this report was to have a contribution for the coaches’ practice. We believe that we were able to create a consistent tool, with fundament and a theoretic background. It has, of course, its limitations and it can be improved. The fact that it will at least reach the UEFA A coaching license candidates is a guarantee that the matrix will be better from the moment that will be under their scrutiny. Critical minds improve the quality of any process or end product.
B) Personal reflection

It was challenging to write a report with this nature in a second language. Although the use of the English language in day-to-day work, it’s still difficult to express fluently. It’s an extra challenge for the Norwegian readers of this report, to who, of course, will be required an extra effort. The flexibility shown by NFF and the coach-educators team in this matter is something to deeply appreciate. Therefore, in some occasions it’s possible that the meaning or the shared ideas can be misunderstood or difficult to understand. It’s more probable that the cause of such situation is on behind the hands of its writer that in the perception of its reader. The lack of control of the English language semantic or correct sentence construction and extended vocabulary is not as vast as desired. The trap of using some “jargonism” was considered, even though the some of the terminology was strictly necessary.

The second point of this personal reflection is the lesson about ambition and efficiency. Those two attributes might not walk *hand-to-hand* as often as we desire. We started this report with a diverse set of ideas to explore and various points of interest. The information available by TFS had set a high standard for a research-oriented report and we intended to set high expectations to ourselves. Many study points were dropped in the process. We intended to analyze the different types of wingers, their relation with different formations. It was also our initial idea to study the wingers in the four moments of the game and we only approached the offensive moment. It would be interesting to approach also how we can develop the winger in all the training dimensions. The less positive outcome of our approach narrowing was that we were not able neither to relate our matrix with the Rosenborg playing style and the wingers in its 1-4-3-3 formation, neither to relate our study with the youth development. Those two specific angles would play a leading contribution to the current professional development scenario. Still, we had before the feeling that such report would provide more future questions and motivate a sharper curiosity than provide particular answers. Those two angles of approach will have a solid ground to stand on when we decide to engage its study.

We stated before that is important to close the gap between what science knows and what we do in football. In education and learning there are space and time for different approaches and styles. The most important message from our report is to show that everything should be considered and that better decisions – on an off the field – are drawn with more and better information, independently from the source (conscious or nonconscious). The new advancements in learning theory, supported by neurobiology, neuroscience, educational sciences and psychology can and should challenge the conventional coaches’ practices on the training ground. We believe that we had a contribution in this matter by engaging in a task like the one we presented.

Finally, it’s also important to reflect on the impact that such task as in our professional development. The coaching community is mostly motivated to practical issues and to immediate outcomes. Still, the level of critical reflection and analysis, the professional dedication and the collaborative coaching networks have been feeding the knowledge around football training methodology and coaching philosophies. The coaching courses have the mission of developing a collective sense of hunger for knowledge and writing a report with this framework is an effective strategy. It takes time and energy and has its challenges particularly for the ones that are no in the job in full-time. But at the end we all share a feeling of accomplishment that would be difficult to feel in any other way.
VIII. References


Endnotes

1 The first time I read this statement was on a college wall when I was taking part of a Manchester United Soccer School Player Development Course (MUSS PDC) in the summer of 2013. Sir Alex Ferguson (or a creative MUSS marketing department) is the author of such statement.

2 (Wikipedia, 2014) In the philosophy of thermal and statistical physics, Maxwell's demon is a thought experiment created by the physicist James Clerk Maxwell to "show that the Second Law of Thermodynamics has only a statistical certainty".[1] It demonstrates Maxwell's point by hypothetically describing how to violate the Second Law: a container of gas molecules at equilibrium is divided into two parts by an insulated wall, with a door that can be opened and closed by what came to be called "Maxwell's demon". The demon opens the door to allow only the faster than average molecules to flow through to a favored side of the chamber, and only the slower than average molecules to the other side, causing the favored side to gradually heat up while the other side cools down, thus decreasing entropy.

3 (Hertz, 2013) The delude of information is a term used by the author to describe how people are drowning in information: For this is the age of data deluge (...) our stone-age bodies can’t cope with this modern-day deluge. Evolution is slow; the deluge has come fast. Confronted with data – some dodgy, some not – our hearts beat faster, our breath becomes more shallow, we sweat: the deluge makes our body shift into crisis mode. (p.5-6)

4 (Kahneman, 2012) The author explores the dichotomy of two modes of thought (System 1 and System 2) and its utility in the decision making process.

5 Adapted thought from the original quote: “If we want to strengthen our companies, elevate our lives, and improve the world, we need to close the gap between what science knows, and what business does.”

6 SL Benfica’s Head Coach Jorge Jesus was the first one I have heard to suggest the set pieces as the fifth moment of the game.

7 (Toppfotballsenter, Kvalitetskrav i spillet , 2014) A large amount of data in this paperwork is provided by reports, study cases or data collection from this research center.

8 (Toppfotballsenter, Kompetansekrav i Rolle, 2014) This report includes the analysis of the different positions on the pitch and the success criteria defined from the World Cup 2014 observation.

9 Dr. Fergus Connolly is a Sports Performance Consultant who has worked in elite team sports from Premiership football and International Rugby, to the NFL and NBA. He has a PhD in Computer Optimization and specializes in the development of unique effective monitoring, training and regeneration approaches to improving results in team sport. He gave a lecture at the UK Sport and Exercise Medicine Conference (now the British Association of Sport and Exercise Medicine) in 2011 to which we will refer to in a couple of occasions (we make reference to this source in the bibliography chapter).

10 The term repetition used here in the Bernsteinian sense, i.e. learners should not be required to repeat an identical movement pattern from situation to situation, but instead should be encouraged to repeatedly construct subtly differing, successful solutions to movement problems during learning (Chow, 2008).

11 (Toppfotballsenter, Kompetansekrav i Rolle, 2014) This report includes the analysis of the different positions on the pitch and the success criteria defined from the World Cup 2014 observation.

12 (Eggen, 1999) The chapter På tur med godfoten is illustrative of this aspect.

13 (Guilherme Oliveira, 2014) The propensity principle has the objective of creating practice contexts where the density of the principles that should be experienced are present regularly in training so that the game model can emerge within the team.
Annex

Annex 1 – Wingers’ game book
Annex 2 – Toppfotbalsenteret Kompetansekrav i Rolle rapport
Annex 3 – Football pitch dimension (reference to the pitch dimensions)