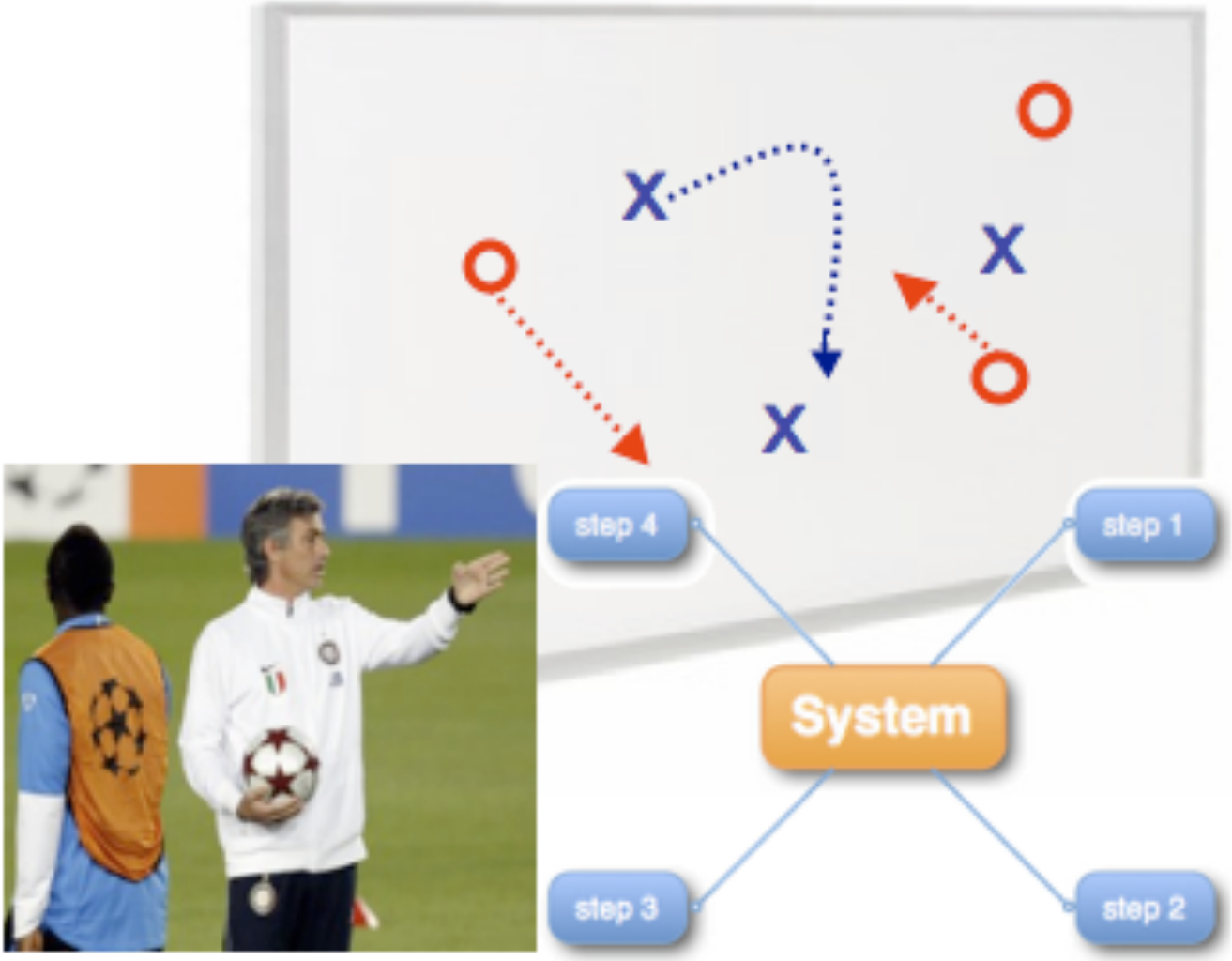
Developing a Playing System



The 4 Stage Coaching Blueprint

By Mark Upton

SPORTS RELATIONS
HIGH PERFORMANCE

Table of Contents

Introduction

Developing a Playing System - The 4 Stage Coaching Blueprint

System (n) - a coordinated body of methods or a scheme or plan of procedure; organizational scheme:

System (as it relates to this text) - a scheme where two or more players operate in a co-ordinated manner either offensively, defensively or in neutral-ball situations.

Coaching of systematic play in team sports has been evident for many years, to greater extents in some team sports than others. Whether offensive or defensive systems, and regardless of the sport, I have often thought there must be common principles that relate to coaching systems of play. Yet when I speak to coaches, sport science experts or trawl through the myriad of online resources there is a lack of information and agreement in relation to this topic. It is evident that experienced coaches have developed and refined their own methodology when implementing their systems, often over many years and much trial and error. And skill acquisition experts have begun to provide scientifically-based principles in relation to training and how players acquire skill. However I am almost sure that a systematic coaching model for implementing a system of play does not exist, or if it does it has not been shared with the coaching community.

As such I come to the motivating factor behind this book. In my time in elite level coaching (Australian Rules Football) we have implemented a number of different offensive and defensive systems. Through the stages of implementing these systems I feel there has been some common principles and processes that we as a coaching group have gone through. I have begun to crystalize these principles and processes in my mind to the point where I am proposing a model for implementing any system of play in your sport. I am hoping this model is generic enough in nature to accommodate most "invasion" sports such as football, rugby, soccer, basketball, netball, hockey, lacrosse and many more. It would be fantastic if this model assisted a coach coming into a new club wanting to implement a system of play, or an existing coach looking to change a system.

This systematic coaching model also considers some of the benefits that sports science and technology can provide, drawing from such areas as performance analysis, skill acquisition, psychology, learning styles, team dynamics and physiology. Modern-day coaching often yields the best results when these evidenced-based principles are combined with the coaches philosophy and past experiences - a union of the science and art of coaching. At this point can I also say that in some sections of this book there will be methods/technologies/principles that are put forward for you to consider - I am NOT saying you must implement them or you are doomed to failure! Every coaching situation and environment is constrained in various forms and it is up to you as coach to implement only what is realistic and achievable.

Many topics covered in this book could be expanded upon in much greater detail but my initial aim was to provide a resource that was quickly "digestible". To that extent I

hope you find something in this book that you can put into practice. Or maybe you completely disagree with this model and have a different approach to propose. That is great too. Either way, hopefully we as coaches are engaging in the process of improving our players and the coaching profession.

Good luck!

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Overview

Congratulations! You have just been appointed to your first head coaching role. Take the handshakes and pats on the back while you can because the hard work is just about to begin. One of your first tasks is to look at how you will implement your various offensive and defensive systems. The systematic coaching model is the tool you will use to guide you through this process.

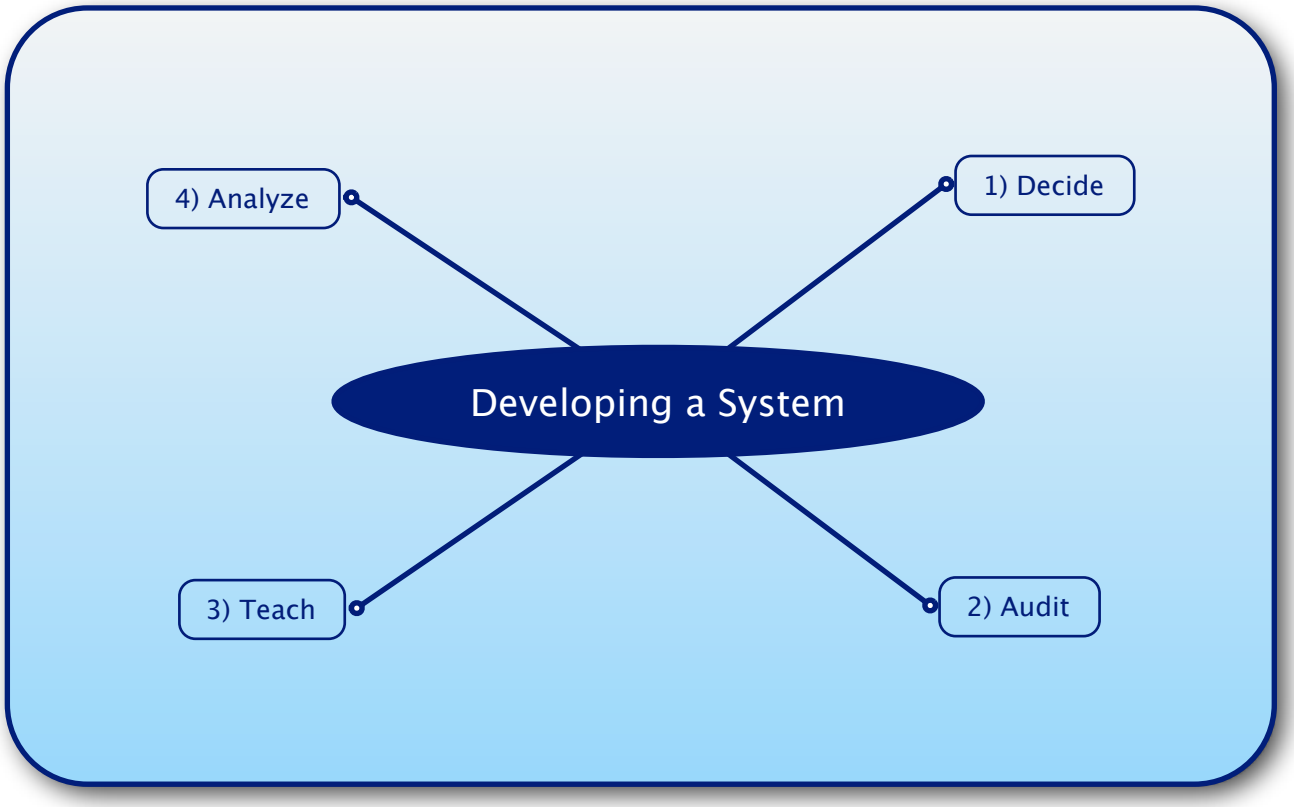
The model is divided up into 4 stages or processes that a coach will typically go through when both choosing and implementing a system of play (creating the acronym D.A.T.A):

1. **D**ecide

2. **A**udit

3. **T**each

4. **A**nalyze



Lets do a quick overview of each of these stages as they will form the main sections of this book and be fleshed out in greater detail in those relevant sections.

Decide on the System

This first stage is critical as it answers a key question - what is your system going to be? Whether you decide to develop your own system, modify a system or implement

an existing system, you as a coach must have a complete understanding of the workings of the system. This section will expand on factors that might influence your choice of system.

Audit the System

The term "audit" is probably an unusual one to use in coaching terms but one I think is most appropriate for this stage. Rather than referring to finances though, in this case it is about detailing the requirements necessary to execute the system well. These requirements are categorised under 4 headings - technical, tactical, physical and mental. It is absolutely critical that these requirements are documented and understood clearly as they form the basis of the next stage of the model.

Teach the System

Initially I was going to call this stage "Training the System" but thought the word "teach" was much more appropriate as it gets at the essence of what all great coaches do well - they teach their players and teams. And if your system is going to be successful then how well you teach it will be THE key determinant. "Training" also tends to imply that the only way we can learn the system is on the practice field. However in modern times there are many other "training" methods to compliment time on the practice field. Video-based decision making is just one to expand upon in more detail in this section.

Analyze the System

This section deals with both subjective observation and objective measurement of the system to inform the coach about parts of the system that are working and/or where it is breaking down. These findings are then incorporated back into the teaching stage. This analytical process can occur in both training and matches. The advances in technology and the discipline of performance analysis mean they have a significant role to play in this stage.

This four stage approach is one that could be cyclical in nature. Any significant additions or modifications to a system requires going through this full process again, albeit on a smaller scale. Of course the last two stages of teaching and analyzing could continue for multiple years before your players acquire the full mastery of the system.

Ok, lets get into it.

Stage 1 - Decide on the System

There are three approaches I can think of, and have used, when settling on a system - copying an existing system, modifying an existing system or taking elements from a variety of systems to create a new system. When evaluating the merits of a system, based on any of the 3 approaches just mentioned, you should take into consideration the following:

Past Experience

You may have played in or coached the system, or elements of the system, in the past and had success in doing so. This is an advantage because it generally means you will have a good understanding of the system, or at the very least a better understanding than a completely new system that you have not played or coached in. You may also choose NOT to implement a system you have played or coached in before because you do not believe it is a good system.

To learn how to coach a new system may take a little more time and trial and error. Remember there is nothing wrong with making mistakes in the process of implementing a system. Coaches are no different to players - they will make mistakes and the best ones see these mistakes as opportunities to learn and improve.

Research & Analysis

Depending on the availability of statistics and video analysis software, it may be possible to for you to identify and analyze systems that other teams successfully employ. For example if you are a basketball coach looking at half court offensive systems, you may look at the statistics to find the most efficient scoring teams in the league out of half court sets. You can then analyze these teams to decide if all or parts of their system are what you want to implement yourself. If you are coaching in a league that is not the highest level in the sport there is nothing wrong with researching what the elite level teams do and see if their systems are appropriate for your situation. Be careful though of using intricate systems from the elite level if you are coaching youth or developmental players - they may not be fundamentally ready for this.

Another benefit of having access to detailed statistical and video data is the insight it can give you into how your sport may be evolving. This is important to consider when about to implement a system. For example Australian Football is in a period where the predominant form of defense is evolving from man on man to zoning. This obviously has implications for offensive systems that now have to work out the best way through, or around, a zone defense.

Winning the "Big Stuff"

This aspect could have gone under the previous heading of Research and Analysis but I thought it required greater focus.

At the higher levels of team sport the primary focus is winning finals and championships. The system you are looking to put in place should be able to "hold up" under the intense pressure of finals matches. By looking back on successful teams you may get an insight into common systems used across different teams, and maybe even different eras. This does not necessarily mean that it is the system that made them successful - you should be able to use your own judgement to assess the impact of the system.

If you are going down the path of implementing a new system or one that has not had proven success in finals in the past, then you need to objectively assess whether you believe the system will work under finals pressure. If you honestly believe it can then back yourself and the system in.

Note: it is usually offensive systems that are most effected by finals pressure, as the level of defensive intensity and tenacity increases significantly.

Personnel v System

Ah, the sixty four thousand dollar question that has seemingly been around since the dawn of time itself! This is a dilemma that almost every coach has gone through when he goes down the path of implementing a system. Do I make the players fit the system or the system fit the players? Different circumstances can influence this decision. For example if you know you are going to have a group of players over a longer period of time (say 3+ years) you may have the time for players to completely master the system, thus justifying its implementation over a different system that perhaps exploits players strengths better but is a weaker system overall.

Another thing to consider is recruiting - can you recruit players to fit your system? If not and you only have one to two seasons then the system of choice probably needs to match your players strengths. The age and stage of development of your players is worth considering. You may believe a particular system is best for developing younger players (say 13 or 14 year olds) to be better players further down the track even though it may not produce the best results in terms of wins in the short term. Your philosophy on development v winning will make the choice for you in this case.

My take on personnel v system? At the elite level of sport where it is possible to recruit and develop players across a few seasons I would pick what I believed was the best system, based on some of the other considerations I have mentioned in this section, and then make sure I teach that system as well as possible. I would do this also knowing that one of the elements of a good system is that it will allow you to exploit individual talents when necessary.

Understand the System

Having an absolute understanding of your system will become important when coaching during training activities. In the "teach the system" section I will expand on the concept of the "coachable moment" in activities. For now lets just say if you do not understand (intricately) the individual aspects of your system and how they dynamically interact then you may miss these "coachable moments" - hence diminishing player learning. You could also make poor assessments when analysing your system.

"You can't teach what you don't fully understand" - Tex Winter

Some coaches think they understand a system but in reality have little idea about what elements make it work. Don't be one of these - study, analyze, research, question, ponder, seek expert opinion and then repeat the process. Do whatever it takes and be as thorough as possible to understand what all the pieces of your system are and how they fit together. You must be particularly diligent in doing this if you choose to "copy" an existing system. Many coaches have fallen for the trap of seeing what last years champion team used and jump on the "bandwagon" with the mindset that if it works for that team then it will work for them too. This can end in disaster if you do not understand the system.

Part of understanding your system is also knowing what strategies the opposition are likely to implement to combat your system. If you begin to have success with a system then opposition will begin to scrutinize and plan meticulously. By understanding what these strategies may be you can plan and train for these scenarios so your system becomes "bullet proof".

Balance & Integration

This is particularly relevant to offensive and defensive systems and the impact they have on the other. Balance and integration is best summed up by this quote:

"*When we attack we should be able to switch quickly to defense and when we defend, it should facilitate our attacking moves"*

This concept is also rapt up in the "risk versus reward" conundrum that is strongly influenced by your philosophy on the balance of attack versus defense. I am suggesting here that a good system should have mechanisms incorporated into it that allows good transition from offense to defense and vice versa. It should also have some degree of "fail-safe" about it such that if a part of the system breaks down there is still options for players to salvage the play. An example of this may be playing a pressing defense in your attacking half but having sweeping players sitting back in your back half to cover if the first line of the pressing defense is penetrated.

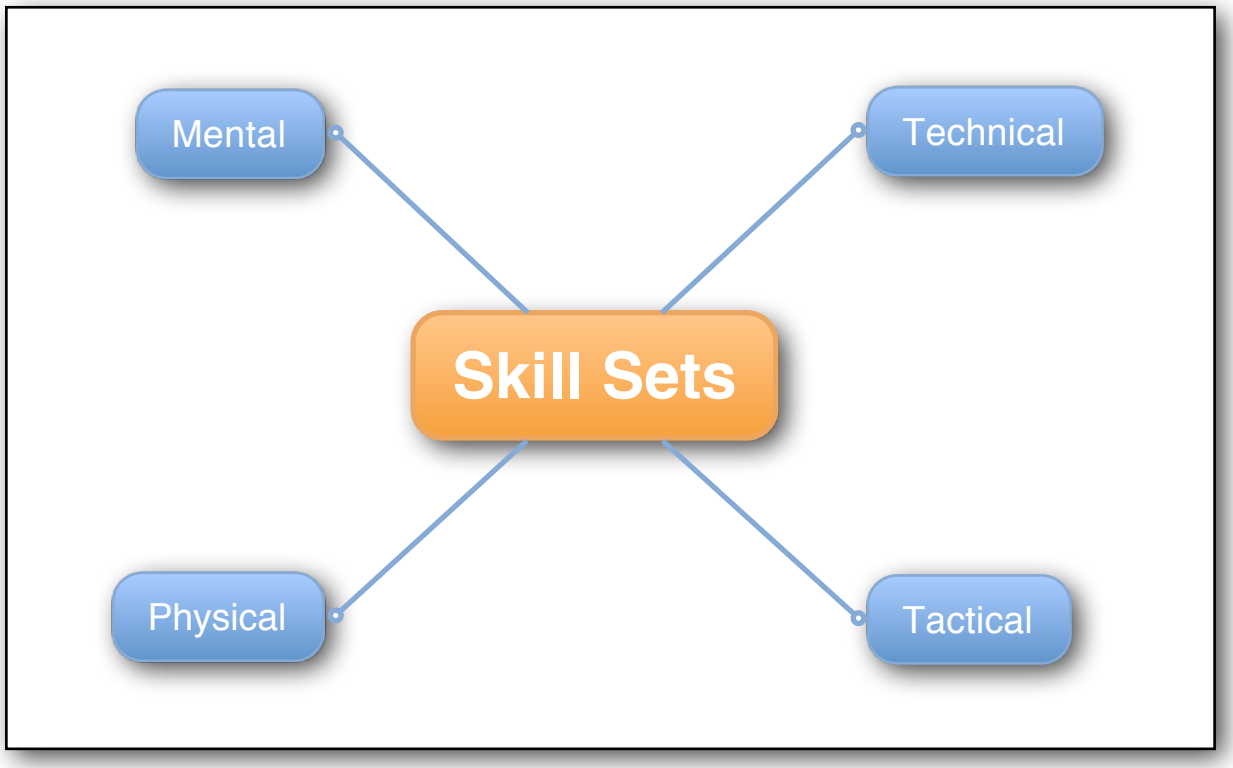
Stage 2 - Audit

Ok, you are at the point where you have settled on the system you are going to use. After complete thoroughness and rigor in designing your system the next step is often overlooked, with coaches keen to jump into planning practices and getting out on the field to begin teaching the system. DO NOT do that. If your training and teaching is going to have real benefit then first must come a clear understanding of the exact skill-sets that players need to develop. A structured analysis and documentation of these skill-sets is needed.

To identify these skill-sets you need to conduct an "audit" of your playing system.

Audit (n) - a methodical examination or review of a condition or situation (in our case a playing system)

There are a number of models you could use to conduct your audit and classify the required skill-sets. Probably the most common classification model in team sports is the one that places skill-sets under one of four headings - technical, tactical, physical or mental/psychological. Lets have a quick look at each of these.



Technical: Generally refers to the "how" of a movement, whether that be with the ball or without. Technical skills could be the execution of a certain type of pass, a tackling technique, or how to set a screen/block

Tactical: I remember reading a definition a while back that summed up tactical awareness perfectly - "tactical awareness is knowing what to do every moment of the contest". Where as technical skill is the "how" of performing an action, tactical skill or awareness is making the decision on "what" action to perform. Tactical skill could be making decisions on whether to pass short or long, to defensively press up on an

opponent or drop back towards your goal, to read how your defender is playing you and make an appropriate move. As these examples illustrate, tactical skill can be both with and without the ball, often the latter being hallmarks of players who "read the game". Research has shown a high level of tactical awareness to be a critical differentiator between elite level players and the "rest".

Physical: speed, endurance, power, balance, agility - depending on the sport and the system there will be varying degrees of importance for the physical components. Agility is required to break a tackle, endurance for a midfielder in soccer or Australian Football, power in a rugby scrum, speed when breaking down the sideline towards the try-line, balance when elevating for a jump-shot. In some cases, without the necessary physical skills the technical and tactical skills cannot be carried out.

Mental/Psychological: This category includes such factors as motivation, arousal, handling pressure and leadership behaviours. I won't expand on this category any further except to say that an important aspect of any system is the willingness of players to play their part in the system. Often this can be difficult as players may have to play a role that does not get much credit or kudos. Depending on the status of each player, there may be differing motivations for them to "buy-in" to the system. Michael Jordan and the Chicago Bulls "Triangle Offense" is a good case study of this phenomena. Jordan was initially reluctant to play his part in this system as it would reduce his scoring production and put the ball in the hands of lesser-skilled teammates more often. However once he saw that the offense could bring success in terms of winning games and in turn championships, he gradually came around. In his case the motivating factor was his desire to be regarded as a winner.

As a coach it is critical that you find the formula that gets every player accepting of his/her role in the system and also having belief that the system will lead to success. How you "sell" this can be achieved in a variety of ways. If you show through your coaching that you have great knowledge and a plan for implementing the system then most players will commit to the system (conversely, players can spot a coach who does not know what he is doing a mile off). Consistently recognising and rewarding players who play a sacrificial role also helps in getting all players to do the same when it is their turn (off-ball movements that create space for other players is a typical example of this). If you can find a way to have players take ownership of the system and make each other accountable to playing within the system then you have created a culture for success. A way of doing this is to empower players with responsibility for certain aspects of the system that they may "tweak" or contribute ideas on. Start with the leaders and senior players as they often will have a very good feel for the game through their experiences and can set the example for the rest of the team to adhere to.

Creating that elusive chemistry and "team-first culture" is every coaches challenge. Without it, successfully implementing a system is near-on impossible - regardless of the technical, tactical and physical abilities of your players.

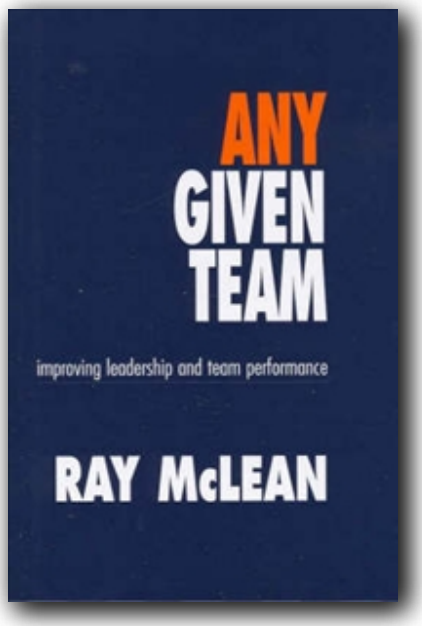
Case Study - “me” v “team”

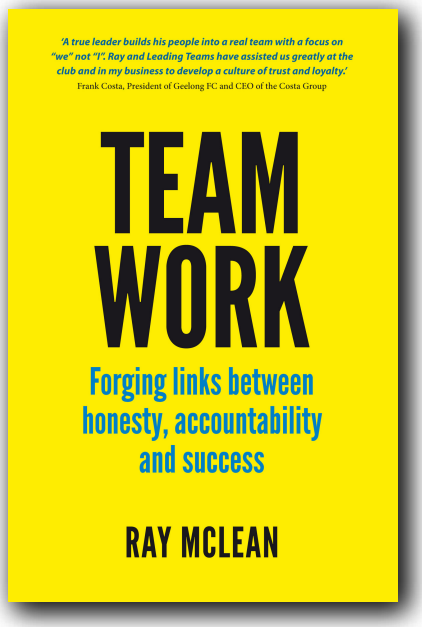
I remember having a chat with a newly appointed youth soccer academy coach at a sports institute. He had previously been coach of a senior team in a professional league. A couple of months into his new role he explained how he was becoming increasingly frustrated with the young guys because they were all playing as individuals, hoping to be recognised for higher honours in the future. He was having a hard time “selling” why they needed to commit to playing as a team and within the systems of play he wanted.

How would you deal with this scenario when trying to implement your system?

Creating Team Culture & Leadership - Recommended Reading

If you are interested in more information on developing culture, “team chemistry” and leadership skills that will all help to enhance your system then I highly recommend Leading Teams founder Ray Mclean’s books “Any Given Team” and “Teamwork”. Ray has worked with the professional sporting team I am involved with for the last 5 years and has been instrumental in facilitating the process of establishing a strong team culture.





The Audit Process

So now you have an understanding of the 4 key headings we can begin to "flesh out" those headings with the skill-sets relevant to the system you are implementing. The easiest way to do this is simply jot down the 4 headings and start putting skill-sets under the appropriate section. To be as thorough as possible I often watch video footage (if possible) or visualise the system being executed and try to identify all the elements. For example what decisions do players have to make on and off the ball in the system? What shape or structure is required in relation to players positioning at certain times? These things would go under the "Tactical" section. If it is an offensive system what type of passes are most often made and/or must be executed at a high level? These would go under "Technical". If you are going to implement a "pressing" type of defensive system it is a safe bet that the aerobic capacity of your players will need to be high. What other physical skill-sets might be required?

Once you have this documented to a level you believe is satisfactory then go away and come back to it a few days later. When you do there may be additions you have thought of in the mean time. It is also good practice to review what you initially documented and see if anything needs changing before finalising this process. I believe it is also important to come back to this document and update it if, and when, you make adjustments to your system. Remember this template guides you through the next critical stage of the systematic coaching process - what you need to teach - so its importance cannot be underestimated.

Before moving on to that next stage there are some optional extra steps you may want to take in this audit process. The first of these is to allocate an “importance“ rating for each skill-set you have identified - low, medium or high. Components of the system that you believe are absolutely critical to its effective functioning would generally be rated as "high". This classification helps when it comes to planning your training program as, inevitably, you will run out of time to cover everything and therefore must prioritise to some extent. To also assist in the planning stage you can make "progression links" between 2 or more skill-sets to identify when a certain skill-set must be taught before another in order to achieve the best results.

Finally, you could consider conducting what some would call a "gap analysis". This process involves rating your team's current competency on the skill-sets you have documented. I feel this only has real value when you are in your 2nd season or more of coaching a team as then you will have accurate subjective opinion and/or objective data to do this effectively. Again, this process helps in terms of prioritising your training plan. If there are skill-sets that you have rated as being of high “importance” to the successful functioning of the system and then your "gap analysis" has identified that your team rates poorly in these - it becomes clear where a large percentage of your teaching time will be devoted to. To take it one step further, you could do this on an individual player level but this can be time consuming and, with large playing squads, it is unlikely you will have the training time and coaching resources to implement individualized training plans.

In the case of finding "gaps" in the physical ratings of your squad members it may be that you have to consider recruiting certain types of players that already have the physical characteristics that your system requires and are hard to train - typical examples would be speed and height.

Below is a template, with example entries, that could be used to document the steps mentioned above.

Skill-Set Description	Category	Importance to System	Current Competency	Pre-requisite skill sets
Short pass execution	Technical	High	High	-
Long v short pass decision making	Tactical	High	Low	execution - short pass, long pass
Attackers - off ball movement patterns	Tactical	Low	Medium	-
Aerobic endurance	Physical	Medium	Medium	-

Stage 3 - Teach

"It is how we teach, not what we teach" - Tex Winter

The quote above sums up the importance of this stage - I believe the most critical stage in the 4-step process of developing your system. In many sports there have been a variety of systems used by successful teams, enough evidence to suggest that the critical factor is not necessarily the system you choose to implement (although important) but how well that system is executed. And the only way a system can be executed under the heat of finals games is if it has been extremely well taught. Therefore this section covers the methods available to teach your system. As mentioned earlier, initially I was going to call this stage "training" but thought that may imply that teaching and learning only occurs out on the training field/court/oval. In reality, with the evolution of modern technology and science, as much critical teaching and learning occurs off the field - be it a player learning a play from a computer animation or a coach planning a phase of training with the necessary progressions to develop his/her system.

There are 3 broad headings to work through in this section. These are:

1) Planning (phase and session)

2) On-Field Teaching

3) Off-Field Teaching

Planning

"Once the opportunity arrives, it is too late to prepare" - John Wooden

"Winning is the science of being totally prepared" - ex NFL coach George Allen

Remember that form you filled out in the previous section that identifies the skill-sets required in your system? Well now comes the part where you use that to guide your planning. Be warned - I have never heard a coach say he has too much time on his hands to teach a system so be prepared for some frustration, temper tantrums, sulks and dummy-spits when you get into your planning and realise that time truly is of the essence!

I should also mention that well thought-out planning is important in any aspect of your coaching - not just in this stage of teaching your system.

Phase Planning

Phase planning is about defining a certain number of training sessions or time period as a "phase" or block of teaching. How many sessions or days/weeks this is can vary greatly depending on your situation. For example, in Australian Rules Football we get

about 12 weeks to prepare for the competition period. I usually break this into 2 phases of 6 weeks which incorporates about 18 training sessions. These numbers are not as important as the reason why you should allocate phases, which I will now explain.

Why phase plan?

Many reasons but I believe there are three standouts. One is to identify the objectives or priorities for that phase. For each phase you should come up with the skill-sets of the system that are a priority to develop. When planning each training session during that phase you are guided by these priorities. Having these priorities documented can be important during competition period where it is easy for coaches to react to losing a match and make "knee-jerk" changes to the following training session(s). Referring back to the priorities for the current phase can force the coach to consider the bigger picture again and not get so caught up in the last match.

At the end of that phase you can then assess how well the players have learnt the required skill-sets and this will guide your planning in the next phase. This approach allows you to progress methodically when developing your system. Remember I mentioned in the "Audit" section that you may wish to establish "porgression links" between skill-sets where a certain skill-set needs to be taught before another. This is easily catered for when using a phase planning approach. What is not as easy to decide on is when a certain skill-set has not been learnt by the playing group as quickly as you would have liked. You then have to determine how much time of the next phase will be spent on this skill-set - potentially at the cost of other skill-sets. There may also be phases, particularly during competition period, where you "refresh" or "top-up" on parts of the system that have already been taught but you feel need to be re-enforced so they are not "de-trained".

Secondly, you will also have to balance the time available in that phase with your other systems and skills that need training. For example, if you are developing your offensive system in all likelihood you will also have to allocate training time to your defensive systems and other aspects of the game. It may be that certain phases will have more time allocated to different systems - if you can plan these phases from the start then you have a good chance of making sure all aspects are covered to a satisfactory level. Again, the chances are you will be "time-poor" so even the best phase planning cannot avoid having to make some hard decisions on what does and doesn't get taught to the level you are comfortable with.

Finally, if you are complimenting your on-field training with off-field teaching methods such as video analysis meetings and elearning (ie electronic playbooks) then time will be required to prepare these resources. By knowing which aspects of your system you will be focussing on in a certain phase you can then prepare and integrate these resources more efficiently.

Session Planning

Once you have the phase plan in place then you can begin to piece together what each individual training session will entail. I like to have all the sessions in a phase planned before that phase begins - again this gives you the best chance of making

sure everything is covered and that the progressions from one aspect of the system to another are optimised. For each drill/activity that you will do in a training session it is important to at least document the following:

1. Duration of the drill

2. Objectives - what skill-set of the system is the training activity working on. This could be multiple things depending on the type of activity. These objectives should be aligning to your audit and phase plan in almost all cases.

3. Coaching Points - this is critical. Consider terminology the coaches will use, likely problems that players will face and how you will coach the solution, approach to feedback and instruction (if questioning is to be used then think about the questions you will ask and the responses that players may give)

For the session it can also be a good idea to have a general theme for players to focus on. If you are developing an offensive system then it could be as simple as a certain type of pass that players will get a chance to execute in 2 or 3 of the drills. If at all possible I would highly recommend that all sessions be filmed for video analysis. Some great teaching opportunities arise from the footage you will collect. Also consider having someone taking statistics on certain aspects of the system that are being trained - maybe the error rate for that pass that is the theme of the session. Whilst we tend to use objective information such as statistics and video analysis in relation to game performance, it can be extremely insightful to do the same for training activities.

Tied in to session planning is session reviewing. Whilst this obviously can't be done in advance (hard to review something that hasn't taken place yet!) DO NOT underestimate the importance of reviewing your training sessions. The level you coach at will determine the time and detail you can put into a session review but the key thing is to do it in some form. "Ticking off" on the objectives for each drill and documenting any key points is within the realm of all coaches and will be invaluable when finalising the plan for the next training session.

A similar review process should occur at the end of each training phase. If you have reviewed each session well then much of the information you need will already be documented. It is critical when reviewing a phase of training to make good assessments on how the various skill-sets of the system have been trained as decisions will have to be made on progressing to more advanced or new skill-sets versus spending more training time on skill-sets that have not yet reached the necessary competency.

On-Field Teaching

Drill Design

Drill (or "activity") design is so important when teaching your system. I have

mentioned that the teaching stage is the most critical of the 4 stages and so the fact drill design is so significant within this stage says it all. You should think of your training drills or activities as the vehicle that will transport your players down the long road to mastering your system. The time spent on these activities is so valuable and cannot be wasted by poor design.

When designing activities you are looking to create a learning experience or habit-forming experience for your players. The focus of this experience should be aligned with the objectives for that activity or session. This should have been established in the previous process of phase and session planning. Good drill design comes about by creating a problem for the players to solve - an example of this:

You are running an offensive system in basketball. The system unfolds only after penetrating the defense. This can either be done by dribble penetration or a pass into the low post. So in this case the skill-set and objective you are trying to train is penetration ("Tactical" classification if we remember back to our "audit" stage). The activity must then pose the problem of how to best penetrate the defense. You could do this by creating a 3 on 3 scenario and manipulating how the defenders guard the post and the ball-carrier. By experiencing the activity often enough players will begin to understand the appropriate solution for penetrating the defense in different circumstances, ie if the ball is on the wing and they are fronting the post then a pass to the top or elbow may create an angle for the next pass to go into the post. Notice here that I did not mention the coach explicitly telling the players what the solution is - that is the role of the drill or activity. Coaches can guide and question but should not tell, and I will explain this in greater detail further on.

In this simple example I have related some ideas that reflect the "gist" of two common quotes about drill and practice design:

"The game is the best teacher"

"Transfer of practice to game conditions depends on the extent to which practice resembles the game" (Magill, 1993)

Now most team sports have similar principles but it is impossible to talk any more specifically about drill design as each sport and system is slightly different. What I can document are some generic principles and methods that can be applied when designing drills and activities to teach your system.

Technical Training

Consider how you train the technical elements of your system - in isolation or integrated with the tactical elements. Most traditional approaches will involve a variety of drills to teach the technical aspects (ie pass, catch, shoot, tackle, block) in isolation. The reasoning for this is that to get enough repetition of these technical skills you need to have specific drills that provide this repetition. Whilst this is probably true remember that you can still make these technical drills game-like, random and even incorporate decision making. The level to which you do this will be partly determined by age and competency. Certainly at more senior and elite-levels the use of "mini-games" should be prominant - ie in soccer, 6 attackers v 5 defenders in a grid with the attacking team looking to keep possession of the ball. This type of

game works on the technical component of passing but still requires decisions to be made before executing the technique - a valuable process based on sound skill acquisition principles. Research has also shown that these type of games can provide just as much repetition of the technical focus (passing) as doing drills that are "cone to cone" and/or void of defenders.

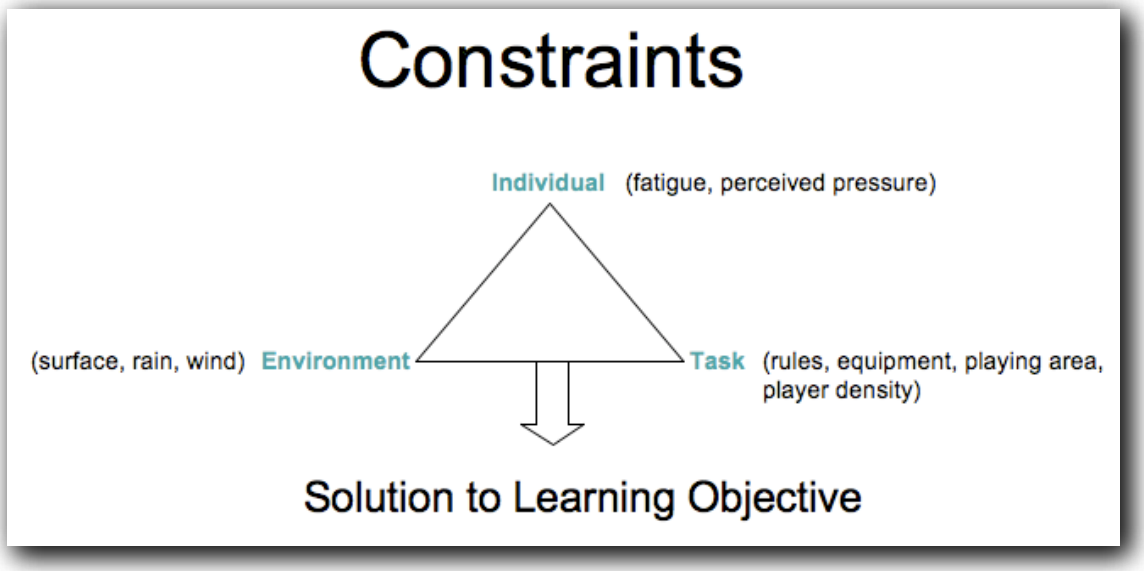
When you are doing technical drills without any decision making it is still possible to make them game-like. If you are working on a certain kick in Australian Football try to replicate the areas on the ground that the kick is most often used in your system. Also, how the kicker receives the ball and moves before the kick, ie player receives a handball facing away from goal then turns and straightens before kicking. In basketball it may be that you are practicing 3-point shooting. In your system the 3-point shot most often unfolds after a player "flares" to the corner. If this is the case then replicate that position and movement on the court in you technical drills - don't just practice throwing up 3's any old way!

Constraints & Breakdown Activities

Creating quality training activities that teach your system will stem from manipulating "constraints" in the activity, particularly when training the tactical aspects of your system.

“A constraint is anything that limits the number of possible decisions available to the player (eg, speed and size, motivation level, playing surface, fatigue level, number of defenders or support players, previous experience, etc). Due to the dynamic nature of constraints they often emerge and decay at different rates (eg, number of defenders or rule changes at practice can vary greatly as opposed to height, weight and sometimes gameplans of opposition which remain relatively constant).Constraints are deliberately manipulated by the coach to alter the dynamics of the playing environment and thereby shape and influence the decisions and actions of the player. This occurs through careful manipulation of key constraints (determined by the coach) which interact with one another to produce varying levels of stability/variability in the practice environment. This in turn will either reduce or increase the number of solutions available to a player in a specific situation and determine the amount of time and space (pressure) in which to make a decision and act. It should be the responsibility of the coach to observe and carefully mediate the complexity of the environment by being able to identify and manipulate one or more key constraints.”

- Richard Shuttleworth, Australian Institute of Sport



The most frequently manipulated "task" variables in the constraints model are player density and task goal. It is generally accepted (without any research to support it I might add) that when beginning to train a system you reduce player density and isolate a few key decision-making scenarios that occur in the system. Again using an offensive system in basketball as an example, this could mean reducing player density from 5v5 to 3v3 and working on the decision making scenario of how to get the ball into the low-post (task goal). Most other decisions and plays that occur before and after this decision are removed. This approach is more commonly know as using "breakdown" drills or activities. Let's expand on this further.

How you implement breakdown drills is critical, along with the progression process. As alluded to, there is no definitive research I am aware of that indicates a starting point and progressions for your breakdown drills. We can get some insight if we look at a couple of approaches taken to training "technique" in individual sports. Firstly there is the "easy to hard" approach - this would mean starting off by breaking down your system to it's smallest individual parts (ie decisions) and training them in isolation and low-pressure conditions. When a certain level of competency is achieved (something you as the coach will have to assess) you add more parts and pressure, continuing this process until your training activity is exposing the whole system against game-like pressure and player density. Hence the term "easy to hard".

Another option is the "whole-part-whole" approach where the full system is experienced by the players in a near-match like training activity in the early training stages. Once this has been done then breakdown activities are implemented and progressed in difficulty until the full system is once again rehearsed as a whole. This approach can have the benefit of giving players the experience of how the smaller sub-sets of the system fit into the "bigger picture" and therefore provide better context when the breakdown drills are used.

The advantage of breakdown drills is the high repetition of specific decisions and actions that players undertake. This environment also provides great teaching opportunities for coaches through questioning (I will expand on this in much greater detail a little further on).

These thoughts by basketball coach Pete Newell encapsulate this:

"We broke down practice into a lot of drills, one-on-one, two-on-two, three-on-three. When you're going five-on-five, you're coaching. When you're going two- on-two, you're teaching, because then you get a chance to work on the little things, and players get to ask questions. I always wanted them to know why they were doing something, not just that they were doing it."

Now, a word of caution with repetition. Whilst coaches and players probably enjoy repetition after repetition of a certain play or movement sequence, the best way of making each repetition a valuable learning experience is to subtly manipulate constraints. By doing this you are constantly providing the players with new experiences to process and understand. Every time players are forced to perceive and process new information the repetition has greater learning value. There is a saying amongst skill acquisition experts that the key to learning is "repetition without repetition". In other words, players need lots of training exposure to decisions and actions that must be undertaken in your system, but ideally this is done in a random way.

A final key point - because of the manipulation of constraints and new scenarios that players will experience there are going to be plenty of errors made. The quicker you as a coach accept this as a natural part of learning your system the better. "Errorless" learning is possible but the types of training activities that promote this will inevitably see your system come up short in the high-pressure situations of the actual game.

This section on tactical training, breakdowns and constraints has been covered by describing important skill acquisition and learning methods. Again, because this book is a generic resource for team sports it is difficult to go into sport-specific examples of training activities or drills. However by applying these principles you should be able to design a variety of drills and activities to effectively teach your system.

Physical Conditioning

The important physical components of your system (speed, strength, endurance, agility etc) will obviously need to be trained in isolation at some stage to see significant benefits. However I believe that to maximise the training time you have with your players you should try to incorporate aerobic conditioning into your technical and tactical drills. Too much valuable teaching and learning time is lost when your players are doing pure running. Whilst it requires a bit more creativity, and sometimes compromise, in your drill design to make sure it has an aerobic conditioning component to it, I believe the extra time you will gain in practicing the technical and tactical elements of your system is invaluable. Also consider that at some stage you need to practice the execution of your system under fatigue so in some ways it is creating another game-like constraint for your players to handle. When I mention this approach to some coaches they get nervous because they feel like they cannot control the conditioning element in drills to ensure the players are working hard enough. This can be monitored and catered for by using technology such as heart rate monitors and gps devices to measure the physical demands of the drill. However even simpler approaches such as getting players to rate the physical "hardness" of the drill

or just looking at the sweat and breathing rates of the players will give you a good feel. Sometimes the simplest approaches are the best!

Feedback and Instruction - "coachable moment"

The most powerful method of feedback and instruction comes when players are immersed in the experience, ie during the training drill. Being able to identify "the coachable moment" during a drill requires that you understand the principles of what you are coaching and what makes it work or break down. When you recognise this moment a very powerful form of teaching is to blow the whistle and have players "freeze" in their exact positions. By then telling or questioning (I will expand on these next) players can receive feedback on their play (be it correct or incorrect) whilst still having the "feel" of what just took place. This is much more effective than reflecting on this moment at the end of the drill or using video footage in the following days. Important in using this technique is to ensure everyone on the field/court can hear the point you are making, which can be challenging on some outdoor fields such as soccer and Australian Football. Also avoid over-using this technique - a couple of times per drill would be ideal as otherwise players will start to become frustrated with the stop-start nature of the drill. Players generally just want to "do it", not talk about it.

Tell v Question

Whether communicating about concepts with players before, during or after a drill you typically have a choice between two distinct approaches - tell the players what the solution is versus questioning and making them come up with a solution (which may not be the same as yours!). The "tell" method is a traditional approach that originates from the dictatorial-style coach who likes to be seen as all-knowledgeable. This method is not as effective as the "questioning" approach but does have its place when time for feedback and instruction is limited and/or the playing groups game understanding is not yet at the level where they can "solve the problem" (if this was the case it is worth considering if the progressions in terms of teaching the system have been too quick).

The "questioning" approach is almost always a great form of teaching, especially in the "coachable moment" as detailed above. I think there are two forms of questioning that you may use depending on how advanced your playing group is. One is the "guided-discovery" questioning which tends to lead the players thinking towards the

solution. An example of this might be to ask - "johnny, we want to do x in that situation so what might have been a better option to achieve this?". Immediately you are guiding Johnny by giving him the answer to what he should have been thinking. He then has to work out what the better option may have been. The other method, which requires a greater ability for players to critically reflect, is "open-ended" questioning. In this method you might ask - "Johnny, what did you think about that play in relation to how we want to execute our system?".

Either method of questioning is useful for learning as players actually have to process information which makes for a learning experience that "sticks" better than using the tell method. The other thing that I have noticed is that when players answer incorrectly to the questioning they seem to learn better - somewhat counter-intuitive to what you may expect.

Terminology (action words)

The use of terminology is important for both on and off-field communication with players. I will focus here on terminology as it applies to instruction and feedback during training. Terminology can be very powerful for quickly conveying detailed concepts with the use of very few words. This makes it useful for coaching "on the run" efficiently. I have been involved in a team where a single term actually described a complex ball movement pattern requiring decisions both on and off the ball. Terminology should ideally invoke strong visual representations of the action it is related to. It should also be "action" or "doing" words - for example "scan", rather than "awareness", might be a term to use with players when they are in defensive transition and have to identify positioning of opposition players. Terminology can be useful when coaching technique too and can avoid "paralysis by analysis". An example of this might be to use the term "snowflake" when you want an Australian Football ruckman to provide a soft tap that lands in-close, as opposed to going into the biomechanical elements of how this is achieved.

Letting players come up with terminology and have ownership is a great way for them to embrace it and use in their communication on the field. It is vital though that whoever decides on the terminology - players or coaches - that it is then used consistently across the playing and coaching group. Players will be confused, and hence restricted in their learning, if varying terminology is used to describe a certain action.

If you can master the areas of designing appropriate drills to cover the technical, tactical and physical elements of your system, manipulating constraints where appropriate, using the questioning methods at the right moment and incorporating terminology, you will have created a fantastic on-field environment for your players to learn the system.

Off-Field Teaching

E-learning

Before delving into this topic we should look at a definition for "e-learning" as it will be an unfamiliar term to most coaches.

"The delivery of a learning, training or education program by electronic means. E-learning involves the use of a computer or electronic device (e.g. a mobile phone) in some way to provide training, educational or learning material."
- Derek Stockley 2003

With the advancements in communication technologies and the internet there exists the ability to send all sorts of multimedia (video, audio, animation) to players computers or mobile phones. So how can this benefit you in terms of teaching your system? Well there are many applications that range from quite simple to advanced. The great thing is that even the simplest approaches can be very powerful in terms of teaching your system. Some of the generic advantages of e-learning are:

Content is available for players to view "on-demand" instead of being restricted to a certain time and place

The range of multimedia that can be used to present concepts of your system caters for different learning styles in your playing group (more on learning styles to follow later). Consider that players often learn best by visuals and "real-world" examples. This can be achieved by using video examples from games and animated diagrams in your e-learning. Often when teaching "face to face" coaches will spend a large percentage of time talking and displaying key points in text format. These communication forms are generally the least preferred way for your players to learn and retain information.

To stimulate your thinking lets look at a few ideas for how e-learning could be implemented. I have deliberately used these examples because I believe coaches at most levels should be able to incorporate at least one of these ideas when teaching

most levels should be able to incorporate at least one of these ideas when teaching their system.

1) Use of playbook software for diagram and animations. Some sports have custom playbook software available "off the shelf" which makes this process easy. Depending on the software it can be possible to include video and audio as well. For coaches of sports that don't have these playbook programs consider looking at a website like http://slideboom.com. This site allows you to create diagrams and animations of your system in microsoft powerpoint and then upload them to the website where they can then be securely accessed by your players. You could create "modules" or "lessons" on your playbook software that compliment the content of the on-field training at that time. This should be documented in your phase and session planning process.

2) Send video examples from games or training to players iphones or other smartphones. If you have the right human resources and technology this process can be done very quickly after the completion of a game or training. The immediacy of the video feedback in this case is extremely beneficial.

3) Create an online quiz for your players to complete that assesses their understanding of the system and gives you as the coach great feedback on how well you have taught the system. There are a range of online software options available from free to expensive. One of the free options is the following site - http://proprofs.com/quiz-school/ - that enables you to create questions that include video and/or images. Reports can be generated on individual player scores as well as overall averages for each question.

4) Upload video to http://youtube.com that displays a certain situation or scenario of your system. Get players to watch the footage and then type in the 'comments' section what they believe is the correct action or decision that should be made by a player(s). This approach is much like using the questioning approach in the "coachable moment" during on-field training of the system, and similarly, can be a very powerful learning process for your players.

5) Text message a question about your system to your players. First player to text back the correct answer "wins a prize".

These examples lend themselves to teaching the "tactical" components of your system more so than the technical or physical, although that is still possible. It is the tactical elements that require the acquisition of "declarative knowledge" - players are able to verbalise the actions they would take in certain situations - and hence the teaching of these are enhanced by e-learning.

Video-Based Perceptual Training

Perhaps falling somewhere between on-field training and e-learning is video-based perceptual training. This approach works by filming game scenarios and patterns of player movement from the perspective of a player on the field/court. The video recordings can then be projected onto a wall so that players can 'experience' having to make decisions as if they were really out on the field. Why is this useful? Well research has shown that expert performers have tremendous "pattern recognition"

ability which aids in their superior decision making. Whats more, it has been shown that pattern recognition can be improved through training. Therefore by showing players numerous repetitions of patterns of player movement it is possible for them to become better decision makers as they will increase their pattern recognition ability. This is no different to how players acquire expertise out on the field and training arena. However this approach can hasten that process as players can get as many repetitions in one video-based session as in a whole season of playing and training.

So how can this be applied to teaching your system? Well there is applications both for offensive and defensive systems, and the example I will use is an offensive system in soccer for delivering the ball to your attackers making runs into the box. In this system lets say that the first attacker makes a run to the near post and the 2nd and 3rd runs are made to the middle and far post. Get your players to run these patterns (include defenders as well) whilst you have a camera setup to film from the position that the ball-carrier would be delivering the ball from. Tell the defenders to deliberately leave one attacker unchecked as the best option. Film about 20 repetitions of these patterns with a mixture of the attacker that is the best option.

Once you have the footage you can then capture it into a digital form and edit each repetition so that it finishes or pauses at the critical point where you think the ball-carrier should make a decision on the best option to deliver the ball too. If possible have the clip pause for about 1 second and then turn to a black screen (I won't go into the editing process for doing that here). Once you have your 20 repetitions saved as separate clips you are ready to connect the computer to a projector (a high quality projector is best) and display the clips on a white wall, sheet or drop-down screen. Try to have the projected image as close to "life-size" as possible. To run a session with a player have someone controlling the playback of the clips. Have another person pass a ball to the player and then they must look at the projected clip, make a decision and physically pass the ball into the wall or screen. It is possible to just have the player verbalise their decision without the physical movements, however research indicates it is best to maintain a "perception-action coupling" - that is, a decision followed by physical movement based on that decision.

You should be able to get through the 20 clips in about 5 minutes - of which the equivalent number of decisions might have taken 4 or 5 weeks to achieve in normal on-field training sessions. There are other considerations and manipulations to this process but hopefully the information just detailed is enough for some coaches to have a go at. The benefits for your system will be evident.

Here is a link to an article that expands on this concept: http://www.wired.com/science/discoveries/magazine/15-06/ff_mindgames

Video Review Meetings

The power of video as a teaching tool cannot be understated. Therefore, regardless of the level you coach at, every endeavor should be made to obtain video footage of your training and games.The use of video in teaching your system will be critical - whether that be in a 1 on 1 meeting with a player, a small group session or a full team meeting. Here are some suggestions on how and when to use video:

- Before a training session to illustrate a concept of your system that will be covered during the training

- Reviewing training footage of the system

- Reviewing game footage of the system

- As a scheduled "stand alone" session to teach your system (this is most likely to happen in the pre-season period when just beginning to teach your system)

Do not be afraid, in the early stages especially, to use video examples of other teams who may use your system. If the example is good "teaching material" then it does not matter if it is not your team that is involved. I have found that the presentation of quality video examples in the early stages of teaching your system is a very powerful way of fast-tracking your players towards "getting it". As players advance in how well they execute the system, both at training and games, showing video examples of them doing things well can help in "selling" the system and building belief amongst the group. The best teams, who have success in high-pressure games, have an unwavering belief that if they execute their system well enough then it will take them to the "promised land". Therefore any opportunity to build this belief is critical.

Below are some other generic principles that can contribute to making your video review meetings efficient and effective:

Length of meeting - Ideally no more than 20 minutes, with a new stimulus after 10 minutes. Research has shown that human attention drops considerably after 10 minutes and therefore some sort of stimulus is required at that time. This could be as simple as a short break, swapping seating positions in the meeting room, a light-hearted moment, change in the coach presenting the video etc

Number of players in the meeting - smaller groups are always better for engaging and interacting with players. If you have a squad larger than 8 players I would try breaking the group up. This may mean running 2 or more sessions, either concurrently if you have the coaching staff and resources, or sequentially.

Number of clips - no more than 8 with a balance on positive and negative if reviewing training or matches. If more negative clips (I prefer to call them "learning" clips) are required then explain clearly to the players why this is the case so they see it as an opportunity to improve rather than lose confidence

Don't jump around from concept to concept - make sure players fully understand the concept being shown in the video and where it "fits" in the bigger scheme of your system. I find that having text overlayed on the video is a nice little re-enforcer for the players, eg overlay "pressuring ball-carrier" as text when looking at video of how this can be done.

Keep the meeting engaging for the players - make it interactive by asking questions, posing problems/scenarios. If possible you could look at an audience

response system (like the game-shows on tv) so players can respond to questions and the results can be immediately displayed on a graph for discussion. Keepad is one option, go to http://keepad.com.

Clarity - this comes from being well prepared and having a thorough understanding of the concepts you are presenting in the video

Use of Smartboards or some other annotation tool that allows you to draw over the video - I think this is vital for clearly highlighting the key concepts on the video and ensuring clarity is achieved. It is also possible to get players more involved this way by getting them to come up and annotate on the video. Find out more about smartboards at http://smarttech.com.

Time of day - research suggests morning is best for absorbing and retaining information. Avoid the late afternoon timeslot!

Have players present the video clips - obviously you will need to prep with them beforehand so they can effectively present. There is a saying that "the best form of learning something is having to teach it".

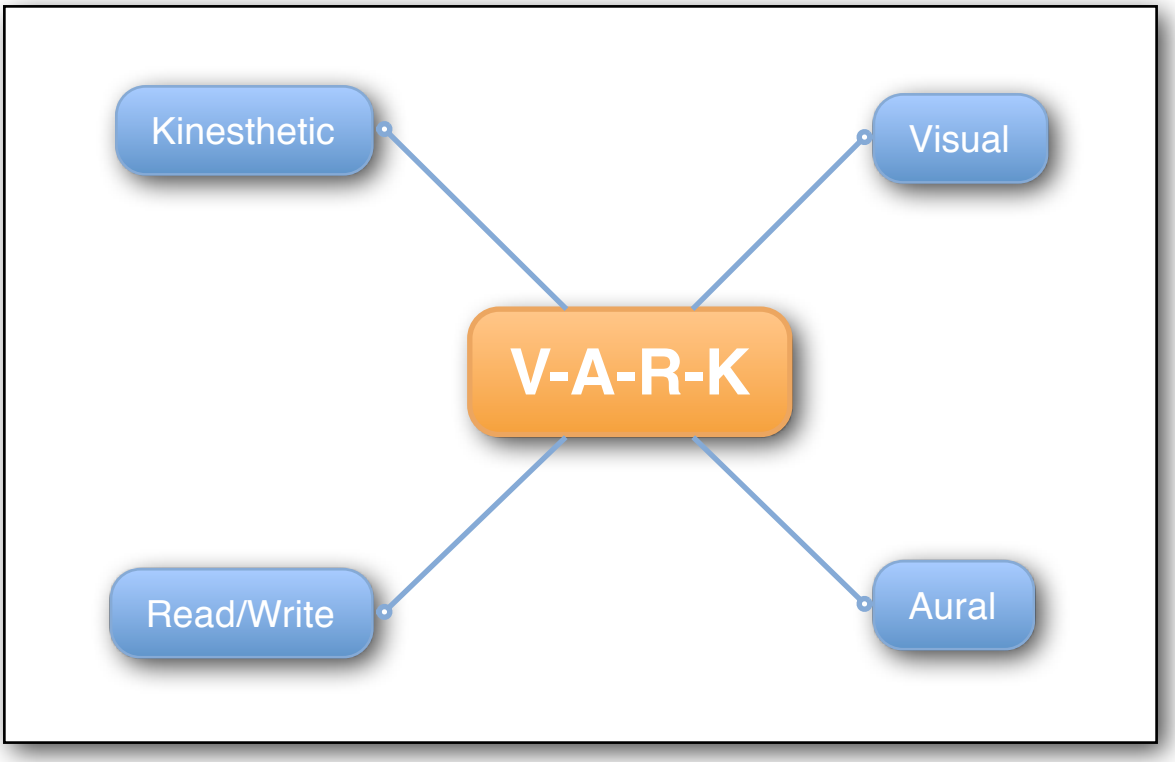
Get players to provide summary of the key points from the meeting - this gives you as the coach instant feedback on what the players have got out of the meeting and is also a good strategy for boosting the players memory retention of the content

The final key thing to mention is to try and have a training session ***within 24 hours*** after the video review meeting - enabling the players to physically rehearse the concepts shown in the meeting. This facilitates the best learning experience.

Learning Styles

It has always been a challenge for coaches of large playing squads to cater specifically for each individual player with limited availability of coaches, time and/or resources. Identifying and catering for a players "learning style" is a recent development in the teaching/learning domain of coaching - and I believe it does have some value in helping players to learn more effectively. However, due to the point mentioned first in this paragraph, the practical application of this concept when it comes to teaching your system can be very challenging.

Essentially, a players learning style is a preference for how he/she receives information that needs to be "learnt". The "V-A-R-K" model is an approach that places these preferences into 4 categories - Visual, Aural, Read/write and Kinesthetic. By surveying players you can identify their preference(s) and then design your teaching around them.



For more information go to:

http://www.ausport.gov.au/sportscoachmag/psychology2/maximising_skill_learning_through_identification_of_athlete_learning_styles

http://www.vark-learn.com/english/index.asp

In the "ideal world" here is an example of how I would cater for learning styles when teaching a new concept of my system.

I would have 4 stations that correspond to each of the 4 learning preferences and a coach assigned to each. Players learning styles would have been identified and so they then move to the appropriate stations. At the "Visual" station I would have diagrams of how the concept works, with perhaps other visual elements like bright colours to highlight key points, mindmaps and the use of graphs if needed to convey statistical information. At the "Aural" station a coach would be available to verbally introduce the concept and then discuss with the players until they are comfortable in their understanding. The "Read/write" station may have a list of the key points about the concept and a step-by-step written process for how the concept unfolds in a game. Players at this station may want to write notes. The "Kinesthetic" station would have some sort of low-key activity such as a walk-through where players get to physically try the concept first to experience it and then ask questions or try different strategies. Watching video of the concept is also a kinesthetic approach as players are seeing and processing a "real-world" example. After 10 minutes at their station all players come together and either do a specific breakdown drill on the concept or a more general game-like drill that provides opportunities to execute the concept just learnt.

Having some practical experiences in catering for learning styles in my teaching, below are some other tips related to this area:

Consider learning styles when introducing a new concept or requiring your players to comprehend a significant change in concept. When reviewing a concept or making some very minor adjustments players only have to "retain" information rather than "learn" it so I would not worry about learning styles.

Most players are Kinesthetic learners - they will want to get out and do it or at least see video.

Players can have more than one preference (called multimodal learners)

A multimodal approach works best - this means providing different forms of presenting the concept without having to break into specific stations. This could be done by a coach briefly explaining a concept whilst having the key points and a diagram projected. He could then show a video example before asking any questions of the players.

In meetings, coaches tend to talk a lot and have a plethora of written "key points". This is catering for the least preferred learning styles of Aural and Read/write and hence should generally be avoided

Your learning style as a coach will influence how you teach - know what yours is and be aware of this if it does not align with the majority of your playing squad.`

Be careful of verbalising a concept too much. You have probably watched video of the concept hundreds of times so that when you begin to verbally explain the concept you can clearly visualize it in your mind. Players are not in this position - they cannot visualise as easily what you are describing, hence the need for visual and kinesthetic aproaches.

Remember that a learning style is only a ***preference*** for learning - it does not mean the player is incapable of learning through other means.

Stage 4 - Analyze

"You don't know where you're going until you know where you've been"

So we arrive at step 4 of the process - analysing your system, whether that be in training or genuine competition. An inherent trait of any system is that it contains actions that are executed at certain times in response to certain situations. Because of this it makes the process of analysis highly valuable as it can provide objective insight into how often and how well these actions are being executed. These insights are so valuable because they will identify where your system is succeeding or failing, and in turn guide your future teaching focus. As I mentioned earlier, steps 3 and 4 of this coaching system - teaching and analysis - are cyclical in nature. Analysis and measurement of performance informs the coach of what learning has actually occurred, and conversely, areas where more teaching is required.

Qualitative v Quantitative Analysis

Before going any further it is important to understand a little bit more about two forms of analysis - Qualitative and Quantitave. Qualitative analysis is defined as “the systematic observation and introspective judgment of the quality of human movement for the purpose of providing the most appropriate intervention to improve performance” (Knudson & Morrison, 2002).

In other words this type of analysis is about observing team and player performance, both live and retrospectively via video, to make judgements on the quality of actions which in turn will lead to feedback and future training activities. On the other hand quantitative analysis is about having the "hard data" or numerical figures that provide insight into the quality of performance and would often be called key performance indicators (KPI's). Both of these analytical approaches compliment each other as I will explain a little later.

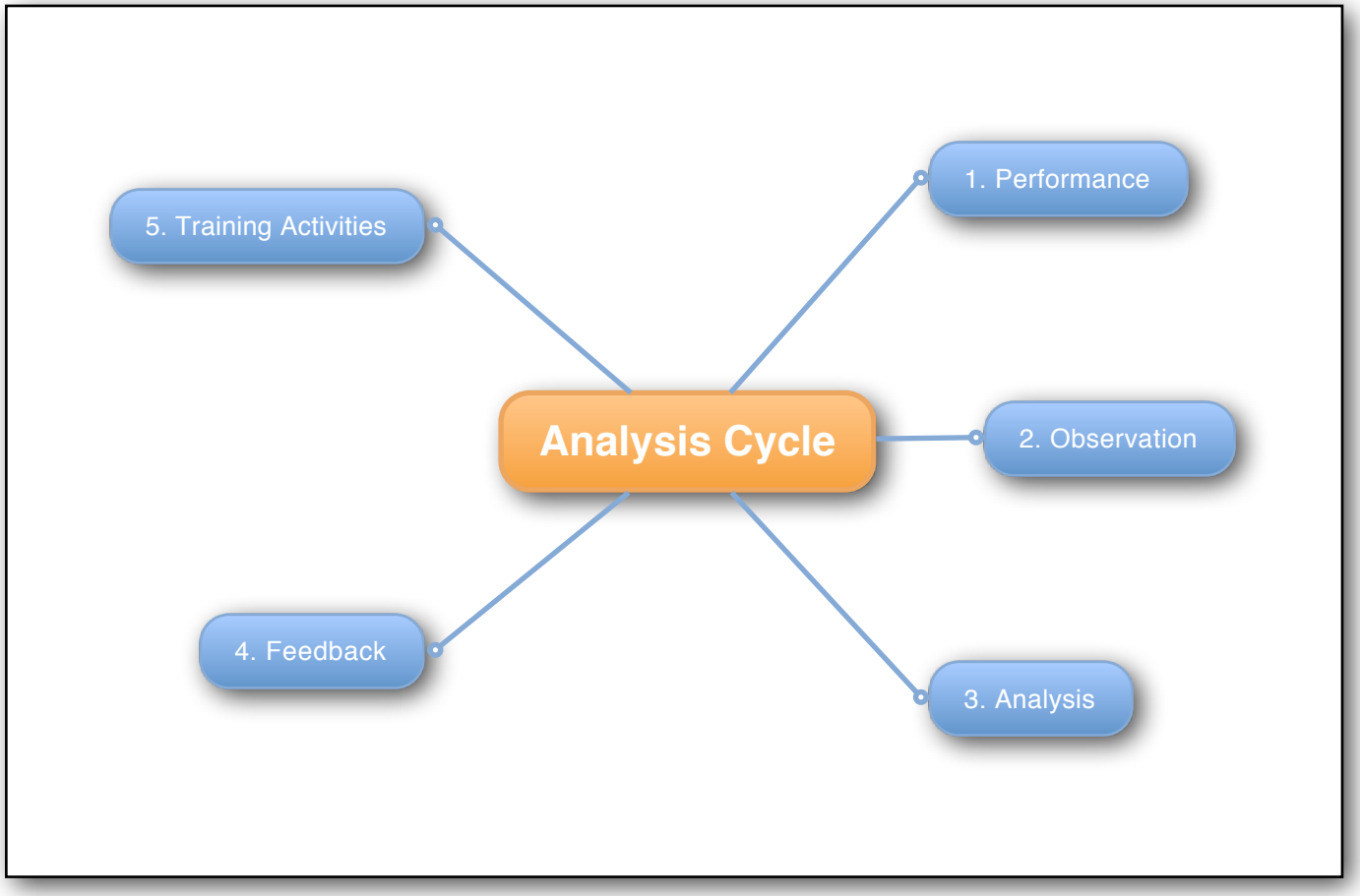
Measure Critical Areas Consistently

The complexity of how and what can be measured is potentially prolific in this day and age of modern technology. However a simplified approach needs to be taken when measuring your system. This approach should be based on measuring what you feel are the critical areas that influence the system functioning properly. Remember that "off-ball" actions are more than likely to be an important part of your system so think hard about how you will measure those. By being consistent with the measures put in place you can track improvement, trends and identify what areas of your system need more teaching focus. I will admit that it can take some time, if you are new to coaching a certain system, to figure out the critical areas of your system that should be measured.

Process v Product Indicators

It is important to track what I would call "process indicators" as well as "product indicators" as they will give you more clarity on where your system is succeeding or failing. An example of a "product" indicator could be the % of times the opposition has got through your defense on the counter-attack to score. Depending on your system the "process indicators" could include how often your defense slowed or delayed the counter-attack, where on the field the ball travelled during the counter-attack and what type of scoring shots were conceded on the counter-attack. These all give an insight into how your defensive system has operated, as opposed to the "product indicator" which may have highlighted an area of concern but does not give us any specific information on how and why. The more specific and objective the analysis the better your feedback to players and subsequent training activities will be. The balance in this is not to try and measure every little aspect of your system - you should be able to combine qualitative (observation and reviewing video) and quantitative (KPI's) methods to get an accurate assessment of performance.

Analysis Cycle



Here is how I typically apply the analysis stage when coaching a system:

1) Game performance (or game-simulation drill in training) occurs

2) Real-time observation of that performance. This is where your first assessments of performance will be made. HOWEVER, you must be careful about the accuracy

of these observations as things such as emotion, biases and highlighting (actions that occur at critical times and as such standout in your memory) can lead to less than objective assessments. That is why it is so important to have objective data and to thoroughly review the performance on video. Do not go "hunting" through the video looking for evidence to back up what you thought you saw. Often you will find that something you thought was done poorly many times may only have happened once or twice. You must have the courage as a coach to re-assess things after having more objective information - being stubborn or pig-headed only leads to incorrect feedback to the players and hinders the development of the system.

2) KPI's are recorded and a report generated that highlights any measures that fall outside a certain range, be that good or bad. This is the quantitative approach.

3) As coaches we naturally gravitate to always trying to improve, so I will focus on the KPI's that are in the negative first. To get a clear picture of why a KPI is in the negative I will look at video footage of all those specific incidents in the game to see if I can subjectively pick up a trend or reason. By seeing these incidents one after the other in a sequential fashion makes it a lot easier to identify a common cause (if one exists). I will repeat the process with the positive KPI's as well. This step is the qualitative approach.

4) Use of the KPI data, but more so video footage, as a form of feedback to individual players or the whole team.

5) If necessary, modify the training activities that have been planned for the next session to expose players to more practice of the elements they need to improve upon.

A word of warning here - be careful of constantly modifying your training based on how the system was executed in the last game. I prefer to wait for at least 2 performances and see if a constant trend appears that justifies adjusting your training activities. By reacting after every game with a change of training focus you could find your training program loses the continuity that is vital when mastering a system. All of this is about finding the balance between having a long term plan for how you will train your system whilst still having the flexibility to make some changes along the way.

Reward the "little things"

Contrary to popular belief the success of most systems, offensive or defensive, is not about the "x and o's" on the whiteboard. Instead it is the execution of the "little things" and fundamentals that determine the effectiveness. I believe this to be particularly true the higher the level of competition. These "little things" are probably not even noticed by commentators and people watching from the sidelines or grandstands. But their importance must not be underestimated by yourself or your team. Because they are not noticed by the general observer these actions are not likely to achieve accolades externally and so must be recognised and rewarded strongly within your team. This point is very pertinent to "off ball" actions and movements.

As such, it is appropriate in this analysis stage to have KPI's that identify who are doing these "little things". A running tally or leaderboard can be displayed somewhere in the locker room that reenforces these behaviours and rewards the players who are doing them. There is a saying that ""what gets measured gets done". I have found this particularly true when the measurement is at the individual level rather than just the team level. When only a team total is displayed it is easy for players to think it is not referring to them, however if a player sees a number alongside his name it is quite clear where he stands.

Video examples can also be shown in team meetings as a way of rewarding players and establishing standards for what is expected of all players when it is their turn to do the "little things" that make the system work. Players don't like to admit it, but they love being given positive feedback in front of their teammates and can gain great confidence. When you get the majority of your players committing to doing the little things well and really valuing there importance then you are on the right track, not only to executing a good system but more than likely developing a great "team chemistry" and culture that players will want to be involved with.

Technical Considerations for Performance Analysis

I have deliberately left this section until last. As mentioned it is easy to get caught up in the technology-side of performance analysis and either get distracted by it or perhaps hesitant to use it. That is why I wanted to clearly explain how analysis is incorporated into the coaching process before looking at specific software and technology that you could use. It is really important to have a clear picture of the former rather than jump straight into the latter.

Anyway, we are now ready to look at the technical side of things. Here are some tips that may or may not be applicable to your coaching environment based on time, money and/or resources.

Filming

Try to get all your training as well as games filmed consistently by one person. Work with them closely so they understand the type of footage you want and when - close in or wide angle. I would recommend footage that allows you to see all off-ball actions. This may mean you need two cameras - one for following in tighter on the ball and another for getting all players on the field/court. Some video analysis software will allow you to "split-screen" the different angles so you can easily view both at the same time or toggle from one to the other. Very powerful.

Video Analysis Software

If possible try to get an analysis software package that is designed for sport rather than generic video editing software. You will find that the sports-specific solution allows you to generate statistical reports which will also have the video footage linked to them (this is very powerful). However, either option is better than using tape to tape editing. Coaches at all levels should be using digital video. All you need is a digital video camera and a

laptop.

Video Analysis Solutions

Try “googling” the following video analysis software packages:

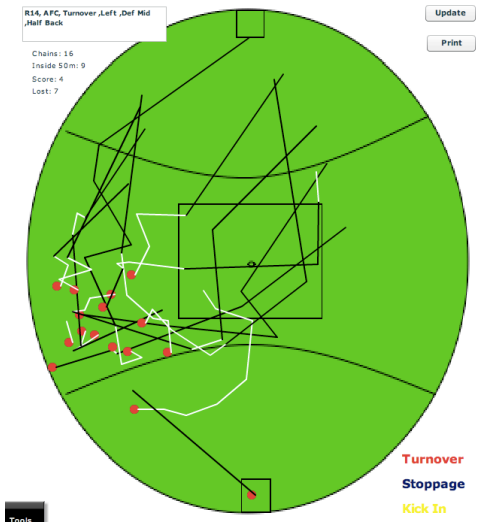
Sportscode
Dartfish
Snapper
Focus

Graph your KPI's

Either yourself, or someone who knows spreadsheet software such as Microsoft Excel, should create graphs that plot your KPI's on a game by game basis. I find looking at these graphs the easiest way to detect any trends that are occurring - which may require closer video analysis and subsequent adjustment of training activities.

Plotting Software

Often visual information is much easier to digest and understand than raw numbers. If you are coaching an offensive system it will often be important to know the ball movement paths and where on the field certain actions have occurred. Whilst this is possible with pen and paper the advantage of software is that it can clearly display trends across single or multiple games via color coding or "hot spots". Some software even has the ability to automatically identify the areas of the field/court where actions are occurring that result in positive outcomes versus negative. A final advantage of plotting software is that the visual representation can be easily displayed in a team meeting as another form of feedback to players. Similar to coaches, players will often find this much easier to understand than statistical data.



Player Tracking Software

This one is probably only relevant to those coaches working at the professional level. Whilst player tracking software was originally implemented to understand and track the physical output of players, it has evolved to provide valuable information on the tactical aspect of games. It is possible to see the running patterns of players on the field/court and what areas of the field/court they covered. In some player tracking software it is possible to replay the movements of all players who were tracked in the form of a 2D animation, This can be linked side by side with video footage and is a really powerful way of analyzing the off-ball components of your system - ie the shape or structure of your team, or certain groups of players, on offense or defense. A really exciting progression that is starting to become available is the software automatically detects patterns or relationships between the positioning of players and the impact they have on that phase of play. A practical example of this is a zone defense. Typical principles of a zone defense are that it needs to stay compact and move as a block so as to limit passing options between the zone players. Player tracking software could automatically report how many times the zone has or has not stayed compact based on distances and angles between players in the zone. This may then be linked to the times the zone has been successfully penetrated by the offensive team. The end result for the coach may be that he is able to conclude " our zone was penetrated 5 times, 3 of these being due to a breakdown in the compactness of the zone".

Portable Devices

The iphone is leading a dramatic evolution in how information is delivered to the ma sses. A similar impact has been seen on performance analysis. Things that you m ay want to consider are being able to code or record stats on these portable device s live during training and games, and having video footage and statistical reports sent to coaches and players with portable devices. All forms of information sharing (audio, video, images, text etc) is now possible anywhere and anytime with these devices.

Video Analysis Resource

Another useful resource for describing the analysis stage is an online article titled “Video Analysis Guide for Rugby” and can be found at http://www.thevideoanalyst.com/articles/video-analysis-a-practical-guide/

Summary

Well, there you have it - the 4 step formula for successfully coaching a playing system. I really hope after reading this that you have found at least one thing that you may apply in your coaching. I would also like to think that this model can be expanded and improved upon further - so if you have any suggestions drop me an email via mark@sportsrelations.com.au . You can also visit http://sportsrelations.com.au/blog for more coaching resources.

Cheers to your coaching success!