

Coach Assessment Tool

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<p>The Coach Assessment Tool was created to assist coaches of all sports for their own development. The starting point to develop the tool is the fact that coaching clinics solely focus on the technical and tactical skills of the sport. The education for coaches is lacking to teach the importance of the coach's behavior towards their athletes. The question is how to teach properly the task in hand to increase the athlete's performance considering the coach's behavior. Nevertheless, coach's knowledge about the proper behavior often is diametral to the athletes perception of it.</p> <p>Therefore, the tool was created to improve the self-awareness for coaches of their own coaching behavior and the impact this behavior has on their athletes. Furthermore it helps to identify coaching behavior strengths and areas to improve, as well as to help the coach improve his behavior through practical development methods. To evaluate the coach's behavior, the tool insists of two main instruments for evaluation. The first instrument is the self-evaluation with questionnaires. The second part is the video analysing tool. Furthermore the tool includes a manual for coaches to analyse their strength and to improve their weaknesses based on the analysis results.</p> <p>The first step was to identify the factors of good coaching. There is no common scientific understanding for those factors. There had not been a concept of categories and sub-categories that describes good coaching so far. The tool does not just enable the tools to identify the coach's own behavior but also provides guidelines for the main categories of good coaching.</p> <p>The Coach Assessment Tool is designed for easy evaluation and analysis. It seems to be very useful for self-development for coach's. Nevertheless, the tool has not been completely finalized yet, but the theoretical framework and steps to realize the Coach Assessment Tool for regular use is set.</p>	
<p>Keywords Self-Evaluation, Self-Awareness, Questionnaire, Video Analysis, Coaching Behavior</p>	

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1 Introduction

As a coach you have one main focus: How to develop athlete's skills, mentally and physiologically. The goal is to find tools to teach and coach athlete's to become better in their respective sport and as human beings. As a coach you go to coaching clinics and you learn all the so called "X's and O's" of the sport. But what comes after that? Are you able to teach the right way? Can you send your messages the right way so the athletes can understand them? How do the athletes receive, understand and finally transform those messages with better sportive performance and individual development? Ultimately, considering all those questions, who does observe the coach? How can he increase his own awareness of coaching the "right way"?

This was the starting point and raised our interest. There is something more than all the tactical, technical and mental knowledge - it is the coaches behavior. How he treats the athletes to buy in and to be able to teach and coach athletes properly. The coach's behavioral skills are the key and how you can control respectively observe them. Not from an outside perspective but from the coach himself. The main problem, speaking from our own experiences, is to find yourself in a tunnel. To coach day in and day out tends to make you blind for what is going on around you.

The aim of this project was to find a tool for self-evaluation that is easy to use and understandable to implement for every single coach. The tool should be practical for self-evaluation and using that tool should raise a coach's self-awareness of his own coaching and teaching skills regarding his athletes perception. The goal of the tool is to make coach's better and develop their behavioral skills regularly during the course of a season.

During this thesis respectively during the work on that tool it becomes obvious that the topic is of big importance in all level of sports. Like mentioned above, all you care and all you talk about with other coaches is about the "X's and O's" but not how your coaching and teaching is perceived. Furthermore, during the working process, it becomes evident that there are so many factors that come together to be a successful

coach. You have to respect and realize that coaching and teaching sport athletes needs a broad understanding of many different factors. The areas where we can assess the coach are:

- Communication
- Coach-Player Relationship
- Coaching Leadership Traits
- Team Environment
- Practice Environment

Those areas are divided into the quality factors of coaching. The tool includes a questionnaire to assess the coach's teaching traits (areas and quality factors of coaching) and a tool to analyze his behavior during practice sessions that includes:

- Feedback observation
- Body language
- Use of Time
- Organization (of the practice)

All these tools give a holistic picture of all necessary traits for coach's to be able to develop their athletes properly.

Markus Arvaja, our teacher for sport psychology, came up with the idea of creating such a self-assessment tool for coaches. He and Brad MacKenzie built a group that finally included Mike Marshall and Tomi Paalanen as well, who was one of our teachers in Vierumäki who taught pedagogical skills. During the work on the tool it becomes evident that we (Härkönen and Klicznik) wanted to put everything together as our thesis because it is evident that the tool is very useful for today's coaching. The results of the tool increase the self-awareness with easy and practical steps of self assessment.

2 Prior Studies – Previous Assessment Tools

The following chapter outlines and describes the four most common and know tools to analyze effective coaching behavior. The common purpose of all four instruments is to measure the coaches´ behavior or leadership style (Horn 2008, 245). Ultimately, all tools should help the athletes to play better and improve their performance in their regarding sport through more effective coaching behavior.

As Lyle explained (1999, in Nelson et al. 2014, 114), “the coach-athlete relationship is at the very heart of coaching and that coaches who fail to acknowledge the importance of this relationship risk hindering their athletes´ realization of their full potential.”

2.1 Leadership Scale for Sports - LSS

Chelladurai`s and Saleh`s (1980, 34-35) approach towards effective coaching is based on the leadership type. In their opinion, leadership has a high relevance to sports since the organizational format of sports teams need managerial capabilities from the coaches to influence a group to reach their set goals. The origin assumption is, that leadership is the most important instrument to create the motivational climate that enhances performance.

The Leadership Scale for Sports measures the coaches´ leadership behavior and what specific behavior is most preferred by the athletes. It consists of five subscales that includes (Chelladurai & Saleh 1980; Horn 2008, 245.):

- the coach´s motivational tendencies: social support and positive feedback
- the coach´s instructional behavior: training and instruction
- democratic behavior
- autocratic behavior
- social support behavior

The LSS is a tool that uses a questionnaire made up of 40 items that measure, as already described above, the five subscales. Nevertheless, it is somehow restricted to just one area of coaching. It just measures the leadership traits and it's areas for improvement for the coach. (Gastel Van 2010.) The table below is a descriptions of the behavioral dimensions.

Table 1. Dimensions of leader behavior in sports (Chelladurai 2012, 333)

Dimension	Description
Training and instruction	Coaching behavior aimed at improving the athletes' performance by emphasizing and facilitating hard and strenuous training; instructing them in the skills, techniques, and tactics of the sport; clarifying the relationship among the members; and by structuring and coordinating the members' activities
Democratic behavior	Coaching behavior which allows greater participation by the athletes in decisions pertaining to group goals, practice methods, and game tactics and strategies
Autocratic behavior	Coaching behavior which involves independent decision-making and stresses personal authority
Social support	Coaching behavior characterized by a concern for the welfare of individual athletes, positive group atmosphere, and warm interpersonal relations with members
Positive feedback	Coaching behavior which reinforces an athlete by recognizing and rewarding good performance

From Chelladurai, P. (1989). *Manual for the Leadership Scale for Sports*. Unpublished manuscript. The University of Western Ontario.

2.2 Coaching Behavior Questionnaire - CBQ

The Coaching Behavior Questionnaire from Williams and Kenow is developed as a “vehicle for assessing athletes’ perceptions and evaluative reactions to both positive and negative coaching behaviors.” (Williams et al. 2003, 18.) It measures the athletes’ perception of coaching behaviors and evaluates their effectiveness in helping athletes play. Therefore, the main purpose is to evaluate the optimal mental state and focus especially during competition (Williams et al. 2003).

The CBQ consists of 28 items and is designed as a questionnaire that measures five specific aspects of coaching behavior (Chelladurai 2012, 331; Kenow & Williams 1999.):

- Cognitive/attentional effects of coach’s behavior

- Supportiveness
- Emotional control and composure
- Communication
- Somatic effects of coach's behavior

2.3 Coaching Behavior Scale for Sport - CBS-S

The Coaching Behavior Scale for Sports from Cote, is an instrument that measures the coaching behaviors from an athletes' perspective. It consists of 37 items with six sub-scales: (a) technical skills, (b) goal setting, (c) mental preparation, (d) personal rapport, (e) physical training and planning and (f) negative personal rapport. The purpose of CBS-S is to provide information about the coaches' behavior. (Cote 1999, 82.)

The framework for the CBS-S is the Coaching Model by Cote, in which he defines all important variables that affect the coaches' work with his athletes. These variables include the behaviors and strategies during training, competition and organizational settings (Cote 1999, 85.):

- training: mental preparation skills; technical skills; physical training,
- competition: competition strategies, and
- organizational settings: planning; goal setting; recognition of individual differences; personal rapport; assistants; parents.

2.4 Coaching Behavior Assessment System - CBAS

The Coaching Behavior Assessment System by Smith and colleagues, is one of the most used measurement tools. CBAS is structured into 12 categories of behavior and the aim of CBAS is to identify these behaviors. (Horn 2008, 247-248.)

The 12 categories are divided into the following coaching behaviors (Cote 1999, 83; Chelladurai 2012, 330):

- 8 reactive coaching behaviors: coaches' response to desirable performance or effort, mistakes and errors, or players' misbehaviors
- 4 spontaneous coaching behaviors: relevant (game related behaviors of technical instruction, encouragement, organization) and irrelevant (general communication) behaviors initiated by the coach

Smith assumes that the coaches' behavior is directly linked with the athletes' psychological development, such as self-esteem, satisfaction or perceived competence, and thus influences their performance (Cote et al. 1999, 83; Horn 2008, 261).

2.5 Summary

There are many more and other instruments to measure effective coaching behavior and the presented tools have been developed and critically analyzed. Nevertheless, as stated by Horn,

[i]nstruments or methodologies to measure coaches' behavior, the choices are still somewhat limited to only a few aspects of coaches' behavior. Thus, many other dimensions of coaches' behavior remain untapped and equally relevant to explore. (Horn 2008, 254.)

Therefore, to have a more holistic approach in identifying coaching effectiveness, further research areas respectively evaluation tools should include the following aspects or dimensions (Horn 2008, 265):

- Coaches' nonverbal behaviors
- Coaches' communication and coordination capabilities
- Coach-athlete interactional patterns
- Coaches' cognitions, perceptions, and decision-making processes
- Coaches' ability to clarify team members' roles

The table below is a summary of the described measurement instruments outlined in this chapter. It shows what the instrument (a) measures, (b) its components (categories) and (c) the references - the scientists that introduced the instrument.

Table 2. Summary of Instruments to Measure Coaching Behavior (Horn 2008, 246-247)

INSTRUMENT	WHAT IT MEASURES	SUBSCALES OF SCALE COMPONENTS	RELEVANT REFERENCES
Leadership Scale for Sports (LSS)	Dimensions of leader behavior <u>Note:</u> Three versions have been developed to measure (a) athletes' preferences for different types of coaching behavior, (b) athletes' perceptions of their coaches' behavior, and (c) coaches' self-evaluation of their own behavior	1. Autocratic behavior 2. Democratic behavior 3. Training and instruction behavior 4. Positive feedback behavior 5. Social support behavior	Chelladurai & Saleh (1978, 1980) Chelladurai & Riemer (1998) Zhang, Jensen, & Mann (1977)
Coaching Behavior Questionnaire (CBQ)	Athletes' perceptions and evaluative reactions to both positive and negative coaching behaviors	1. Negative activation 2. Supportiveness and emotional composure	Kenow & Williams (1992, 1999) Williams et al. (2003)
Coaching Behavior Scale for Sport (CBS-S)	Coaching behaviors exhibited in training, competitive, and organizational settings	Seven dimensions of coaching behavior (e.g., physical training and planning, goal setting, personal rapport)	Cote, Yardley, Hay, Sedgwick, & Baker (1999) Mallet & Cote (2006)
Coaching Behavior Assessment System (CBAS)	Coaches' overt leadership behaviors during both practices and competitive events <u>Note:</u> CBAS can be used to assess coaches' behaviors in general or coaches' behaviors towards individual athletes	12 or 13 categories divided into reactive and spontaneous coaching behaviors	Smith, Smoll, & Hunt (1977) Smith & Smoll (1990) Smith, Smoll, & Christensen (1996) Horn (1984, 1985) Coatsworth & Conroy (2006)

3 What is good coaching – quality factors of good coaching

Coaching is not alone about knowing the X's and O's of the sport. The knowledge must include to “understand how psychological factors affect a person's motor performance and [...] how participating in physical activity affects a person's psychological development.” (Weinberg et al. 2011, 21.) That is, to understand that sports performance is influenced by psychology. Today's elite athletes and high level sport clubs utilize the help of mental coaches and sport psychologists in their training routines to enhance athletic performance. Nevertheless, the closest connection is between the coach and the athletes on a daily basis. Therefore, you as a coach, need to understand and have the knowledge about the psychological traits that influence performance and exercise. If athletes experience high quality as participants, it reflects not just the quality of the way they are taught and coached based sport knowledge, but also how each coach understands and uses sports psychologically in his approach. Additionally we always should have in mind that the coach might be the most important and influential person in an athlete's live despite their family (Pyke 2013, 3).

It can be supposed that the coach is the key factor in sports and sports development. He works with the athletes and therefore must know the athlete's personality. That is when the sport psychology comes in. Numerous authors wrote about the key factors of being a good coach. Cassidy, Jones and Potrac (2009, 47), for example, came up with the following inventory that describes a good coach:

- Patient
- Experienced
- A good communicator
- Knowledge about skills
- Motivator
- Has a sense of humor
- A people manager
- Adventurous
- Flexible
- Organized
- Not just a dictator
- Open-minded
- Has the ability to teach
- Punctual
- Has a loud voice
- Uses time wisely

Kajtna and Baric (2009, 48) describe a successful coach – therefore a good coach – with traits as commitment, aspiration to excellence, ability to transfer ideas and opinions in a simple way, inclined to give feedback, social skills, self-control, ability to create positive atmosphere to mention just a few. Interestingly they assume that the characteristics describing good educators – teachers – are the same as for good and successful coaches.

Reading and studying different literature (Weinberg et al. 2011; Murphy et al 2005; Robinson 2010), discussing with experts who have many years of experience in sport coaching and based on our own experience in coaching youth teams as well as part of our studies, we came up with the following quality factors of coaching. We classified them into five equally important categories: communication, coach-player relationship, coaching leadership traits, team environment and practice environment. Within these five categories we have the quality factors for each category.

3.1 Communication

“[C]ommunication lies at the heart of effective coaching.” (Bloom, Schinke & Salmela 1997, 3.) To work efficient and effectively as a team it is necessary as a coach to communicate in a two way open door philosophy. The communication channels must be developed transparent and open between the coach and the performer (Robinson 2010, 38). That means to communicate open, honest, precisely, direct, with integrity and mutual respect, as well as being clear, concise, correct, complete, courteous and constructive. Good communication in that sense is a quality of good interpersonal relationship, thus the coach need to communicate with his athletes, coaching staff, parents and media. (Hardy, Burke & Crace 2005, 192; Zyl van 2011, 5-6.)

Communication though does not just include to send a message but also the gestures and body movements as well as the skill to receive a message – being an expert listener (Bloom, Schinke & Salmela 1997, 3). The following factors are identified as the quality factors for the communication category: verbal & non-verbal communication, feedback, listening and the ability to solve problems/conflicts.

Martens (2012, 96) listed the following guidelines as general rules to follow to be a better communicator:

- Provide athletes with specific information that helps them correct mistakes rather than general information that judges their performance.
- Be certain you understand the reason for your athletes' actions before you judge their behavior.
- Avoid making evaluative comments when athletes know they've made a mistake.
- Focus your comments on the athletes' behaviors, not on them as people, to avoid damaging their self-worth.

3.1.1 Verbal communication

Effective and efficient communication is about to send messages that can be understood from the recipient. Some points are important to take into consideration. Verbal communication is about developing the message. Listeners, as Psychologist Georg Miller found out, can remember five to nine items. Therefore, the message from the coach must be precise to match the capacity and concentration of the athletes to get the message across. If we think about a stressful game situation, it makes even more sense to send clear and short messages. Furthermore, the coach must be direct, open and honest on a consistent basis when sending his message. Communication is about trust and mutual respect and by not being straightforward in their approach they will lose credibility. (Hardy, Burke & Crace 2005, 197-200.)

After all, the coach want to be understood and train the athletes effectively to improve their performance. To ensure appropriate actions regarding to his verbal communication the coach can ask himself the following questions (Zyl van 2011, 5):

- Do I have the players' attention?
- Am I explaining myself in an easily understood manner?
- Have the players understood?
- Do the players understand?

- Do the players believe what I am telling them?
- Do the players accept what I am saying?

Effective verbal communication considers and contain the following points (Zyl van 2011, 5-6):

- WHY they want to communicate
- WHO they wish to communicate with
- WHERE and WHEN the message could best be delivered
- WHAT is it that they want to communicate
- HOW they are going to communicate the information

3.1.2 Non-verbal communication (body language)

Non-verbal communication can be defined “as any meaning conveyed through sounds, behaviors, and artifacts other than words.” (Survey of Communication Study, 20.) Basically, all the messages that are send in a message other than words are non-verbal (Besson et al.2005). It is accepted, that more than the half of the communication is non-verbal. We speak with body language – head-nods, smiles, frowns, bodily contact, eye movements (contact), laughter, body posture (position), language (use of voice), arms, face gesture and so on. Thus the recipient of the message pays more attention to how something is said rather than what is said. Although body language comes natural and reflects a person´s character and values, coaches should pay attention to it. On the other hand, it is as important to observe the body language of the recipient to recognize their understanding. The coach must be sensitive to the signals send by his athletes as well. (Hardy, Burke & Crace 2005, 200-201; Zyl van 2011, 5.)

Have in mind that non-verbal expression can say more than any word that is spoken. Sometimes it might be the only way to communicate at all, thinking about competitive situations. Therefore, coaches should be aware of the body language as part of their communication and what impact it can have on his athletes. (Barker et al, 2004, 196-197.)

3.1.3 Feedback

A skill that a coach needs is to observe, monitor and finally give accurate feedback during competition and training. Feedback is necessary and essential for the athlete to improve their performance and therefore is a major aspect of coaching. (Robinson 2010, 38.) When it comes to give feedback to an athlete, it becomes very critical to be constructive and positive to keep the athlete motivated, confident and not intimidated. Generally, coaches should and must “deliver positive and supportive messages by acknowledging their athletes’ effort.” (Hardy, Burke & Crace 2005, 199.)

Using the sandwich technique seems to be a very beneficial approach. Starting with a positive statement, following with corrective instruction and end the feedback with a positive note that focus on the process outcome or general encouragement lead to increased message perception. The key is that coaches’ emphasize on the positive first and on the process that lead to the proper outcome. The athlete should focus on the next situation and how to do it rather than what went wrong. An additional easy technique is to use “and” instead of “but” to get the whole message heard (Hardy, Burke & Crace 2005, 201-203.)

However, there are times when athletes performing wrong over and over again respectively have difficulties learning a new skill. Nevertheless, negative feedback should be avoided due to negative effects for the athlete such as demotivation. The coach must find a way to make the athlete aware of incorrect performance without being too critical. A good way for feedback is to use video sessions. It is a clear and neutral way to give corrective feedback and it is also a chance to give feedback after competition or practice if immediate feedback – feedback should always be provided as quickly as possible after the event – is not possible. (Barker et al 2004, 214.)

3.1.4 Listening

To hear something and to listen to a message is something different. Coach’s must be expert listeners. To listen to his athletes helps the coach to know if the (a) athletes understand the message (e.g. how they need to execute a technique the coach explained

or, just as simple, if they know when the bus for the road trip leaves) and (b) it is a source to gather information of an athlete outside of the sport (e.g. about school, family and so on). Asking questions and listening is a very important skill for a coach. Therefore, to hear something and to listen is a big difference. (Barker et al 2004, 197.) Mistakes of bad listeners are: paying no attention, thinking about your response instead of listening, just focus on certain parts that interest you, ignore a message if you don't want to hear what is said, and listening only to the information to use it for an attacking response are some of the interfering habits of effective listening. Furthermore, a message to be heard must be send repeatedly so the information will be remembered. (Hardy, Burke & Crace 2005, 203.)

Efficient and effective listening is a skill. There are techniques that can be used to be a better listener, although everyone has to find out his own strategy when listening. Hardy and colleagues (2005, 203-205) examined the following characteristics for effective listening:

- Get ready: gather your energy for the task at hand
- Active listening: use supportive and confirming behaviors
- Flexibility: different communication situations need different strategies

3.1.5 Conflict resolution

In every team structure, each individual, although unified in their commitment and cooperation within a team, is competing against each other and that involves and evokes conflicts. In a competitive environment conflict is obvious but it is about how the athletes as a group can solve the tensions within a team. The coach is responsible to create a climate where conflicts can be solved. Factors that can reduce tensions are positive communication (talking and listening), seeking understanding, establishing equality, flexible leadership, being other-centered, encouraging others to participate in conflict solving. (Veach & May 2005, 180-181.)

3.2 Coach-player relationship

Outside the family, the coach might be the most important person for an athlete. “In a sport context there are many personal relationships [...] that can impact on performance, but the coach-athlete relationship is considered to be particularly crucial.” (Jowett 2005, 412.) The coach does not just develop physical, technical and tactical skills, but also psychological skills. The coach-player relationship is so critical because of the position of a coach.

The behavior of a coach impacts the outcomes of his athletes – regarding how the athlete perceives the coach’s behavior. The key for any successful relationship is communication and how they interact. A good relationship between the coach and his athlete can lead to happiness and welfare for both, but especially for the athlete. If the relationship functions, the coach can help his athlete overcome difficult times when injured, when he has an emotional crisis (e.g. the athlete broke up with his girlfriend or someone in the family just died) or when his athlete retires from sport (during the transition from being a professional athlete to become a “normal” person after the sporting career). The coach-player relationship is one, if not the most important ingredient for success because of the coach’s impact on his athlete’s performance. (Jowett & Clark-Carter 2006, 618.)

The coach’s power comes first and foremost from his position, rather than because of his qualities as a coach. It is his action that enhance or disrupt his position. (Cassidy, Jones & Potrac 2009, 177.) To maintain and enhance his power the coach must be an expert, therefore we identified eight quality factors as the fundament of any successful coach-athlete relationship in sport.

3.2.1 Player’s level of motivation

The coach’s behavior is highly responsible for a climate within the team that creates a level of motivation for the athletes. The coach has to be aware that the player’s level of motivation can vary over time. It is never on the same level but fluctuant. Therefore, it is an ongoing process for a coach to work on the environment that enhances the level

of motivation for his athletes. A coach has to inspire his players and understand their motivational forces that stimulates their athletic participation. Generally it can be supposed that “[m]otivation is not up to the individual. [...] humans [...] (are) products of genetics or the environment.” (Eliot 2005, 4.)

The player’s or athletes motivation is driven by feelings such as pleasure, acceptance and competence. The coach, as already mentioned, can create a climate of positive reinforcement and encouragement to manipulate such feelings. Nevertheless, motivation is a decision by the athletes that can be influenced by the coach. Athletes are intrinsic (by their own will) or extrinsic (outside influence) motivated to participate in sport, whereas intrinsic motivation is the more powerful and long lasting motivation that should be enhanced. (Eliot 2005, 4-5.)

Furthermore, the athlete should be motivated through a motivation climate that is task oriented. That means, that the athlete is judged by his personal improvement, by the improvement of his learning and mastering of a task – “being the best you can be”. On the contrary, participation based on ego orientation – “you win today, you are better than him” – can be stronger, but also have a downside if the athlete doesn’t feel competent and therefore avoid challenges and effort as a result of lack of achievement. (Eliot 2005, 10.)

Therefore, coaches have to create a mastery environment, where the focus is on all things the athlete can control – effort, preparation, focus on technique, emotional control – and consequently winning is a bi-product of performance. Athletes focus on their own level and their own personal achievement rather than emphasize on comparing to others. In this mastery-oriented motivational climate – task orientation – the athlete really succeed in the long-term perspective because individual development is in first place. Furthermore, that prevents athletes from experiencing factors as stress, anxiety and fear of failure. (Vickery 2013.)

For a better understanding of the coach's behavior regarding mastery and ego climate that influences athlete's motivation, the following table presents an outline of the behavioral influence the coach has on motivation regarding to the "mastery climate".

Table 3: TARGET behaviors that influence motivation climate (Epstein 1989; Ames 1992, in Morgan & Kingston 2010, 74)

TARGET behavior	MASTERY CLIMATE	EGO CLIMATE
Task	Self-referenced goals, multi-dimensional, varied & differentiated	Comparative goals, uni-dimensional & undifferentiated
Authority	Participants given leadership roles & involved in decision making	Teacher makes all the decisions
Recognition	Private recognition of improvement, effort and accomplishments	Public recognition of normative ability and comparative performances
Grouping	Small mixed ability & co-operative groups	Ability groups Whole class activities
Evaluation	Self-referenced. Private consultations with teacher based on improvement & effort	Normative & public
Time	Flexible time for task completion and maximum time to learn	Inflexible time for task completion

3.2.2 Fairness

Being fair is crucial and important as a coach. Sometimes a coach has to make difficult decisions for the team and therefore he has to treat every individual of his team alike. Every member of the team should have the same equal opportunity when it comes to determine who is playing. Prejudgment is not fair and to be fair is something athletes and parents make a coach accountable for. (Sabock & Sabock 2011, 104.) As shown in the table below, the coach has to consider the do's and don'ts to be fair to his athletes.

Table 4. Do's and Don'ts of fairness (Hutson 2013)

DO'S	DON'TS
<ul style="list-style-type: none"> • Treat all people fairly • Listen closely to others and try to understand what they are feeling and saying • Consider all the facts, including opposing views, before making a decision • Use all the same criteria, rule, or standards for everyone • Correct your mistakes 	<ul style="list-style-type: none"> • Don't take advantage of other people's mistakes or ignorance • Don't take more than your fair share • Don't let personal preferences, prejudices, or other feelings interfere with decisions that should be based on merit

3.2.3 Patience

As a coach it is important to be patient. Everyone know the saying that *Rome wasn't built in a day*. The same applies for coaches who teach skills and try to develop young athletes. It is all about being patient and persistent. There are several aspects that help to be patient with yourself and your athletes (PSPS 2011):

- Develop realistic expectations
- Recognizing setbacks as temporary
- Think in solutions not in problems - choose to be part of the solution
- Patience is rooted in the belief you can overcome.

3.2.4 Approachability

To be an effective leader, you have to be approachable. Approachability describes the ability of someone to approach and talk with someone on a human level. This person is able to create an environment in which everyone feels comfortable to approach each other and communicate openly – openness is a key factor. In this environment everyone can feel confident to share their feelings, thoughts and opinions with mutual respect and trust. (Franklin 2007, 109; 117.)

Especially when we consider the categories of communication and the coach-athlete relationship, approachability is an important quality factor for coaches. It gives the advantage of getting to know and understand the athletes. Approachability is a two-way street where coaches and athletes mutually have the opportunity to express themselves to each other. (Franklin 2007, 117; Brophy 2010, 45-46; Vadackumchery 1999, 79.)

3.2.5 Open-minded

A successful coach is, as later described, a well planned and organized person. Nevertheless, challenges and adversities will arise at one point and a good coach is able to deal with these challenges - he is open-minded to deal with this unexpected situations. A coach has to be able to think outside the box and shows encouragement to learn and

try new things. They ask questions about the current status quo and are curious for different and new perspectives and approaches. (Tiffan 2010.)

To sum up the trait of being open-minded as a coach it is important to have the skill of listening and involving the athlete in the communication channel. The mind-set of "my way or the highway" is totally contrary to what should be aimed for in the coach-player relationship.

3.2.6 Individual concern

A coach should always have in mind that he coaches people performing a certain sport. It is important that you cultivate and show interest in your athlete as an individual. That means that a coach should care about his athletes also outside of the playing or practice field – in school, after the season, educational decisions for school or university, offer of assistance in difficult times and so on. A coach should create a mind-set that he cares and support everyone's overall development as a human being and as an athlete at the same time. (Sabock & Sabock 2011, 89-90.)

3.2.7 Supportiveness

A coach has to be supportive. Most of all good leaders show a lot of attention and express supportiveness. To be supportive is a key factor for being an effective coach. (Stowell & Starcevich 2003, 46.) If your team needs to maintain confidence after a loss because they feel frustrated and are disappointed; if athletes have problems in school or at home; when they have to deal with cultural differences; the coach has to be supportive. Showing encouragement, support and understanding as a coach helps injured athletes to recover and go through rehabilitation with a positive mind-set as well (Klenk 2006). Therefore, being supportive means to observe, discuss and talk to the person involved.

Supportive behavior can be summarized with the following factors (Eikenberry 2010; Stowell & Starcevich 2003, 46-48):

- Collaborate: empower everyone around you and let them feel you act as a part of them and they will feel supported.
- Help/Assistance: find out what and how you can help and to so.
- Empathize: feel with others and recognize their feelings.
- Recognize someone's value: show that you care about others.
- Recognize their goals and interests: help others realizing their goals and support their interests.
- Communication: To listen and to give feedback is a powerful supportive behavior.
- Create positive exchanges: let others feel good after every conversation.

3.2.8 Trustworthy

Kassebaum defines trust as followed:

Interpersonal trust is an expectation about a future behaviour of another person and an accompanying feeling of calmness, confidence, and security depending on the degree of trust and the extend of the associated risk. That other person shall behave as agreed, unagreed but loyal, or at least according to subjective expectations, although she/he has the freedom and choice to act differently, because it is impossible or voluntarily unwanted to control her/him. That other person may also be perceived as a representative of a certain group. (Kassebaum 2004, in Bamberger 2010.)

The attribution of trust is very individual, depending if the person is part of a specific group or the person is seen individually (alone; one single person). The first one – also role trust – is the role as a coach. The players might not trust him as an individual but because he is the coach. But since a coach is such an important person in an athlete's life, he should be trusted as an individual. That is called personal trust. The trust perceived by a coach is so important, because that means that his athletes trust in the coach's competence, knowledge and behavior. Therefore, the coach has a high responsibility towards the athletes, thus they have expectations based on the trust. (Bamberger 2010.)

Trust involves being confident about people's competence, being optimistic that the trusty will do something for me and committed to what the truster expects. As already mentioned, trust can be dangerous as well because it is a dependable relationship. If one side does not pull through, we lose our trust in that person. (McLeod 2011.)

3.3 Coaching leadership traits

Leadership can be defined as the impact that someone can have on a group. A coach with leadership is able to influence his group towards accomplishing team goals and objectives or a collective goal. Leading can be (a) spiritual – aligning team and individual values by clearly define them; (b) mental – focus and think clearly for challenges by being prepared and effectively manage time; (c) emotional – communication, empathy and creating a climate of confidence and trust within a team; and (d) physical – proper behavior regarding values, ethics, integrity and accountability individually and as part of a team environment. (Loehr 2005, 155-157.)

According to the four ways of leading, the true leadership quality shows itself through adversity. It is all about leading a group under extraordinary conditions. The following factors are identified as the key factors for leadership.

3.3.1 Competence

There a plenty of educational options for coaches to gain and foster knowledge. As stated by Gilbert and Trudel (2001, in Cassidy, Jones & Potrac 2009, 126), most of the “youth team sport coaches work in isolation and, therefore, have tremendous freedom in the content they select to teach, and the way they structure the training programs.”

It is common sense that a coach must have a basic knowledge of the sport he teaches before he can run practices. The ability to improve a coach's performance – that benefits the learning process of the athletes as the ultimate goal of every coach – can be outlined in the following framework (Cassidy, Jones & Potrac 2009, 128-129.):

Subject-matter content knowledge

- knowledge of relevant information (rules, biomechanics and psychology)
- being able to model and adjudicate the rules of the game in the coaching session
- knowing what tactics to employ against what opposition

Pedagogical content knowledge

- knowledge of the different methods and strategies that can be adopted
- being able to apply various methods and strategies in the coaching session
- changing the methods and strategies to suit the learning preferences of the athletes

Curriculum content knowledge

- knowledge of what coaching resources are available
- being able to incorporate the ideas and activities into the coaching session
- using words to explain the drills that suit the context and the type of athletes

Additionally, it is important to recognize and understand that knowledge is not static and is highly dependent on the coach's willingness to develop his own knowledge of the sport or activity he is part of. (Cassidy, Jones & Potrac 2009, 133.) A coach has to be open-minded to new ideas and changes in the game respectively acknowledge his own strength and weaknesses. It is important to recognize that and have the will to constantly improve the own knowledge and skills.

3.3.2 Confidence

As for athletes, confidence is very important for coaches as well. If he believes in what he is capable of doing, if he trusts his abilities and his strength to successfully perform and is able to show that to his athletes it will mirror in his athletes feeling of confidence. But confidence can be unstable and thus being something you feel today (state self-confidence) or very stable as part of your personality (trait self-confidence). It is very important, as already mentioned, to believe in your abilities and expect positive

outcomes. Thus, confidence becomes a self-fulfilling prophecy. (Weinberg & Gould 2007, 323.)

The coaches' behavior is very important considering his athletes behavior. If a coach acts confident, thinks confident, uses goal mapping, uses imagery, optimizes physical conditioning and preparation for his athletes and creates a social climate, the coach himself and his athletes will be confident. (Weinberg & Gould 2007, 336.) Feltz and colleagues (1999, 2000, in Weinberg & Gould 2007, 331) have outlined coaching efficacy that defines the coaches believe in his capacity to affect his athletes and therefore have an influence on his own and thus in their athlete's confidence:

- Game strategy: coaches confidence in his ability to coach during competition
- Motivation: coaches confidence to affect the psychological skills in their athletes
- Technique: confidence in instructional skills
- Character building: confidence to influence a positive attitude toward sport

A confident coach is self-assured, ambitious, sociable, competitive, risk taking, hard working, determined, accepting, positive, goal oriented, self-aware, and accountable.

As confidence develops so do these important personality traits. According to Albert Bandura's theory of self-efficacy (as outlined in the image below), confidence can be influenced by interpretation of arousal, previous success, learning by observing, and verbal persuasion. Interpretation of arousal explains how different situations can cause different reactions. Confident coaches view their mistakes as learning opportunities and do not get down on themselves. (Bandura 1977.)



Figure 1. Four Influences of self-efficacy (Bandura 1977; 1982)

3.3.3 Commitment

Commitment is defined as a long-term orientation towards the relationship that is assured through accommodative behaviours [sic!] such as appreciating the other's sacrifices, communicating and understanding, as well as working with the other relationship member to achieve performance goals. (Jowett & Clark-Carter 2006, 619.)

As Jowett & Clark-Carter define commitment, it is about the engagement with others to fulfill the set goals – aspiration, engagement and sacrifice (Crossan, Gandz & Seijts 2012).

In studies it is shown that a coach who helps his athletes to feel competence, autonomy (freedom in the task) and intrinsic motivation (self-determined) will have committed athletes. A coach needs to create a climate that satisfies the mentioned psychological needs of his athletes. Athletes – as well as the coaches' – commitment is an intrinsic variable that shows in effort, adherence and dedication to persist in practice. The coach's effort must be to create a motivational climate. (Lukwu & Guzman Luján 2011.)

From a coach's perspective, it is important to have your athlete's committed because that shows their will to follow the "leader" what contributes in their behavior towards

sport (exercise frequency) and determines (superior) performance (Hopton, Phelan & Barling 2007, 51).

3.3.4 Organization

Organization skills starts with the coach himself. He has to be able to sort his own thoughts and ideas regarding the overall goals of the program he is working for. He needs to organize his stuff and season activities (preseason, in-season, postseason). Flexibility in his organizing abilities is key because things might not work in the future that worked in the past. Planning and organizing a season must include everything that could possibly happen during a season (injuries, disciplinary code, etc...). A successful coach has basically a plan for everything. (Sabock & Sabock 2011, 77, 105, 119.)

Barker identified analyzing, evaluation, time-management, problem-solving skills and health, safety and security skills as good organizational skills. Being well organized ensures to be in control to do the right things in the right place at the right time. That means a coach knows what and which facilities he can use, what equipment he has at hand. (Barker et al 2010, 197.)

3.3.5 Emotional control

Lazarus defines emotion as “an organized psychophysiological reaction to ongoing relationships with the environment, most often, but not always, interpersonal or social.” (2000, in Cox 2002, 192.) That means, that emotions are always a response to an environmental event – e.g. bad call of a referee. Emotions have an influence on the performance, though positive or negative emotions should be differenced. For example, anger as a negative emotion must not automatically lead to a negative performance outcome. Furthermore, emotions do just last for a short amount of time – in the worst case just for a few hours. Emotions such as anxiety, anger, happiness, pride, guilt, to name just a few emotions someone faces during competitive situations are common for coaches as well as for athletes. (Cox 2002, 192-193.) The figure below summaries the interaction of the "stress" (stimulus) and its outcome (response).

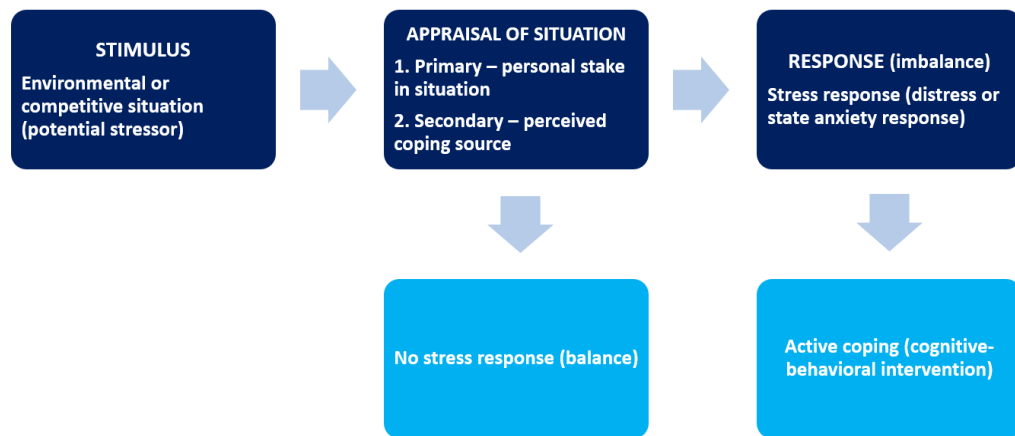


Figure 2. The stress response (Cox 2002, 194)

The response for the emotional stimulus of competition can effectively be managed through four strategies (Cox 2002, 235):

- thought control strategies: self-talk, positive thinking, thought control
- attentional focus strategies: concentration control, tunnel vision
- emotional control strategies: arousal control, relaxation, visualization
- behavioral strategies: set routines, rest, control of the environment

3.3.6 Motivation

Intrinsic motivation has some resemblance with passion. Passion is when “people engage in activities to fulfill their basic psychological needs of autonomy (a sense of personal volition), competence (interacting effectively with the environment), and relatedness (a positive reciprocal connection with others).” (Lafrenière et al. 2008, 542.) To sum it up, intrinsic motivation is the interest and like for an activity – love for the sport. Extrinsic motivation is not based on the enjoyment of the activity but on rewards. In that case, the motivation lies in something outside the activity such as money, prestige or status. (Lafrenière et al. 2008, 543.)

The coach’s motivation, a coaches’ personal orientation towards coaching can have an important influence on the athlete’s motivation. As shown in the image below, the athletes need to perceive autonomy, competence, structure, involvement and relatedness. The coach must provide that climate in his coaching environment and he must

have in mind that it is a reciprocal process. (Mageau & Vallerand 2003 885-886.) The figure below shows the synergy of the coach-athlete relationship regarding the motivational climate. It shows, as described above, the influence the coach has on his athletes motivation. The coach's behavior is responsible to create such a climate that can enhance his athletes performance through intrinsic and extrinsic motivation.

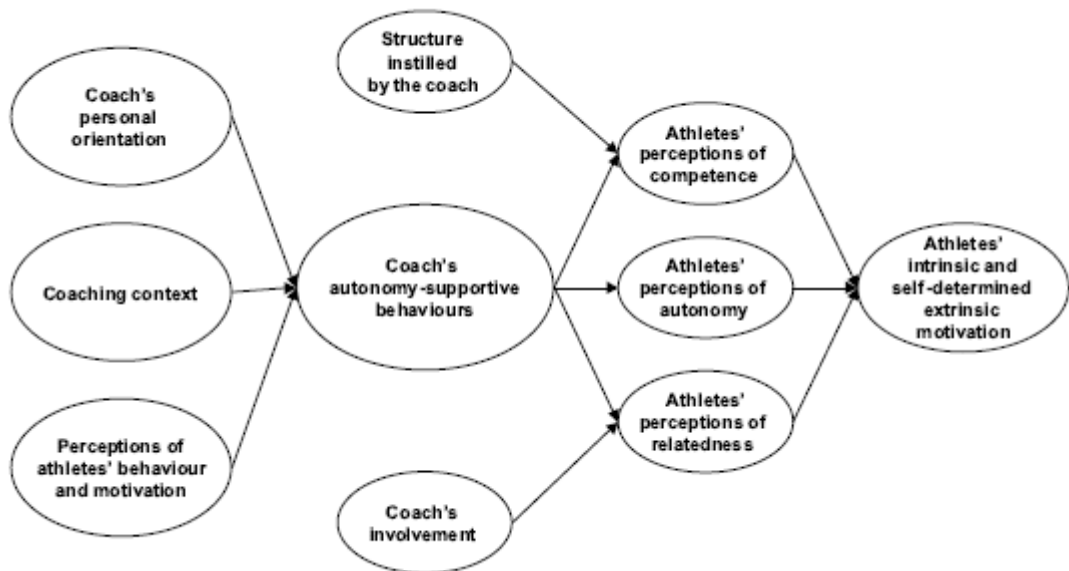


Figure 3. The motivational model of the coach-athlete relationship (Mageau & Vallerand 2003, 584)

3.4 Team environment

What is a great team? The coaches job is to create a team that is cooperative and coordinated as a group where each individual acts together as a team for a common cause or goal. A functional team works together as an ensemble and where individual achievement is secondary but necessary for the common outcome as a team. (Veach & May 2005 171-172.)

The coaches' aim must be to form a group of individuals into a team. He can do so by implementing the following quality factors of a functioning team environment.

3.4.1 Goals & objectives

A goal is, as Locke defines, “what an individual is trying to accomplish; it is the object or aim of an action.” (Locke et al 1981, in Kingston & Wilson, 75.) The coach must set goals and objectives individually and as a team and that, finally, can be very important in team building. The goal-setting should be short-term and long-term as well and both the coach and the athletes should be responsible in setting those goals. (Veatch & May 2005, 175.)

Veatch and May (2005, 174) have identified some components in strategies for goal-setting:

- Initial clarification of the intervention strategy in terms of time, timing, and format.
- Educational lectures, seminars, and workshops to outline the principles of individual and team interventions and their value to team success.
- Working with group sessions to build team cohesion and communication by identifying, discussing, and achieving consensus on the relationship of individual and team goals.
- Implementing follow-up sessions that address performance barriers identified by the team.
- A feedback process to evaluate the effectiveness of the intervention and develop further intervention strategies.

Generally, goals have to be set difficult (optimal challenge) and specific enough to lead to higher levels of performance respectively to maximize them. Proper goal setting enhances athlete’s motivation and affect the athlete’s behavior because they can reflect the ability and success. (Kingston & Wilson 2009,76-77.)

3.4.2 Norms & rules

"The sense of rules and norms in sports is to realize the aims of sports and to optimize the outcomes of sports." (Lumer 1995.) Working with a group of athletes – as well as

for individual athletes – norms and rules are needed to ensure that everyone behaves in a manner that is consistent with the best interest of the team.

The definition of a norm is the "general way of acting (of certain people under certain conditions during a certain period)." (Lumer 1995.) They are the standards that govern the behavior of the members within a group (Parks 2004).

Rules can be technical to reach certain aims (e.g. warming up before practice) and the rules of the game (e.g. what is allowed respectively counts in the game) that standardize the game and therefore make it comparable (Lumer 1995). From a coach's perspective, the technical rules are very important. It is essential to stick with the rules, because otherwise the group is difficult to control and to keep on track. Nevertheless, they are essential to many teams and their success. (Parks 2004.) They have to be established and accepted by each individual of the group (Kropvelt & Pelland 2006).

A group that does not have clear, agreed upon and fair norms and rules will lack direction and the coach will eventually lose control of the athletes leading to a team with very poor cohesion. One of the easiest ways to disrupt team cohesion as a coach is to have unfair rules and to discipline athletes in an inconsistent manner. This enhancement of cohesion is possible because both coaches and players will have to withhold a level of discipline which will lead to respect between both parties. When rules are enforced equally, players will feel that they are treated fair which will enhance their desire to be a part of the team. Clear norms and rules also ensure that the players are not taking actions which would harm their teammates or the team. (Parks 2004; Kropvelt & Pelland 2006.)

3.4.3 Process-orientation

Goal setting, as already outlined, is important. Nevertheless, on the other side of that coin is not the outcome but the process orientation. Being process oriented means to focus on improvement. Focusing solely on the outcome rather than the performance leads to the risk, that when the goal is once achieved they stand still and the athlete is not realizing that they are happy with their achieved laurels. It is important to set pro-

cess-oriented goals that focus on one aspect. On one specific task they want to develop and therefore, in doing so, serve to achieve their overall set goal. The coach, in that environment, does not judge the outcome of the performance but allows his athletes to focus on the execution of the performance. In this climate the athlete focus on the process, on a specific task during performance. (Edger 2011; 2012.)

To sum up process-orientation, it represents the path to the outcome goal. Coaches need to establish the proper actions that are based on skill development and the creation of an environment where the athlete can perform at his best. Therefore, focusing on process goals are the stepping-stones to achieve performance levels that ensure success and the achievement of the set outcome goal. (Burton & Weiss 2008, 357.)

3.4.4 Team cohesion

A team is cohesive if each individual member feels appreciation and support for his efforts. Team cohesion can be enhanced by fulfilling the quality factors like communication, respect, role clarification of each athlete, team goal-setting, creating an environment where the athletes feel comfortable with each other outside of the sport field, leading by example (coach's motivation and effort), skill and character development (behavioral components), empowerment and accountability for team members. (Veach & May 2005, 177.)

3.4.5 Autonomy

Athletes want to feel autonomy and empowerment being part of a team environment. They don't want to feel being property of the coach or the club. Enhancing autonomy for the players increase first and foremost the level of motivation for an athlete. It is, as Mallett stated (Mallett 2005, in Ahlberg et al. 2008), the "key component of their role" to enhance and develop that self-motivation. Autonomous athletes are included in the decision-making process that affects the team such as training times, tactics or learning activities and are part of creating the identity for the team – athletes should feel ownership of their own decision through involvement. To summarize, athletes who feel autonomous and empowered are able to lead themselves regarding to achieve their set

goals. (Kidman & Hanrahan 2011, 59; Ahlberg et al. 2008; Conroy & Coatsworth 2007.)

Nevertheless, the coach is still in charge and responsible for running the time. Hence, he can create an environment that allows to work with his athletes in such an empowered team environment.

3.5 Practice environment

Every coach should have the mind-set that he helps each and every athlete to live up to his potential. Especially in team sport that seems to be quite difficult, thus the coach has to take care of many athletes. Nevertheless, the coach has the responsibility to create an environment that enhances his athlete's skill development. (Barker et al 2004, 203.)

3.5.1 Optimal challenges

One way to keep athlete's motivated to participate in sports can be described with flow. That means that if ability and challenge are matching the athlete will be in a flow zone and therefore have his thoughts totally focused on the activity in hand. That is "because we feel in control of ourselves and our environment." (Martens 2012, 108.)

As it can be seen in the image below, we need to create an environment where the athlete is not bored or anxious to perform. For example, if the athlete's ability is very high but the challenge is very low, he will feel bored and therefore may lose his motivation to participate. As already mentioned, the coach has to design his drills based on his athlete's skill level. The practice task should be difficult enough to be challenging, but not too much so the athlete can still have success. This is necessary but not easy to do, thus – especially in team sport – the number of players is relatively high and their abilities vary regarding to each other. Nevertheless, the optimal challenge is to teach the skills that match the athletes abilities and to not the other way around - match the athletes capabilities. (Martens 2012, 109; Weiss 2004.)

As mentioned in this paragraph, the figure below shows the synergy of challenge and ability. When both match, the athlete is in his "flow zone" and therefore his learning experience (development) is in its perfect state (condition).

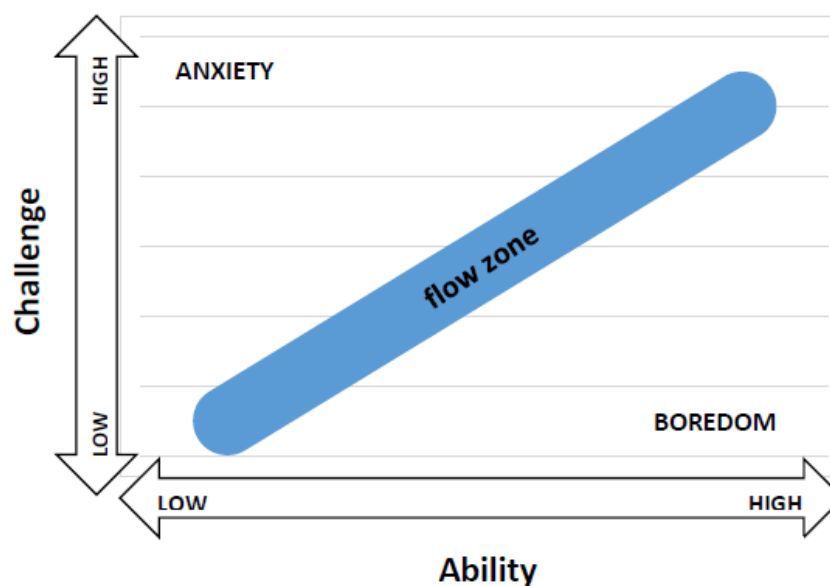


Figure 4. Matching challenge of the task to the ability of the athlete (Martens 2012, 109)

3.5.2 Use of time

Graham defines proper use of time as “the time that athletes are actually engaged in the targeted task.” (2008, in Kidman & Hanrahan 2011, 82.) It is important to use practice time wisely and effective to get the best developing outcome. But moving as much as possible during practices does not mean to use the time properly. It is about practicing what is supposed to be practiced. Doing so, it is important to have a well planned practice plan. That means to organize the practice that minimizes managerial tasks such as non-instructional tasks (e.g. gathering players, demonstrations, organizing teams, setting up drills,) and administrative duties (passing out gear, balls), and to maximize practice time that focus on the defined task or subject of the practice (non-managerial). (Kidman & Hanrahan 2011, 82-83.)

Every coach will confirm Renshaw’s suggestion "that if athletes spend more time on optional learning activities, they will have a higher success rate." (Renshaw 2010, in

Kidman & Hanrahan 2011, 83.) Especially in youth sports where practice time is very short and the amount of practice sessions per week might not be appropriate for effective development. Therefore the efficiency must be high. Being able to provide as much practice as possible that emphasizes on the task, high participation rates during drills and that reduces managerial time must be the goal when planning practices. Thinking about the well known rule of 10.000 hours (Ericsson et al 1993) to master a new skills - although controversial discussed - and the fact that many sports require a wide variety of different skills that have to be mastered at the same time to be successful (e.g. hockey when skating, passing, decision-making happens at the same time), it is even more important to focus on proper use of time when planning practices.

3.5.3 Practice plan

As already mentioned, a successful coach is well prepared and organized and has a plan for every contingency. An important part in that aspect is the practice plan. Practice plans should be planned in advance and not last-minute, preferable after the last practice session in the process of analyzing the practice execution from a coaches and players perspective. (Sabock & Sabock 2011, 243.)

Sabock and Sabock (2011, 243-244) have provided the following guidelines when writing a practice plan:

- variation
- well organized (time for drills; key points, guidelines, roles of assistant coaches)
- planned for maximum participation (be prepared for different numbers of participants)
- efficient use of time
- maximum use of space and facilities
- outline the progression in teaching skills
- teach new things, to review, to correct, and to prepare for the next contest
- use of the whole-part-whole method when teaching something new
- practice plans should be adjusted for time and intensity as the season progresses

Table 5. Making practices more efficient (Martens 2012, 173)

TIME WASTERS	TIME SAVERS
Drills in which most of the athletes' time is spent waiting	Reorganize drills so athletes are more active
The coach talks too much	Keep demonstrations, explanations, and feedback concise
Moving between activities in the practice schedule	Be sure you have a practice plan so you know what you'll do next, and develop routines for athletes to follow when changing activities
Practicing things that don't help athletes play the sport better; selecting useless drills	Don't spend too much time on techniques athletes already know well; work on those that need the most improvement
Dealing with athletes' misbehavior	Separate the misbehaving athlete from the team, have the team continue practicing, and then speak with the misbehaving athlete
Insufficient or ill-prepared facilities or equipment	Be sufficiently organized to make the best use of the facilities and equipment available

Considering effective and efficient practice planning the coach has to consider the optimal time management. He has to be organized and structured in his planning routine. Therefore he needs to have an understanding of what saves and wastes time during practices. The table above summarizes the key points of time management (time wasters and time savers) when considering an efficient practice plan.

3.5.4 Individual skill development

“Learning is a relatively permanent improvement in performance as a result of practice.” (Martens 2012, 162.) The coach must create (a) an environment that allows for effective and efficient skill learning and (b) pay attention to instructions and feedback when he wants to develop athlete's technical skills (Farrow 2013, 171). The coach must have in mind, as Barker identifies, that athletes need specific conditions to learn effectively. Generally athletes learn best when they are interested and motivated; actively involved in their learning; able to build on their own previous experiences; able to see how things fit together; able to see improvements in their performance. (Barker 2010, 206.)



Figure 5. Developing skills (Barker et al 2010, 208; Martens 2012, 167)

As Barker and Martens (2010, 208; 2012, 167) outline - as shown in the figure above -, four steps to take into considerations when teaching skills development:

- Introduce and explain: use words and actions – simple and clear communication to introduce the skill. Explain how it is used in game situations and how it relates to previously learned techniques. Finally check if the athlete understood.
- Demonstrate: the technique should be demonstrated adequately, that goes hand in hand with proper explanation at the same time.
- Practice: the athlete's should practice the new technique as soon as possible after the introduction, explanation and demonstration. The coach has to decide if he wants to practice the skill as a whole or broken down into parts before putting them together again.
- Analyze and correct: finally the coach has to observe and evaluate the performance and correct it if necessary. The coach must give feedback by using video sessions or simply by giving corrective and positive instructions.

Martens (2012, 172) defined seven principles for better technical skills practice:

- Have athletes practice the right technique
- Have athletes practice the technique in game like conditions as soon as they can
- Keep practices short and frequent when teaching new techniques
- Use practice time efficiently
- Make optimal use of facilities and equipment
- Make sure athletes experience a reasonable amount of success at each practice
- Make practice fun

3.5.5 Individual character development

“Character is not caught, but taught, in sport, exercise, and physical activity settings.” (Weinberg & Gould 2007, 557.) We all believe that participating in a sporting environment is the systematic and organized delivery of fair play, good sporting behavior and build one’s athlete character. Although there is less evidence, we do believe that the coach has a lot of influence in doing so. Nevertheless, there is a winning for all costs mindset in competitive sports, already in youth sport. But the coach has the responsibility to develop character as well, since they do influence many values, intentionally or not. Have in mind that the vast majority of athletes we coach is not able to make a living from the sport and they need the skills to be successful in the society.

The coach must enhance strategies for character development. Weinberg and other colleagues (2007, 560-562; Omar-Fauyee 2012) have defined some strategies which shows the option and chance to guide character development in practice and competition – sporting environment:

- Definition of good sporting behavior: identifying positive and negative sporting behavior
- Reinforcement and Encouraging of good sporting behavior
- Model appropriate behaviors: coach as a role model
- Explain why certain behaviors are appropriate: rational explanation of good and bad behaviors.
- Discuss moral dilemmas and choices
- Teach cooperative learning strategies
- Create a task-oriented motivational climate
- Transfer power from leaders to participants

As Weinberg & Gould (2007, 560.) outline, good sporting behavior include proper behavior towards officials, opponents, teammates, spectators and the ability to accept rules and infractions. The table below summarize examples of good and bad behavior considering the above mentioned points that show individual character.

Table 6. Example of written code of good sporting behavior (Weinberg & Gould 2007, 560)

AREAS OF CONCERN	POSITIVE SPORTING BEHAVIOR	NEGATIVE SPORTING BEHAVIOR
Behaviors toward officials	Questioning officials in the appropriate manner (e.g., lodging an official protest; having only designated individuals, such as a captain, address officials)	<ul style="list-style-type: none"> • arguing with officials • swearing at officials
Behavior toward Opponents	Treating all opponents with respect and dignity at all times	<ul style="list-style-type: none"> • arguing with opponents • making sarcastic remarks about opponents • making aggressive actions toward opponents
Behavior toward teammates	Giving only constructive criticism and positive encouragement	<ul style="list-style-type: none"> • making negative comments or sarcastic remarks • swearing at or arguing with teammates
Behavior toward spectators	Making only positive comments to spectators	<ul style="list-style-type: none"> • arguing with spectators • making negative remarks and swearing at spectators
Rule acceptance and infractions	Obeying all league rules	<ul style="list-style-type: none"> • taking advantage of loopholes in rules (e.g., every child must play, so coach tells unskilled players to be sick on day of important game)

4 Quantitative method – questionnaire

The purpose of self-assessment is to describe the status quo. Therefore the quantitative method of a questionnaire is used. It's advantage is to measure a large number of data to provide a broad picture of the actual, existing situation relatively quickly and easy. Furthermore the data can easily summarize the identified patterns with graphics. (Hale & Graham 2012, 96; Rugg & Petre 2007, 35.) As Gratton & Jones (2010, 128-129) identify, using a questionnaire has the following advantages:

- Accessibility
- Potential reduction in bias
- Anonymity
- Structured data
- Increased time for respondents

Nevertheless, creating a questionnaire hide some challenges that have to be taken into consideration.

4.1 Reliability

Reliability is the “ability to measure the same phenomenon consistently when the conditions of measurement are kept constant.” (Hale & Graham 2012, 101.) That means that no matter who, when and where and under which circumstances, that the questionnaire can be done the same way and you still get the same answers. (Hale & Graham 2012, 104; Rugg & Petre 2007, 224-225.)

4.2 Validity

Validity is the ability that you really measure what you want to measure. In other words, how close the results display the reality. (Hale & Graham 2012, 104; Rugg & Petre 2007, 226.) For better understanding of validity we can use physical testing. If you want to measure how far an athlete can jump, you cannot conduct a bench press test since it is a measurement tool for upper body strength. Therefore, if you want to

find out something about approachability, you need to specifically ask for it. Each question must address the targeted issue only to get a valid result.

4.3 Scale

We choose to use a semantic differential scale, since it is the most useful way to assess answers without forcing the respondents into a choice he feels uncomfortable respectively that is extreme. A semantic differential scale measures “the respondent’s reaction to a specific concept using a scale with contrasting adjectives at each end.” (Gratton & Jones 2010, 135.)

Commonly, for a semantic differential scale, a five point scale is used because of several advantages. They are more easily understood than when using a scoring system with more points. As scientific studies showed, respondents clearly favor these types based on the fact that they allow to express one’s personal opinion more suitable. (Garland 1990.)

Nevertheless, we choose to use a four point scoring system. We found out, that when compare the coaches and athletes questionnaire it gives a better picture of the answers and therefore easier to provide techniques for the factors that are lacking quality.

4.4 Length of questionnaire

The quality of surveys or questionnaires are not measured by its length. The challenge is to keep “the questionnaire as short as possible, yet ensure that it will provide all of the necessary data.” (Gratton & Jones 2010, 131.)

Being aware of that fact – simpler is better – we finally came up with 73 questions. It seems a large amount of questions. Nevertheless, each quality factor does not have more than three questions.

4.5 Piloting the questionnaire

Considering all the factors described above, an important step is to pilot the questionnaire. As Gratton & Jones (2010, 140-141) outline, piloting the questionnaire serves some important functions, such as:

- To check that the wording of the questionnaire is clear, unambiguous and understandable to the intended sample.
- To check that the sequence of the questionnaire is clear and logical to respondents.
- To check the administration of the questionnaire, from its initial distribution to receiving the completed questionnaire.
- To allow you a “dry run” at analyzing the data collected from the questionnaire.

5 Field observation - video analysis

The field observation consists of different parts. The first part of the observation focuses on the type of feedback. Furthermore, the field observation analyzes the practice environment and finally includes an observation of the repetition for individual athletes. The aim for the field observation is to shape the awareness from a coaches' perspective during practice activity. Providing this information for the coach should enhance further development in the coaching effectiveness and efficiency.

5.1 Feedback - reinforcement

The field observation focuses on the reinforcement, one type of feedback a coach can deliver to his athletes during training sessions. Reinforcement can be provided through verbal and non-verbal communication. Using positive or negative reinforcement is the coaches' everyday job, thus his goal is to change his athletes behavior. The coach wants to create a climate that help the athletes to be motivated in achieving their set goals.

It is very easy to deliver criticism than praise and positive reinforcement, yet it is important to recognize the athletes' effort positively and support them (Horn 1987; Hardy, Burke & Crace 2005, 199). Receiving especially positive reinforcement for their performance, athletes "develop and exhibit other positive attributes and behaviors such as intrinsic motivation, high self-esteem, low performance anxiety, and persistence at achieving task mastery." (Horn 1987.)

5.1.1 Definition

Reinforcement is a function of feedback. It is defined as an "event following a response that increases the likelihood that the performer will repeat the response under similar circumstances." (Schmidt & Wrisberg 2008, 291.) If for example a hockey coach shouts to a player after a good pass, "Good work!" the coach uses reinforcement – he wants the player to repeat the same action again under the same or similar circumstances. There are 3 types of reinforcement (positive, negative and punishment),

thus for the field observation the focus is on the positive and negative reinforcement. The definitions are as followed (Schmidt & Wrisberg 2008, 291.):

- 1) negative reinforcement: an event following a response that removes an aversive condition and increases the likelihood that the performer will repeat the response again under similar circumstances
- 2) positive reinforcement: an event following a response that increases the likelihood that the performer will repeat the response again under similar circumstances; similar to a reward

Generally, positive reinforcement does more likely lead to greater learning outcomes. The information delivered through positive reinforcement is easier to interpret for the recipient because it tells them what is acceptable respectively what is better and more desirable. Therefore it creates a positive climate that increases motivation and encouragement for learning. (Schmidt & Wrisberg 2008, 292.)

5.1.2 Categories

The first part observes the coach's verbal and non-verbal behavior during a practice session. It is based on six behavioral categories. These categories are loosely based on the CBAS, but uses instead of 12 just six categories of the coaching responses to a player's performance – reinforcement and non-reinforcement (Smith, Smoll & Hunt 1977.):

- Specific positive reinforcement: when an instructor positively reinforces a single player or student
- General positive reinforcement: when an instructor positively reinforces the team or class
- Specific negative reinforcement: when an instructor negatively reinforces a single player or student
- General negative reinforcement: when an instructor negatively reinforces a team or class

- Specific technical instruction: when an instructor instructs a player or student
- General technical instruction: when an instructor instructs the team or class

5.2 Practice environment

The second part of the field observation analyzes the practice environment. The question is, how does the coach organize and plan his practice and how effective and efficient he is in doing so. The key variables are "use of time" and "organization".

5.2.1 Planning and organization

As already described before in this work (see chapter 3.5.2), it is important to use practice time wisely to have the athletes being active respectively working on a targeted task as much as possible - deliberate practice in a sense that a coach knows what he is practicing and having his athletes actually engaged in doing what the coach has planned.

A very important aspect in the use of time is the managerial aspect (demonstrating, setting up drills, passing out practice material, and so on). That part should be as short as possible compared with the non-managerial time. (Kidman & Hanrahan 2011, 82-83.)

5.2.2 Variables

The variables for the field observation of the practice environment are:

- | | |
|-------------------|--------------------------|
| - total time | - feedback during drills |
| - action time | - breaks |
| - time explaining | - wasted time |

5.3 Individual athlete repetition

Ericsson's rule of 10.000 hours or practice to master a new skill (Ericsson et al 1993) is well known - although controversial discussed. However, despite the many factors that have to be taken into account for an athletes' development (see chapter 3.5 practice

environment), repetitions are undoubtedly a key factor for learning and improving new skills. Therefore, planning a practice should take the number of repetitions for each athlete into consideration.

6 The aims of the project

The aim of the tool was to evaluate coach's skills regarding his behavior. Many educational systems and strategies for coaching emphasize on the development of athletes from a coach's perspective. It is about the so called X's and O's – how to teach the technical and tactical aspects of a given sport. But the skills of teaching those in an effective and efficient way is many times left out. Furthermore, coaches are often left alone once they finished their education and start working. Often, there is no higher instance to control and to provide feedback to foster their strengths and to develop weaknesses respectively identify areas of improvement. Coaches depend on their own will for self-education and their experience and consequently, lose their awareness of their own behavior. Therefore, the project aims directly on that open space of coaching to provide a scientifically grounded analysing tool for self-development in the psychological approach of good coaching. The self-assessment tool consists of two analysing tools, the actual self-assessment (questionnaire) and a video analysing tool (field observation), to provide that kind of educational support from a coach's perspective.

The main emphasis of the project is the self-assessment tool. It focuses on the psychological traits of good coaching. That is the behavioral aspect of teaching and coaching considering the defined categories and its quality factors, as mentioned above. The tool consists of two identically surveys for the coach and his athletes to evaluate differences in the perception of the coaching style. The athletes perspective and their perception of the actual coaching behavior is connected with the coaches survey results to finally illustrate differences. In doing that comparison, the coach is confronted with his own perception and his athletes perception to highlight strength and areas of improvement for future changes in his coaching behavior. Based on the final result and in the identification of his personal strength and weaknesses, the coach can adjust his behavioral approach towards his athletes to be more effective and efficient in his ways of teaching and coaching. The goal is to provide a helpful tool that can be applied at regular intervals to maintain more self-awareness and to periodically adjust to the

changing psychological demands of his athletes – especially in youth sport they can change rather quick and have to be taken into consideration from the coach.

The second part of the tool focuses more on the actual working behavior on the field. Although, the results of the self-evaluation can be diametral opposed compared to the athletes perception, theoretically a coach knows how to coach and teach effectively and efficient. Therefore, the video analysis tool provides a more precise evaluation of coaching behavior and compares the actual self-awareness with the real life work on the field. Knowing theoretically everything but not being able to apply it on the field is a common fact in coaching. To see yourself how you are actually doing on the field can add extra information and supplement the survey results.

The tool is planned to be simple and easy to use as a self-evaluation tool and is meant to support the coaching process. The aim is to increase the self-awareness and understanding of their coaching behavior and to finally support their own development. The coach can learn something about his strength and weakness of coaching compared to the athletes awareness of how he is actually coaching them. This tool is developed to be used not only for ice hockey coaches but for all sports, team sports and individual sports.

The quality factors of good coaching as developed for this tool gets, in our opinion, more and more attention in todays coaching, since the coach´s interest for his athletes must increase to match todays demands of young athletes. This tool has been developed because of our interest of becoming better coaches and because it gave us an idea about the quality factors of good coaching, as well as an understanding of the difference in the coach´s self-awareness compared to the athlete´s actual perception of his actions. This tool provides the essential factors of good coaching behavior and gives as an end result, an easy assessment of the strength and weaknesses of coaching.

7 The implementation of the project

This project started in fall 2012 as a non-school project with Markus Arvaja. He approached us with the idea of developing a tool for coaches to assess and increase their self-awareness. He experienced coaches who are complaining about the fact that the main focus of sport coach educations is how to develop the athlete - learning about skills, tactics of an athlete's perspective - but not how to develop the coach to be able to teach the athletes properly. That was the starting point to create our first working draft.

We first created the quality factors of good coaching and the questionnaire to evaluate them as valid as possible. The areas we found to evaluate are:

- communication
- coach-player relationship
- coaching leadership traits
- team environment
- practice environment

The main categories were divided to sub-categories (quality factors), for example communication was divided to verbal, non-verbal, feedback, listening and conflict resolution. The next step was to start a first working draft, where we shared the categories between us and started to search definitions, criteria's that will be assessed, theories, resources and how to assess those specific categories.

After finding the areas for evaluation we started to build our questionnaire for the players and coaches. We used already existing questionnaires for guidelines to find out the right questions for each category. Both questionnaires included the same questions, for the coach and his players. The final questionnaires have a total of 73 questions. In the coaches questionnaire the questions are straight to the coach, how he is seeing his own actions. In the players questionnaire the questions are about how the players see the actions of the coach.

After we finalized the first version of the questionnaire, we tested it with a competitive U14 ice hockey team of Lahti. The purpose of the first test was to find out if the players and coaches understand the questions. There were some misunderstandings with the players so we had to evaluate the questions again and change the form of some of the questions that caused misunderstanding.

The next step was to test the tool infield. We contacted a junior soccer coach - competitive, local U14 soccer club - and asked if we could come to film his practice and use this tool with him for the first time. For the field observation - the infield testing - we used two different cameras, one for filming the whole soccer field to find out the overall picture of the practice and the second camera to film the coach to evaluate his body language and movements during the practice. The second camera also had microphone on, so we could hear and record everything the coach is saying. This was to evaluate the way of tone, the way of feedback and what words the coach is using when talking to players. After the practice the players and the coach answered the questionnaires. We sent the copy of the second camera footage to the coach, so he could evaluate his own performance before we have a feedback session with him.

For the analysis of the questionnaires, we counted the average values for each questions, then we marked the questions where the results were high scores and low scores. We also compared the coaches' answers to the player's answers to find out if there were some major differences of the results. For the field observation analysis, we watch the footage and went through coaches feedback, words and tone and made notes about topics we would need to talk with the coach. Tomi Paalanen, our teacher of pedagogic was also with us analyzing the video.

Now, with the results and notes from the infield testing analysis, we had a feedback session with the coach. The feedback session started with the coach telling about his own findings from the video, then we gave him feedback about the parts of practice he should give more considerations. We went through the questionnaires with the coach and gave him the feedback needed. In the end he also gave us feedback about the tool

and we talked about some ideas to improve that. Overall feedback was very positive and he thought that the tool is very useable and helpful.

After we finalized our questionnaires, we started to build a manual for coaches we evaluated. The manual consists of definitions for the areas we evaluated and guidelines for coaches to develop those areas.

The last part of the project was to create a web page where coaches and sport clubs should be able to easily purchase the tool in the future when it is finally finished.

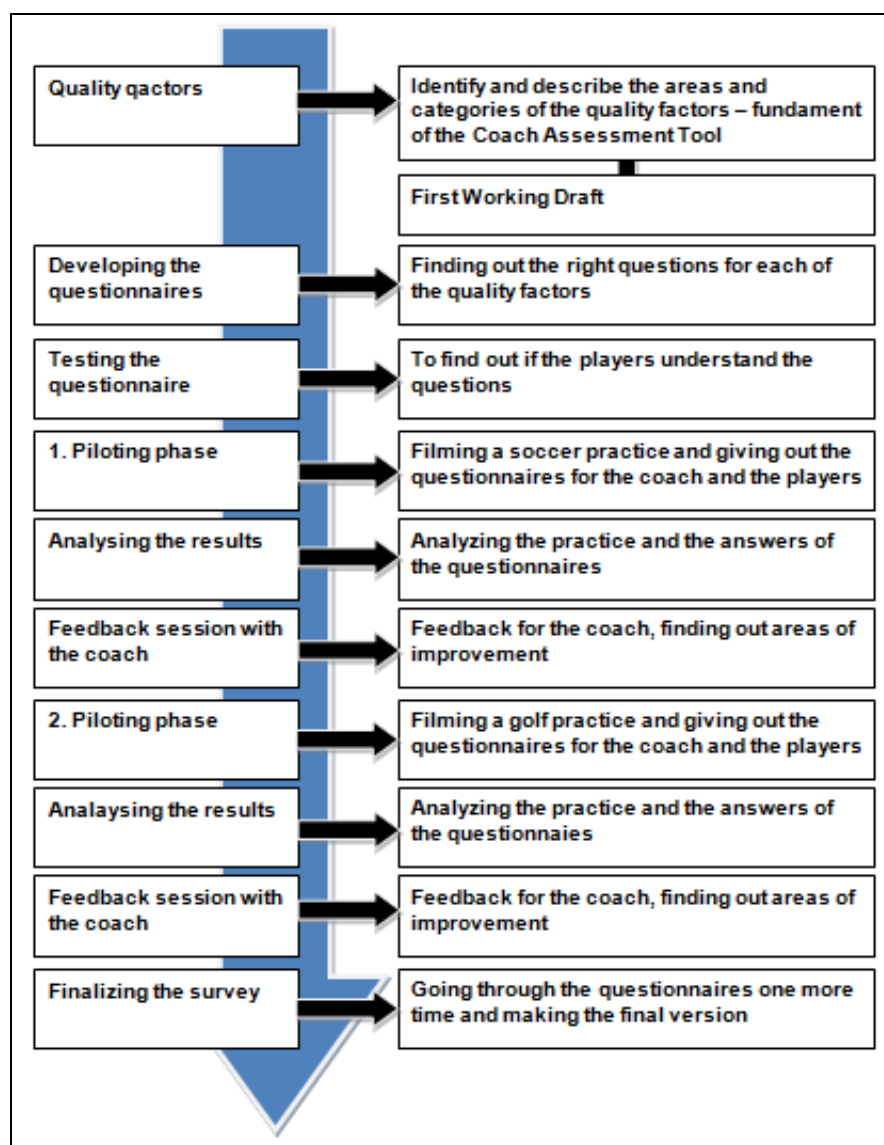


Figure 6. Timetable

8 The description and results of the project

The final version of the Coach Assessment Tool includes questionnaires for the coach and the athletes, the video analyzing tool, a manual for coaches to develop their own coaching skills and a webpage.

8.1 Questionnaire

The questionnaire is the main analyzing tool of the Coach Assessment Tool. The main goal of the questionnaire is to find out the differences between the coaches perception of his behavior and actions and the player's perception of the coaches behavior and actions. The analysis of the results and it's comparison can be made with all quality factors within the five categories or just with each the category by itself. The results of both questionnaires are confronted with each other, to finally identify the areas of improvement – the areas of the quality factors that have to be developed in order to improve one's coaching ability. The tool is made to show the results very clear and visible with images. Being below or above the results of the athletes show which factors have to be taken into consideration by the coach for further development respectively improvement of his own behavior and actions when teaching and coaching his athletes.

The questions are evaluated with a scale from 1 to 4 (1=Never, 2=Sometimes, 3=Often and 4=Always). For some questions we had to flip the scale to get the right results of the answers. Furthermore, the questionnaires for both coach's and athlete's are identical to get valid and reliable results. This was essential when creating the questionnaires since the comparison between both is the goal of the analysis. The total number of questions in both questionnaires is 73. The challenge was to create a questionnaire that is easy to use and makes it clear for everyone. Therefore, we tried to make visible differences between each category. That should also allow the user to analyze just one or a few of the categories and not all if wanted.

8.1.1 Categories and quality factors

The questionnaire is based on five main categories. Those categories are divided into the sub-categories, the so called quality factors. All the questions are based on these quality factors. The main categories and sub-categories that we used for the Coach Assessment Tool are:

1) Communication

- Verbal communication
- Non-verbal communication
- Feedback
- Listening
- Conflict resolution

2) Coach-Player Relationship

- Player's level of motivation
- Fairness
- Patience
- Approachable
- Open-minded
- Individual concern
- Supportiveness
- Trustworthy

3) Coaching Leadership Traits

- Competence
- Confidence
- Commitment
- Organization
- Emotional control
- Motivation

4) Team Environment

- Goals & objectives
- Norms & rules
- Process-oriented
- Team cohesion
- Autonomy

5) Practice Environment

- Optimal challenges
- Use of time
- Practice plan
- Individual skill development
- Individual character development

8.2 Video analyzing tool

The second analyzing tool in our Coach Assessment Tool is the video analyzing tool. The main goal of the video analysis is to assess the coaching behavior during actual training sessions. The video analyzing tool is an optional feature in our product. It seems to be very important for self-assessment to see yourself working from an outside perspective. There is not just a difference between your own behavior and actions compared to your athletes perception of it but also with yourself. The difference between "how you think you act" and "how you actually act" in fact can be diametrically opposed. To analyze the coach's behavior and acting from an outside perspective the video analyzing tool as part of our Coach Assessment Tool is a big part and very important. To have a holistic approach for self-evaluation of one's own performance the video tool is essential.

For the evaluation of the coach's performance via video we choose the following concept: Analyzing solely the coach and his performance - mainly verbal and non-verbal behavior and actions - and the overall organization of the practice. Therefore we used two cameras for filming the practice. One that was directed at the coach for the duration of the whole practice. In that case, the coach also wears a microphone to record his verbal inputs during the practice (feedback, directions and so on). The second camera is filming the whole practice from a larger perspective to get an overall picture of what is happening on the field during the practice (use of time during practice; repetitions of athletes, and so on)

The video tool has the following categories and sub-categories to evaluate solely the coach and the whole practice:

1) Feedback

- Specific positive reinforcement
- General positive reinforcement
- Specific negative reinforcement
- General negative reinforcement
- Technical instruction
- Individual feedback
- Amount of team feedback
- Amount of individual feedback

2) Body language

3) Use of assistants

4) Use of time

- Action Time
- Breaks
- Time explaining
- Wasted time

5) Individual repetitions

- Individual player repetition
- Overall drill time
- Time per repetition

6) Organization (Practice Plan Evaluation)

8.3 Manual

The most important part of the tool is the manual since self-development is the key! Having the results and awareness of the perception of one's own behavior and actions the next step is to find the right way to do it right. For example, if your communication is not good enough respectively rated lower by your athletes than you think you are actually communicating with them, you need guidelines to do it better. The manual basically is based on the description of the quality factors of good coaching (chapter 3) in a less theoretical way but with practical guidelines how to improve those factors for yourself. The manual should not just present ways to improve your own behavior but to give a short understanding of the pro's and con's of the athletes behavior when done wrongly or the right way.

8.4 Homepage

The ultimate goal is, based on the interest that we had for our product, to offer it on a platform that allows us to easily provide it for-profit. Therefore, we created a homepage for our Coach Assessment Tool.

Creating a homepage for our was the final step of our project. Having the goal to create a tool that can be used by any coach and any sport worldwide, it was just a practical next step to implement a webpage for our product. The homepage of the Coach Assessment Tool should include all necessary information and tools necessary for the self-evaluation. Furthermore, the idea was to purchase the product and to do so with a webpage seemed the easiest way to offer that. Finally, we already get some interest for our product as well, what made it even more important to find a way to spread our product and to make the access to it as easy and comfortable as possible.

We had many discussions how to do it and if we should create our own homepage. That made it quite complicated in the first steps because it needs some investments since there are certain costs when creating your own homepage. Because it still is and was a project and no serious business yet we choose to make our homepage with a free version. Therefore we worked with "weebly" (<http://coachassessment.weebly.com>). The first step was to create a webpage that fits our ideas. We tried and tested different user-friendly and easy and clear versions for our webpage.

The information that the homepage provides at the moment are the following points:

Our mission

- To improve coaches self-awareness of their coaching behavior and the impact this behavior has on their athletes
- To identify coaching behavior strengths and areas to improve
- To help the coach improve coaching behavior through practical development methods

Our services

- Coach behavior questionnaire
- Self-assessment of coach's behavior
- Athlete-assessment of coaching behavior
- Field analysis of coaching behavior (optional)
- Coach profile based on analysis of assessments

- Coach development goal setting template
- Practical behavior development manual

Coaching behavior questionnaire

- Basic information and explanation of the questionnaire

Field analysis

- Basic information and explanation of the field analysis

Coach profile

- Basic information, explanation and examples of the coach profile we provide

Coach development goal setting template

- Basic information and explanation of the goal setting template

Coach development manual

- Basic information and explanation of the coach development manual

As already mentioned above, our goal is to finalize our tool in a way that it is made available to purchase for every coach and sports club interested in developing their sport program. When designing our webpage, the most difficult part was to provide each tool and make it purchasable via our webpage as easy as possible. Our idea was to create a download version for our questionnaire that sport clubs get when they sign in and purchase the self-evaluation tool of our Coach Assessment Tool. After finishing the survey they should upload it on the webpage again and get a proper analysis of their assessment. The analysis they would get back should be a system that automatically analysis the results of the questionnaire to provide the results. Additionally with the final result of the analysis the customer should get the manual for good coaching where all categories and quality factors are broken down to study them and implement them for their own coaching.

The "field analysis" that is provided with our video analysing tool is optional on our homepage. If a club that is interested in using that tool as well for their evaluation it can be purchased as well at our homepage. In that case we provide the variables that should be used for the "field analysis", yet they have to use their own cameras and microphones. In the future it should be possible to upload the video on the homepage and a program analyzes all key points automatically.

The webpage that was created during our work as a group just represents a first step to get an idea how a final version could look like if we are really able to purchase it. The next step - if the final version of the whole tool exists - is to make a more professional homepage. Therefore some investments are necessary, not just to make the homepage but to have the systems and tools to download, upload and analyse the results properly and easy without being personally involved in that process.

8.5 The results of the project

The results of the project can be summarized as followed: "The tool is done but not finished". The whole theoretical part is done. What is needed to finalize the whole project are the following points:

Questionnaire

Piloting phase of the survey. The questions are made and put together. We had already piloting phases for understanding but to guarantee validity and reliability further steps are necessary. Furthermore, the length of the survey might make it difficult to have a customer-friendly and quick use of survey. The quantity of the questions need to be shortened. Therefore, expertise is needed from sport psychologists with experience. Less questions should still guarantee that all areas are still covered.

Manual

The manual, as already mentioned, basically is the theoretical part. Still, it should be practical and easy to use for coaches who are reading it and using it for their own development. Furthermore, we need a layout that is practical as well.

Video analysis

The field observation tool is the most difficult tool to use easily for customers. It is quite elaborate to have first of all the right material - two cameras and a microphone; secondly you need the people who are filming and arrange everything for the filming session. You need to find the right place for filming the whole field, to get the right perspective the camera should be on a higher level to get as much as possible on the camera.

Filming is the one thing, the other thing is the analysis of repetitions of athletes or the analysis of the "times" of the practice (waste of time, and so on). There are programs that can easily save "times", but marking repetitions of single athletes during the practice is not easy and needs an extra person.

Homepage

The main problem with the homepage is already mentioned above. Furthermore, you need persons to take care of it. Checking who is registering and downloading the tools for evaluation. Taking care of the analysis and manage the budget (income & costs) for everything when it will come to the point when the product is on the market for purchase. The administrative side of the tool when we have it on a homepage and as our own business is a thing we haven't thought of yet but is quite important when our idea finally can be realised.

Additionally, we need experts who can install and maintain programs that can automate everything. Download, upload, registration as well as automatic analysis of the uploaded questionnaire or video analysis.

8.6 Summary

The tool and all its parts are basically done and finished but need the final touch. Since it was a school project that needed all people involved in it on a regularly basis to discuss and develop the product, it seems to be almost impossible to finish it. Simply because there is no time and every member is spread out all over the world working with their current clubs as hockey coaches.

9 Summary and discussion

Working on that project, thinking about our own experiences in coaching and considering all the discussions we had with our study colleagues, it became obvious that all you hear is about how to do something: How to learn skating, shooting or to defend and opponent! How to do this or that correctly. Just to make sure, those things are fundamental things and the knowledge about the "X's and O's" define the quality of a coach. It is just not the only thing to be a successful coach. As important as the knowledge about the sport is the knowledge about the coaching and teaching skills of a coach. His behavioral skills in dealing with athletes.

Another very important factor to be a successful coach and what became clear is the fact, that self development is very important and vital. The same problem comes into effect. Most of the sources for self development are about the "X's and O's" of the sport. As a coach you "steal" drills and watch games for self development. Even if you use sources from sport psychology or mental aspects of sport. It is all theoretical. As a saying goes: "Competence is not knowledge"! Being an expert is one thing and in our opinion it is just theoretical. To be successful it should be practical. That means that the coach and his athletes are in a symbiosis of learning. The coach knows how and which buttons he has to push with his athletes when teaching things. It's a fact that the coach might have the competence and knows what to do but just don't get the results he is aiming for. There is a contradiction between his own awareness and his athletes awareness - how they receive his teaching skills.

There are tools that analyze the coach's behavior and how he is perceived by his athletes, but they are not practical enough to use them easily on a regular basis. Our goal was just to realize that: An easy and practical self-assessment tool to shape the coach's self awareness of his own behavior.

Generally it seems that the information, definitions and concepts of "good coaching" is somewhat unclear. There is no common understanding in sports psychology. It is very difficult and in the end impossible to find the quality factors of "good coaching" that

are widely accepted and not discussable. The result will always be under scrutiny and raise arguable questions. Nevertheless, there is no such tool that is useful for practical, periodic self-evaluation.

We believe this tool is very important because it increases the self-awareness and therefore enhances learning and development. The results give coach's concrete and detailed information. The feedback of the analysis can be easily understood. The manual provides further information about the quality factors; what behavior is positive or negative and how the coach's behavior effect the athlete's perception. To get a better understanding of the coaching behavior the tool also includes a video analysis. That video analysis gives someone an ultimate feedback. There is no hiding when you see yourself acting in front of your athletes. It includes a "only-coach-perspective" with a microphone and a "court-perspective" to be able to analyze the whole practice organization and structure. It seems to be difficult for coach's first time to get filmed and acoustically observed. We came to the conclusion that for self-assessment it is quite difficult to find the right technology to do so.

To get the tool spread out and easy to access for a wide number of coaches who are open-minded for a critical self-evaluation, it should be accessible via internet. We were thinking and looking to make the tool internet friendly. Furthermore, we were thinking the tool could be realized as an App for I-Pad for quick access and evaluation. The main focus was on the survey and the manual since the video-analysis seems to be difficult to realize for an internet access.

During our testing phase the experience from using the tool was very positive and it looked like that tool is something coaches are looking for. Especially for coach's who are willing to develop themselves. We also were in contact with a German sport psychologist who works with the German Football Federation and he admitted that this tool could be very useful. Unfortunately we don't have the tool finalized in a way it really could be spread around and be used for coach's of different sports. Through our work-placement time we basically got stopped in the process of finalizing the whole project. The fundament is laid but the testing phase was too short to come up with the

final version. The questionnaire for the survey needs to be fine-tuned for friendly usage. The questionnaire (73 questions) might be still too long - considering the quality factors of a survey and the piloting phase, as already mentioned above. It hasn't shown acceptable validity and reliability yet to produce the final version. We choose a scale from 1 to 4, but we consider a wider scale. The results during our testing phase showed that there is just a small deviation between the coach's and athlete's results. Therefore it doesn't show the differences accurate enough. A wider scale should be considered but hasn't been tested yet by us. The next step is the modification and finalization of the tool for usage and purchase. We really do think that the final version can be a global success for coaching development.

Finally, choosing this topic was a real eye opener in the area of coaching. All the different aspects that coaches should take into consideration are massively wide, but it helped with our own education. We are convinced that the only way for coach's to develop is to learn on a constant basis. Self-evaluation and the analysis of your own behavior as a coach develops your performance to become a very successful coach nowadays.

Unfortunately, the tool is not completely finalized. It's still in the beginning and to finish it much more work and expertise is need from outside. We set the fundament, the idea and the theoretical basis for further work.

References

Ahlber, M, Mallet, C. & Tinning, R. 2008. Developing autonomy supportive coaching behaviors: An action research approach to coach development. *International Journal of Coaching Science*, 2, 2. URL:

http://www.selfdeterminationtheory.org/SDT/documents/2008_AhlbergMallettTinning_IJCS.pdf. Accessed: 16 March 2014.

Bamberger, W. 2010. Interpersonal trust – attempt of a definition. URL:

<http://www.ldv.ei.tum.de/en/research/fidens/interpersonal-trust/>. Accessed: 25 February 2014.

Bandura, A. 1982. Self-efficacy mechanism in human agency. *American Psychologist*, 37, 2, pp. 122-147.

Bandura, A. 1977. Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84, 2, pp. 191-215.

Barker, R., Miles, A., Saffery, G., Saïpe, R. & Sutton, L. 2004. *Sports development and fitness options*. Heinemann Educational Publishers. Oxford.

Besson, C., Graf, D., Hartung, I., Kropfhäusser, B. & Voisard, S. 2005. The importance of non-verbal communication in professional interpretation. URL:

<http://aiic.net/page/1662/the-importance-of-non-verbal-communication-in-professional-interpretation/lang/1#2>. Accessed: 20 February 2014.

Bloom, G., A., Schinke, R., J. & Salmela, J. H. 1997. The development of communication skills by elite basketball coaches. *Coaching and Sport Science journal*, 2, 3, pp 3-10

Burton, D. & Weiss, C. 2008. The fundamental goal concept: the path to process and performance success. In Horn, T. (ed.) *Advances in sport psychology*, 3rd ed., pp 339-376. Human Kinetics. Champaign, IL.

- Butterfield, J. 2010. Verbal Communication. Illustrated Course Guides. Boston.
- Brophy, J. 2010. Leadership essentials for emergency medical services. Jones and Bartlett Publishers. Sudbury, MA.
- Cameron, K. 2008. Positive Leadership. Berrett-Koehler Publisher, Inc. San Francisco
- Cassidy, T., Jones, R. & Potrac, P. 2009. Understanding sports coaching. The social, cultural and pedagogical foundations of coaching practice. 2nd ed. Routledge. New York.
- Chelladurai, P. & Saleh, S. 1980. Dimensions of leader behavior in sports: Development of a leadership scale. *Journal of Sport Psychology*, 2, pp. 34-45.
- Chelladurai, P. 2012. Leadership and Manifestations of Sport. In Murphy, S. (ed) *The Oxford Handbook of Sport and Performance Psychology*, pp. 328-342. Oxford University Press. Oxford.
- Conroy, D. & Coatsworth, D. 2007. Assessing autonomy-supportive coaching strategies in youth sport. *Psychol Sport Exerc.* 8, 5, pp. 671-684. URL: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2390874/>. Accessed: 16 March 2014.
- Cote, J., Yardley, J., Hay, J., Sedgwick, W. & Baker, J. R. 1999. An exploratory examination of the coaching behaviour scale for sport. *AVANTE*, 5, 3, pp. 82-92.
- Cox, R. 2002. *Sport psychology: Concepts and applications*. 5th ed. McGraw-Hill Companies, Inc. New York.
- Crossan, M., Gandz, J & Seijts, G. 2012. Developing leadership character. URL: <http://iveybusinessjournal.com/topics/leadership/developing-leadership-character#.Uxg2ROLEnkc>. Accessed: 6 March 2014.

- Edger, M. 2012. Five key components of sport psychology. URL: <http://www.sportpsychologytoday.com/sport-psychology-for-athletes/five-key-components-of-sport-psychology/>. Accessed: 4 March 2014
- Edger, M. 2011. Developing a healthy sports philosophy. URL: <http://www.sportpsychologytoday.com/sport-psychology-for-coaches/developing-a-healthy-sports-philosophy/>. Accessed: 4 March 2014
- Eikenberry, K. 2010. Eight Supportive Behaviors Every Coach (and every person) should use. URL: <http://ezinearticles.com/?Eight-Supportive-Behaviors-Every-Coach-%28and-Every-Person%29-Should-Use&id=4869246>. Accessed: 25 February 2014.
- Eliot, J. 2005. Motivation: The need to achieve. In Murphy, S. (ed) The sport psych handbook, pp. 3-18. Human Kinetics. Champaign.
- Ericsson, A., Krampe, R. & Tesch-Römer, C. 1993. The role of deliberate practice in the acquisition of expert performance. *Psychological Review*, 100, 3, pp. 363-406.
- Farrow, D. Teaching sport skills. In Pyke, F. (ed) 2013. Coaching excellence, pp. 171-184. Human Kinetics. Champaign.
- Franklin, J. 2007. Building leaders the West Point way: Ten principles from the nation's most powerful leadership lab. Thomas Nelson, Inc. Nashville.
- Franklin, M. I. 2012. Understanding Research. Coping with the quantitative qualitative divide. Routledge. New York.
- Garland, R. 1990. A comparison of three forms of the semantic differential. *Marketing Bulletin*, 1990, 1, 19-24, Article 4. URL: http://marketing-bulletin.massey.ac.nz/V1/MB_V1_A4_Garland.pdf. Accessed: 3 March 2014

Gastel Van, C. 2010. Leadership Scale for Sport (LSS). School of Exercise Science (NSW). Sportpsyc unpublished. URL: <http://ess220.files.wordpress.com/2008/02/lss-highlighted.pdf>. Accessed: 26 April 2014.

Gratton, C. & Jones, I. 2010. Research methods for sport studies. 2nd ed. Routledge. New York.

Hale, B. & Graham, D. 2012. Quantitative approaches. In Armour, K. & Macdonald, D. (eds.) Research methods in physical education and youth sport, pp. 95-105. Routledge. New York.

Hardy, C., Burke, K. & Crace, K. 2005. Coaching: An effective communication system. In Murphy, S. (ed.). The sport psych handbook, pp. 191-212. Human Kinetics. Champaign.

Harwood, C. 2005. Goals: More than just the score. In Murphy, S. (ed.) The sport psych handbook, pp. 19-36. Human Kinetics. Champaign.

Hopton, C., Phelan, J. & Barling, J. 2007. Transformational leadership in sport. In Beauchamp, M. & Eys, M. (eds.) Group dynamics in exercise and sport psychology. Contemporary themes, pp. 45-62. Routledge. New York.

Horn, T. 1987. The influence of teacher-coach behavior on the psychological development of children. In Gould, D. & Weiss, M. (eds.) Advances in pediatric sport sciences, 2. Behavioral issues. Human Kinetics. Champaign, IL.

Horn, T. 2008. Coaching effectiveness in the sport domain. In Horn, T. (ed.) Advances in sport psychology, 3rd ed., pp. 239-278. Human Kinetics. Champaign, IL.

Hutson, Z. Developing fairness. (Family Times Newsletter; West Virginia University) URL: <http://fh.ext.wvu.edu/r/download/12434> Accessed: 25 February 2015

- Jowett, S. 2005. The coach-athlete partnership. *The Psychologist*, 18, 7, pp. 412-415
- Jowett, S., Clark-Carter, D. 2006. Perception of empathic accuracy and assumed similarity in the coach-athlete relationship. *British Journal of Social Psychology*. The British Psychological Society, 45, pp. 617-637.
- Kajtna, T. & Baric, R. 2009. Psychological characteristics of coaches of successful and less successful athletes in team and individual sports. *Review of Psychology*, 16, 1, pp. 47-56.
- Kenow, L & Williams, M. 1999. Coach-athlete compatibility and athlete's perception of coaching behaviors. *Journal of Sport Behavior*. URL:
<http://www.udel.edu/ICECP/resources/coachingstyles/Coach%20athlete%20compatibility.pdf>. Accessed: 27 April 2014.
- Kidman, L. & Hanrahan, S. 2011. *The coach process. A practical guide to becoming an effective sports coach*. 3rd ed. Routledge. London.
- Kingston, K. & Wilson, K. 2009. The application of goal setting in sport. In Mellalieu, S. & Hanton, S. (eds.) *Advances in Applied sport psychology. A review*, pp.75-123. Routledge. New York.
- Klenk, C. 2006. Psychological response to injury, recovery, and social support: A survey of athletes at an NCAA division I university. Senior Honors Projects. Paper 9. URL: <http://digitalcommons.uri.edu/srhonorsprog/9>. Accessed: 25 February 2014.
- Kropvelt, M. & Pelland, M-A. 2006. *The Cult Phenomenon: How Groups Function*. Info-Cult. Relations avec les citoyens et immigration Québec. URL:
<http://infosect.freeshell.org/infocult/phenomene/English/TheCultPhenomenonHowGroupsFunction.pdf>. Accessed: 23 February 2014.

Lafrenière, M., Jowett, S., Vallerand, R., Donahue, E. & Lorimer, R. 2008. Passion in sport: on the quality of the coach-athlete relationship. *Journal of Sport and Exercise Psychology. Human Kinetics*, 30, pp. 541-560

Loehr, J. 2005. Leadership: Full engagement for success. In Murphy, S. (ed.) *The sport psych handbook*, pp. 155-170. Human Kinetics. Champaign.

Lukwu, R. & Guzman Luján, J. 2011. Sport commitment and adherence: A social-cognitive analysis. *Revista Internacional de Ciencias del Deporte*, 25, 7, pp. 277-286. URL: <http://www.cafyd.com/REVISTA/02503.pdf>. Accessed: 6 March 2014.

Lumer, C. 1995. Rules and moral norms in sports. *International Review for the Sociology of Sport* 30 (1995). Pp. 263-281. URL: http://www.academia.edu/861124/Rules_and_moral_norms_in_sports. Accessed: 6 March 2014.

Mageau, G. & Vallerand, R. 2003. The coach-athlete relationship: a motivational mode. *Journal of Sports Sciences*, 21, pp. 883-904.

Martens, R. 2012. *Successful coaching*. 4th ed. Human Kinetics. Champaign.

McLeod, C. 2011. Trust. *The Stanford Encyclopedia of Philosophy*. URL: <http://plato.stanford.edu/archives/spr2011/entries/trust/>. Accessed: 25 February 2014.

Morgan, K. & Kingston, K. 2010. Promoting a mastery motivational climate in a higher education sports class. *Journal of Hospitality, Leisure, Sport and Tourism Education*, 9, 1, pp. 73-84.

Murphy, S. (ed.) 2005. *The sport psych handbook*. Human Kinetics. Champaign.

Nelson, L., Groom, R. & Potrac, P. (eds.) 2014. Research methods in sports coaching. Routledge. Oxon.

Non-Verbal Communication Modes. URL:

<http://www.andrews.edu/~tidwell/bsad560/NonVerbal.html> Accessed: 4 May 2013

Omar-Fauyee, M.S. 2012. The strategies for character building through sports participation. International Journal of Academic Research in Business and Social Sciences. Vol. 2, No. 3. URL: <http://www.hrmars.com/admin/pics/651.pdf>. Accessed: 22 April 2013.

Parks, C. 2004. Group norms. Encyclopedia of leadership. SAGE Publications Inc. Thousand Oaks, CA. URL:

<http://www.sagepub.com/northouseintro2e/study/chapter/encyclopedia/encyclopedia7.1.pdf>. Accessed: 6 March 2014.

PSPS (Professional Sport Psychology Symposium). 2011. Training for patience. URL: <http://prosportpsychsym.wordpress.com/2011/04/11/training-for-patience/>. Accessed: 25 February 2014.

Psychological Services of Pendelton, LLC. Principles of Reinforcement. URL:

<http://www.pendletonpsych.com/doc/principles-of-reinforcement.pdf>. Accessed: 29 April 2014.

Pyke, F. (eds) 2013. Coaching excellence. Human Kinetics. Champaign.

Radic, Z. Social reinforcement. URL:

http://zdenkoradicfitforlife.weebly.com/uploads/8/9/1/7/8917256/kin_855-_social_reinforcement.pdf. Accessed: 29 April 2014.

Robinson, P. 2010. Foundations of Sports Coaching, Routledge. New York.

- Rugg, G. & Petre, M. 2007. A gentle guide to research methods. Open University Press. Mc Graw-Hill Education. Berkshire, England.
- Sabock, M. & Sabock, R. 2010. Coaching. A realistic perspective. 10th ed. Rowman & Littlefield Publishers, Inc. Maryland.
- Schmidt, R. & Wrisber, C. 2008. Motor learning and performance: a situation-based learning approach. Human Kinetics. Champaign, IL.
- Smith, R., Smoll, F. & Hunt, E. 1977. A system for the behavioral assessment of athletic coaches. *Research Quarterly*, 48, pp. 401-407.
- Stowell, S. & Starcevich, M. 1998. The coach. Creating partnership for a competitive edge. 2nd ed. (5th printing 2003). The Center for Management and Organization Effectiveness. Utah.
- Tenenbaum, G. & Driscoll, M. 2005. Methods of research in sport science. Quantitative and qualitative approaches. Meyer & Meyer Sport Ltd. Oxford.
- Tiffan, B. 2010. The value of an open-mind. *American College of Physician Executives*. United States, 36, 4. URL: <http://www.freepatentsonline.com/article/Physician-Executive/234078431.html>. Accessed: 25 February 2014.
- Vadackumchery, J. 1999. Police leadership. The inside story. APH Publishing Corporation. New Dehli.
- Veach, T. & May, J. 2005. Teamwork: for the good of the whole. In Murphy, S. (ed.) *The sport psych handbook*, pp. 171-189. Human Kinetics. Champaign.
- Vickery, S. 2013. Overcoming fear in sport: Creating a mastery environment. URL: <http://www.thesportinmind.com/articles/overcoming-fear-in-sport-creating-a-mastery-environment/>. Accessed: 16 March 2014.

Weinberg, R. & Gould, D. 2011. Foundations of Sport and Exercise Psychology. 5th ed. Human Kinetics. Champaign.

Weinberg, R. & Gould, D. 2007. Foundations of Sport and Exercise Psychology. 4th ed. Human Kinetics. Champaign.

Weiss, M. 2004. Coaching children to embrace a "love of the game". University of Virginia. URL:

<http://www.rgalberta.com/coachingResources/Coaching%20Children%20to%20Embrace%20a.pdf>. Accessed: 25 November 2013.

Williams, J., Kenow, L., Jerome, G., Rogers, T., Sartain, T. & Darland, G. 2003. Factor structure of the coaching behavior questionnaire and its relationship to athlete variables. *The Sport Psychologist*, 17, pp. 16-34.

Zyl van, R. 2011. Player/Coach relationship. URL:

<http://www.rugby.com.au/LinkClick.aspx?fileticket=kUCaFGyMtFQ%3D&tabid=1611>. Accessed: 20 February 2014.

Survey of Communication Study. California State University. URL:

<http://www.csus.edu/indiv/s/stonerm/ComS5SurveyOfCommunicationTextbook.pdf>. Accessed: 20 February 2014.

Attachments

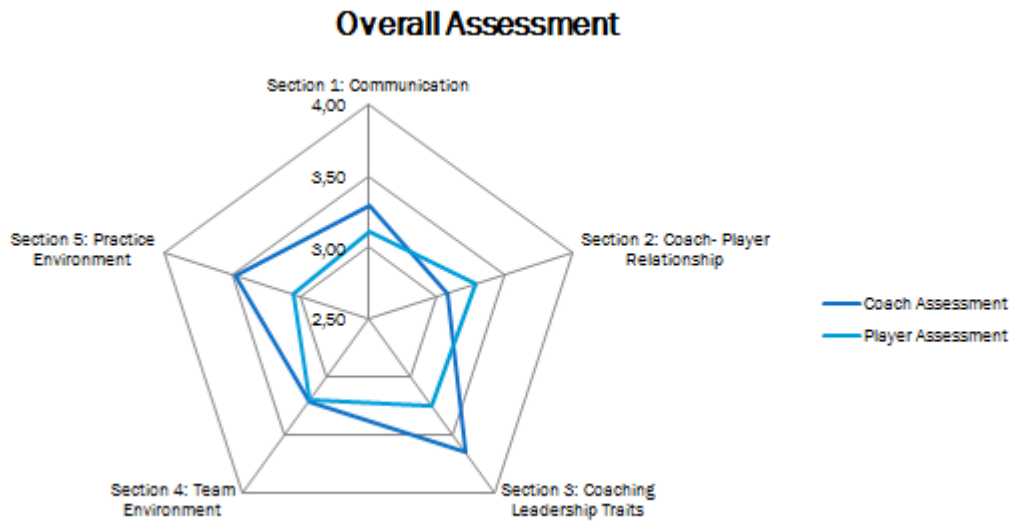
Attachment 1. Example of practice analysis (video tool)

Feedback Observation

Type of Feedback	Individual	%	Team	%	Total	%
Specific Positive Reinforcement	19	14%	4	3%	23	17%
General Positive Reinforcement	22	16%	9	7%	31	23%
Specific Negative Reinforcement	12	9%	1	0,70%	13	10%
General Negative Reinforcement	5	4%	2	1%	7	5%
Specific Technical Instruction	50	37%	5	4%	55	41%
General Technical Instruction	0	0%	7	5%	7	5%
Total	108	79%	28	21%	136	

Individual Feedback	Total	%
#13	4	4%
#30	10	9%
#67 (19)	18	17%
#31	3	3%
#40	15	14%
#3	10	9%
#12	11	10%
#39	11	10%
#68	5	5%
#10	6	6%
#16	7	6%
#20	8	7%
Total	108	

Attachment 2. Example of questionnaire analysis



<h1>Coach Assessment</h1>		
	Coach Score	Player Score
Section 1: Communication	4,42	4,27
Verbal	3,67	4,37
1. My players clearly understand my message	4,00	5,10
2. I use an appropriate tone of voice for the situation	4,00	4,00
3. I yell at my players when they make mistakes	3,00	4,00
Feedback	5,00	4,63
4. I give regular and immediate feedback during sessions for my players	5,00	4,60
5. I give specific feedback (for example: "Good job on covering on man" instead of "good job")	5,00	4,70
6. I provide examples of how to improve on specific tasks	5,00	4,60
Listening	4,00	4,53
7. I am a good listener	4,00	4,50
8. My players can easily approach me about personal problems they might have	4,00	4,50
9. I value my players opinions	4,00	4,60
Conflict Resolution	5,00	3,55
10. I handle problems effectively	5,00	4,20
11. Our team does not have many conflicts	5,00	2,90