Master Coaches Theses – Part 1

1. *LT Defence Formation: Description and Examples* – Zoltan Cordas / AUT

2. *The Austrian Way: Giving Young Athletes the Opportunity to Make it to the Top National and International Handball by Combining School Education at "ORG XVI for Top Athletes" and the "WHV-Top Performance Model" in Vienna* – Harald Grünanger / AUT

3. *The Fast Break a Decisive Factor of Success* – Heinz Hausmann / AUT

4. *Handball a Complex System? Consequences for Training Practice* – Helmut König / AUT

5. *The Eccentric 5:1* – Erwin Gierlinger / AUT

6. *How to Make Handball More Attractive and Recognized Internationally in Other Continents than Europe* – Mohammed Elkedim / GBR

7. *It's All Mental: Mental Training in Youth Sports* – Oscar Dawo / GER

8. *Establishment of a Handball Club in a Developing Country* – Andrea Ongaro / IRL

9. *Reykjavik the Handball Cluster: No Icelandic Magic* – Konrad Hatlemark Olavsson / ISL

10. *Goal Setting and Success: The Icelandic Men's Handball Team at the 2007 World Cup and 2008 European Championships* – Patrekur Johannesson / ISL

11. *Optimisation of Goalkeeper's Training on a Basis of a Systemized Approach to a Goalkeeper's Play* – Dmitrijs Braznikovs / LAT

2012

L T Defence Formation

Description and Examples

Zoltan Cordas
EHF Rinck Master Coach
12.11.2012

Modern Handball has become faster, more attractive and more popular

In many defence variations, such as the 3:2:1 for example, the centre back or “libero” has to cover ever increasing distances, or has to accept decisions of narrow minded referees. If a wing (quick and agile player) sweeps in and gets into possession of the ball, things are looking bad for the centre back in the 1:1 situation, as the slightest touch will undoubtedly be punished by a 7-m throw or a warning will be awarded by the referees.

Another problem arises if the pivots, after a transition, take their positions far away from one another and the defence players have to cover long distances. Basically all offensive defence systems pose problems when the attacking team applies transition concepts or the pivots position themselves near the outside defenders.

The same is true in the 5+1 defence formation when the midright and midleft players attack their relevant opponents (right and left backcourt players) offensively. As a consequence new open space is created for the attacking players which causes enormous problems for the centre.

Because of that we have to create a new defence system which can cope with the problems depicted above and, moreover, can offer working solutions. I am always prepared to try something new in Handball.

As far as I can see, a new defence system in which the centre (“libero”) actively helps in attacking the LB (left back) and RB (right back) is the

solution. By using a defence like that, transitions should be easier to handle and the space between the defence players should be narrowed because of the numerical superiority of the defenders attacking the LB, RB and CB (centre back). In this system the two wing defenders OL (outside left) and OR (outside right) are supposed to take over a great deal of the libero's defence work.

In addition, the system is supposed to function in such a way that it is not necessary to change the defence formation in case of transitions or a change of position of the CB.

Moreover, the system should provide the coach with the means of adapting his defence formation more easily, quickly, and more specifically to the attacking systems of his opponent.

What is the solution then?

The L&T Defence Formation!!!

After 6:0, 5+1, 3:2:1 and – and – there it is: **L&T**

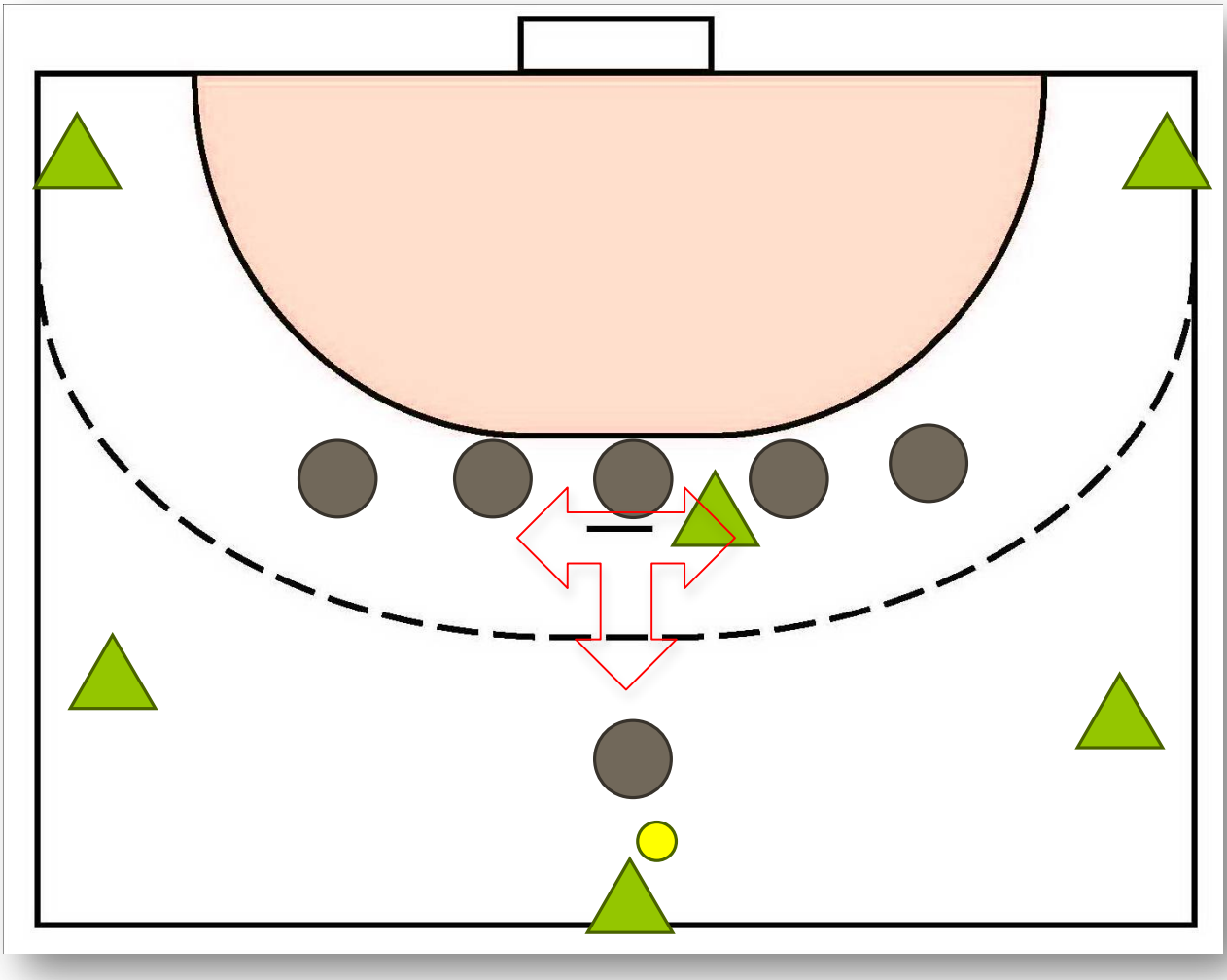
If we want our players to accept a new defence system quickly, it has to function on the basis of simple and relatively clear rules.

Every trainer is expected to offer, develop, and adapt existing defence systems to his team throughout the training sessions. Thus this new variation L&T came into being.

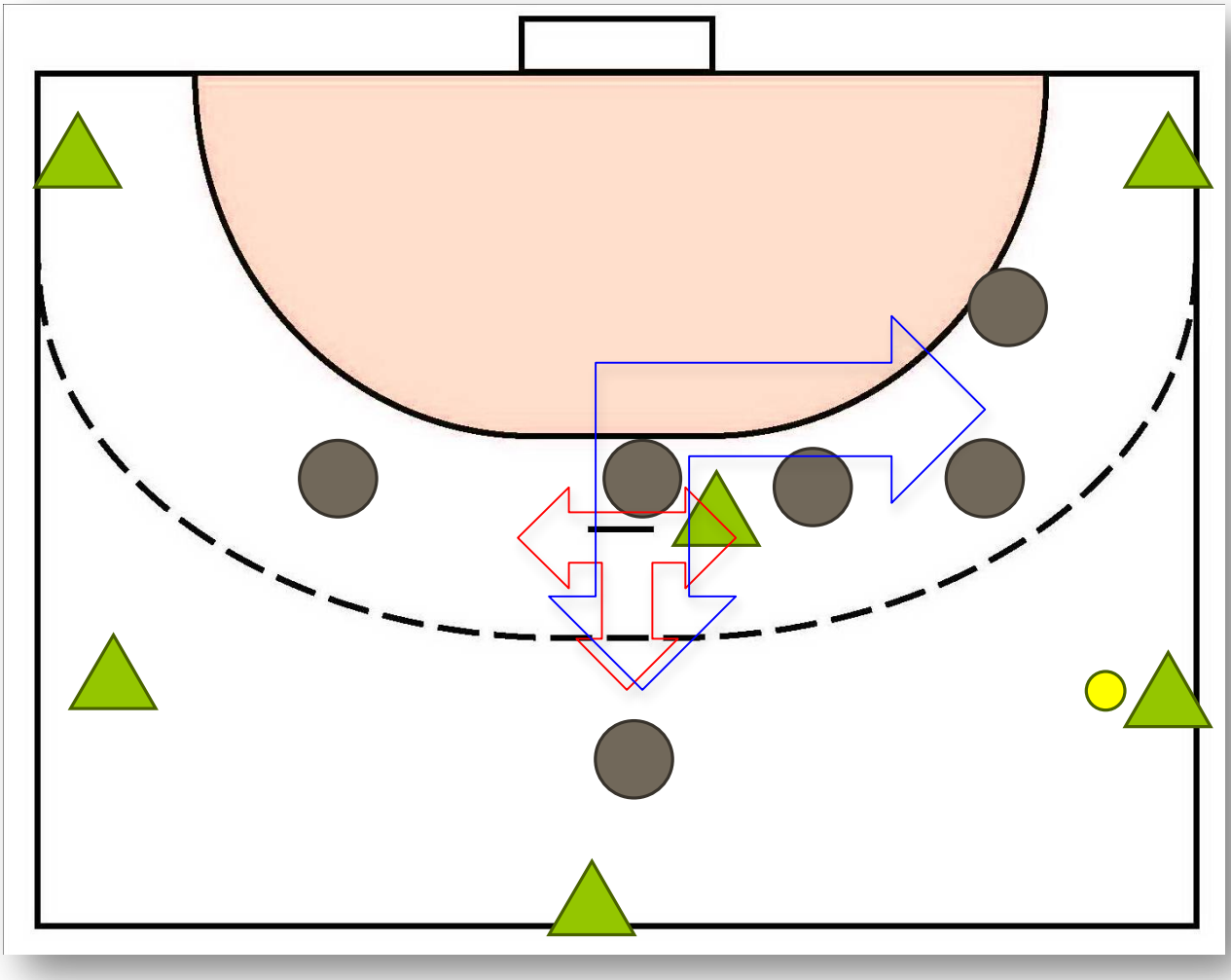
The following sketches show L&T from a bird's eye view.

L&T is an interesting zone defence system which can be developed and automated in a very short time. It is basically similar to the known 5+1 defence, but has some decisive innovations.

T – Defence Formation



L – Defence Formation



The L&T Defence Formation!!!

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Advantages

1. Quick fast break, extended fast break and throw off.
2. Motivated defence players attack aggressively and actively.
3. Saves energy for your own backcourt players: wings at half-position.
4. Attractive for players and spectators.
5. Parallel passes of the attackers are difficult to execute.

Weak points

1. There is more open space at the wing positions and at the goal area.
2. Possible referees' decisions to the disadvantage of the defender when attacking 1:1.

Basic preconditions

1. Readiness to get into a 1:1 situation and to win it.
2. Constantly breaking the attacking rhythm.
3. Proper way of helping out.
4. Fouling in a way that cannot be regarded as progressive.
5. Active work with arms.
6. Communication amongst the players.
7. A defence which attacks the opponent constantly.

Preconditions

1. An effective and aggressive goalkeeper from the wing and the goal area positions.
2. Extensive leg work, working load twice the normal work one would expect from a defence player.

3. “Social” defence, that is to say to help another player if he has been outplayed.
4. Determination to fight.
5. 1:1.
6. Every player to dominate his space.
7. Wing defence players playing on midleft and midright positions.

Basic rules for L&T

1. The entire defence formation orientates sweeps actively versus the ball (must never be passive).
2. Quick piston movement by the centre, midleft or midright player against the player with the ball according to the situation to prevent RB,LB, or CB from shooting from 9m without hindrance
3. Running in of attacking players must be blocked. Available space for the attackers should, at least optically, be narrowed and controlled by the defenders. Players should not clinch but push their opponents out.
4. Attempts at blocking should be evaded by pushing the blocking player out. The defenders should try to “overtake” the pivot at any time.
5. Running paths should be blocked.
6. The formation of successful attack should be disrupted by forming a cooperative triangle.
7. Mistakes should be provoked – diagonal passes should be prevented.
8. Sweeping in of an attacking player without the ball into the defence behind the back of defence players should be prevented.

9. Pivots should always be pushed.

Position specific description

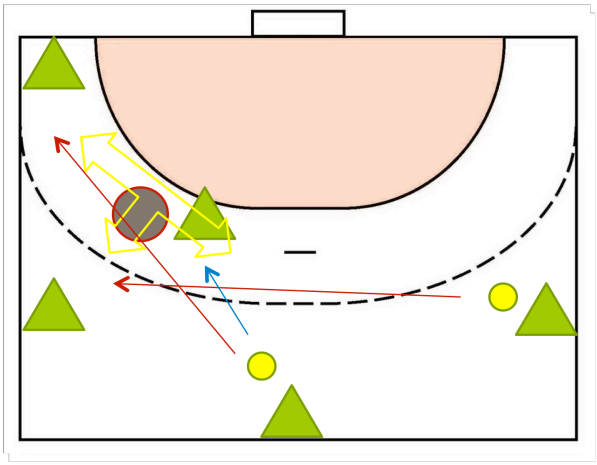
OR – outside right

In this (L&T) defence position we can use the RB to defend at the OR position (optical advantage: height of the player).

Tasks:

1. Always move the defence towards the ball.
2. Secure defensive space of MR (midright) when attacker tries to break through “against his hand”.
3. Prevent or, at least, disturb RB from passing diagonally to LB. Prevent passes from CB to pivot, when he is positioned between MR and OR.
4. Always push the pivot towards the middle when he is positioned between MR and OR. The RB has the advantage of height and weight to counter blocking attempts by the pivot trying to find a good shooting position.
5. The RB at the OR position has to encounter less 1:1 situations and can therefore save energy for his own attack.
6. If the right wing (RW) plays at the OR position he has the same tasks as the RB but must compensate his lower height and weight by more legwork, cleverness and speed when playing against the pivot and to prevent diagonal passes.

OR – outside right



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MR midright

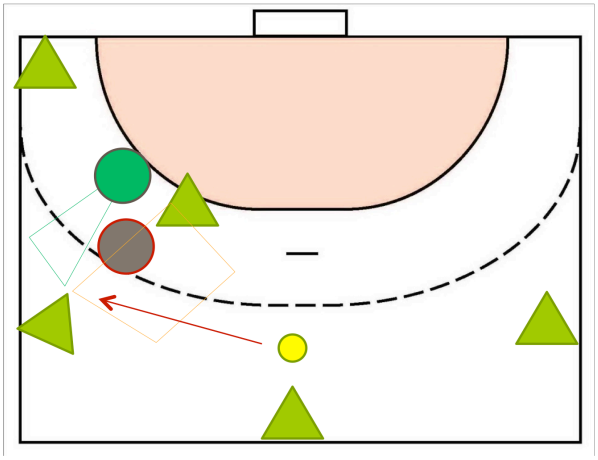
Players at this position must be extremely well trained in 1:1 play and have to have good leg work.

Tasks

1. Accept “duels” for the possession of the ball.
2. The player must win any action directed towards the middle. If the action is set against the OR position the player at OR can help.
3. Activities of the pivot must be disturbed when the ball is at position RB, and extreme move to the side of the ball is absolutely necessary.
4. Develop good timing when taking on and passing over the pivot.
5. Defenders should not worry about the actions of the pivot, but should courageously move forward and seek the 1:1 situation.
6. Help the OR if the left wing tries to move towards the middle.
7. If the pivot positions himself between OR and MR, the pivot is to be attacked. The LB is attacked by the centre (libero).
8. If the ball is played from the right side to the left, MR always plays against LB.
9. If the ball is played from left wing/pivot the MR always plays against the pivot.
10. If the pivot is opposite the ball, in the other half of the attacking area, the MR always

plays against LB.

MR midright



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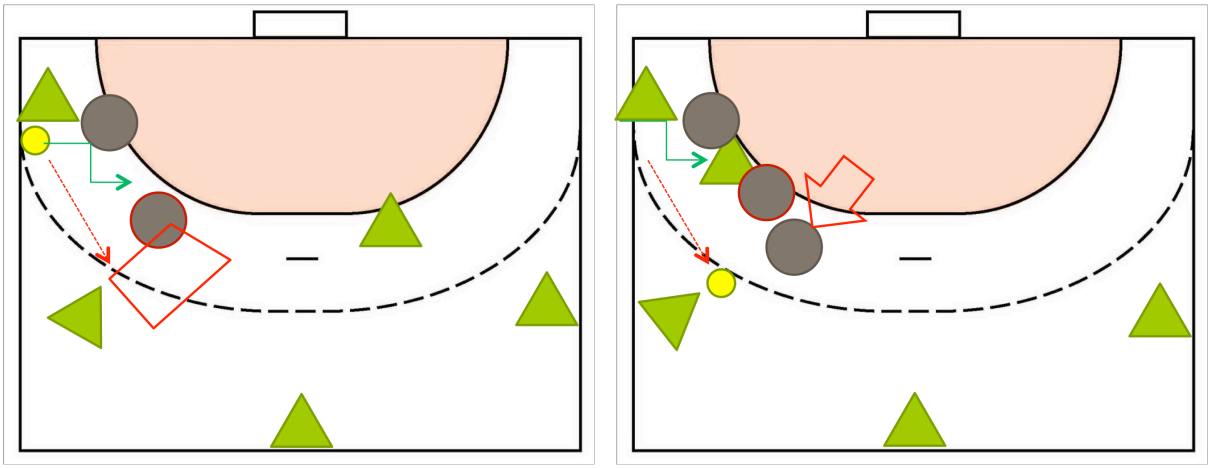
Ball at LW – withut P and with p

Boll LW - LB



Ball at LW, no P disturbing defense, is a standard situation.

If pivot is in between OR and MR, then CE must help

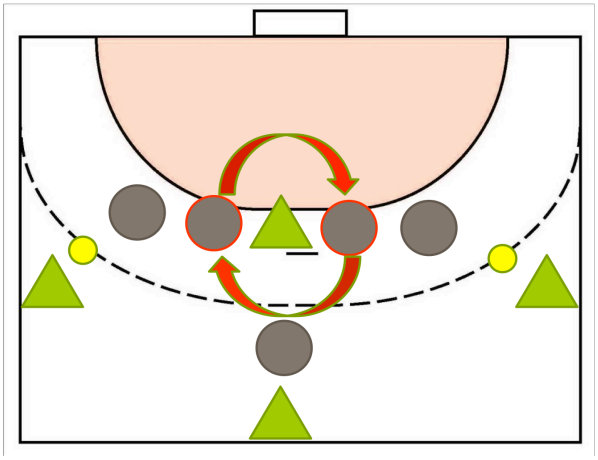
CE –Centre or “Libero”

The CE is the player who is required to have a strategic understanding of the game, who possesses the ability to overview situations and can read the development of a game. His area of action is about 6m wide.

Tasks

1. If the pivot is in the middle, the CE ignores his actions and always tries to overtake him in direction of the ball.
2. If the pivot is in the middle the CE positions himself between the ball and the pivot at all times.
3. The CE helps against break throughs of LB, CB, and RB if necessary.
4. If the ball is at the LW/RW position and the pivot is at position OR/OL the CE takes on either the LB or RB (according to the position of the ball) if they move to the middle.
5. When the CE tries to block a shot, he always takes the “long” corner of the goal.
6. If the attacking team changes over to two pivots (transition), then the tasks of the CE hardly change. He must run more and has to block more shots.
7. The CE constantly analyses the movement of the FO- (“Red Indian”) and reacts accordingly (strategic understanding) if the situation changes.

CE –Centre or “Libero”



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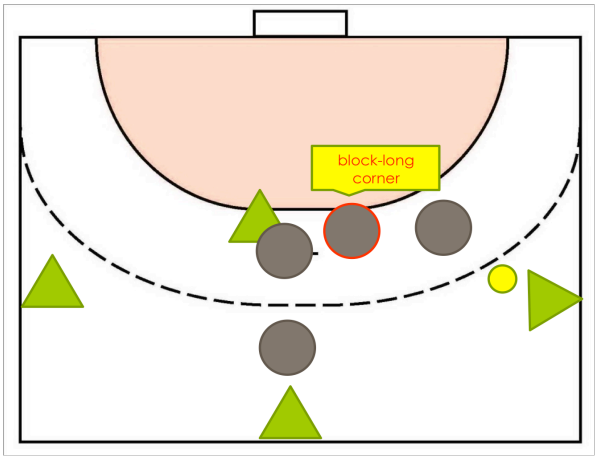
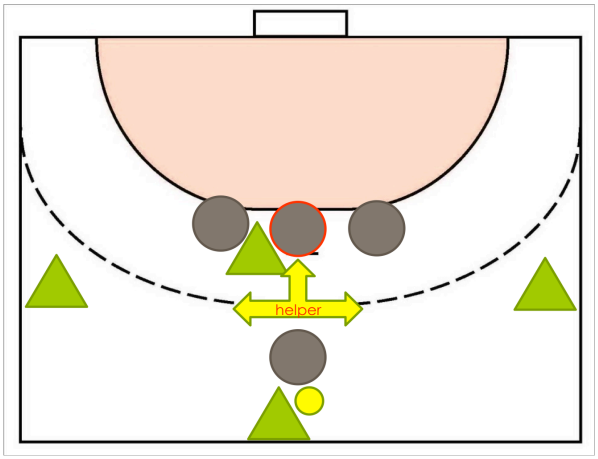




FO – Forward (nicknamed “Red Indian”)

The FO (nicknamed “Red Indian) has to have a high degree of ability to anticipate. His nickname seems to be very appropriate, because he has to be nimble as a cat, must interpret situations quickly, should provoke situations which cause opponents’ failures, and should be determined to take action when necessary.

Tasks

1. Must win his 1:1 situations against the CB.

2. Must interrupt actions of RB/LB towards the middle.

3. Must prevent or disturb diagonal passes.

4. If the FO, because of trainer’s instructions, falls back a little, ML and MR must take over to disturb diagonal passes.

5. If backcourt players cross, he must attack the one who moves towards the middle.

6. By constantly changing his position very quickly he must force the CB out thus enlarging the distance between pivot and CB. As a consequence there is more time for the CE, ML, and MR to react if the pivot, for example, is about to be passed to.

7. The FO must see and interrupt crossings between CB and RB in good time, and take over the new player at position CB.

8. In transition situations the FO follows instructions from his trainer or co-players as the action takes place behind his back.

9. If in transition situations he has no direct opponent, he helps to make the defensive centre more compact

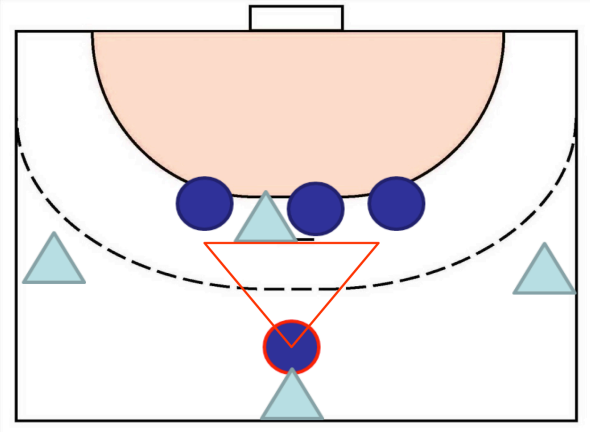
in order to prevent diagonal passes to the pivot.

10. The FO is responsible for the T-formation.

11. He must anticipate shifts in the action, and as a consequence react more defensively.

12. He must recognize any form of crossing between backcourt players and try to hinder their completion by falling on his opponents' nerves.

FO – Forward (nicknamed "Red Indian")



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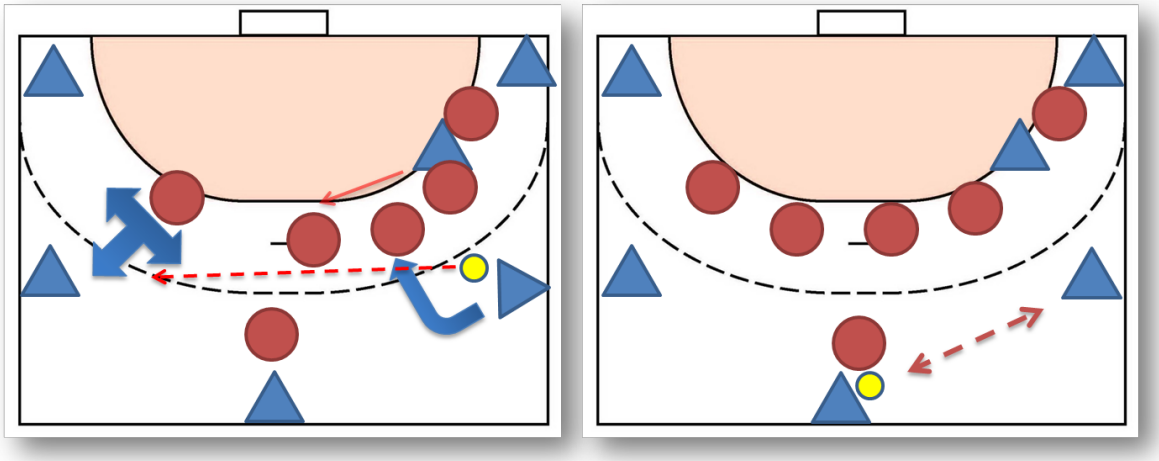
Examples:

Pivot position between OL and ML



Often P is between OL and ML, due to physical advantage.

With LT defense it‘s possible or even positive that LB is defending OL, due to physical advantage.

If LW defends at ML, defense has tendence to be more aggressive small players are more aggressive and agile

P – shifts whole defense at left sideganze!

FO avoids diagonal-pass from RB with defense position and OR helps with offensive behaviour!

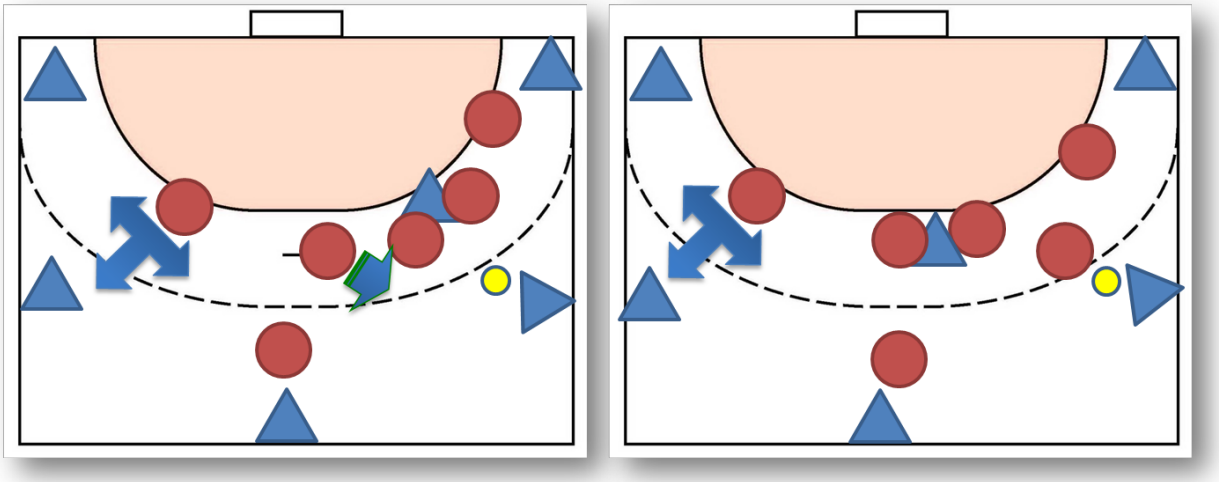
CE (Libero) takes over task from ML and avoids attack through middle!

Defensive must avoid P to follow attacking ball.

Biggest danger is a diagonal-pass!

Big travel path from MR and CE!

Pivot position between ML and CE



Pivot position between ML and CE

This situation is the most frequent situation and needs a lot of training.

CE (libero) is very aggressive against RB and ML takes over P.

FO is relatively defensive with a zone defense behaviour.

Whole defense is tending to the center.

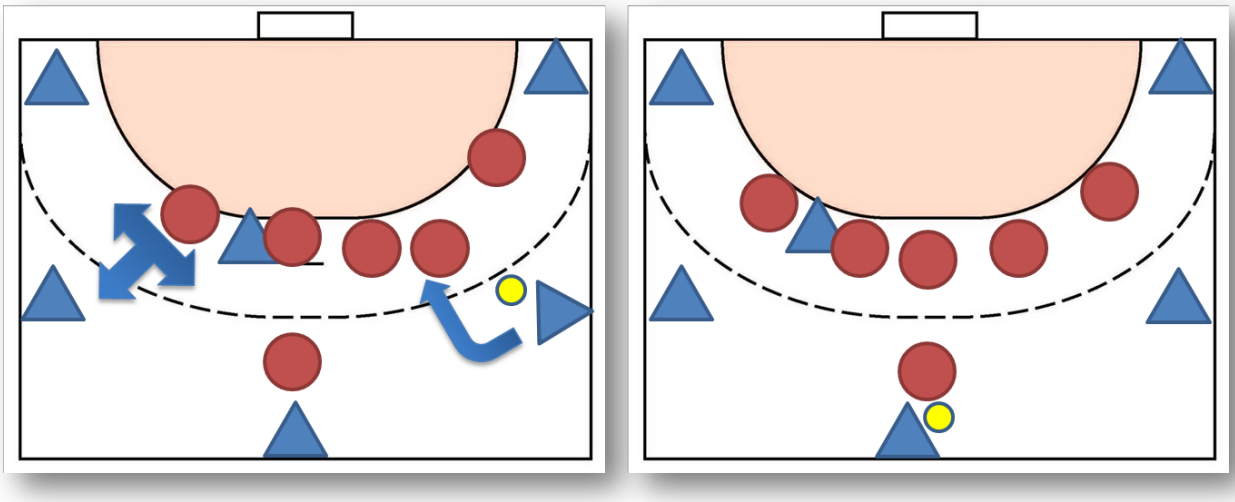
OR must be very active (diagonal pass, avoid LW walk into middle)

P – at CE (libero)

Simpliest solution, CE is always in front of P on ballside!

ML aggressive against RB, MR is central and OR must be very active

Digonal Pass from RB & Boll from CB to LB (P barrier at MR wing side)



Diagonal Pass from RB

At this situation OR absolutely has to disturb the diagonal pass to LB and P!

RB has to defense player in front of him!

Behaviour of FO is depending on strategy!

FO - Offensive – the danger is the diagonal pass (job from OR) pass to CB takes out speed!

FO Defensive - very compact, less work from OR!

Ball from CB to LB (P barrier at MR wing side)

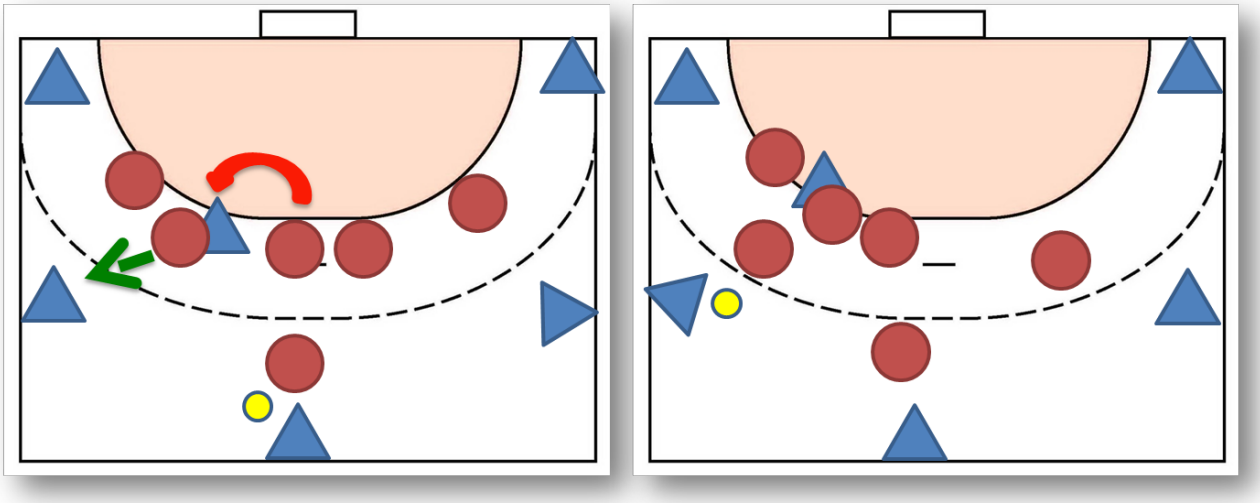
At this situation MR concentrates on LB and ignores P.

CE takes over P.

This situation is problematic but solveable with good legwork!

OR gives help and stability with permanent disturbance!

CE & Boll from LW - LB



CE

Always in front of P!

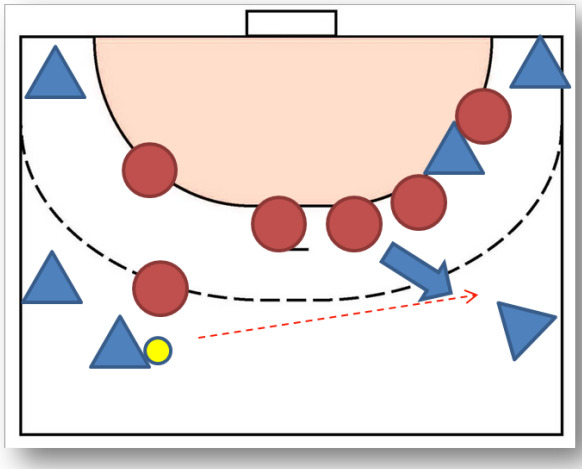
CE must always try to position in front of P.

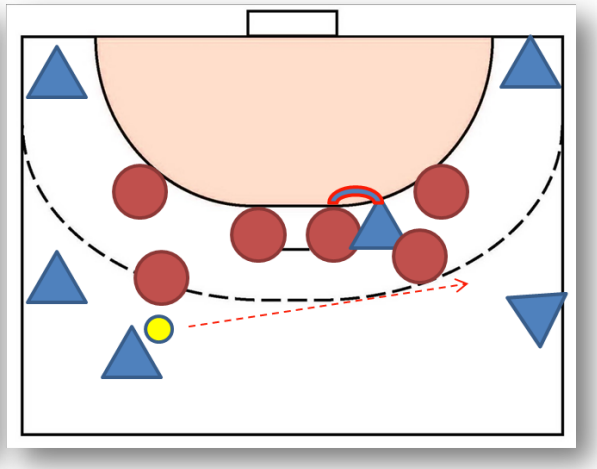
Ball from LW - LB

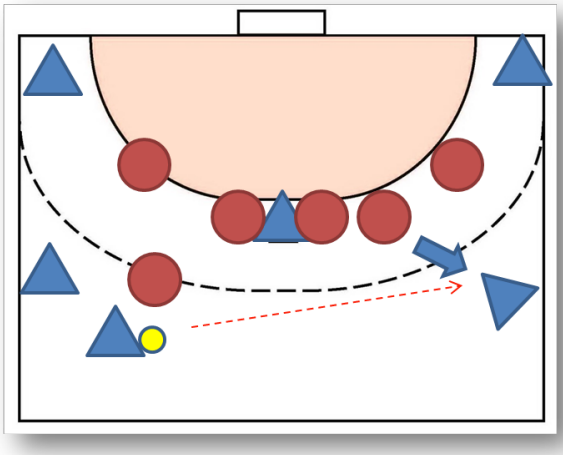
OR and MR agressive against LW and LB

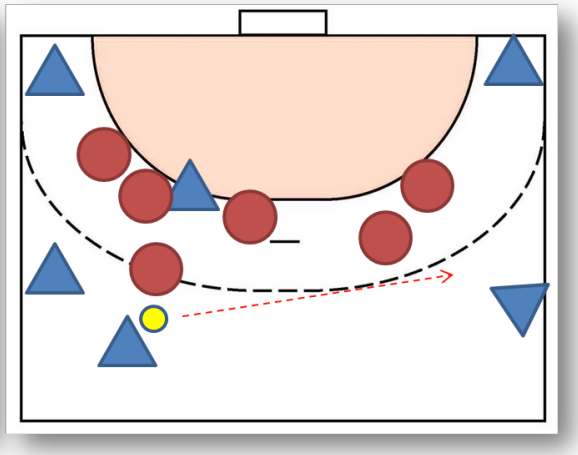
CE isolates P

Displacement CB









Displacement CB RM

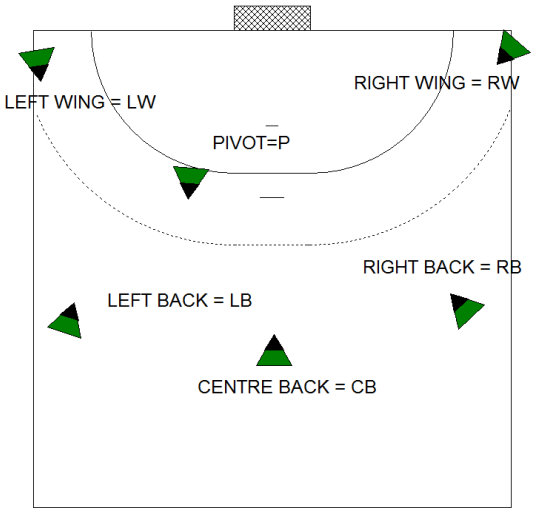
Displacement from middle

Possibility for the diagonal side, libero must be diagonal oriented

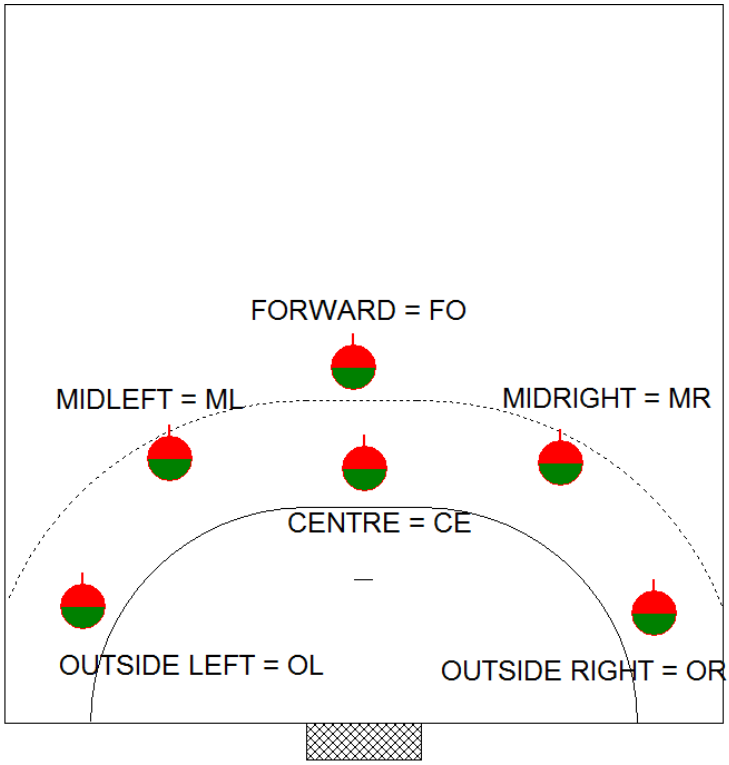
Red Indian must be very defensive and in direction of displacement

Terminology used in accordance with recommendations of the
CCM –TMK – CEM
Handball Symposium 1995 in Cairo

Attack



Defence


FORWARD = FO
MIDLEFT = ML
MIDRIGHT = MR
CENTRE = CE
OUTSIDE LEFT = OL
OUTSIDE RIGHT = OR

THE AUSTRIAN WAY: GIVING YOUNG ATHLETES THE OPPORTUNITY TO MAKE IT TO THE TOP IN NATIONAL AND INTERNATIONAL HANDBALL BY COMBINING SCHOOL EDUCATION AT “ORG XVI FOR TOP ATHLETES” AND THE “WHV-TOP PERFORMANCE MODEL” IN VIENNA.

MAG. HARALD GRÜNANGER

ÖHB

AUSTRIA

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Abstract

Based on the findings gained by the pilot project carried out at the Viennese ORG XVI for Top Athletes, this thesis attempts to prove that it is possible for young handballers to acquire a higher education while practising competitive handball on the highest level.

The athletes can only be successful if the cooperation between this special pilot project and the "WHV-Top Performance Model" works exceedingly well. Taking Sonja Frey and David Brandfellner as examples of recent graduates, it will be demonstrated that it is possible to succeed at the highest level of sports and acquire access to higher education at the same time.

Keywords

Viennese ORG XVI for Top Athletes, WHV-Top Performance Model, access to higher education, succeess at highest level of competitive handball

1. Introduction

1.1. Problems of Young Top Athletes

International studies on young top talents show that up to 90% of the girls and 75% of the boys quit the relevant sport within a time span of five years after having started training. The drop-out rate is at its peak at the age between 16 and 17 ("Drop-out Rate and Drop-out Reasons among Promising Norwegian Track and Field Athletes – A 25 Year Study, Enokson 2011). Reasons for that phenomenon are manifold, such as too early specialization, lack of regeneration measures, injuries, conflicts between school and sports, and a lack of motivation. Physical, psychical, and social pressure on young persons is ever increasing (Internationales Nachwuchsleistungssport Symposion 2012).

1.2 Relation between School and Competitive Sport

We see that athletes are caught in a network of contradictions whilst growing up. During this period young people establish a set of values and increasingly start becoming independent personalities. Because of that they have to make decisions, which is often not easy for them. Consequently, their degree of motivation varies considerably and the young people cannot find their proper perspective in life. To reach proper decisions is the first step they have to take. But the decision to go in for competitive sports is only the first step. From now on stress builds up continually. Day in day out a career in competitive sports demands top achievement, and there should be enough time for one's job and free time as well. The main problem in this context is that the young athlete has to be flexible and should adapt his life to his training conditions. As a consequence, social relationships often suffer because of preparation time, competition stress and time pressure increase. Because of different training and competition venues the athlete has to travel a lot and thus invest even more time. Another risk in competitive sports is that one's social contacts are limited to the relevant sports environment, and because of that other contacts are hardly established. The biggest problem

which might result from the factors described above would be the neglect of one's education or job career.

Summing up, we can say that because of this complex system of various influences, different conflicts arise and the young up-and-coming top athletes are confronted again and again with new problems. It is the task of the teacher and the trainer to help their athletes to cope with these situations in order to develop their own personalities.

1.3 Related Fields of Top Athletes

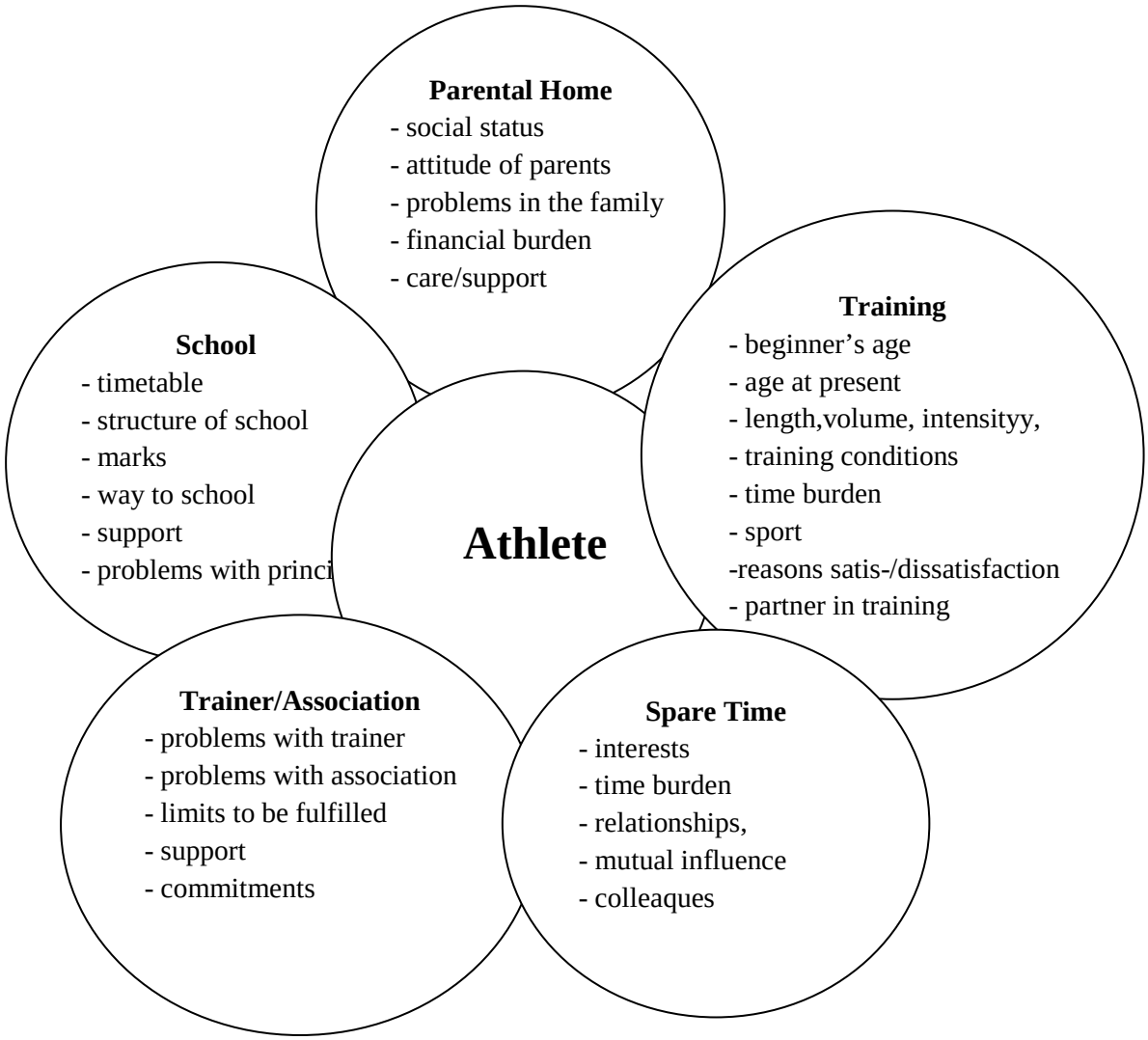

Table 1: Related fields of top athletes (cp. J.HANDLOSER/W.KLAUSER; Schule und Leistungssport; 1986; S.36)

Research by HOLZ 1980, in Baden-Würtenberg shows that top results can only be achieved by athletes if the social climate (STEINER 1980) and the social milieu are of adequate quality. The results of the research show that the social milieu – understood as a tangle of various interactions

(cp table) – forms an area of conflict for the athlete. From a sociological and social psychological point of view, the social environment cannot be understood as a mere overlapping of fields such as home, spare time, school, education/job, training or trainer/association. Each of them defines itself upon very specific social norms, values and rules, which, for those interacting there, have different validity.

The problems for the athlete, on the one hand, are based on the fact that the norms, values and rules of one field need not necessarily correspond to those of another field, and sometimes they are even contradictory; the athlete, however, should live up to their demands.

On the other hand, it is the athlete who defines his own norms and rules against the background of his own development, his own expectations and needs within a particular field of action.

Thus, it is very difficult for the athlete to keep a permanent balance between contradictory norms, values, and expectations of the various fields in his role as athlete, pupil, son or daughter, and his own norms, values, and expectations determined by the process of his socialization. The essential aim of the system top competitive sport is a successful balance, a "balanced compromise" (NEIDHARDT/CACHAY 1978) between the different fields, thus leading the athlete to optimum steering of the training process, resulting in higher competition performance.

1.4 Drop-out Reasons of Young Top Athletes

In a drop-out study on ex D-squad athletes (1978/79) of Baden-Würtenberg the following reasons for terminating one's competitive sports career were given.

1.	School/study at university was more important	52,4%
2.	Apprenticeship/job was more important	43,7%
3.	Lack of spare time	41,3%
4.	I was fed up with training day in day out	28,3%
5.	My friends were more important	28%
6.	Injuries made me drop out	27,3%
7.	The training group broke up	26,2%

Table 2: Drop-out reasons for termination of a competitive sports career, cp P. HOLZ, in: Leistungssport 1/88; S.6)

Summing up, there are three main reasons for an early termination of a competitive sports career:

- Priority of school/studies or apprenticeship/job
- Lack of spare time, partners or training apathy
- Injuries, training group, environment

Those three areas rank clearly before areas such as "I did not get enough support", "I had achieved what I wanted to achieve" (21, 4%), or "I had not achieved what I wanted to achieve, but did not see any improvement of performance" (21%).

The problem with empirical studies is that those being questioned sometimes answer in a "social sense", or, in relation to their dropping out, give reasons which are socially accepted. It may be interesting in this context to compare what athletes thought about the relationship of their input and output into competitive sport.

Competitive sport:	True (%)	Less true (%)
Was practised at the expense of other spare time interests	61, 8	22,2
Caused family problems	17, 9	65,6
involved deprivation	54, 6	25,6
Limited opportunities for contact with others	31, 2	53,8
Caused disadvantages at school	24, 4	59,3
Caused advantages at school	11, 7	71,1
Caused disadvantages in my apprenticeship	9, 4	80,3

Competitive sport:	True (%)	Less true (%)
Opened up a personal dimension which cannot be exchanged with any other experiences	84,7	5,9
Helped to find interesting acquaintances/friends	77,6	8,1
Enabled me to travel abroad	55,6	34,3
Strengthened my self confidence	84,4	7,4
Gave me the ability to lead my life consciously	61,8	19,1

Table 3: If you sum up your competitive sport results under the heading of “input” and “output” what are the conclusions you draw? (Cp: P.HOLZ; Leistungssport 1/88,6)

Remarkable in this context is that a “lack of spare time (61,8%) and “deprivation” (54,6%) are considered to be negative, whilst disadvantages at school and in one’s job are not considered that important. If one compares school to job, disadvantages at school are considered more serious than those in one’s job. The athletes being questioned experienced their participation in competitive and top competitive sport over a number of years as extremely positive. A majority of them would choose to get into competitive sports again.
Summing up we can say that the reasons for terminating one’s competitive sport career are basically not due to a lack of support, but to a general switch of interests towards other spare time activities and the decision that school and job must be given priority. This is even true if the individual athlete has no problems at school or in his job which might be closely connected with his social norms and values.
The same line of argument can also be found in the studies of Bussmann (1995) on women’s track and field drop-out rate.

2. Aims And Guidelines of the Trial Model ORG for Top Athletes GRG, Maroltingergasse 69-71

2.1 Aims

All those young people who choose to attend the trial model ORG for top athletes are offered special organizational structures not only in the field of sports but also in the educational sector. The aim of all measures is to offer and foster top athletic careers parallel to traditional scholastic education.

To reach that aim an optimal and close cooperation is necessary between sports associations (association representatives, trainers), school (heads, sports coordinators at school, and form masters) and parents.

2.2. Duties of Pupils

2.2.1 Development of Sportive Performance

In order to achieve the desired sportive performance, the following is expected of each and every pupil:

- high degree of competitive attitude
- high degree of readiness to cooperate with trainers
- tendency towards increasing performance (whilst taking into account individual opportunity for development, biological underdevelopment, acute injuries and their following rehabilitation phases, etc.)
- keeping of an accurate training documentation (including successes in competition)
- observation of the following sports principles:

2.2.1.1. Punctual appearance at all training units and competition meets is essential.

2.2.1.2 In addition to the training units under qualified supervision pupils are expected to be willing to undergo individual training (in accordance with their own training structure and plan). Up to one quarter of training time (differing according to the particular sport) may be used for training on one's own.

2.2.1.3 During scholastic holidays pupils are expected to keep to training and holidaying behaviour focussed on the athletic target for the season.

2.2.1.4 Prescribed sports medical examinations and tests must be carried out at the times as fixed. Scholastic establishments are to allow the required release of pupils for this purpose.

2.2.2 Development of Educational Performance

The duration of upper high school has been extended to 5 years as opposed to the 4 years foreseen for traditional high school, but the general performance requirements have not been reduced. After these five years at upper high and on taking the so-called Matura examination the equivalent scholastic and general educational level is to be reached. For pupils this demands real commitment on the educational side and a high degree of readiness to cooperate with the teaching staff in order to coordinate the targets in both sports training and scholastic education.

2.3 Duties of Sports Associations

In order to ensure optimum conditions for the education of pupils in the sport and scholastic fields close cooperation with the school is necessary (training coordinator).

The following basic principles are expected of each and any sports association participating in the trial model (contact person in association, trainer):

- All pupils at the ORG have a right to effectual / adequate training. Each respective sports association must organize sufficient possibilities for training, qualified trainers, sports instruction and coaching at a high level both from a technical and pedagogical view, and participation in contests suited to the performance and training level of the pupil.

- Sport medical examinations and sport motor activity tests of each pupil are to be carried out at least once per academic year (preferably twice yearly!!) by a qualified sport medical institute (IMSB-Südstadt, Institute for Sport Science Schmelz, Sport Med etc.). These examinations will be carried out at the expense of the relevant sport association and/or the parents. The results of the examinations must be forwarded to the school (training coordinator) immediately.

- Each sport association and trainer is obliged to submit a contest/competition and training plan to the training coordinator by the end of September (for the first term) and by the end of January (for the second term). Absences (3 weeks or more) for training camp, journeys to tournaments and competitions must be indicated therein.

- The sport association has the obligation to organise psychological care for the ORG - pupils, should this be necessary.

- All trainers are under the obligation to urge pupils to keep precise training documentation and to check them.

- An assessment of “sport performance” (participation in competitions, competition successes, ”performance chart” (the same or worse than expected) is to be compiled for each pupil annually (by mid-May at the latest).

- The sport associations and the trainers take responsibility for the arrangement as given in Point 4 of exemption from classes for their pupils for reasons due to sport appointments.

- A meeting for the trainers is to take place at least once per half year, to which all trainers of ORG pupils will be invited. Regular attendance is expected for the purpose of cooperation.

- An organisational meeting is to take place at least once per academic year, to which those responsible within the associations will be invited.

2.4 Obligations on the Part of the School

Those responsible for the school educational trial (head, training coordinator) undertake to act in accordance with the principles and guidelines for the model. The selection of staff teaching in the ORG will be carried out in compliance with a special job profile. A high degree of willingness to

cooperate will in particular be expected of the teachers in order to enable the scholastic and sport goals.

The school offers coaching units (in accordance with the money made available by the School Board for Vienna) so that pupils can catch up on the lessons and curriculum missed (due to sport appointments) in good time. These may be arranged by request of the pupil, but also by demand of the teacher and/or the staff meeting.

The school undertakes to apply the arrangement according to Point 4 with reference to the exemption of pupils from classes for reasons of sport appointments.

2.5 School Organisation

During school hours the Austrian School Law applies and on school premises, the relevant rules apply.

With regard to the ORG - pupils the following additional rules apply:

Basically, exemption from class is possible at any time for sport purposes provided there is a sport oriented relevant argument for it and academic performance will not suffer to such a degree that positive completion of the academic year appears to be an unrealistic proposition.

Nevertheless the basic principle should be adhered to whereby training and participation at competitions be organised (as far as possible) in such a way that regular participation in classes is not jeopardized.

The question of which training camps and competitions should be attended during school time should be a matter of long-term planning by the trainers and/or association.

The school (the training coordinator) must be informed by written application – request for exemption (the relevant form is available from the form master/mistress) as to the exact particulars regarding who, when, where, how long and at which sport events (name, time, place, length of time, and at which sport events) a pupil will be engaged.

In this context the following deadlines must be observed:

1 day's absence	3 days in advance
2/3/4 days' absence	5 days in advance
1 week absence	9 days in advance
2 week absence	2 weeks in advance
3 week absence	3 weeks in advance

More than 3 weeks (absence): at the beginning of the semester (cp 2, Duties of Sport Associations)

2.6 Specific School/Sport Organizational Principles with Regard to Lapses in Behaviour

The way of life and behaviour of pupils should in public meet the special sport specific requirements for top performance athletes.

Top performance athletes should attach particular value to the following items:

- sufficient sleep
- specifically tailored diet (nutrition)
- sensible attitude towards alcohol and nicotine consumption as suited to top performance sport
- fairness/ fair behaviour at competitions and in training
- use of pharmacological substances on the BSO doping list is categorically forbidden.

2.7 Educational Problems

Should poor performance (due to extensive sport commitments) be noted in the educational sector obligatory coaching periods must be prescribed as a first measure. Coaching tuition is intended as a method of accompanying pupils who are able only inadequately to fulfil the demands in compulsory subjects as a result of problems in adjusting to a change in schools, or either due to illness or to circumstances requiring particularly special consideration, e.g. due to participation in competitions, have been absent from classes for a longer period. Should educational performance thereafter continue to be unsatisfactory the school (head, training coordinator) can shift priorities at the cost of training time. In the same way exemptions from classes can be refused.

Should results at the end of the academic year not comply with school requirements the usual consequences apply (repeat examination with or without the right to promotion to the next form). The 5th form may not be repeated.

2.8 Health and Sport Problems

Should such serious problems with regard to health and sport develop during the first two years at the school that it appears clear there will be a definite restriction of possible training time and exertion in the future, move to a parallel class in the school without emphasis on sport (with the necessary placement tests) would be a realistic measure.

In the case of pupils in the 8th and 9th form who are unable to continue with regular training aimed at good results in performance, the relevant sports association and the school will look for useful related occupation for them (coaching work, training and occupation as referee, training as instructor, etc.). At all events the time already set aside for permitted exemption from school classes must be used for practical and sport oriented activities.

As long as a pupil trains with the commitment required of him/her whilst keeping to the prescribed guidelines, continued stay in the trial model is assured even if performance ability stagnates. However, should the training opportunities as prescribed by the associations and trainers not be

utilized as best possible, the “Expulsion Commission” (head, coordinator, representative of the sport association) can decide on a move to a conventional form. The pupil must receive a written caution, and the parents a written notification at least 6 weeks before the official decision is pronounced.

These organisational, training, supervising, behavioural and cooperational guidelines come into effect from school year 1994/95 onwards and remain effective until further notice.

2.9 Table of Lessons of Instruction Per Week

Below find a table of the compulsory lessons per class and week. The German names of the relevant subjects were not translated.

Pflichtgegenstände Wochenstunden in d. Klassen

	5.	6.	7.	8.	9.	Gesamt
Religion	2	2	2	2	2	10
Deutsch	3	3	3	3	3	15
Englisch	3	3	3	2	3	14
Französisch	4	3	3	3	3	16
Geschichte u.Sozialkunde	2	2	2	1	0	7
Geographi u. Wirtsch.kunde	2	2	2	1	0	7
Mathematik	3	3	3	3	3	15
Biologie u Umw.kunde	2	2	1	1	0	6
Chemie	0	0	0	2	2	4
Physik	0	1	2	2	2	7
Phil.Einführungs-unterricht	0	0	0	2	2	4
Musikerziehung	1	*2	*2	0	0	1+*4
Bildnerische Erziehung	1	*2	*2	0	0	1+*4
Informatik	2	0	0	0	0	2
Sportkunde	0	2	2	2	2	8
Ausgleichssport	1	1	1	1	1	5
Gesamtwochen stundenanzahl	26	26	26	25	23	126

*.....alternative school subject

2.10 Curriculum

The curriculum for the compulsory subjects Religious Studies, German, English, French, History and Social Studies, Geography and Economics, Mathematics, Chemistry, Physics, Introduction to Philosophy, Informatics correspond to the curriculum of the RG for Pupils of Music.

Note: Wherever there is an indication in the curriculum that in various subjects more emphasis must be given to certain aspects pertaining to music the word “Music” must be replaced by “Sport”. Special curricula have been drawn up for the following compulsory subjects: Art, Music, Biology and Ecology, Sport Sciences.

2.11 School Leaving Certificate Examination

When registering for the school leaving certificate examination according to § 2 Para 1 the candidate is required to simultaneously produce proof that he/she is a high performance athlete within the framework of the BORG for High Performance Athletes, or had been active in sports until the end of the first semester of the 9th form, or no longer able to take part in high performance sport due to injury.
Upon successful completion of the examination for the school leaving certificate the school leaver has the same rights as if he/she had been at a conventional BORG.

2.12 Training Coordinator

The post of a training coordinator is planned for the BORG for High Performance Athletes. The position covers pedagogic, organizing and sport administrative issues. The coordinator is expected to coordinate school and sports, is, however, only an adviser on sports issues. The training coordinator will be appointed from the group of physical educators and should have the greatest possible experience of organization in the area of high performance sports. The area of responsibility of the training coordinator at the BORG for High Performance Athletes includes in particular the following functions and activities:

2.12.1 Coordination of school-pedagogic issues with the special sports demands (planning the school year, training, tournaments, and/or competitions).

2.12.2 Acting as contact person between school, trainers, representatives of associations, and Viennese Sport Administration.

2.12.3 Providing learning strategies for the support of individual pupils in cooperation with the relevant teachers, tutors, training coordinator, coordinators of individual sports (organisation of tutoring, “learning packages” etc.).

2.12.4 Organizing sport scientific accompaniment (request for medical tests and for reports from experts).

3.Cooperation School and WHV Top Performance Model

3.1 Sport Selection

The top performance model selects the pupils for sport. That is to say there must be a description of the pupils' perspective in sport which ensures that they deserve support in their top performance. This description of sport perspective must be seen in connection with the student's membership in an Austrian National Team's squad. Is the pupil at the time of selection no member of an Austrian National Team he/she has at least to be member of a regional squad. Scouting of candidates for the school takes place two years before their probable acceptance into the top performance model. In addition, selection training for all candidates takes place in order to check their actual individual technical status under pressure.

3.2 School Entrance

After the procedure described above the pupils' names are passed on to the educational coordinator of the ORG for Top Athletes, parents and pupils are invited for a personal interview in the first week after the semester holidays (February).
During this interview the educational performance of the past year is discussed and reflected by means of the pupil's school report. Particular emphasis is laid upon aspects such as commitment on the educational side, self- and time management (marks in the other subjects apart from German, English, and Mathematics), since these aspects are basic pre-conditions for going in for top sport performance. The 5th form may not be repeated and the physical and psychological load because of increased training sessions of six to ten times a week must not be underestimated.

Moreover, a written test in German, Mathematics, and English is held. This test serves as a basis for the school to form its own opinion on the candidates' individual capabilities in those subjects.

Since the school cannot accept all the pupils who would like to be accepted, it receives a ranking by their sport partner by the end of March. There are more than a hundred candidates from 24 federations for maximum 40 places at school.

In April a ranking of those accepted provisionally, and a possible waiting list, is published by the evaluation commission and sent to WHV. By the end of June after the marking of the pupils' work and the presentation of the final certificate those candidates who meet all the necessary conditions are finally accepted to the ORG for Top Athletes.

3.3 Rights and Duties of the Association, Sports Persons, and the School Can Be Found Under Item 2 above

3.4 Agreement between the Top Performance Model and the School

In a written agreement set up between the WHV top performance model and the school, the model commits itself to act according to the principles and guidelines of the school.
Furthermore, a written concept has to be presented in which the: association's structure, contact person, checking of the qualification of the trainers, criteria for the sport ranking of candidates, criteria of issuing a sport report, checking of training documentation, contact with members of the association, organization of the morning training, and the supervision of the relevant training process are laid down.

3.5 Concept of Certificated WHV Model as to Subject Matter

- General aim
- Philosophy – WHV model
- Strategic aims
- Aim:
    - Selection (1st and 2nd year)
    - Training
    - Proper game experience
    - Systematic combinations
- Ethics
- General principles
    - Continuity
    - The meaning of results with regard to up-and-coming players
- Speed in handball
- Technical elements in attack
    - Principles of passing and catching
    - Shooting technique by way of example of centre back court player
    - Technical skills in play 1:1
    - Technical skills in play 2:1, 3:2, 2:2
- Group and collective tactical skills
- Technical elements in defence
- Goal keepers
- Back court players, wings and pivots
- Technique and tactics in fast break
    - Tactical elements - offence
    - Building up one's attack
- Tactical elements – defence
    - Playing philosophy
- Factors for success
    The trainers offer:
    We expect:
- Mental preparation

- Necessary means to ensure optimum training and competition
- Medical care
    - Medical examination
- Sport concept
    - Annual plan containing:
    - Players' perspectives
    - Laying down of teaching contents in the various forms
    - Laying down of volumes of loads
    - Selection norms

4. Successful Graduates of the School Year 2011/12 and Their Load Peaks between January and June 2012

I would like to present the load peaks of two juvenile top competitive athletes, David Brandfellner and Sonja Frey. Both are absolutely top national athletes, and play the game of handball as a member of HSZ or a professional in the German league (HC Thüringen) respectively.

The last school year was a period of enormous stress for both of them and it has once again been shown that the system ORG for top athletes in cooperation with the top performance model of the Viennese Handball Association is a great success in all aspects. The juvenile top athletes have school leaving certificates enabling them on the one hand to attend university, and on the other to further develop their athletic skills in the best way possible.

4.1 BRANDFELLNER David (90)

Handball (Fivers Margareten)

David‘s successful shot against Hard

Successes:

- Rookie of the year in HLA
- Austrian Cup Winner 2012
- Austrian Champion U 19
- Pool of the Austrian Male National Team

David Brandfellner's special Situation

During the period between 1 January 2012 and 10 April 2012 he had exactly 11 days free of training. The rest of the time, in addition to regular championships, Cup matches, Austrian Youth Championships, and regular training sessions, he had to take part in training camps of his club and of the national teams (aged 90 and 92), the selection camps of the Austrian Male National Team, tournaments of his club, and the EC Qualification for the age group 90 and 92.
Not to mention the demands at school: three hour tests in the subjects German, English, and Mathematics. Tests and exams in the other subjects had also to be taken. In Sports Sciences (compulsory subject for final examination, cp timetable, item 2) he had to present a written thesis of a special area of handball.
In order to cope with this load of stress a special coaching plan was introduced upon the first signs of exhaustion. A mental coach set up a career and a time management plan. This was done in cooperation between those responsible for the Performance Model, the club, and the Austrian Handball Federation. This plan determined in detail how the student was to proceed with regard both to his career at school and in sport.
As David was a particularly disciplined top athlete, measures such as steering of training load, intensity, volume, and mental supervision, regenerative measures, and specially targeted coaching at school could be accomplished successfully.
Remarkable and a sign of his attitude is the fact that on 12 March whilst at a team training camp at Südstadt he sat down for a written English test at school, and immediately afterwards returned to the camp. Unfortunately he injured his wrist in the EC Qualification age group 92 (1-10 April 2012) in Norway. Because of this injury he was free to concentrate on school matters and passed his finals with excellent marks.

4.1.1 Planning of Training and School Career with Special Reference to the extremely high Loads in the last School Year 2011/12 (months, days, and other details in the table below were not translated into English)

Jänner			VM	Abend	Februar			VM	Abend
1	**So**			**FREI**	1	Mi			**FREI**
2	Mo			**FREI**	2	Do			**19.30 Hollg.**
3	Di	NT		**FREI**	3	Fr			**19.00 Hard vs. 5ers**
4	Mi	NT		**FREI**	4	Sa			**ÖMS U19 in Bregenz**
5	Do	NT		**FREI**	**5**	**So**			**ÖMS U19 in Bregenz**
6	**Fr**	NT		**FREI**	6	Mo			**BSZ 19.00 - 21.00**
7	Sa	NT		**FREI**	7	Di		**9.30 Hollg.**	**18.00 Hollg.**
8	**So**	NT		**FREI**	8	Mi		**9.30 Bacherpl**	**18.00 Hollg.**
9	Mo	NT		**19.30 Bacherpl.**	9	Do		**Individual 9.30**	**FREI**
10	Di	NT	**9.30 Hollg.**	**18.00 Hollg.**	10	Fr			**18.00 Hollg.**
11	Mi	NT		**19.30 5ers vs. St. Pölten**	11	Sa			**Linz vs. 5ers 20.20. 18.15**
12	Do	NT	**9.30 Hollg.**	**19.30 Hollg.**	**12**	**So**			**FREI**
13	Fr	NT		**18.00 Hollg.**	13	Mo			**BSZ 19.00 - 21.00**
14	Sa	NT		**FREI**	14	Di		**9.30 Hollg.**	**18.00 Hollg.**
15	**So**			**FREI**	15	Mi		**9.30 Bacherpl**	**18.00 Hollg.**
16	Mo		**TEST**	**BSZ 19.00 - 21.00**	16	Do		**Individual 9.30**	**FREI**
17	Di		**9.30 Hollg.**	**18.00 Hollg.**	17	Fr			**18.00 Hollg.**
18	Mi			**18.00 Hollg.**	18	Sa			**5ers vs. Bregenz 19.30, 17.30**
19	Do		**9.30 Hollg.**	**FREI**	**19**	**So**			**FREI**
20	Fr		**Abfahrt 10.00**	**Turnier Polen**	20	Mo			**BSZ 19.00 - 21.00**
21	Sa			**Turnier Polen**	21	Di		**9.30 Hollg.**	**18.00 Hollg.**
22	**So**			**Turnier Polen**	22	Mi		**9.30 Bacherpl**	**18.00 Hollg.**
23	Mo			**Laufen BSZ 19.00 - 21.00**	23	Do		**Individual 9.30**	**FREI**
24	Di		**9.30 Hollg.**	**18.00 Hollg.**	24	Fr			**18.00 Hollg.**
25	Mi			**FREI**	25	Sa			**Hard vs. 5ers 19.00. 17.00**
26	Do		**9.30 Hollg.**	**18.00 Hollg.**	**26**	**So**			**FREI**
27	Fr			**19.30 5ers vs. Leoben**	27	Mo			**BSZ 19.00 - 21.00**
28	Sa			**FREI**	28	Di		**9.30 Hollg.**	**18.00 Hollg.**
29	**So**		**Training?**	**Training?**	29	Mi		**9.30 Bacherpl**	**18.00 Hollg.**
30	Mo			**BSZ 19.00 - 21.00**					
31	Di		**9.30 Hollg.**	**18.00 Hollg.**					

Laufen und Kraftk.
Hallentraining
ORF Sport Plus live Spiel
NT- Termin
TR-Spiel
Heimspiel
Schule
ÖHB Cup

Auswärtsspiele

Mai		VM	Abend	Juni			
1	**Di**			1	Fr		**Finale 3**
2	Mi			2	Sa		
3	Do			**3**	**So**		
4	Fr			4	Mo	**mündliche Matura**	
5	Sa		**HF 1**	5	Di		
6	**So**			6	Mi		
7	Mo	**schriftliche Matura**		**7**	**Do**		
8	Di	**schriftliche Matura**		8	Fr		
9	Mi		**HF 2**	9	Sa		
10	Do	**schriftliche Matura**	**HF 2**	**10**	**So**		
11	Fr	**schriftliche Matura**		11	Mo		
12	Sa			12	Di		
13	**So**			13	Mi		
14	Mo		**HF 3**	14	Do		
15	Di			15	Fr		
16	Mi			16	Sa		
17	Do			**17**	**So**		
18	Fr		**Finale 1**	18	Mo		
19	Sa			19	Di		
20	**So**			20	Mi		
21	Mo			21	Do		
22	Di			22	Fr		
23	Mi			23	Sa		
24	Do			**24**	**So**		
25	Fr		**Finale 2**	25	Mo		
26	Sa			26	Di		
27	**So**			27	Mi		
28	Mo			28	Do		
29	Di			29	Fr		
30	Mi			30	Sa		
31	Do						

4.2 FREY Sonja (90)

Handball (MAG Fivers)

International successes

- Pre-olympic Tournament London
  National Team Women) 1st place
- WC Qualification Women 2012 1st place
- WC Czech Republic 11th place
- U 19 European Championship Women
  3rd place (best player of the tournament)

Sonja Frey who in the meantime is a pro in Germany playing for HC Thüringen had her peaks of load during the period between March 2012 and June 2012. As she is a permanent member of the Women's National Team, the intensive training camps of the Women's National Team and the WC Qualification for age group 1992 came at the same time as the peak school stress (cp table a) of the three hour school tests which are considered direct preparation for the written final exams.

As in the case of David Brandfellner it was possible to find individual solutions in cooperation with those responsible for the performance model, club trainers, sports coordinators for women in the Austrian Handball Federation, and the trainers of the national teams, as defined within the framework of the principles and guidelines.

Above all the oral final examination on 4 June was a challenge to the young athlete. From 21st May to 2nd June she had been at the training camp for the EC qualification. On 2 June she had played in the last game against the Czech Republic and on Monday, 4 June, she went to her oral final exam which she passed excellent marks.

4.2.1 Planning of Training and School Career with Special Reference to the extremely high Loads in the last School Year 2011/12 (months, days, and other details in the table below were not translated into English)

Jänner					Februar				
1	So			FREI	1	Mi			18.00 Stadthalle
2	Mo			19.30 Hollg.	2	Do			18.00 Hollg.
3	Di			19.30 Hollg.	3	Fr			19.30 Bacherpl.
4	Mi			18.00 Bacherpl.	4	Sa			19.00 MGA vs. Korneuburg
5	Do	NT92		2 Trainings (VM und NM)	5	So			FREI
6	Fr	NT92		18.00 Bacherpl.	6	Mo	NT92		2 Trainings (VM und NM)
7	Sa			18.00 ÖHB-Cup vs. Felkirchen	7	Di	NT92		2 Trainings (VM und NM)
8	So	NT92		2 Trainings (VM und NM)	8	Mi	NT92		2 Trainings (VM und NM)
9	Mo			FREI	9	Do	NT92		2 Trainings (VM und NM)
10	Di			19.30 Bacherpl.	10	Fr	NT92		2 Trainings (VM und NM)
11	Mi			18.00 Bacherpl.	11	Sa			FREI
12	Do		GL-Ausdauer	FREI	12	So			FREI
13	Fr			08.00-19.00 Demo-Team A-TR	13	Mo			FREI
14	Sa			FREI	14	Di			19.30 Bacherpl.
15	So			FREI	15	Mi			18.00 Stadthalle
16	Mo		Technik-TR	FREI	16	Do			18.00 Hollg.
17	Di		Regeneration	19.30 Bacherpl.	17	Fr			19.00 Bacherpl.
18	Mi		Technik-TR	18.00 Stadthalle	18	Sa			FREI
19	Do		GL-Ausdauer	18.00 Hollg.	19	So			FREI
20	Fr		Technik-TR	19.00 Bacherpl.	20	Mo			FREI
21	Sa			FREI	21	Di			19.30 Bacherpl.
22	So			16.30 MGA vs. Eggenburg	22	Mi			18.00 Bacherpl.
23	Mo		Lauf-regener.	FREI	23	Do			18.00 Hollg.
24	Di		Regeneration	19.30 Bacherpl.	24	Fr			19.00 Bacherpl.
25	Mi		Technik-TR	18.00 Stadthalle	25	Sa			FREI
26	Do		GL-Ausdauer	18.00 Hollg.	26	So			FREI
27	Fr			19.00 Bacherpl.	27	Mo			FREI
28	Sa			19.00 MGA vs. Hypo 1	28	Di			19.30 Bacherpl.
29	So			FREI	29	Mi			18.00 Stadthalle
30	Mo			FREI					
31	Di			19.30 Bacherpl.					

TR-Leistungsmodell
Hallentraining
NT- Termine

TR-Spiel
Heimspiel
Beach-Training

Auswärtsspiele

März					April				
1	Do			18.00 Testspiel	1	So	NT92		WM-Quali U20
2	Fr			19.30 Bacherpl.	2	Mo	NT92		WM-Quali U20
3	Sa			17.00 MGA vs. Atzgersdorf	3	Di	NT92		WM-Quali U20
4	So			FREI	4	Mi	NT92		WM-Quali U20
5	Mo			FREI	5	Do	NT92		WM-Quali U20
6	Di			19.30 Bacherpl.	6	Fr	NT92		WM-Quali U20
7	Mi			18.00 Bacherpl.	7	Sa	NT92		WM-Quali U20
8	Do			18.00 Hollg.	8	So	NT92		WM-Quali U20
9	Fr			19.00 Bacherpl.	9	Mo	NT92		WM-Quali U20
10	Sa			19.00 MGA vs. Dornbirn	10	Di			FREI
11	So	NF			11	Mi			FREI
12	Mo	NF			12	Do			FREI
13	Di	NF			13	Fr			19.00 Bacherpl.
14	Mi			18.00 Stadthalle	14	Sa			FREI
15	Do			18.00 Hollg.	15	So			FREI
16	Fr			19.00 Bacherpl.	16	Mo			FREI
17	Sa			FREI	17	Di			19.30 MGA vs. Wr. Neustadt
18	So	NF			18	Mi			FREI
19	Mo	NF			19	Do			18.00 Hollg.
20	Di	NF			20	Fr			19.00 Bacherpl.
21	Mi	NF			21	Sa			19.00 MGA vs. HC Kärnten
22	Do	NF		EM-Quali: AUT - SWE	22	So			FREI
23	Fr	NF			23	Mo			FREI
24	Sa	NF		EM-Quali: SWE - AUT	24	Di			19.30 Bacherpl.
25	So			FREI	25	Mi			18.00 Stadthalle
26	Mo	NT92		2 Trainings (VM und NM)	26	Do			18.00 Hollg.
27	Di	NT92		LSP: SVK - AUT	27	Fr			19.00 Bacherpl.
28	Mi	NT92		LSP: AUT - SVK	28	Sa			FREI
29	Do			FREI	29	So			17.00 MGA vs. Tulln
30	Fr			FREI	30	Mo			18.00 Bacherpl.
31	Sa			FREI					

ÖHB Cup-Spiel

So und Feiertag

Mai					Juni				
1	**Di**			**18.00 MGA vs. Fünfhaus**	1	Fr	NF		**Vorbereitung EM-Quali**
2	Mi			**18.00 Stadthalle**	2	Sa	NF		**EM-Quali: AUT - CZE**
3	Do			**18.00 Hollg.**	3	**So**			**FREI**
4	Fr			**19.00 Bacherpl.**	4	Mo		**mündliche Matura**	**FREI**
5	Sa			**FREI**	5	Di			**FREI**
6	**So**			**FREI**	6	Mi			**FREI**
7	Mo		**schriftliche Matura**	**FREI**	7	**Do**			**FREI**
8	Di		**schriftliche Matura**	**19.30 Testspiel**	8	Fr			**FREI**
9	Mi			**18.00 Stadthalle**	9	Sa			**FREI**
10	Do		**schriftliche Matura**	**18.00 Hollg.**	10	**So**			**FREI**
11	Fr		**schriftliche Matura**	**19.00 Bacherpl.**	11	Mo			**FREI**
12	Sa			**FREI**	12	Di	NT92		**Leistungsdiognostischer Test**
13	**So**			**18.00 MGA vs. Hypo 2**	13	Mi			**FREI**
14	Mo			**FREI**	14	Do			**FREI**
15	Di			**FREI**	15	Fr			**FREI**
16	Mi			**18.00 Beach-Training**	16	Sa			**FREI**
17	Do			**FREI**	17	**So**			**FREI**
18	Fr			**18.00 Beach-Training**	18	Mo	NT92		**Vorbereitung EM-Quali**
19	Sa			**FREI**	19	Di	NT92		**Vorbereitung EM-Quali**
20	**So**			**FREI**	20	Mi	NT92		**Vorbereitung EM-Quali**
21	Mo	NF		**Vorbereitung EM-Quali**	21	Do	NT92		**Anreise nach CZE**
22	Di	NF		**Vorbereitung EM-Quali**	22	Fr	NT92		**TR+LSP: CZE - AUT**
23	Mi	NF		**Vorbereitung EM-Quali**	23	Sa	NT92		**TR+LSP: CZE - AUT**
24	Do	NF		**Vorbereitung EM-Quali**	24	**So**			**FREI**
25	Fr	NF		**Vorbereitung EM-Quali**	25	Mo	NT92		**Vorbereitung EM-Quali**
26	Sa	NF		**Vorbereitung EM-Quali**	26	Di	NT92		**TR+LSP: AUT - ESP**
27	**So**	NF		**Vorbereitung EM-Quali**	27	Mi	NT92		**Vorbereitung EM-Quali**
28	Mo	NF		**Vorbereitung EM-Quali**	28	Do	NT92		**TR+LSP: AUT - ESP**
29	Di	NF		**Vorbereitung EM-Quali**	29	Fr			**FREI**
30	Mi	NF		**EM-Quali: CZE - AUT**	30	Sa	NT92		**Anreise nach CZE**
31	Do								

5. Successful Graduates of the Cooperation between the WHV Performance Model and the Viennese ORG XVI for Top Athletes

5.1 Stefanie Subke/Ofenböck (200 national games, EC bronze medal 1996 and 1999, 5th place at the Olympic Games, WC 2009)
5.2 Martin Abadier (9th place EC 2010, Men's National Team, HLA Fivers Margareten)
5.3 Richard Wöss (9th place EC 2010, Men's National Team, Bergischer HC)
5.4 Martin Fuger (Junior National Team, HLA Fivers Margareten)
5.5 Thomas Hurich (Junior National Team, HLA Fivers Margareten)
5.6 Andreas Krywult (A-licence trainer)
5.7 Mathias Nicolic (Junior National Team, HLA Fivers Margareten)
5.8 Lisa Fischer (Female Junior National Team, MGA)
5.9 Barbara Fischer (Female Junior National Team, MGA)
5.9 Dolores Raijic (Female Junior National Team, MGA)
5.10 Lisa Hagen (Female Junior National Team, MGA)
5.11 Kim Cintula(Female Junior National Team, MGA)
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6. Conclusion

This successful handball careers are a proof that the dual system of an ORG for top athletes and a high quality performance model of the WHV certified by the Austrian Handball Federation contributes to a high degree towards a further development of handball in Austria on the one hand, and on the other towards personal security. A specialized timetable, the prolongation of tuition by one year, and the resulting opportunity to train professionally (morning and evening) are the reasons why this development is possible.

Moreover, the support by the school (individual coaching, no problem in obtaining exemption for sport activities, the use of the internet) ensure that young top athletes with the right attitude can, via the final exam, attain entrance to university.

7. References

J. HANDLOSER/W.KLAUSER; in Leistungssport; 1986; S.36

P. HOLZ; in: Leistungssport 1/88; S.6

G. BUSSMANN; women`s track and field drop out rate; 1995; S.34

THE FAST BREAK GAME

A DECISIVE FACTOR OF SUCCESS

HEINZ HAUSMANN

ÖHB

AUSTRIA

2012

SUMMARY

The question, whether the fast break is a decisive factor for success, will be discussed after working out of the official data of the 10th Men`s Championship EURO 2012 in Serbia statistically.
After my detailed composition of the statistics and the data from the championship, I can say that the fast break doesn't only influence the actual outcome of the game, but revealed that wing-players are more efficient than all the other players of the team, as well.
The conclusion is that the left and the right wing players scored around 80%, while on the other hand the remaining players were below 70%, to lower the total tournament average fast-break success-rate to 74%.
There a many factors influencing this substantial difference. A couple of factors are listed and demonstrated by graphics and pictures below. According to my findings, the warm-up phase and especially the fast-break part of it should be updated and modified to maximize efficiency of scoring by fast-breaks.

KEYWORDS

Team Handball, offense play, fast break, efficiency, success

INTRODUCTION

There seems to be general agreement that the fast break is a decisive factor of success. Therefore statements like the following are very common in handball literature:
*"The successful, spectacular and quick mode of attack is the counter-attack which is **the first attack attempt** after gaining possession of the ball when the defense is still disorganized"* (Marczinka, 1993. p. 220)

The aim was to check to which extent this statement turns out to be correct.

The analysis of the 10th Men`s European Handball Championship has shown that the matches tend to be very close. More than half of all matches were decided by 2 goals or less.
Being aware of this trend, I got curious as to what degree fast breaks were part of victory, respectively loss of a match. To put it differently: Are successful fast breaks directly linked to victory?

It is a fact, that there are in total average four fast breaks per match and team.
Furthermore only three of these attempts result in goals, meaning 75% efficiency throughout the entire tournament (Pollany/Euro 2012).
This information is the basis of my thesis. Accordingly I will work out the importance of the fast break game of EURO 2012 and will try to prove that the fast break is indeed a decisive factor of success.

The idea to write about fast breaks initially arose in my mind when I examined the preliminary round game between Macedonia and Germany.

Being tied at 23:23, forty seconds to go before the end of the match, a Macedonian player had the chance by fast break to take the lead. He failed to score and shortly afterwards Germany managed twelve seconds before the end to score the game-deciding goal to take their first victory on their way to proceed to the main round. If he had scored for a final score of 24:23 Germany would have been eliminated from the tournament. If the match had ended 23:23 Germany would have played in the main round, though they would have only had three points instead of four, which would have resulted in facing their opponents in a different sequence.

Statistic tables were necessary to work out the specific details.

Table 1/preliminary round/shooting position

GROUP A	SCORE	DIFF	L	POS	CEN	TER	R	POS				
POL	18	-4	1	1	2	3	0	0	3	4	75%	-1
SRB	22	4	0	0	2	2	0	0	2	2	**100%**	0
DEN	30	5	3	4	4	6	1	2	8	12	67%	-4
SVK	25	-5	0	0	2	4	0	0	2	4	**50%**	-2
SVK	24	-17	0	0	1	1	0	0	1	1	**100%**	0
POL	41	17	5	5	12	12	0	1	17	18	94%	-1
SRB	24	2	0	0	0	1	0	0	0	1	**0%**	-1
DEN	22	-2	0	0	4	4	0	0	4	4	**100%**	0
POL	27	1	0	0	3	5	2	2	5	7	71%	-2
DEN	26	**-1**	1	1	1	2	1	1	3	4	75%	**-1**
SRB	21	**0**	0	1	3	3	0	0	3	4	**75%**	**-1**
SVK	21	**0**	0	1	2	3	0	0	2	4	**50%**	**-2**

GROUP B	SCORE	DIFF	L	POS	CEN	TER	R	POS				
GER	24	-3	1	2	2	2	0	0	3	4	75%	-1
CZE	27	3	1	2	1	1	2	3	4	6	67%	-2
SWE	26	**0**	3	5	0	0	0	0	3	5	60%	**-2**
MKD	26	**0**	2	2	1	2	2	2	5	6	83%	**-1**
MKD	23	**-1**	1	2	2	2	0	0	3	4	**75%**	**-1**
GER	24	1	1	1	1	2	0	0	2	3	67%	-1
CZE	29	-4	1	1	4	5	1	2	6	8	75%	-2
SWE	33	4	0	0	6	7	1	1	7	8	88%	-1
GER	29	5	3	3	0	0	1	1	4	4	**100%**	0
SWE	24	-5	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
CZE	21	-6	0	0	2	3	1	1	3	4	75%	-1
MKD	27	6	1	1	2	3	0	1	3	5	60%	-2

GROUP C	SCORE	DIFF	L	POS	CEN	TER	R	POS				
FRANCE	26	-3	2	2	0	1	0	1	2	4	**50%**	-2
ESP	29	3	1	1	5	5	0	0	6	6	**100%**	0
HUN	31	0	1	1	3	3	0	0	4	4	**100%**	0
RUS	31	0	0	0	2	2	2	2	4	4	**100%**	0
RUS	24	**-4**	0	1	2	5	2	3	4	9	**44%**	**-5**
FRANCE	28	4	3	3	4	4	0	0	7	7	**100%**	0
ESP	24	**0**	0	0	3	4	1	1	4	5	**80%**	**-1**
HUN	24	0	0	0	2	2	1	1	3	3	**100%**	0
ESP	30	3	1	2	3	4	1	2	5	8	63%	-3
RUS	27	-3	2	4	4	4	1	1	7	9	78%	-2
FRANCE	23	**-3**	3	3	3	5	1	2	7	10	**70%**	**-3**
HUN	26	3	1	1	3	6	0	0	4	7	57%	-3

GROUP D	SCORE	DIFF	L	POS	CEN	TER	R	POS				
NOR	28	1	1	2	2	3	0	0	3	5	60%	-2
SLO	27	-1	1	1	2	2	1	1	4	4	**100%**	0
CRO	31	2	2	2	1	1	0	0	3	3	**100%**	0
ISL	29	**-2**	0	0	1	3	0	0	1	3	**33%**	**-2**
SLO	29	**-2**	2	3	2	3	3	3	7	9	**78%**	**-2**
CRO	31	2	2	2	1	1	1	1	4	4	**100%**	0
ISL	34	2	2	2	2	4	3	3	7	9	78%	-2
NOR	32	-2	0	0	1	1	0	0	1	1	**100%**	0
ISL	32	**-2**	1	2	3	4	2	3	6	9	**67%**	**-3**
SLO	34	2	2	2	1	1	0	0	3	3	**100%**	0
CRO	26	6	3	7	1	2	3	5	7	14	**50%**	**-7**
NOR	20	-6	0	0	3	3	1	1	4	4	**100%**	0

54	73	111	146	35	47	200	266
	74%		**76%**		**74%**		**75%**

Table 2/main round/shooting position

GROUP M1	SCORE	DIFF	L	POS	CEN	TER	R	POS				
POL	29	**0**	3	3	7	11	1	2	11	16	**69%**	**-5**
SWE	29	0	0	0	4	4	1	1	5	5	**100%**	0
DEN	33	1	1	2	2	2	2	2	5	6	83%	-1
MKD	32	**-1**	0	0	3	4	0	0	3	4	**75%**	**-1**
SRB	21	**0**	2	2	2	3	0	0	4	5	**80%**	**-1**
GER	21	**0**	0	0	3	4	0	0	3	4	**75%**	**-1**
POL	25	**-2**	0	1	4	7	2	4	6	12	**50%**	**-6**
MKD	27	2	1	1	3	3	1	1	5	5	**100%**	0
DEN	28	2	2	3	5	7	0	0	7	10	70%	-3
GER	26	-2	0	0	2	2	1	2	3	4	75%	-1
SRB	24	3	0	0	3	3	1	1	4	4	**100%**	0
SWE	21	-3	1	1	0	0	0	0	1	1	**100%**	0
POL	33	1	0	0	4	4	2	2	6	6	**100%**	0
GER	32	-1	2	2	4	4	0	0	6	6	**100%**	0
DEN	31	7	0	0	3	4	0	1	3	5	60%	-2
SWE	24	-7	0	0	0	1	2	3	2	4	**50%**	-2
SRB	19	-3	0	0	0	1	0	0	0	1	**0%**	-1
MKD	22	3	0	0	4	5	0	0	4	5	80%	-1

GROUP M2	SCORE	DIFF	L	POS	CEN	TER	R	POS				
HUN	21	-6	0	0	2	3	0	0	2	3	67%	-1
ISL	27	6	1	1	4	7	0	0	5	8	63%	-3
FRANCE	28	2	1	1	0	0	5	6	6	7	86%	-1
SLO	26	**-2**	2	3	3	4	3	3	8	10	**80%**	**-2**
ESP	24	2	1	1	1	3	1	1	3	5	60%	-2
CRO	22	**-2**	1	3	2	3	2	2	5	8	**63%**	**-3**
ESP	31	5	2	2	0	1	1	2	3	5	60%	-2
ISL	26	-5	3	3	3	5	1	2	7	10	70%	-3
FRANCE	22	-7	0	1	2	2	1	1	3	4	75%	-1
CRO	29	7	2	2	1	2	1	1	4	5	80%	-1
HUN	30	-2	1	1	4	5	1	1	6	7	86%	-1
SLO	32	2	2	2	3	4	0	0	5	6	83%	-1
FRANCE	29	**0**	2	2	3	4	0	1	5	7	**71%**	**-2**
ISL	29	**0**	2	2	4	5	0	0	6	7	**86%**	**-1**
ESP	35	3	1	1	4	4	1	1	6	6	**100%**	0
SLO	32	**-3**	1	2	2	4	0	0	3	6	**50%**	**-3**
HUN	24	**0**	0	0	2	2	0	1	2	3	**67%**	**-1**
CRO	24	**0**	3	3	5	9	0	0	8	12	**67%**	**-4**
			37	45	98	136	30	41	165	222		
				82%		**72%**		**73%**		**74%**		

Table 3/finals and placement matches/shooting position

	SCORE	DIFF	L	POS	CEN	TER	R	POS				
DEN	25	1	1	1	1	2	2	3	4	6	67%	-2
ESP	24	**-1**	1	1	3	3	2	3	6	7	**86%**	**-1**
SRB	26	4	0	0	1	1	1	1	2	2	**100%**	0
CRO	22	**-4**	0	1	4	6	0	1	4	8	**50%**	**-4**
MKD	28	1	0	0	3	4	0	0	3	4	75%	-1
SLO	27	-1	0	0	1	1	0	0	1	1	**100%**	0
CRO	31	4	0	1	3	3	0	0	3	4	75%	-1
ESP	27	-4	0	0	1	2	0	0	1	2	**50%**	-1
SRB	19	-2	0	0	1	1	0	1	1	2	**50%**	-1
DEN	21	2	1	1	2	2	1	2	4	5	80%	-1

3	5	20	25	6	11	29	41
	60%		**80%**		**55%**		**71%**

Table 4/summary of tournament/shooting position

	L	POS		CEN	TER		R	POS	
prel	54	73	74%	111	146	76%	35	47	74%
main	37	45	82%	98	136	72%	30	41	73%
finals	3	5	60%	20	25	80%	6	11	55%
	94	123	**76%**	229	307	**75%**	71	99	**72%**

	TOTAL	AVERAGE	
Prel	200	266	75%
Main	165	222	74%
finals	29	41	71%
	394	529	**74%**

The 1% point difference in comparison to the official Qualitative Trend Analysis of the Euro 2012 results (see Pollany 2012) might be due to the fact, that I've included the finals and placement matches as well, which were not considered in the official report, mentioned above.

Looking only at the charts above, one could assume that the average percentage of 74% success rate is generally speaking valid for all three positions.
However, my next step was to have a more precise look and distinguish those scores by position, namely left and right wing, as well as centers, which (as you will see) draws a different picture.

Table 5/preliminary round/shooting player

GROUP A	SCORE	DIFF	L	W	CEN	TER	R	W				
POL	18	-4	1	1	1	2	1	1	3	4	75%	-1
SRB	22	4	2	2	0	0	0	0	2	2	**100%**	0
DEN	30	5	3	4	4	6	1	2	8	12	67%	-4
SVK	25	-5	0	0	2	4	0	0	2	4	50%	-2
SVK	24	-17	1	1	0	0	0	0	1	1	**100%**	0
POL	41	17	5	5	11	12	1	1	**17**	**18**	**94%**	-1
SRB	24	2	0	0	0	1	0	0	0	1	0%	-1
DEN	22	-2	1	1	2	2	1	1	4	4	**100%**	0
POL	27	1	0	0	3	4	2	3	5	7	71%	-2
DEN	26	**-1**	1	1	1	2	1	1	3	4	**75%**	**-1**
SRB	21	**0**	0	0	0	0	3	4	3	4	**75%**	**-1**
SVK	21	**0**	0	0	2	4	0	0	2	4	**50%**	**-2**

GROUP B	SCORE	DIFF	L	W	CEN	TER	R	W				
GER	24	-3	1	2	1	1	1	1	3	4	75%	-1
CZE	27	3	0	0	3	5	1	1	4	6	67%	-2
SWE	26	**0**	2	4	1	1	0	0	3	5	**60%**	**-2**
MKD	26	**0**	1	2	2	2	2	2	5	6	**83%**	**-1**
MKD	23	**-1**	0	1	3	3	0	0	3	4	**75%**	**-1**
GER	24	1	0	1	0	0	2	2	2	3	67%	-1
CZE	29	-4	0	0	5	7	1	1	6	8	75%	-1
SWE	33	4	2	2	2	3	3	3	7	8	88%	-1
GER	29	5	2	2	0	0	2	2	4	4	**100%**	0
SWE	24	-5	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0%**	**0**
CZE	21	-6	0	0	2	3	1	1	3	4	75%	-1
MKD	27	6	2	4	0	0	1	1	3	5	60%	-2

GROUP C	SCORE	DIFF	L	W	CEN	TER	R	W

FRANCE	26	-3	1	1	1	2	0	1	2	4	**50%**	-2
ESP	29	3	2	2	2	2	2	2	6	6	**100%**	0

HUN	31	0	2	2	2	2	0	0	4	4	**100%**	0
RUS	31	0	3	3	1	1	0	0	4	4	**100%**	0

RUS	24	**-4**	0	2	3	4	1	3	4	9	**44%**	**-5**
FRANCE	28	4	3	3	3	3	1	1	7	7	**100%**	0

ESP	24	**0**	1	1	2	3	1	1	4	5	**80%**	**-1**
HUN	24	0	0	0	3	3	0	0	3	3	**100%**	0

ESP	30	3	1	1	2	4	2	3	5	8	63%	-3
RUS	27	-3	4	4	2	3	1	2	7	9	78%	-2

FRANCE	23	**-3**	3	3	4	7	0	0	7	10	**70%**	**-3**
HUN	26	3	1	1	3	6	0	0	4	7	57%	-3

GROUP D	SCORE	DIFF	L	W	CEN	TER	R	W

NOR	28	1	1	2	2	3	0	0	3	5	60%	-2
SLO	27	-1	2	2	1	1	1	1	4	4	**100%**	0

CRO	31	2	2	2	1	1	0	0	3	3	**100%**	0
ISL	29	**-2**	0	0	1	3	0	0	1	3	**33%**	**-2**

SLO	29	**-2**	2	2	1	3	4	4	7	9	**78%**	**-2**
CRO	31	2	2	2	2	2	0	0	4	4	**100%**	0

ISL	34	2	2	2	1	1	4	6	7	9	78%	-2
NOR	32	-2	0	0	1	1	0	0	1	1	**100%**	0

ISL	32	**-2**	0	1	4	**5**	2	3	6	9	**67%**	**-3**
SLO	34	2	0	0	1	1	2	2	3	3	**100%**	0

CRO	26	6	3	5	2	5	2	4	7	14	**50%**	-7
NOR	20	-6	0	0	4	4	0	0	4	4	**100%**	0

59	74	94	132	47	60	200	265	
	80%		**72%**		**78%**		**75%**	

Table 6/main round/shooting player

GROUP M1	SCORE	DIFF	L	W	CEN	TER	R	W

POL	29	**0**	3	3	6	9	2	4	11	16	**69%**	**-5**
SWE	29	0	3	3	0	0	2	2	5	5	**100%**	0

DEN	33	1	2	3	1	1	2	2	5	6	83%	-1
MKD	32	**-1**	1	1	1	2	1	1	3	4	**75%**	**-1**

SRB	21	**0**	4	5	0	0	0	0	4	5	**80%**	**-1**
GER	21	**0**	0	0	1	2	2	2	3	4	**75%**	**-1**

POL	25	**-2**	1	3	3	4	2	5	6	12	**50%**	**-6**
MKD	27	2	2	2	2	2	1	1	5	5	**100%**	0

DEN	28	2	4	5	1	1	2	4	7	10	70%	-3
GER	26	-2	3	4	0	0	0	0	3	4	75%	-1

SRB	24	3	3	3	1	1	0	0	4	4	**100%**	0
SWE	21	-3	1	1	0	0	0	0	1	1	**100%**	0

POL	33	1	1	1	5	5	0	0	6	6	**100%**	0
GER	32	-1	3	3	1	1	2	2	6	6	**100%**	0

DEN	31	7	0	1	3	3	0	1	3	5	60%	-2
SWE	24	-7	2	2	0	2	0	0	2	4	**50%**	-2

SRB	19	-3	0	1	0	0	0	0	0	1	**0%**	-1
MKD	22	3	1	1	3	4	0	0	4	5	80%	-1

GROUP M2	SCORE	DIFF	L	W	CEN	TER	R	W				
HUN	21	-6	0	0	0	1	2	2	2	3	67%	-1
ISL	27	6	2	4	2	3	1	1	5	8	63%	-3
FRANCE	28	2	0	0	4	4	2	3	6	7	86%	-1
SLO	26	**-2**	5	5	0	1	3	4	8	10	**80%**	**-2**
ESP	24	2	0	0	1	3	2	2	3	5	60%	-2
CRO	22	**-2**	2	2	2	3	1	3	5	8	**63%**	**-3**
ESP	31	5	2	2	0	1	1	2	3	5	60%	-2
ISL	26	-5	2	3	2	3	3	4	7	10	70%	-3
FRANCE	22	-7	0	0	2	3	1	1	3	4	75%	-1
CRO	29	7	1	2	1	1	2	2	4	5	80%	-1
HUN	30	-2	0	0	3	4	3	3	6	7	86%	-1
SLO	32	2	2	2	0	0	3	4	5	6	83%	-1
FRANCE	29	**0**	1	1	4	5	0	1	5	7	**71%**	**-2**
ISL	29	**0**	1	1	1	2	4	4	6	7	**86%**	**-1**
ESP	35	3	0	0	3	3	3	3	6	6	**100%**	0
SLO	32	**-3**	1	1	1	4	1	1	3	6	**50%**	**-3**
HUN	24	**0**	1	1	1	1	0	1	2	3	**67%**	**-1**
CRO	24	**0**	2	4	0	1	6	7	8	12	**67%**	**-4**

summary		56	70	55	80	54	72	165	222
			80%		**69%**		**75%**		**74%**

Table 7/finals and placement matches/shooting player

	SCORE	DIFF	L	W	CEN	TER	R	W				
DEN	25	1	1	1	1	2	2	3	4	6	67%	-2
ESP	24	**-1**	3	4	1	1	2	2	6	7	**86%**	**-1**
SRB	26	4	1	1	1	1	0	0	2	2	**100%**	0
CRO	22	**-4**	1	2	2	5	1	1	4	8	**50%**	**-4**
MKD	28	1	2	2	1	2	0	0	3	4	75%	-1
SLO	27	-1	0	0	1	1	0	0	1	1	**100%**	0
CRO	31	4	1	1	0	1	2	2	3	4	75%	-1
ESP	27	-4	0	0	0	1	1	1	1	2	**50%**	-1
SRB	19	-2	0	0	1	1	0	1	1	2	**50%**	-1
DEN	21	2	1	2	1	1	2	2	4	5	80%	-1
			10	13	9	16	10	12	29	41		
				77%		**56%**		**83%**		**71%**		

Table 8/summary of tournament/shooting player

	L	W		CEN	TER		R	W	
prel	59	74	80%	94	132	72%	47	60	78%
main	56	70	80%	55	80	69%	54	72	75%
final	10	13	77%	9	16	56%	10	12	83%
summary	125	157	**80%**	158	228	**69%**	111	144	**77%**

In order to draw viable conclusions, I opposed the statistics of who finished off the fast break, to those statistics showing from where the player actually shot, as shown in table 9 below.

Table 9/summary of tournament

shooting position

	L	POS		CEN	TER		R	POS	
prel	54	73	74%	111	146	76%	35	47	74%
main	37	45	82%	98	136	72%	30	41	73%
final	3	5	60%	20	25	80%	6	11	55%
summary	94	123	**76%**	229	307	**75%**	71	99	**72%**

shooting player

	L	W		CEN	TER		R	W	
prel	59	74	80%	94	132	72%	47	60	78%
main	56	70	80%	55	80	69%	54	72	75%
final	10	13	77%	9	16	56%	10	12	83%
summary	125	157	**80%**	158	228	**69%**	111	144	**77%**

Looking at those two tables, some very interesting factors of fast breaks become apparent:

First aspect to consider is, that both wing-positions show specific running patterns, which results in them also shooting from center position, rather than just their own wing positions:

This explains the difference in numbers, between other-than-wing players scoring/shooting *[158/228]* and actual center-of-field goals/attempts *[229/307]*.
Another very interesting aspect shows, that while both wing-positions score above the already mentioned tournament-average of 74% *[Left Wing 80%, respectively Right Wing 77%]*, the rest of the team only manages to score in 69% of their attempts, lowering the average by quite a substantial percentage.

Goalkeepers also made it into the statistic charts (as part of the other-than-wing players), scoring only one out of four direct attempts. However, considering the very low amount of shots, they don't influence the statistic at all and are therefore negligible.

Now, knowing these facts of wings and other-than-wing player there remains another important question to be answered:
Is it possible to succeed in 100% of your fast breaks?
In the tournament 47 Matches have been played. 24 times a team was able to score 100% by fast break:
Serbia (3/8 matches) and Slovenia (3/7 matches) three times.
Germany (2/6), Spain (2/8), Hungary (2/6), Croatia (2/8), Norway (2/3) and Sweden (2/6) two times.
Slovakia (1/3), Denmark (1/8), Russia (1/3), France (1/6), Macedonia (1/7) and Poland 1/6) only one time.

According to these submissions, it is safe to say, that managing a 100% ratio of scoring through fast breaks is in fact possible, as fourteen different teams have shown at the championship, by achieving this mark at least once throughout the tournament.

Next question on the list is: Which factors do have an influence whether a fast break will be successful or not?

There are quite a few factors coming into play, when examining fast break behavior, respectively its success. In the following section, I will explain some of those major aspects.

Whether a fast break is successful or not relies on answers to some essential questions. Some of those can be answered by themselves, while others are better off and more meaningful being regarded as part of the whole:

a) What's the shooter's running pattern and/or running lane?
b) What's the shooter's distance to the goal when he elevates?
c) What's the shooter's distance to the goalkeeper?
d) What's the shooter's jumping direction?
e) What`s the shooter`s speed?
f) What´s the shooter´s expectation of succeeding (psychological factor)?

ad a) The running lane has a great influence as to which possibilities of efficient shooting techniques remain to the player:
Running straight to the goal or running a turn to the middle position has in fact a huge impact on the span of shooting-varieties, which means that there are running patterns in which the shooter actually restricts himself in what he can do, before even jumping.

ad b) The answer to this question is more difficult, than it appears at first glance. The speed he's running at and even the point where he catches the ball at both have a huge impact. For instance, elevating from 9m in most cases turns out to be more effective, than jumping from 6,5m, which can partly be due to the shooter having a wider field of sight of the goal.

ad c) Besides where the player jumps from, his distance to the opponent's goalkeeper is directly linked to the speed he's running at beforehand, because that dictates how many meters he will be covering while being in the air. Another aspect to answering this question is a factor, that can't be influenced by the shooter himself at all: What is the goalkeeper doing? Is he staying in the goal (on the line so to speak), or is he moving towards the shooter, and if yes, how much? Usually goalkeepers move 2-3 meters out of their goal. Part of this question is covered, when talking about the psychology that comes around with fast breaks.

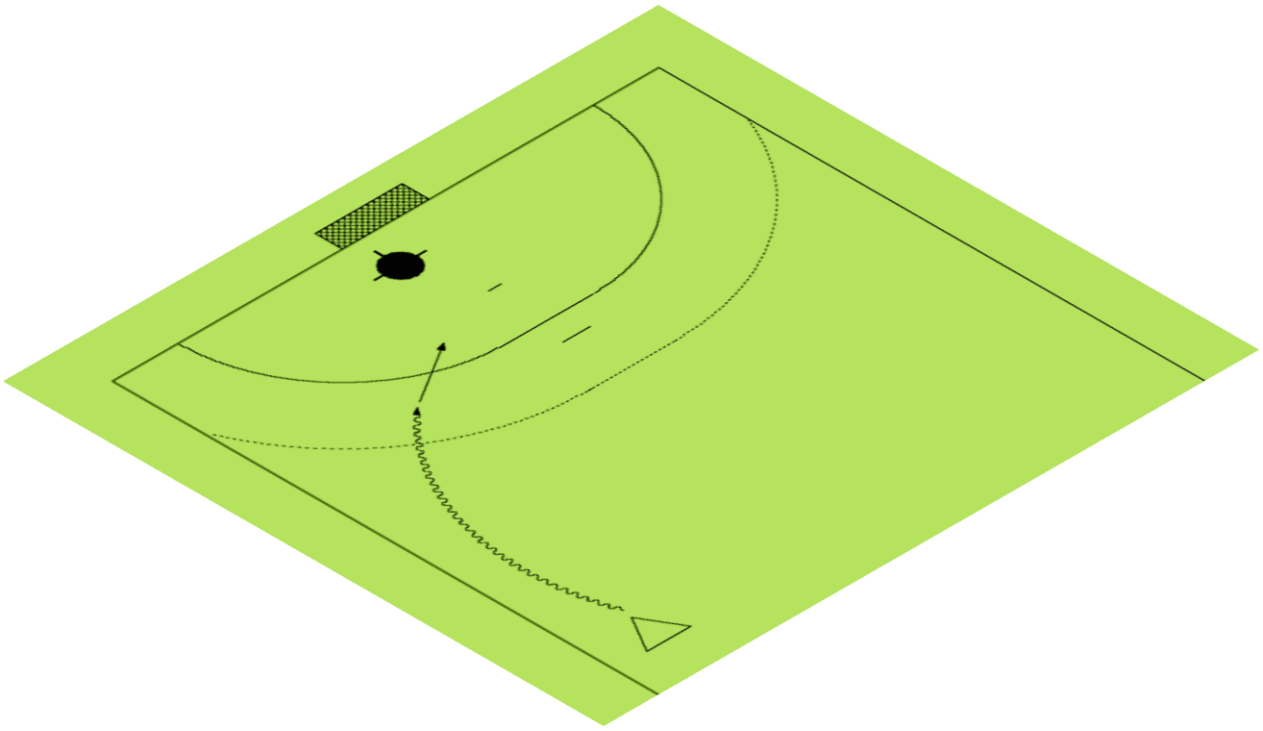
ad d) Does the player jump in the same direction (like running lane) or does he change the direction after jumping?
If you combine the "standard" two different running lanes and add the three possibilities of how/where to a shooter could jump (straight/left/right), that leaves us with multiple combinations.
Each of those run-jump combinations restricts the shooter in what he can or can't do with the ball in a certain way more or less.

ad e) How fast is the player when he is shooting?
The speed someone is running or (for that matter) "flying" at has high influence in the shooting-behavior. Furthermore, the speed someone is running at already influences and restricts the player in his jumping-direction possibilities: For instance, a left wing running in a right turn at maximum speed will have a hard time trying to jump left.

ad f) Is the shooting player ready to handle the psychological pressure 1:1, because the external expectation of being successful is set very high?
Obviously, running a fast break early game with (for instance) 50 more minutes to be played, is a psychologically different situation, than trying to score with only two remaining minutes.
Furthermore, the success a goalkeeper has had in the past (his general reputation) and his current state on this particular day, play a very important role as of how the shooters perceive him, which may lead to shooters cutting some varieties out of their repertoire solely based on psychology, rather than actual success or failure.
Consequently, Thiel/Hecker formulated, that the expectations are much higher for the shooter than for the goalkeeper, who has basically nothing to lose. The shooter on the other hand is in most cases not disturbed at all and should have control of the 1:1 situation, based on the fact that he knows what he wants to do with the ball, while the goalkeeper can only take an educated guess at most (see Thiel/Hecker, 1989).

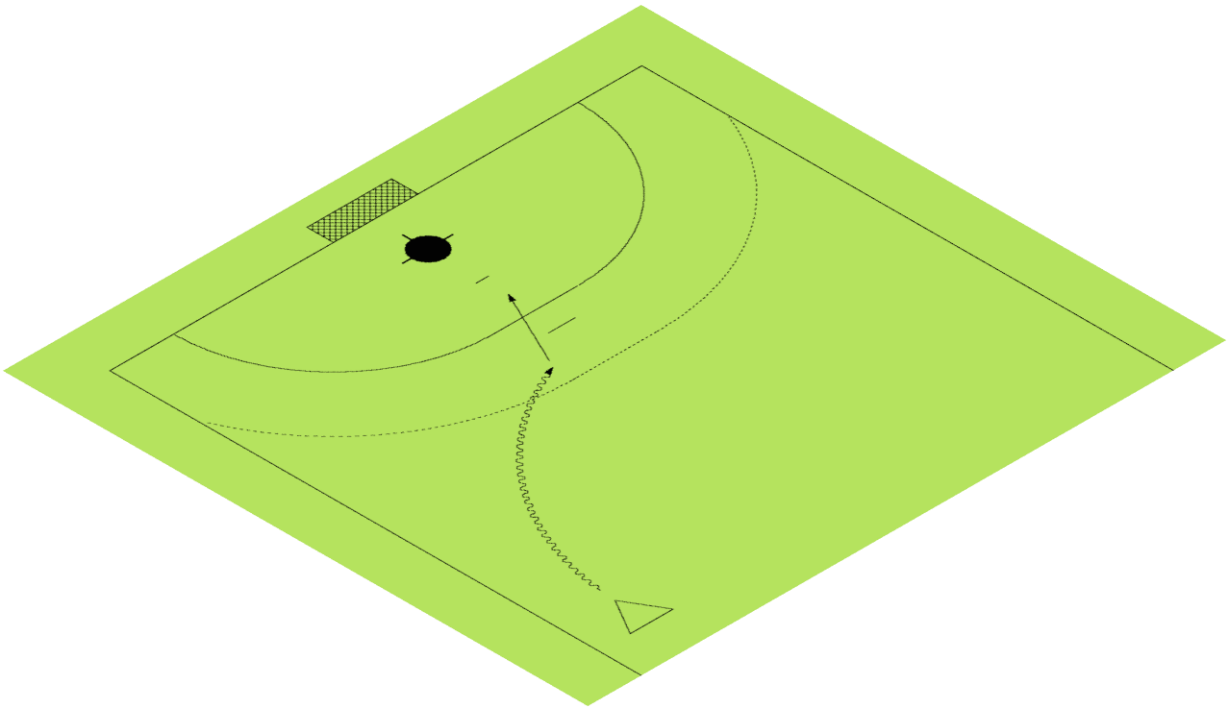
In the following I will show you some graphics and pictures to demonstrate the “positive” and the “negative” situations of the shooting players.

Graphic 1/LW /7,5m/wing position/for example Gudjon Valur Sigurdsson (ISL)



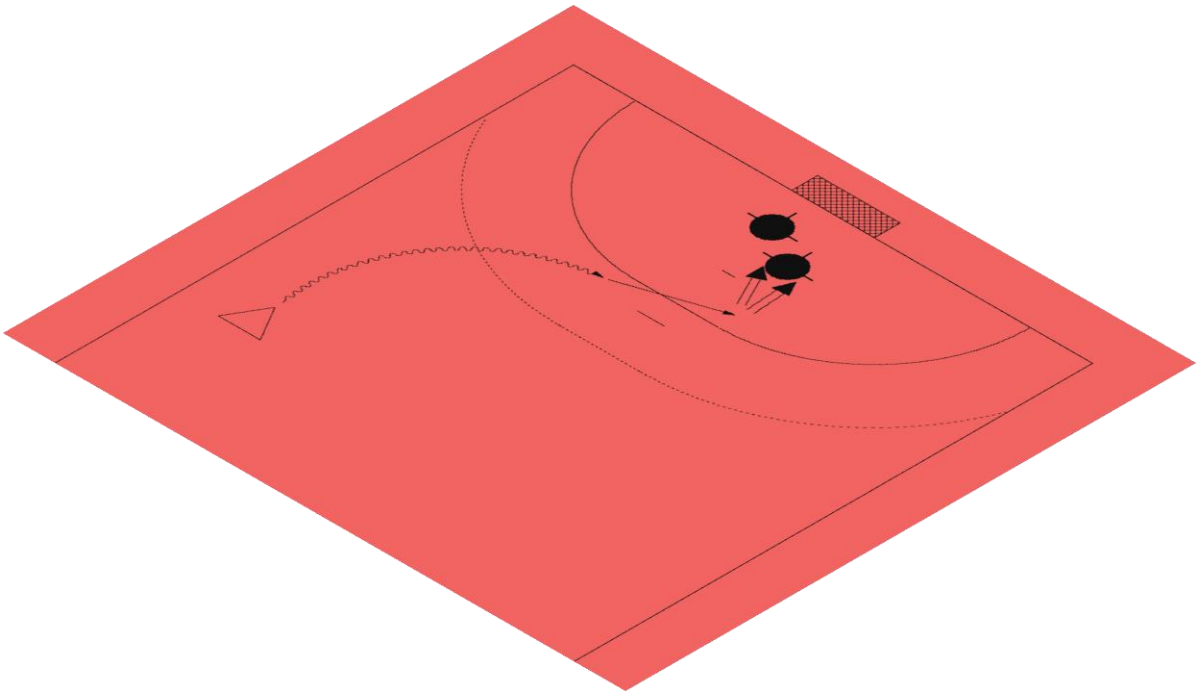
The shooter doesn't restrict himself at all.
All different kinds of shots and shooting varieties appear to be viable, considering what and how much the shooter (and the ball) sees of the goal.

Graphic 2/LW /7,5m/center position



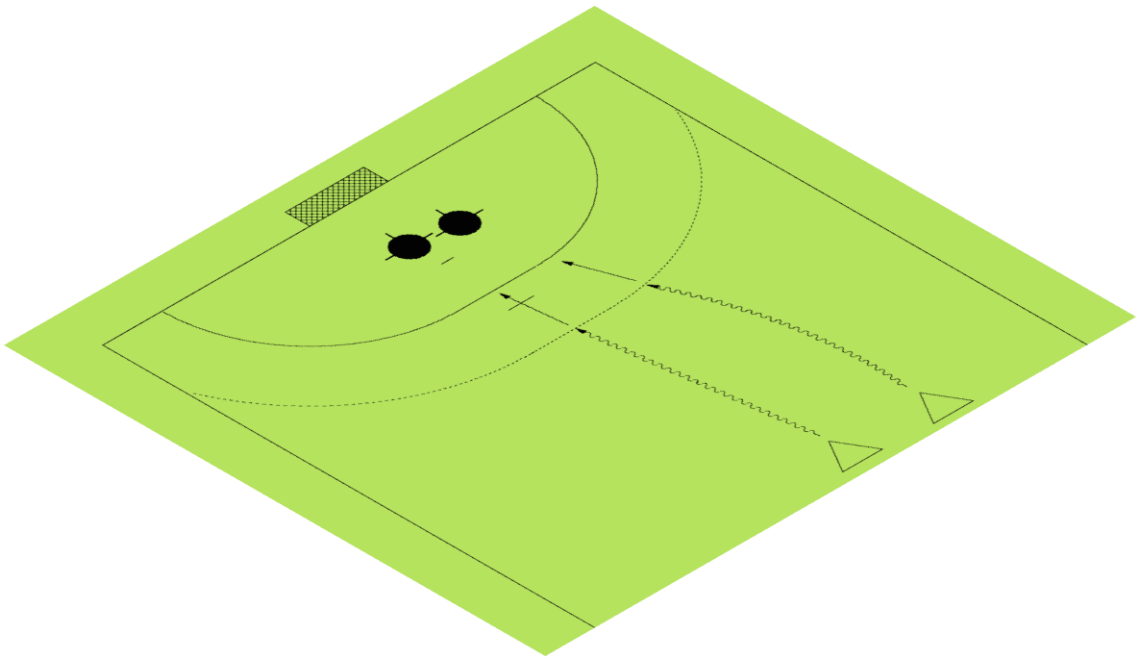
The shooter restricts himself a little bit.
As above, all different kinds of shots may be successful, whereas „straight“ shots (opposed to trick-shots) to the shooter's left side are more difficult than in Graphic 1.

Graphic 3/LW /6,5m/center position



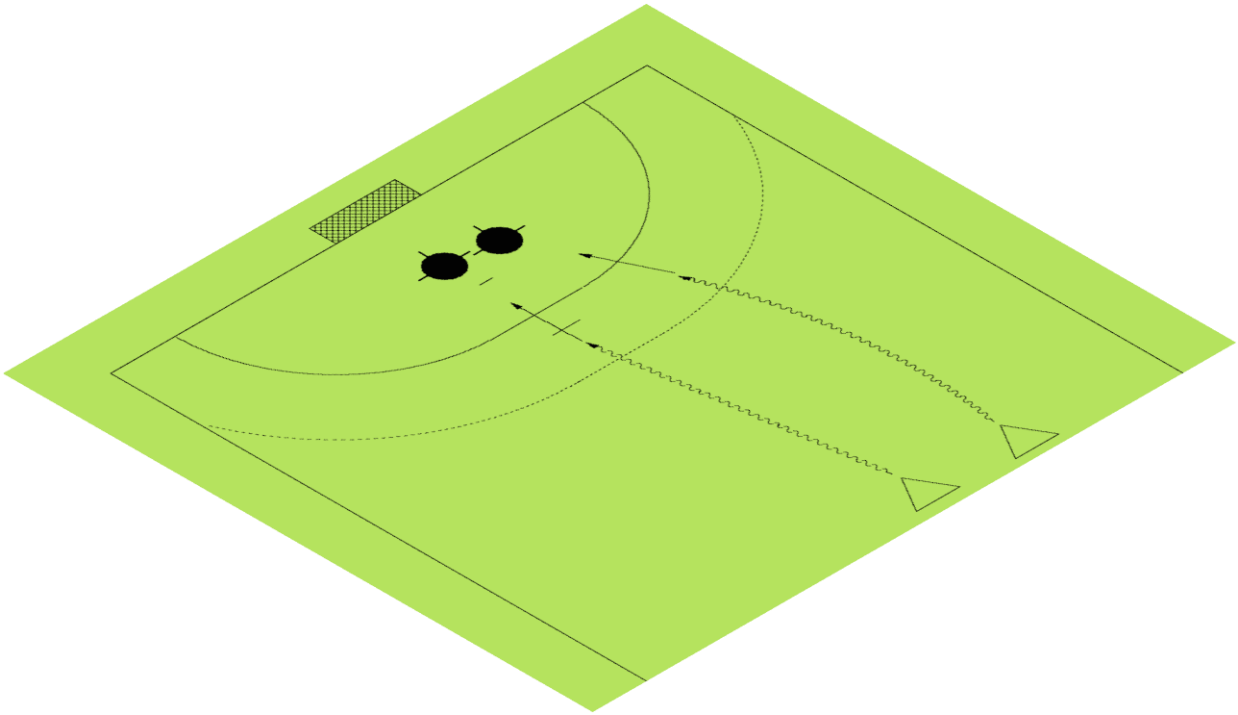
The shooter restricts himself immensely.
Except of straight shots to the right, only trick-shots remain.
Straight shots to the left side of the goal range from very difficult to impossible, considering this running and jumping pattern.

Graphic 4/center player/9m/center position



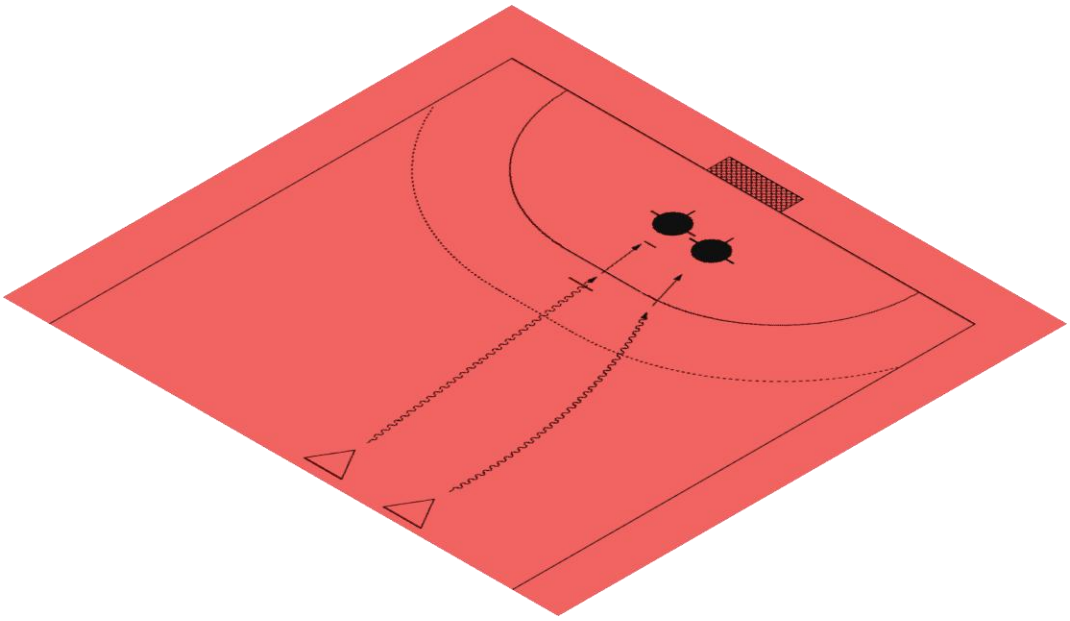
The player doesn't restrict himself at all.
Once again, the player has clear vision of left side and right side, while not being too close to the goal or the goalkeeper.

Graphic 5/center player/7,5m/center position



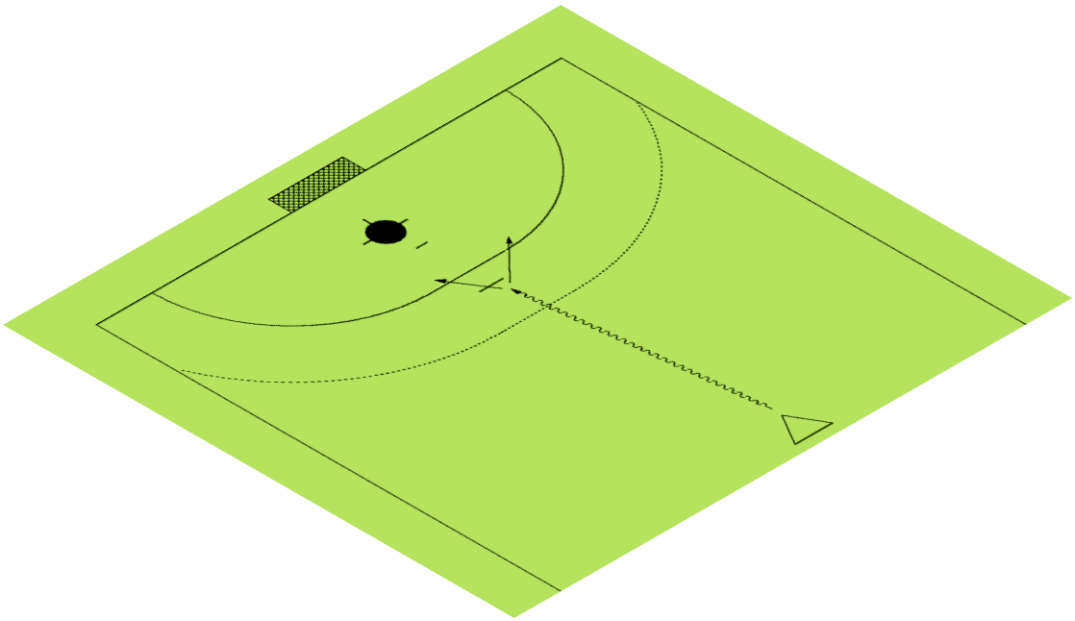
The player restricts himself a little bit.
Like above, the shooter has clear vision of the entire goal, but is closer to the goalkeeper, leaving him with less options and space to aim at.

Graphic 6/center player/6,5m/center position



The player restricts himself immensely.
Besides being too close to the goalkeeper, leaving himself with almost no space to shoot at, his jumping direction erases multiple options of what he could do. Thus he is forced to jump in a particular direction in order to maintain certain shooting-possibilities.

Graphic 7/center player/ 7,5m/center position/for example Igor Vori (CRO)

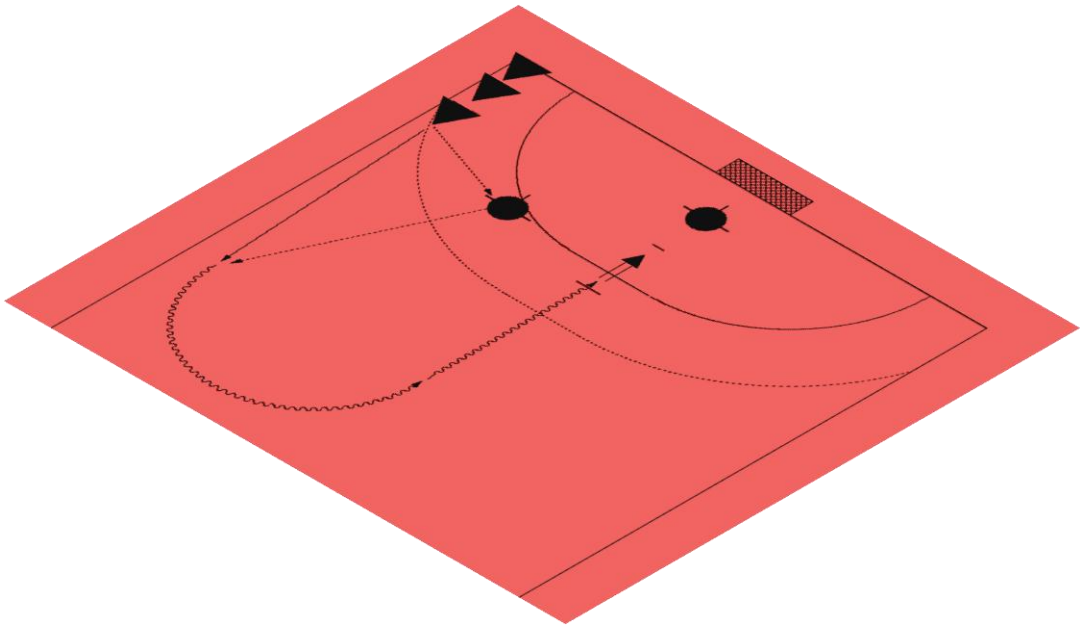


Igor Vori almost solely runs this route and has been very successful in doing so.
He isn't too close to the goalkeeper, while his running lane leaves him with the options of jumping left or right, while being able to react to whatever the goalkeepers offers him.

Conclusion/warming up program/exercise

The very popular warming up exercise to prepare the players for fast break shooting around ten minutes before the match is starting generally looks like this:

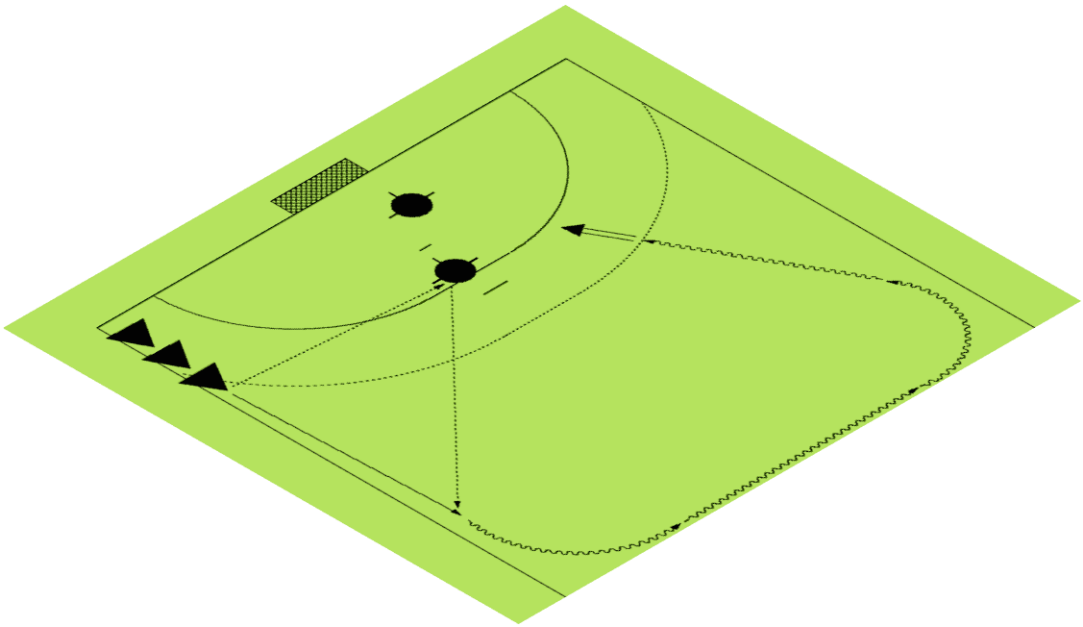
Graphics 8



In my opinion, this isn't the way to prepare for fast breaks as they're run in the actual match. If you look at the questions on whether a fast break is successful or not (a-f) and compare it to the current way of how fast breaks are prepared during the warm-up, it is obvious that almost none of the conclusions I had come to is fulfilled within this exercise. Furthermore, in my humble opinion, this particular exercise is never practiced ever (training, match, etc) besides during the warm up phase, which makes it kind of an "alien" part for the sport of handball. To make it even worse most of the players run with medium speed only and slow further down when preparing for the shot.

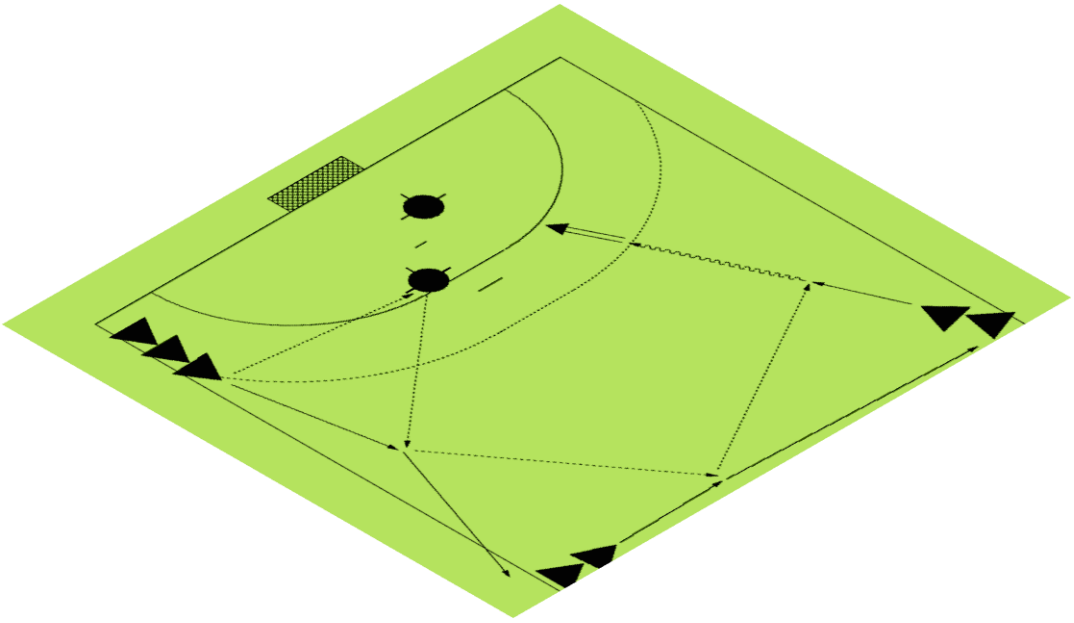
According to the results of the data I've worked out, there are better ways of preparing player for in game fast break situations.
For example:

Graphics 9



In this setup the ball-passing goalkeeper is positioned in the very center on purpose. Therefore it is impossible to shoot from there. So the running players have to do a pattern that corresponds more likely to a pattern that is used in the match.

Graphics 10



Like mentioned before the ball-passing goalkeeper is located in the very center in this setup as well.
Additionally the bouncing of the ball is restricted to a minimum. Instead of the bouncing a parallel-thrust like move is implemented.
In this drill you will achieve a group tactical move rather than a simple individual element.

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HANDBALL A COMPLEX SYSTEM?
CONSEQUENCES FOR TRAINING PRACTICE

Abstract

In the following thesis we will
A) Analyse the characteristics and constituent elements of complex systems in general,
B) Try to apply our results to the "SYSTEM HANDBALL",
C) Point out consequences for the training practice,
D) Add some practical examples,
E) And finally sum up our findings.

A) CHARACTERISTICS AND CONSTITUENT ELEMENTS OF COMPLEX SYSTEMS

If one tries to define the term system according to the original meaning of the "Latin word *systēma*, in turn from Greek *σύστημα* systēma it is a set of interacting or interdependent entities, real or abstract, forming an integrated whole"[1], or " a set of interacting or interdependent components forming an integrated whole or a set of components and relationships which are different from relationships of the set or its elements to other elements or sets"[2]. The term system, however "may also refer to a set of rules that governs structure and/or behaviour"[3] which seems particularly true for the game of Handball. Systems can also be regarded as abstractions of reality if one compares actions, relations, and impact of individuals living in modern societies upon one another. Handball in that sense is only a sub-system of society and also an abstraction of life in itself. Thus we are justified in maintaining that whatever interrelations can be found in the functioning of modern societies can also be detected in Handball.

In addition, analysing complex systems is about understanding indirect relationships and effects. At first sight it is often difficult to grasp problems within the system (e.g. why a particular concept of attack did not work) because cause and effect are not obviously related and cannot be detected immediately (such as a left wing who was supposed to sweep in at a particular phase in the attack but might have been fractions of a second late in starting his movement, and thus did not position himself in the opponent`s defense where he was expected to execute a block for a backcourt player).

If we try to enumerate common characteristics of systems there are some generally accepted features in the scientific world. Those features include:

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[1] http://novelresearchinstitute.org/library/Systemsbiology.pdf, Complex Systems Theory, p.2,§1.
[2] http://en.wikipedia.org/wiki/System, p.1,§1.
[3] http://en.wikipedia.org/wiki/System, p.1,§4.

- Systems have structure, defined by components or elements and their composition,
- Systems have behaviour, which involves inputs, processing and outputs of material, energy, information, or data,
- Systems have interconnectivity: the various parts of a system have functional as well as structural relationships to each other,
- Systems may have functions[4], such as entertaining people, providing an outlet to get rid of one's aggression, or a possibility to socialize with other "Gleichgesinnte"[5].

The analysis of systems simultaneously leads us to the question of **complexity**, to a set of elements having numerous relationships. "Complex systems are "systems featuring a large number of interacting components, whose aggregate activity is non-linear and typically exhibits self organization under selective pressures"[6] . When penetrating deeper into the subject of complex systems, one realizes that there are many different ways to define the term complex. In a special edition of Science[7] one can find the following definitions:

- A complex system is a highly structured system, which shows structure with variations (N. Goldenfeld and Kadanoff),
- A complex system is one whose evolution is very sensitive to initial conditions or to small perturbations, one in which the number of independent interacting components is large, or one in which there are multiple pathways by which the system can evolve (Whitesides and Ismagilov),
- A complex system is one that by design or function or both is difficult to understand and verify (Weng, Bhalla and Iyengar),
- A complex system is one in which there are multiple interactions between many different components (D. Rind),
- Complex systems are systems in process that constantly evolve and unfold over time (W. Brian Arthur).

In our analysis of complex systems, and Handball in particular, we tend to concentrate on Rind's definition. Moreover, we have to add another element to our way of looking at complex systems, and this is the ability to learn. Modern team games such as, for instance, Basketball, Handball, Ice-Hockey, US Football seen from that angle, are **complex adaptive systems**, i.e. they can change and learn from experience.

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[4] http://en.wikipedia.org/wiki/System, p.1,§3.

[5] König, H.: …"sharing the same opinion or attitude towards something".

[6] Rocha, Luis M. 1999, in: http://novelresearchinstitute.org/library/Systemsbiology.pdf, Complex Systems Theory, p.11, Overview.

[7] http://www.sciencemag.org/content/vol284/issue5411in: http://novelresearchinstitute.org/library/Systemsbiology.pdf, Complex Systems Theory, p.11, Overview.

When we state that systems as one of their characteristics have structure (cp above) then we understand structure as a description of what systems are made of, a collection of inter-related elements, a hierarchy, a network featuring connections between components that are close or distant in space. Describing complex systems means finding out about **input** and **output** of material, energy, information, or data.

The terms **input** and **output** of information, energy, etc. clearly indicate that the function and the behaviour of a complex object must be understood as a process of interaction, a procedure composed of many steps which convert one or more inputs into one or more outputs such as strategic orders by the coach transformed into a working offensive system, or training loads and their impact on players and, consequently, their performance in competitions, etc. Seen from this point of view it is very important in **complex training** - similar to processes in a company or a factory production line - to carry out a constant process analysis, to identify the different parts of the process (information to players, understanding the information, transforming it into action, change of position on the court) and to constantly check how they lead to another part of the process.

Up till now, we have looked at our topic from a purely analytical-definitional point of view. Up till now we have not included the **human element**. Human element in the sense of different attitudes of players towards a task, different emotions while executing particular movements, different levels of understanding and grasping the inert meaning of a game, different levels of intelligence, development, and perception, different levels of technical and tactical competence. If we add these factors quoted above to our description of interrelations between players, coaches, and their spectators we will immediately come to understand what the term **complex in a modern team game** really means. It is no longer a purely scientific term existing for its own sake, but a **constantly changing variable** determining our daily work in the sports hall or at competitions. Thus Handball is a **complex, self developing system**, which is changing because of the introduction of new rules, better trained players, latest scientific findings, expectations of spectators, sponsors, the media, and last but not least the creativity of players and coaches.

B) APPLICATION TO THE "SYSTEM HANDBALL"

One of the definitions we quoted above stated that "systems have structure, defined by components or elements and their composition"[Fn7.] On the one hand structure in Handball is determined by the position of players in attack and in defense, a structure which is generally accepted throughout the handball world. The assignment of players to particular playing positions according to their intellectual, technical and tactical competences automatically brings up the element of hierarchy, of "power" connected with playing positions. Power in the sense of determining the distribution of passes in attack, power as to giving of indirect orders to other players by the centre player in a 3:2:1 defense formation. Thus playing positions and the way players execute particular

movements in a game influence one another and make the system complex at any time. On the other hand each attack and defense system has its own structure, which in turn, at least for a certain amount of time, determines the structure of the play itself.

If Whitesides, Kadanoff and others maintain that a complex system is one whose evolution is very sensitive to initial conditions or to small perturbations, one in which the number of independent interacting components is large, or one in which there are multiple pathways by which the system can evolve[8] this is clearly true for Handball. Let us have a look at the **act of decision making** in a game by quoting a very simple example. If the left wing passes to the left backcourt player in attack, the backcourt player has at least 8 possible ways of continuing:

1. Return pass to left wing
2. Crossing with left wing to get him into a different position
3. Pass to central backcourt player
4. Crossing with central player
5. Shooting from 9-10 metres
6. One to one if being attacked by relevant defender
7. Pass to pivot on his side
8. Play pick and roll with the pivot if being attacked by relevant defender.

Which of the above actions he executes depends on the technical, tactical and intellectual competence of the player, upon his ability to properly **"read**" the particular situation he is in. In any case, whatever decision he takes will undoubtedly change the continuation of the game, and thus alter the specific structure of the play and, perhaps, the outcome of the game.

In this connexion the elements of **input and output** deserve a closer analysis. Over the past ten years the development of information systems and IT technology has developed by leaps and bounds. Whereas coaches some years ago noted their observations on lists using simple symbols, nowadays every single move can be documented in super slow motion almost simultaneously. As a consequence of technical development the ability to handle the growing **amount of information** which has to be **digested** at ever increasing speed has become essential to success or failure on the court. But it is not only the individual player or coach who can get as much information as he needs, it is also the spectator, the sponsors or the media who are better informed with regard to systems,

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[8] Kadanoff, L.P.: *From order to chaos I, II- essays, critical, chaotic and otherwise*. World Scientific 1993, ISBN 981-02-1198-8, Bd.2 1999, ISBN 981-02-3434-1.**Whitside,** George Mc Clelland is professor of chemistry at Harvard University. He is best known for his work in the areas of NMR spectroscopy, organometallic chemistry, molecular self-assembly, soft lithography[], microfabrication, microfluidics, and nanotechnology (http://en.wikipedia.org/wiki/George_M._Whitesides)

effectiveness of training methods, divergent playing philosophies, background information about and development within clubs, and the like.

Thus the system "Handball" consists of constantly learning and adapting to new ideas and findings. It is only logical that the coaches and players who keep the system going also have to adapt and develop further. If we accept that the system **"Handball"** has become **more sophisticated and information laden** over the past years, it goes without saying that the **training process,** and thus also the **training practice,** has to adapt accordingly, to become more sophisticated too, to use modern means of information and techniques and structures in the training units in order to prepare the players for the tasks at hand.

Let us consider the **amount of training time** teams have at their disposal, and let us add the time needed for **rehabilitation and competition per week** in connection with the ever increasing stress and levels of expectations from both the public and the participants in the game themselves, the only solution for coping with this new situation is to use **more sophisticated, more effective, and less time consuming training methods**, to put it in nutshell, to use **complex exercises**. Complex here means we have one or two **main foci** in our training sessions plus a number of other aspects of secondary importance which we train simultaneously.

Finally we should look at Handball from the **synergistic** angle. "Synergistic phenomena - combined (or "co-operative") effects that can only be produced by two or more component parts, elements or individuals"[9] play important roles in the effectiveness and the in the structure of a team. "Computer sciences, for example, are also grounded in synergy. There is, the microscopic complexity of Intel's Pentium microprocessor, which embodies the equivalent of 3.1 million transistors in a substrate that is about 2.17 inches square varying with the temperature"[10]. Although the number of elements in Handball is limited by the number of players on the court, substitutes on the bench, physiotherapists, statisticians, and coaches, they nevertheless cooperate constantly to establish synergies, to share tasks, to maximize input for the tasks at hand. Consequently, we have to seek for synergies in the training process as well. By synergistic effects we can save time, maximize the effect of methods applied, and reach our training and competitive targets more easily.

C. CONSEQUENCES FOR THE TRAINING PROCESS/PRACTICE

If we apply the above results of our comparison of complex systems in general and the game Handball in particular, and consider Handball as "a process or collection of

[9] Corning, Peter A.: Synergy and self-organization in the evolution of complex systems, http://search.conduit.com/Results.aspx?q=complex+systems%2Borganization&Suggest=&stype=Homepage&SelfSearch=1&SearchType=SearchWeb&SearchSource=10&ctid=CT2269050&octid=CT2269050.
[10] Corning, Peter A.: p.4.

processes that transform inputs such as information about opponents, tactical elements, instructions how to go about a particular sequence in attack etc. into outputs"[11], it goes without saying that the training practice has to be organised accordingly. In addition, if we analyse the development of Handball over the past ten years, it is evident that elements such as:

- maximum speed in carrying out attack and defense movements,
- anticipation,
- action instead of reaction,
- flexible switching from offence to defense,
- perfect technique,
- high tactical competence of players and coaches,
- flexibility in execution of shots, fakes, transition processes,
- adequate decision making within fractions of a second,
- top mental and physical condition,

and the development of the means of information have contributed towards an enormous complexity of the game. Therefore the training process, the individual training session, has to be adapted to meet modern concepts of training. **Complex training** and **complex thinking** on the part of players and coaches are the key to success.

Complex training means:

- incorporating different elements into one exercise,
- combining technical/tactical/intellectual tasks,
- repetitive paths of balls and players,
- reducing or adding elements without altering the basic structure of an exercise,
- using many competition-identical elements,
- correcting players whilst an exercise continues/is in progress,
- varying the intensity of an exercise (pressure training),
- frequent changes of the general set-up during an exercise,
- making players memorize paths of other players and the ball,
- understanding consecutive actions and their impact on the action at hand,
- having the ability to think analytically within reasonable limits, and
- perceiving the interaction between speed of ball, space, and time, in brief, developing a feeling for "timing".

In addition, the nature of the **process of learning movements** furthermore determines the application of complex exercises. Learning any movement in sports (faking,

[11] (http://en.wikipedia.org/wiki/System, p.2, §2,ll 1-2)

dribbling, jumping, falling properly, attacking an opponent in defense etc.) means basically **approaching an ideal** of the relevant movement. By constant repetition and relevant feed back by the trainer or coach a **general basic movement** of any one player is established. **Continuous exercise** transfers the basic form into a **"personal" execution"** of a particular movement. As a further consequence of constant repetition and correction, an **internal model** of the movement the player is trying to develop and improve is established. Sports movements, described analytically, consist of five parts (drive, orientation, planning, execution, and evaluation), and complex training offers an ideal instrument of trainer intervention at each of these stages.

Another good reason for using complex exercises in the training process is the problem of **time management.** Normally**,** with the exception of clubs at the highest European level, training sessions are **too short**, there are **not enough** units per week, and the **volume and intensity** of the training sessions is **too low**. Complex exercises help to cope with these problems.

Last but not least the "**round character**" of complex exercises enables the trainer to control, interfere, and correct his players effectively whilst a particular exercise is still in motion.

Guidelines for complex work (cp remarks about the learning process of motor activity) are:

- slight variation of tasks during the exercise (e.g. use of other hand, way of passing etc.),
- change of the manner of executing a particular task to **offer new stimuli** and to **force the brain to adapt** constantly,
- information of the players about the training target – **to foster the learning process/transfer**,
- frequent correction (necessary feedback to improve the execution of a particular movement) – this **facilitates and accelerates** the learning process,
- use of **different information systems** to facilitate and accelerate the learning process as well.

As already stated above, the development of an **internal model of a movement** (**perception of movement**[12]**)**, and how to execute it effectively in pressure situations throughout a game is of utmost importance. Basically the following guidelines apply in that context[13]

[12] Will in the following be referred to as **PoM.**
[13] HOTZ, A.,WEINECK,J.: Optimales Bewegungslernen, Beiträge zur Sportmedizin, Bd 23, Erlangen 1982, p.76. Translated by: König, H.: Vienna, September 2012.

10 principles for optimizing the perception of movements (PoM)

1. Optimizing the PoM is impossible without conscious practice and evaluation.

2. Conscious repetition of movements combined with analysis, comparison and reflection improves movements considerably.

3. Demonstration, explanation, and finally execution of a movement by an individual player are effective means of learning.

4. Space, time, and dynamic parameters of movements can only be best understood by executing them oneself.

5. The PoM forms the cognitive basis for orientation by providing the means of checking the actual stage of the learning process.

6. The more precise the PoM has been developed in a player, the more effective is the mental training.

7. Clearly defined training targets, praise, and constant correction facilitate the mental construction of movements.

8. The earlier and the more precise an optimum PoM is formed, the less is there a danger of having to "relearn" ineffective automated movements.

9. Verbalising the execution of a movement (talking to oneself) is essential for optimising its regulation.

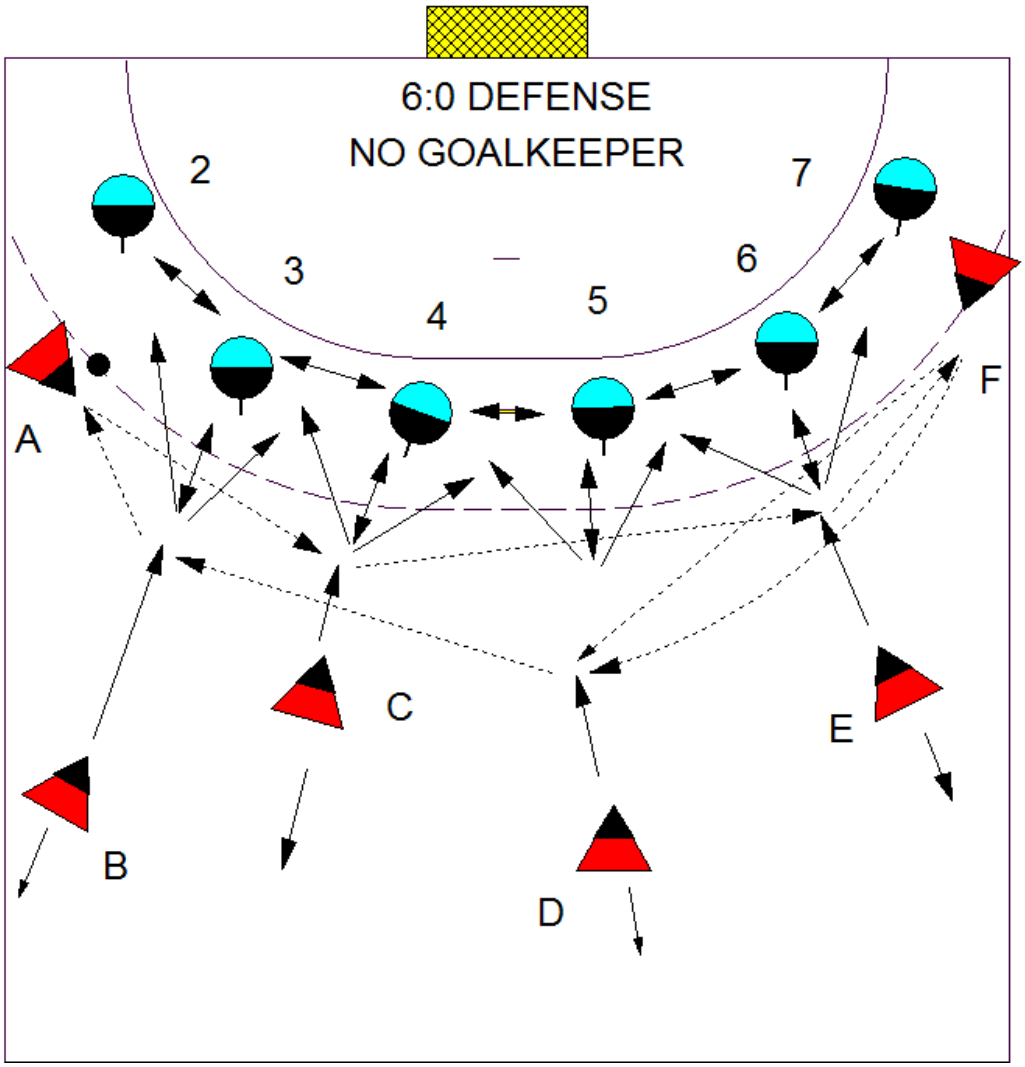
10. The real mastering of movements can only be achieved by a combination of practical and mental training.

If we see the training process as a complex unity it becomes obvious that the acquisition and development of the new technical, tactical, or physical qualities of players necessary to compete successfully on all levels, will constantly have to be checked and re-checked. Complex training and complex exercises will greatly help to achieve this, because they provide the frame within which a trainer can move and reach his players individually, in groups, or as a team. The **"round character**" of complex exercises enables the trainer to control, interfere, and correct his players effectively whilst a particular exercise is in motion.

Apart from that, **synergies** have to be aimed at in our training units by meticulously planning our training, by establishing functional units between players and various forms of apparatus, by incorporating approved methods used in other team games ("looking over the fence") and by excluding any disturbing factors.

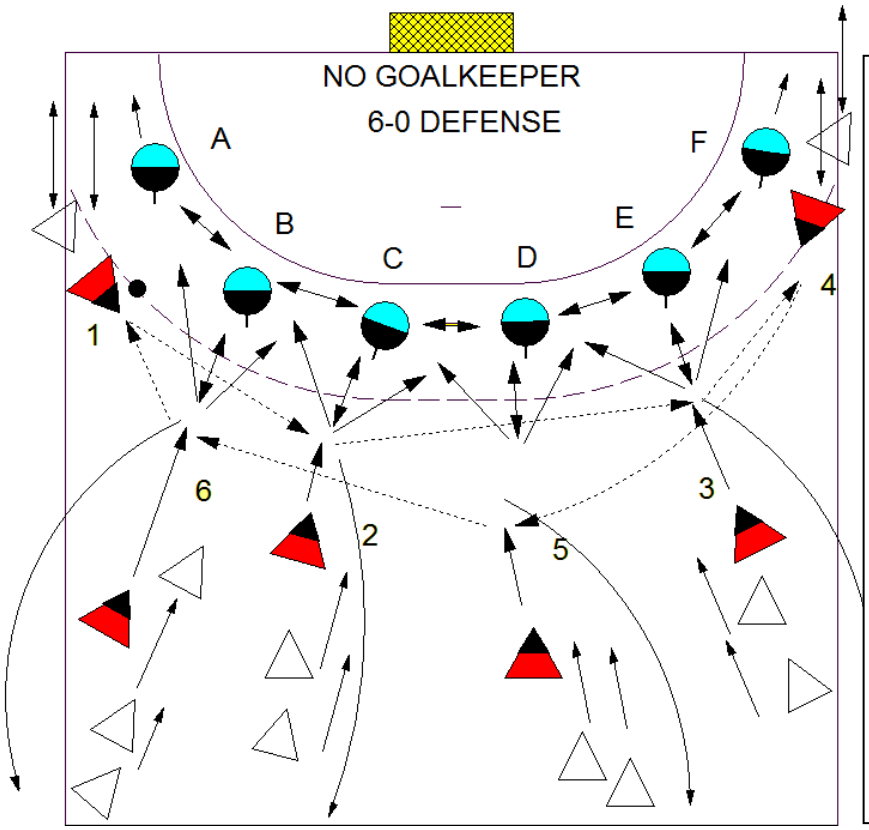
D) EXAMPLES OF COMPLEX EXERCISES AND THE RELEVANT TRAINING AIMS

Example 1 Complex work 6:0 defense- variations and increasing complexity



Low complexity - moderate speed.
Aim of the exercise: basic movements in a 6:0 defense.

If the ball is at pos. A - 7 covers F and 2 covers A vice versa if the ball is at pos. F. The attackers constantly pass A-C, C-E, E-F, F-D, D-B, B-A. Defense players are supposed **to attack player with ball and slide back into defense** with visual orientation towards the ball. The defense moves sideways with the ball. Timing of defenders is crucial – should be on attacker the moment he receives the ball. 60 seconds attack/defense

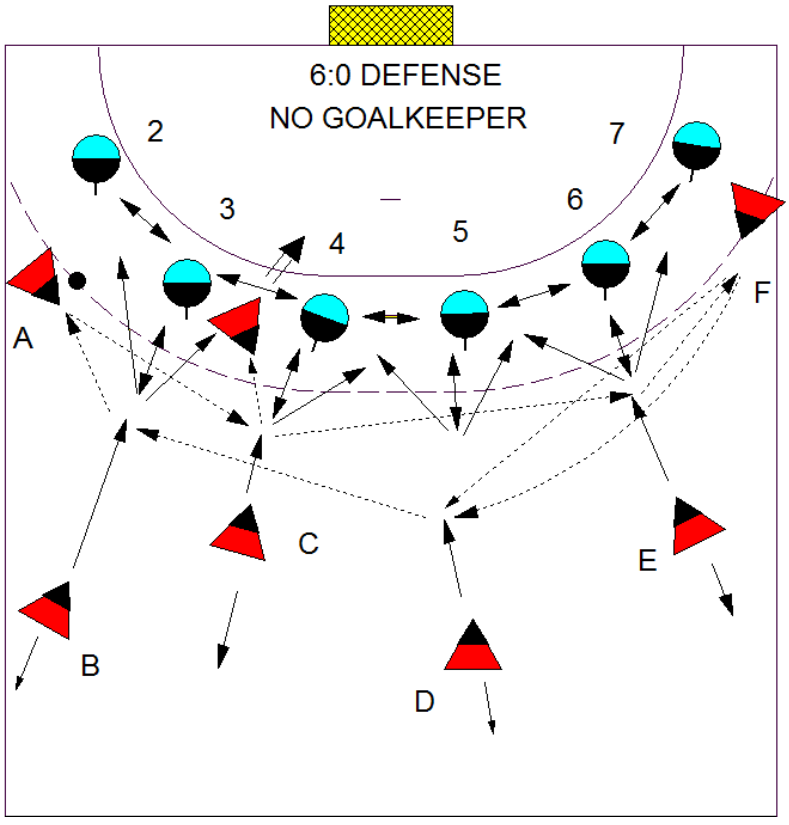


Higher complexity - higher speed.
Aim of the exercise: basic movements in a 6:0 defense under pressure.

If the ball is at pos.1 - F covers 4 and A covers 1 vice versa if the ball is at pos. 4. The attackers constantly pass 1-2, 2-3, 3-4, 4-5, 5-6, 6-1.

Attacking players attack in waves with piston movement.

Defense players are supposed to attack player with ball and slide back into defense with visual orientation towards the ball. The defense moves sideways with the ball. Timing of defenders is crucial – should be at attacker's position the moment he receives the ball. 60 seconds attack/defense

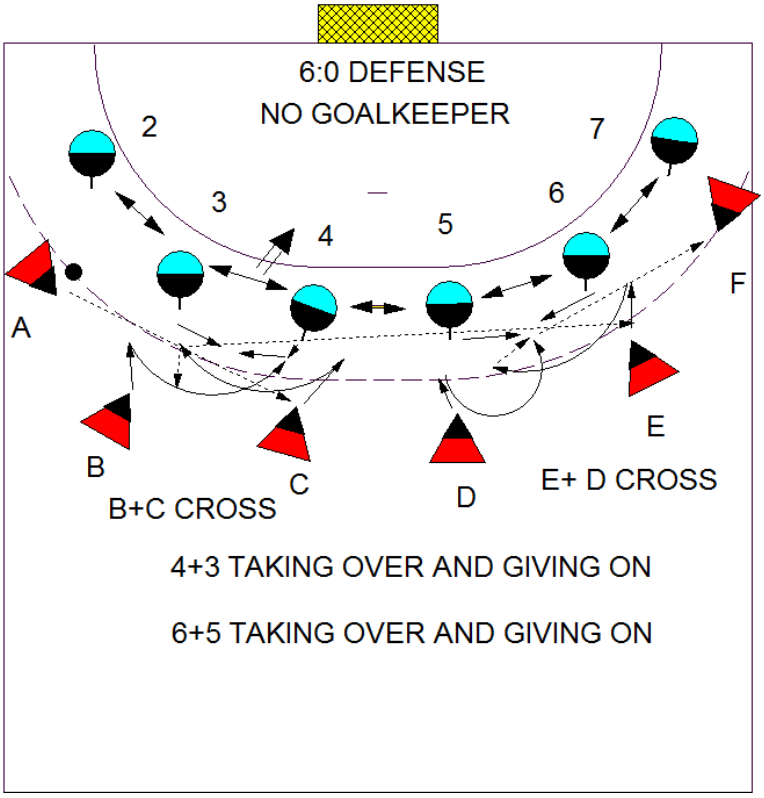


Higher complexity - moderate speed.
Aim of the exercise: movements in a 6:0 defense + additional pivot player (surplus of attacking players).

If the ball is at pos.A - 7 covers F and 2 covers A vice versa if the ball is at pos. F. The attackers constantly pass A-C, C-E, E-F, F-D, D-B, B-A.

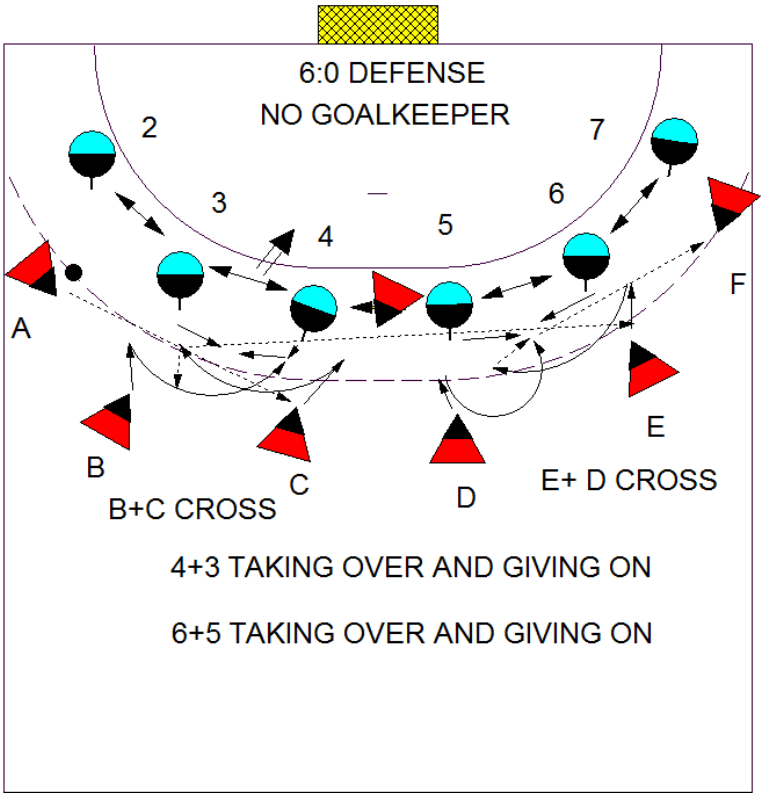
Defense players are supposed to attack player with ball and neighbouring positions cover the pivot player properly.

The defense moves sideways with the ball. Timing of defenders is crucial – should be at attacker's position the moment he receives the ball to prevent him from passing to the pivot. 60 seconds attack/defense

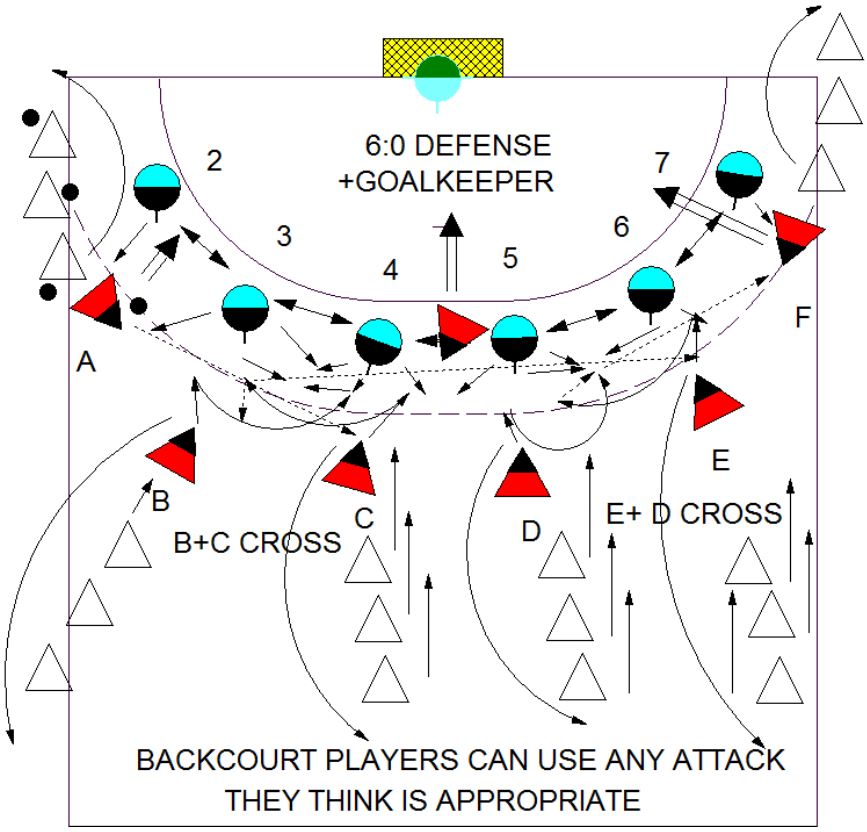


Higher complexity - moderate speed.
Aim of the exercise: movements in a 6:0 defense + crossing of back court players.

If the ball is at pos.A - 7 covers F and 2 covers A vice versa if the ball is at pos. F. The attackers constantly pass A-C, C crosses with B, B - E, E crosses with D, D – F, F-D, D crosses with E etc.
Defense players are supposed to attack player with ball and **to take over and give on.** The defense moves sideways with the ball. Timing of defenders is crucial – should be at attacker's position the moment he receives the ball. 60 seconds attack/defense



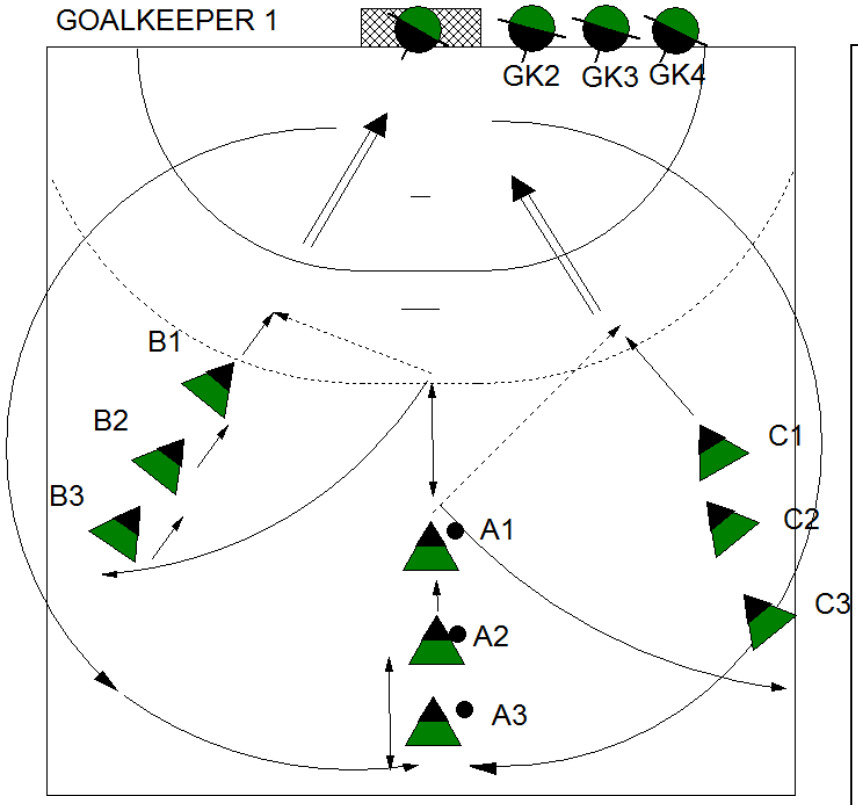
Higher complexity - higher speed.
Aim of the exercise: movements in a 6:0 defense + crossing of back court players + pivot player.
If the ball is at pos.A - 7 covers F and 2 covers A vice versa if the ball is at pos. F. The attackers constantly pass A-C, C crosses with B, B-E, E crosses with D, D–F, F-D, D crosses with E etc.
Defense players are supposed to attack player with ball and **to take over and give on. Neighbouring positions cover the pivot player properly.** The defense moves sideways with the ball. Timing of defenders is crucial – should be at attacker's position the moment he receives the ball to prevent him from passing to the pivot. 60 seconds attack/defense.



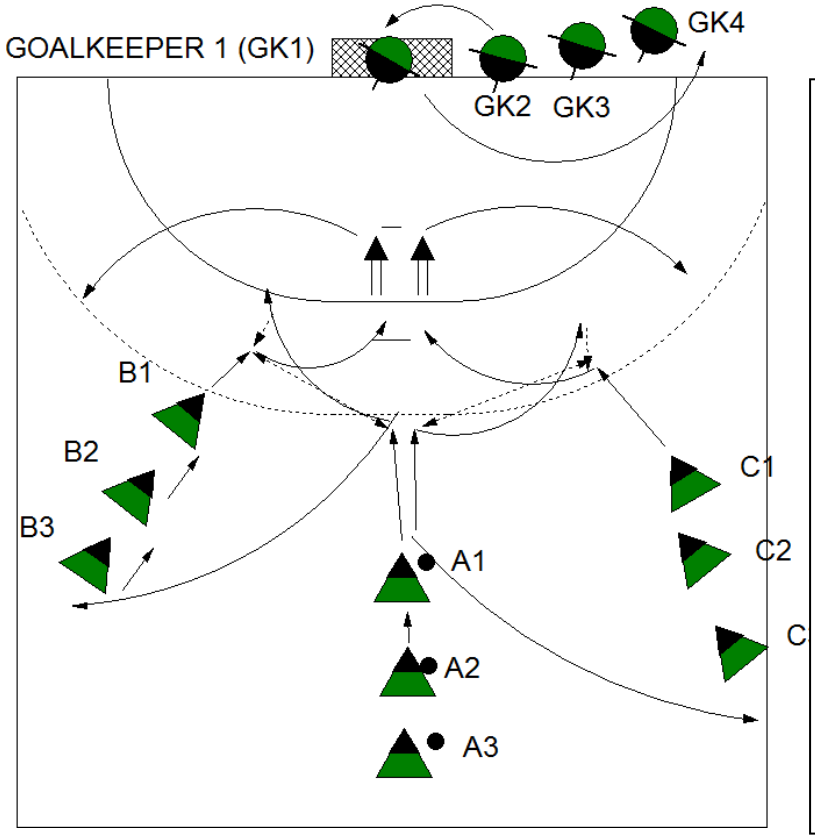
Very high complexity - top speed.
Aim of the exercise: dynamic movements in a 6:0 defense + crossing of back court players + additional pivot player (surplus of attacking players) + attack in wave form + goalkeeper
Shooting at the goal at any time is permitted

The defense players are supposed to prevent attackers from: shooting, passing the ball easily, blocking, passing to the pivot etc.
90 seconds attack/defense.

Example 2 Complex work: Shooting backcourt players + cooperation pivot + defenders

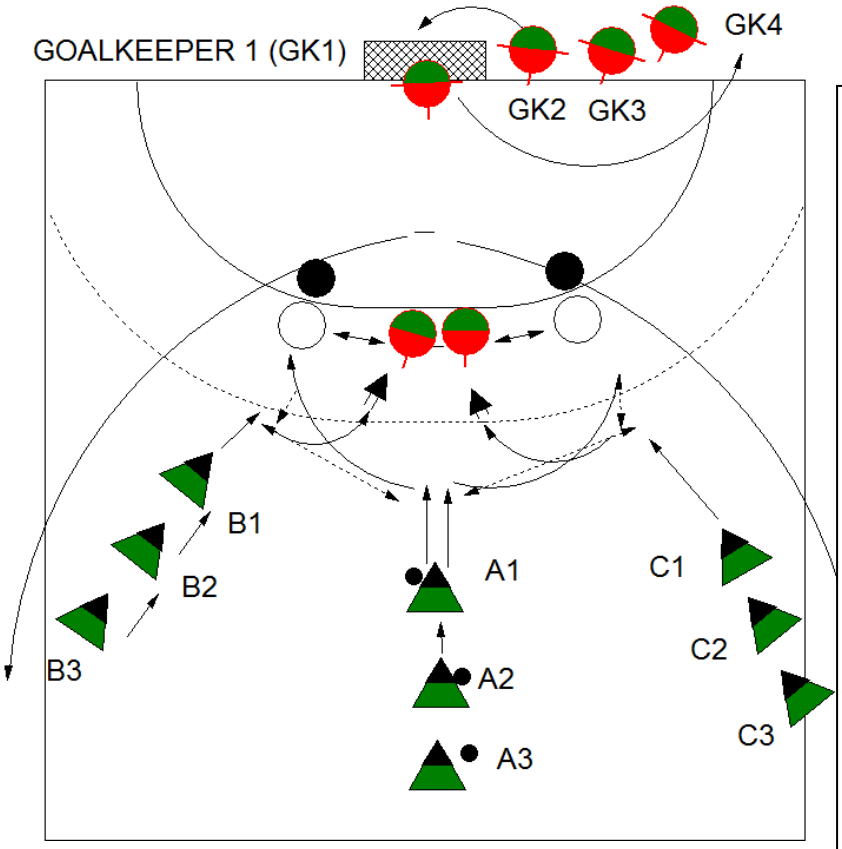


Very low complexity - moderate speed.
Aim of the exercise: preparation for position specific shooting of backcourt players/pivot + warm-up of goalkeepers
A1 piston movement – passes B1, B1 shoots, collects his own ball, dribbles right + left hand alternatively, and queues at pos.A. A1 queues at pos. B by using long strides backward to have visual control of the game. A2 piston movement – passes C1, C1 shoots, collects his own ball, dribbles right + left hand alternatively, and queues at pos.A. A2 queues at pos. C by using long strides backward to have visual control of the game etc. Goalkeepers change after 2-4 series of shots (goalkeepers “steer” the change).



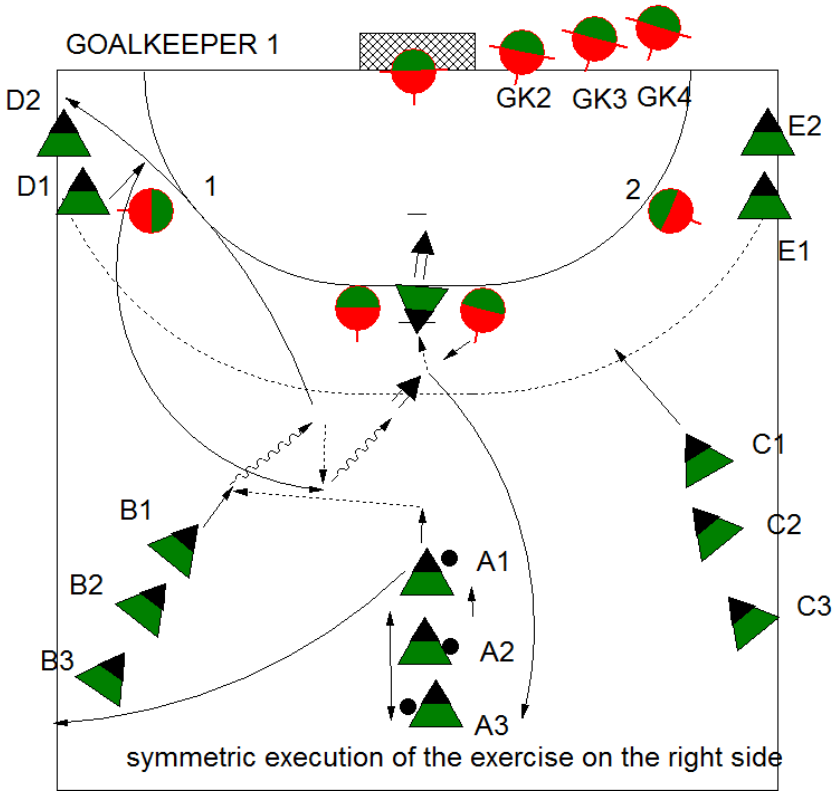
Low complexity - moderate speed.
Aim of the exercise: preparation for position specific shooting + warm-up of goalkeepers + new element = crossing

A1 piston movement – passes -B1, B1-A1 + crossing +B1 shoots, collects his own ball, dribbles right + left hand alternatively, and queues at pos. A. A2 piston movement – passes C1, C1 – A1 + crossing, C1 shoots collects his own ball, dribbles right + left hand alternatively and queues at pos. A. A1 + A2 queue at B/C respectively using long strides backwards to have control of the game etc. Goalkeepers change after 2-4 series of shots (goalkeepers "steer" the change).



More complex - higher speed.
Aim of the exercise: position specific shooting back court players + crossing + defense players + defense (double block) who move sideways and back again to block the shots

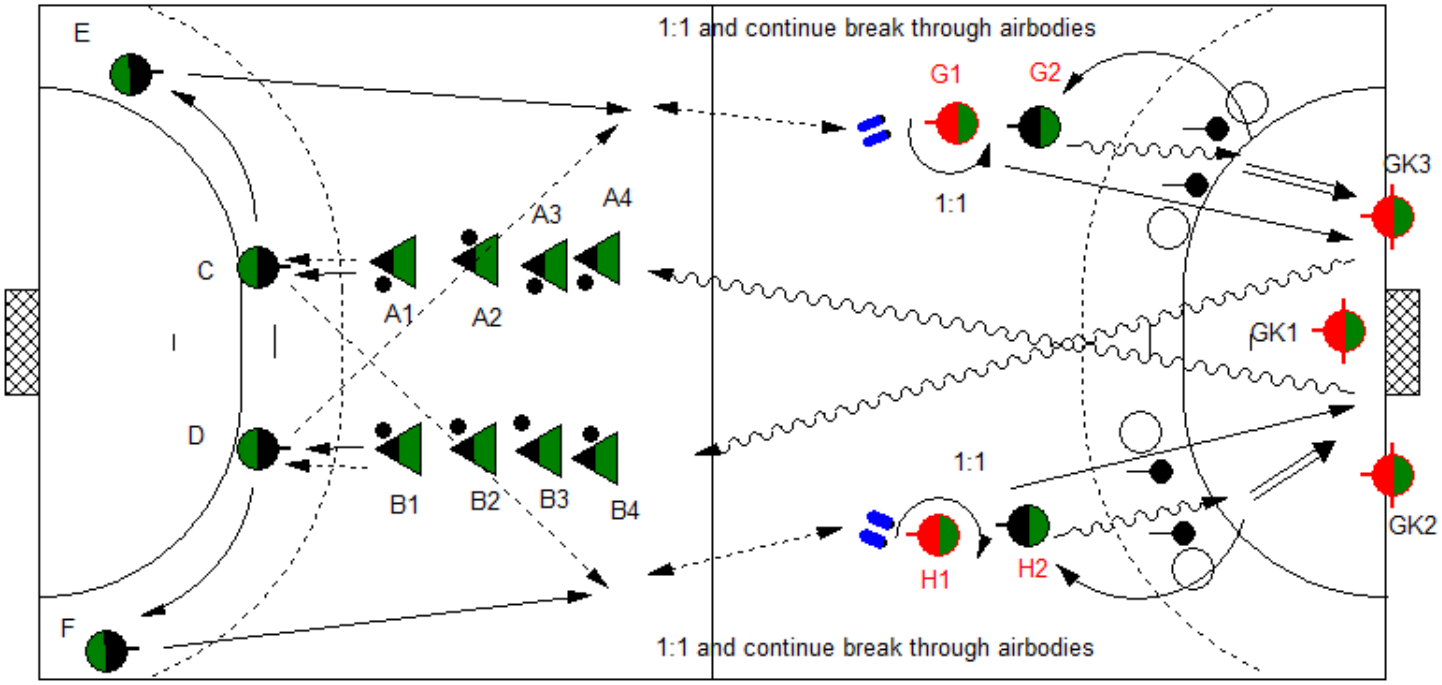
A1 piston movement – passes -B1, B1-A1 + crossing, defense players move sideways and back again to block the shots, B1 shoots, collects his own ball, dribbles right + left hand alternatively and queues at pos. A. A2 piston movement – passes C1, C1 – A2 + crossing, defense players move sideways and back again to block the shots C2 shoots collects his own ball, dribbles right + left hand alternatively and queues at pos. A. A1 + A2 queue at B/C respectively using long strides backwards to have control of the game etc. etc. Goalkeepers change after 2-4 series of shots (goalkeepers "steer" the change).



More complex - high speed.
Aim of the exercise: sweeping in of wing player) + defense players (double block) who move sideways and back again to block the shots + cover the pivot player

A1 piston movement – passes -B1, B1-piston movement- D1 sweeps to the middle after a fake movement to the corner + crosses with B1, gets the ball and either shoots or passes to pivot player when being attacked by defender, D1 collects his own ball, dribbles right or left hand alternatively and queues at pos. A. B1 queues at pos. D, A1 queues at pos. B. The exercise is then executed symmetrically on the right side. The defenders 1 /2 try to prevent the wing players from sweeping in by blocking their paths. Goalkeepers change after 2-4 series of shots (goalkeepers "steer" the change).

Example 3 **Complex work: Defense movements, running in counter attack, 1:1, break through**



High complex - high speed.
Aim of the exercise: train defense movements (side steps), transform into counter attack run and play 1:1+ subsequent breaking through at 8-ms and finalizing with a "pivot shot"

A1 passes - C, C-passes long counter attack pass to sprinting F, F passes H1gets the ball back and plays 1:1 against H1, after that F continues and breaks through air bodies/or players. Finally shoots from 8ms. H1 after 1:1 immediately orientates himself towards the goal (training of getting the rebound), collects the ball and queues at pos. A. F after shooting queues at pos. H. Symmetric execution at the other side. Goalkeepers change after 2-4 series of shots.

E) SUMMING UP

Throughout our paper we have demonstrated that nowadays Handball has become a highly complex system which is constantly being improved, developed further by scientific findings, by the expectations of the media and the spectators, by innovative thinking of trainers and players, by changes of rules and regulations, and by synergistic effects within the system itself.

To cope with the ever increasing speed of development in the world of IT technology and the changes in our modern society, Handball has to be constantly adapted to satisfy players and spectators. The instruments to achieve this aim are on the one hand systematic steps to incorporate the latest scientific findings into our training processes and planning, on the other hand to use complex exercises to a much higher degree than they have been used up till now. It is no longer one single training target we aim at and concentrate on, two or more main targets form the centre of our training units nowadays, furthermore secondary targets are aimed at simultaneously in one unit or training sequence.

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- http://en.wikipedia.org/wiki/System
- http://en.wikipedia.org/wiki/System, p.2, §2, ll 1-2)
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THE ECCENTRIC 5:1

Erwin Gierlinger

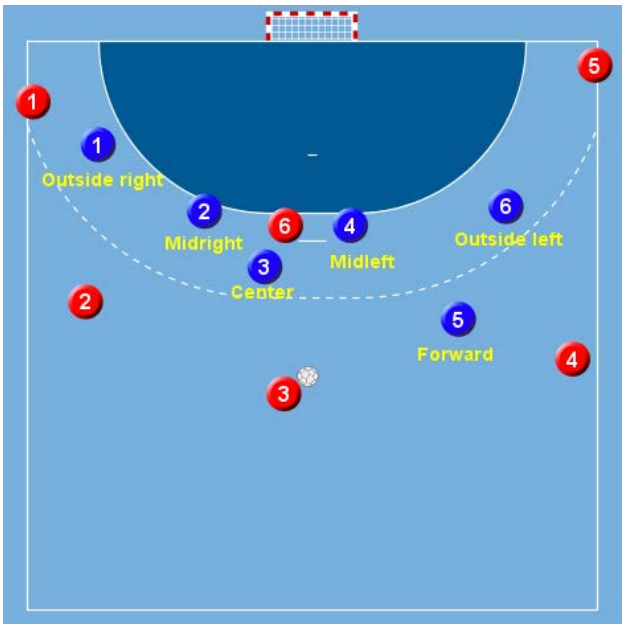
Austrian Handball Federation - Austria

Index of contents

Summary:
I will start this paper with a short introduction with some personal reasons of why I have chosen this topic. This is followed by a basic description of the defense positions of the eccentric 5:1 and a closer look at the tasks for each individual position. Then the advantages and problems of this kind of defense system will be discussed and visually presented. As hardly any team keeps playing in a 3:3 offense nowadays, the next paragraphs will concentrate on common team tactics and how to solve them. Therefore different cooperations between the positions regarding positioning, timing and switching are described in detail. As every defense position has its specific requirements to fulfill, the next chapter gives a deeper insight in the "player's profile" better known as the profiles of qualification. These tactical topics are followed by the methodology, first trying to develop the skills necessary for the specific positions and afterwards working on a perfect cooperation between the defenders. The last part of the thesis is a short conclusion.

Keywords:
advantages, problems, task distribution; player profiles; methodology;

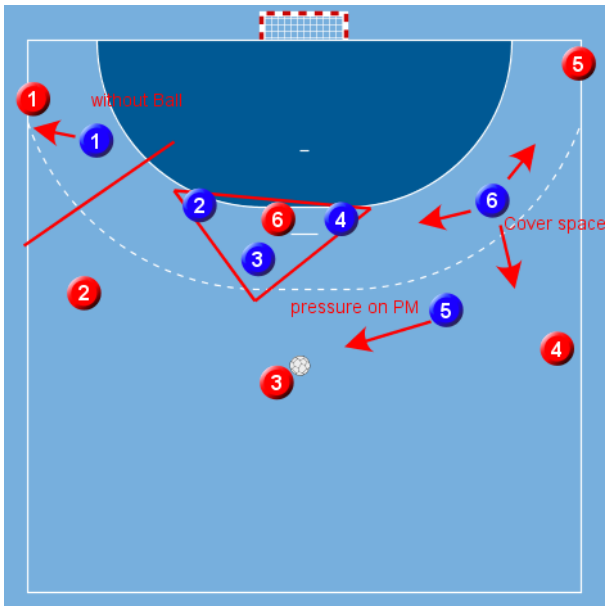
Introduction:
My first contact with a professionally played eccentric 5:1 was during the time when Dagur Sigurðsson was coach of the Austrian Men's National team. As part of the Austrian National Team's Video Analysts' group I had the chance to learn a lot from him and get a deep insight in his ideas behind this defending system. Therefore I want to thank Dagur for everything and wish him all the best for his future career. From the beginning I was fascinated by this not so often played defense system. The mixture of a man centered defense which covers a certain position from scoring and a defensive formation that tries to isolate the attackers in one half of the playing field caught my attention. Therefore I decided to try to further develop this defense formation.



Picture 1

Defense positions and basic rules

As in every defense formation, each player has some specific tasks to fulfill in order to make the system work properly. Therefore each player has to have some different strengths, which will be described later on under “Profile of qualification”.



Picture 2

Outside right:

The outside right has to cover the left wing without the ball, taking him completely out of the game as a passing opportunity as well as preventing him from trying a one on one. The positive side effect is that the left back therefore has some difficulties in taking up speed and often has to dribble the ball to start an offensive action.

Whether outside right helps out on 1:1 situation from the left back to the outside or not, depends on the scoring ability of the left wing. Regarding to low- and high-scoring areas brought up by Hellgren (HELLGREN & WILLBEK: Danish Goalie Academy, 2008) the scoring percentage from this position is worse than from the wing, so outside right better covers the wing accepting a breakthrough between 1 and 2 if this is not preventable.

Midright:

The midright has to stay rather defensively. His main purpose is to block the left back if he is coming straight towards him and to cover the pivot in situations when the left back comes wide to the center. Therefore his basic position may not be outside 8m, as the way back to cover the pivot would be too far. Another task midright has to fulfill, is to narrow the space for breakthroughs from left back outside as carefully as possible, knowing that shots from this area with contact have a rather low scoring percentage.

Center:

The center has the most offensive job of the three central players. He has to attack the left back when coming towards the center, as well as the playmaker penetrating from straight ahead. Besides, the center also has to cover the pivot in some group tactical means and therefore needs a good cooperation in 2 on 2 situations with midright and midleft.

Midleft

The midleft's main task is to help cover the pivot and keep the free space for the lineplayers tight. Furthermore he has to stop the playmaker aggressively if trying to penetrate the area behind the forward.

These three central players always build a triangle in which the center is the peak of it attacking all offensive players moving towards the middle, whereas the others try to cover the pivot and keep the defense in the center tight.

Forward:

The forward has the most important position in the eccentric 5:1 defense. He does not only have to take the right back completely out of the game but also put a lot of pressure on the center back.

As a result the defense achieves two things: First of all, the 5:1 impedes the flow of the game and forces the attackers to individual or group tactics by intercepting on the center back and second because of this pressure the playmaker will shift his starting position away from the forward restricting the actually available playing field for the offense.

Outside left

As the forward often moves from his original position to the middle, the outside left has a very challenging job to do. He often is in a 1 on 2 situation which he has to solve offensively not staying on the 6m line but positioning himself in the free space. Hence he has to anticipate very well as he sometimes has to cover the pivot but also to be aware to run to the right wing

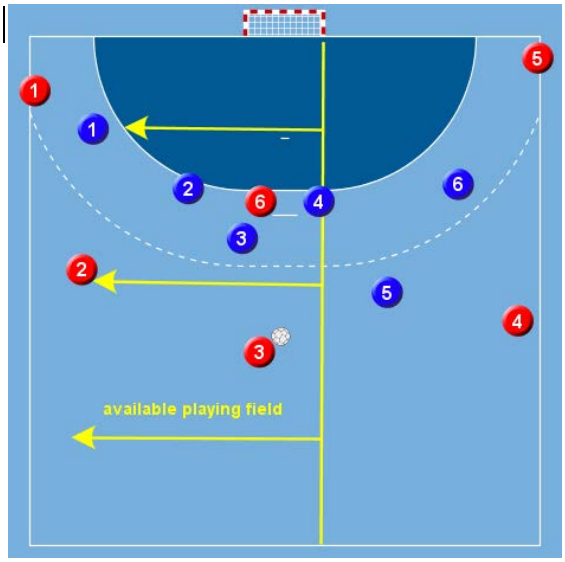
as well as to cover the right back in situations when the forward tries to make a foul on the playmaker.

The outside left therefore has to watch the forward very well and cooperate with this player perfectly.

Benefits of the eccentric 5:1:

As already mentioned there are different kinds of advantages, starting from psychological to tactical benefits.

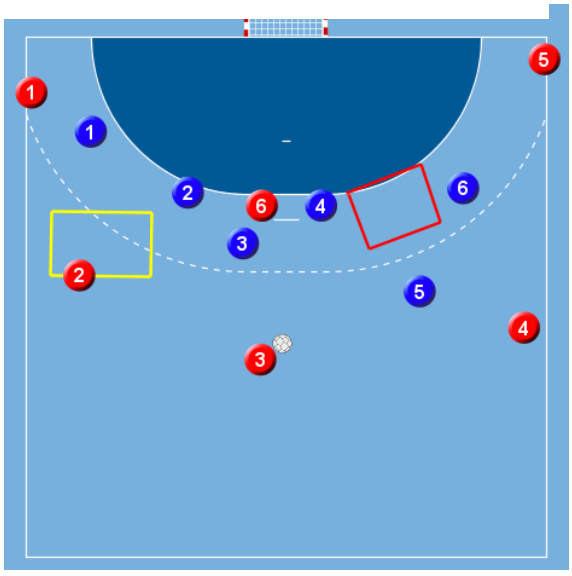
One big advantage of the eccentric 5:1 is the simple fact that it is not played very often and therefore the attackers have a smaller repertoire of group or team tactics as well as less experience in playing against this formation compared to the traditional 6:0 or 3:2:1. This might not seem important as most players are very skilled but in a sport where you have to take decisions in a split second it definitely makes a difference whether you solved this situation in your career hundreds of times or only in a few trainings (WEINECK, J.: Optimales Training (12th ed), Erlangen 2002.



Picture 3

Another benefit is the mixture of taking out one very strong attacker and putting pressure on another one. So one side of the offensive formation is well covered which also does not allow a lot of team tactics. This often tempts the attackers to take unprepared actions or shots.

The last main advantage is in the narrowing of the actual playing field so that the attackers have less space for 1 one 1 situations or group tactical means. As most of the playmakers are right-handed the forward is not only able to put a lot of pressure on him but also to intercept or at least interrupt a lot of moves.



Picture 4

Problems of the eccentric 5:1:

As every defense formation also the eccentric 5:1 has its weak points. Some areas of the defense are less covered and as a result extremely vulnerable to 1:1 situations or group tactics especially those including the pivot.

As you can see in picture 4 there are mainly two big problems an eccentric 5:1 has to cope with.

The first one is if the left back has a high percentage in shots from the area covered in yellow. As the midright has to stay rather defensively to keep the opportunity to cover the

pivot quickly this area is not well covered. Therefore the arrangement between the blocking midright and the Goalkeeper has to be perfect. Nevertheless this remains a weak point of the defense system.

Another problem area is the space behind the forward covered in red. If this area is penetrated by the center back, the midleft and forward have to cooperate closely to solve this problem. How this can be done if the offensive team is crossing or empty crossing is discussed later on in "How to solve common team tactics".

This space also causes problems if the pivot is occupying this area. In this situation the outside left has to solve this 1 on 2 situation by covering the pivot but being prepared to quickly move to the right wing.

Task distribution for common team tactics – "How to counteract moves against the eccentric 5:1 defense":

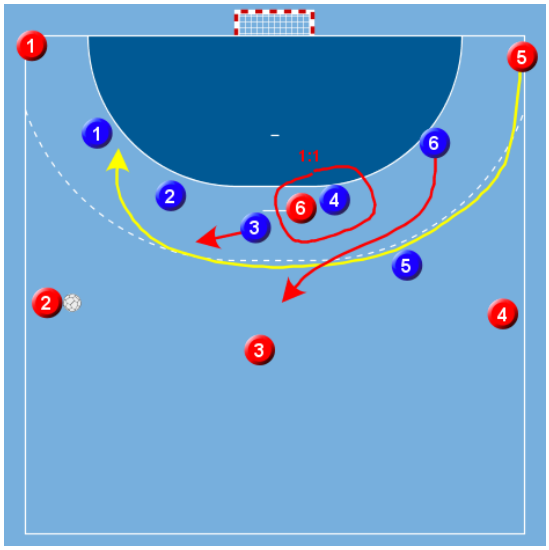
The top ranking of the German Bundesliga and according to that the attraction for world-class foreign players from all over the world to be part of that as well as the availability of most of the games during TV or Internet lead to a standardization of common team tactics. In this chapter we will have a closer look on how to counteract these.

Transition of the right wing

A common way to play against an eccentric 5:1 is a transition from the right wing. Depending on the individual strengths of the attacker's positions there are different ways to solve this problem.

The first one would be that the outside left only moves inside till he is able to cover the pivot or the playmaker. The positive aspect of this solution is that there has to be no coordination of tasks between the forward and him.

On the other hand the attackers gain more space as the forward now is covering the far most right player who will probably sweep outside. As a result there is less pressure on the playmaker and more chances to use group tactical means.



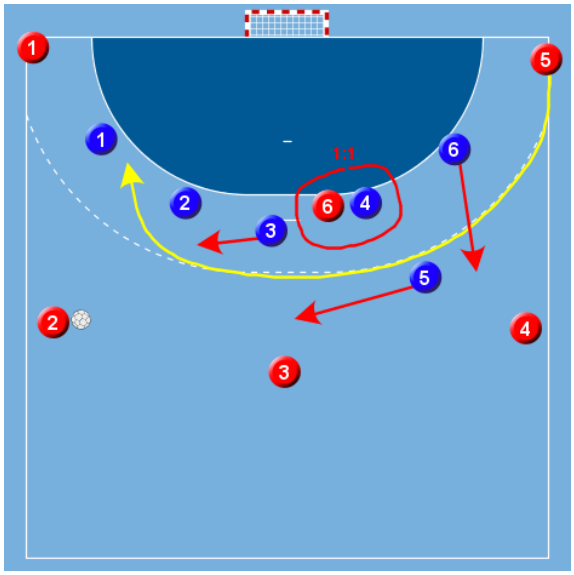
Picture 5

Another way to solve the transition of the right wing is that the outside left follows the transition to the middle and there immediately covers the playmaker.

The advantage of this solution is that the attackers are under a lot of pressure as the playmaker and the right back are covered very closely. As a result, the left back has to find a solution on its own. Nevertheless, a perfect coordination of moves as well as a great timing is needed.

Especially if the left back immediately goes to the middle it is very important that the midright

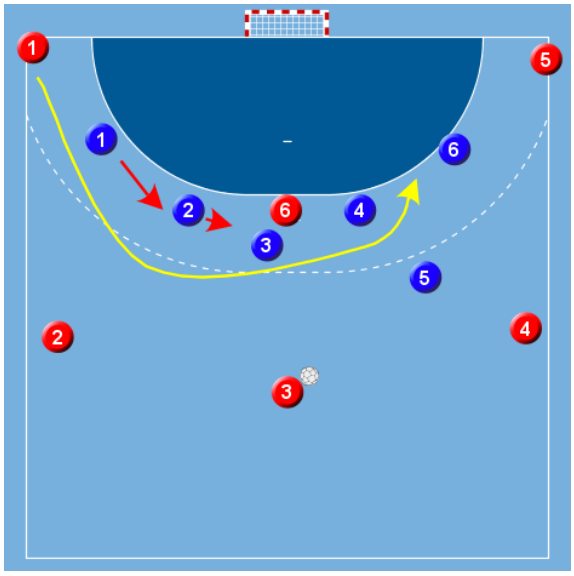
anticipates the transition very fast and is able to cover the pivot in time.



Picture 6

Another way to cover this move is that the forward switches to the playmaker and the outside left covers the right back. In this arrangement the most dangerous situation for the defense is the time when the forward is switching but has not arrived at the playmaker.

The benefits are the same as before: a lot of pressure on the offense and very little space to play. But as mentioned above also here the timing as well as the arrangement of tasks is crucial.



Picture 7

Transition of the left wing

A minor problem for the eccentric 5:1 normally is the transition of the left wing as there is not a lot of cooperation between the defense positions necessary.

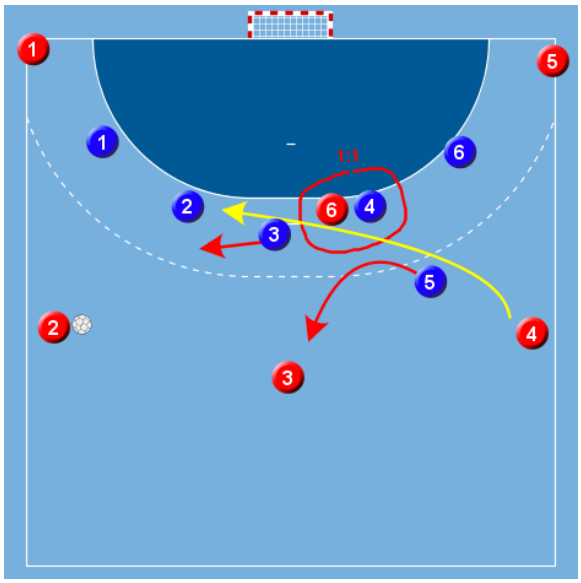
The outside right only moves a little to the inside and depending on the position of the pivot the defending formation has to solve a 2 on 2 situation between a back player and the pivot.

As the forward still has the task to cover the right side and put a lot of pressure on the playmaker there is very little space for the attackers.

Transition of the right back

A common team tactics is the transition of a back player. For the eccentric 5:1 defense formation, transitions of the left back or the center back are not highly dangerous as there is no switching required and hence no misunderstanding in the cooperation possible.

As there is also only one back player left after the transition, no highly complex group tactics are feasible. Nevertheless, the defense has to be extremely concentrated as an early shot is very likeable.



Picture 8

A transition of the right back is therefore more likeable.

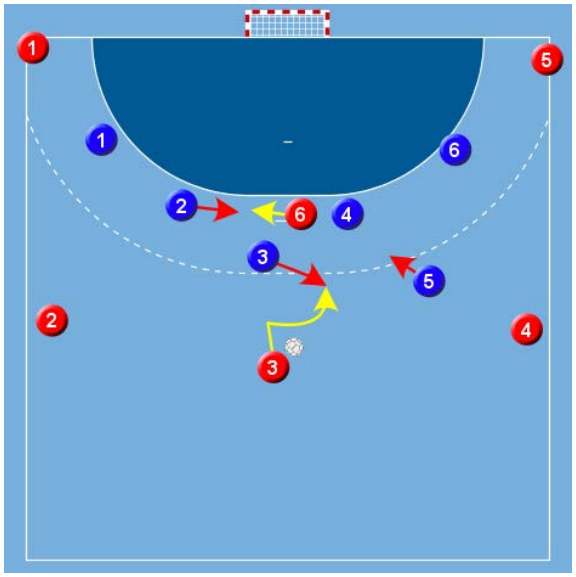
The forward player then accompanies the right back to the middle and afterward switches to the center back trying to cover the playmaker in a way that he is not able to get any ball at all.

During this transition the midright is very vulnerable and has to cover the pivot quickly, whereas the midleft and center have to cooperate to solve the 2 on 2 situation between left back and right back as second line player.

Having the outside right covering the left wing without the ball and the forward checking the playmaker, the right back has to find a solution, either taking an individual move or trying to play with the pivot.

One way or another, there is hardly any game flow possible, but rather an unprepared action is probable.

Individual move from a right-handed playmaker to his dominant side:



Picture 9

As mentioned in the "Problems of an eccentric 5:1 defense" chapter, the area behind the forward is highly vulnerable.

The most dangerous situation regarding this problem is not when the left back moves to the middle and passes the ball to the center back who is also moving to the right, because then the forward has the chance to stop the play by attacking the playmaker.

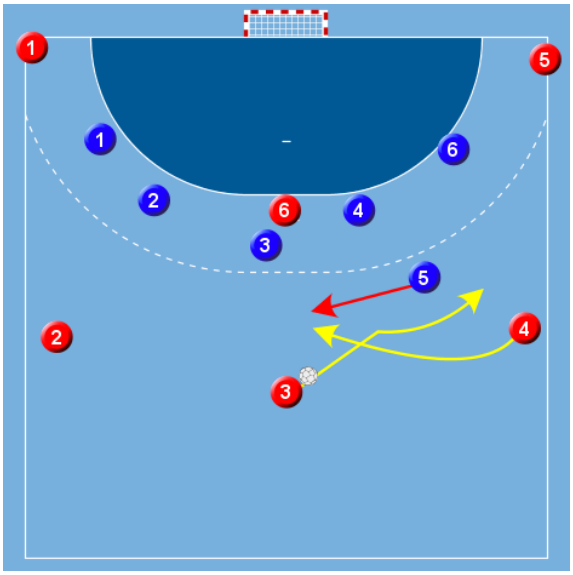
Far more dangerous is if the center back comes on his own dribbling with a wide movement and trying to penetrate this area and the pivot moves away from player Nr. 4 behind the center.

As the center has to take some steps outside to attack the playmaker the cooperation between the center and the midleft is very important. Both of them have to anticipate the situation very early so that the center is able to get back and cover the pivot and the midleft is fast enough to stop the playmaker from penetrating this area.

This situation is also difficult for the forward as he has to watch the right back carefully. If the right back stays on his position, the forward has to help, stopping the center back but if the right back moves to the middle, he has to follow him.

Besides the midright has to move inwards to narrow the free space for the pivot.

Crossings:



Picture 10

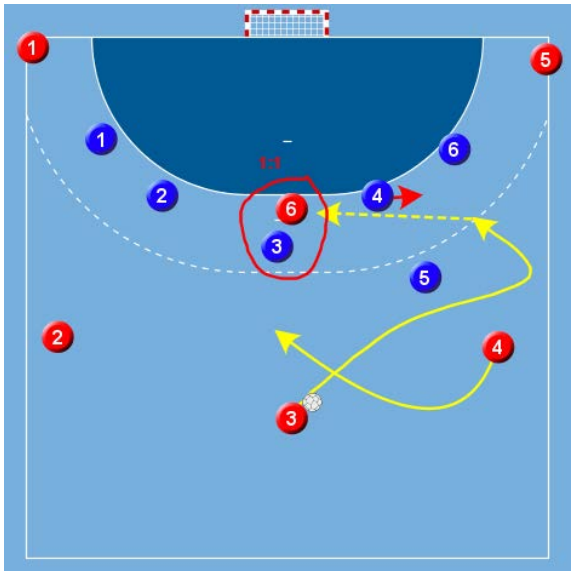
Another often used group tactics are crossings.

As crossings between the left back and the Middle back without any action from the pivot are not relevant for the eccentric 5:1 defense we will concentrate on crossings including the right back first.

The main rule therefore is that the forward normally stays with the right back. So if the right back moves to the center back position he is following him.

To cover a crossing between center back and right back the forward must not be blocked, so he has to be very offensive and try to get between the playmaker and the right back.

Crossing with pass back to the center back:



Picture 11

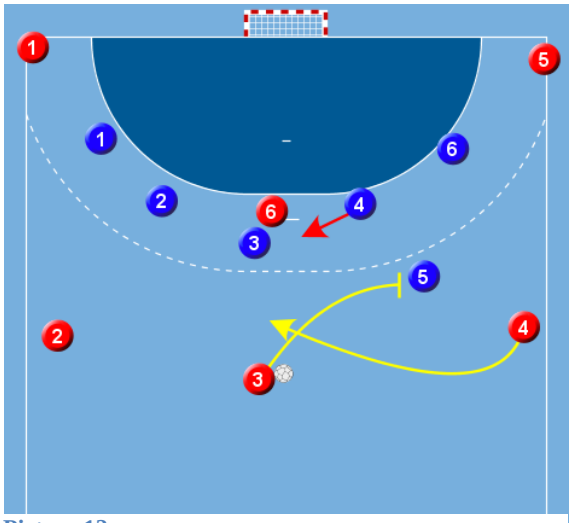
As the forward moves with the right back to the center the defense has to be prepared for a pass from the right back to the center back who takes the right back position.

In this situation the midleft has to attack the playmaker and the center has to fight for a good position against the pivot. These two defenders have to anticipate this play very quickly in order to cover the crossing.

Crossing with block:

Although it's the forward's task not to be blocked in a crossing, there might be situations where it can't be prevented.

If this happens, the forward has to cover the playmaker whereas the center attacks the right back early enough on 9m as he comes with a lot of speed and probably is the main shooter. Consequently the midleft has to move inwards to help cover the pivot.

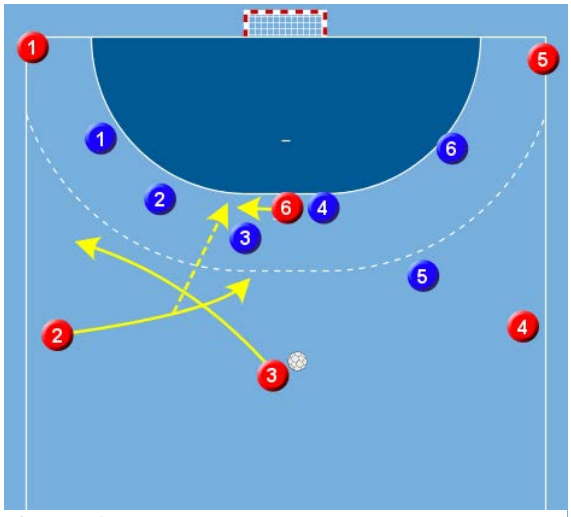


Picture 12

Especially the possibility that the center back may only fake the crossing and penetrates on his own makes this move rather difficult to cover for the eccentric 5:1 and demands a very good cooperation between the forward and the central defensive players with respect to timing and anticipation.

Crossing with countermove from the pivot

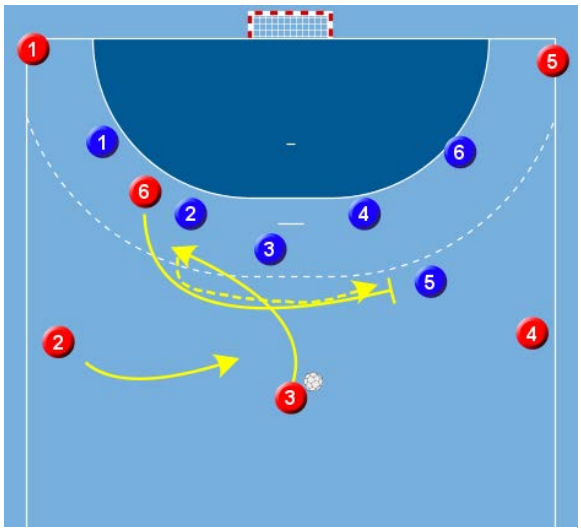
As mentioned above the only crossing not including the right back that presents a problem for this defense system is a crossing between center back and left back with the pivot simultaneously moving outwards behind the center back.



Picture 13

As the normal task is the center to attack the left back, coming to the middle there is space behind him. This space the pivot tries to penetrate.

To solve this problem midleft and midright have to narrow the space behind the center so the pivot has as little space as possible. At the same time the center has to get diagonally into the running way of the left back, preventing him from going far to the right side and giving the midright the chance to check the pivot properly.



Picture 14

Inside sweep of the pivot:

A lot of teams play an inside sweep of the pivot, either with the playmaker staying inside as a second lineplayer or coming back out and playing left back whereas the left back moves to the center back position.

The inside sweep of the pivot is to play like the crossing with block for the defense. After the crossing between center back and pivot the forward has to anticipate the next step being able to move out on the right back

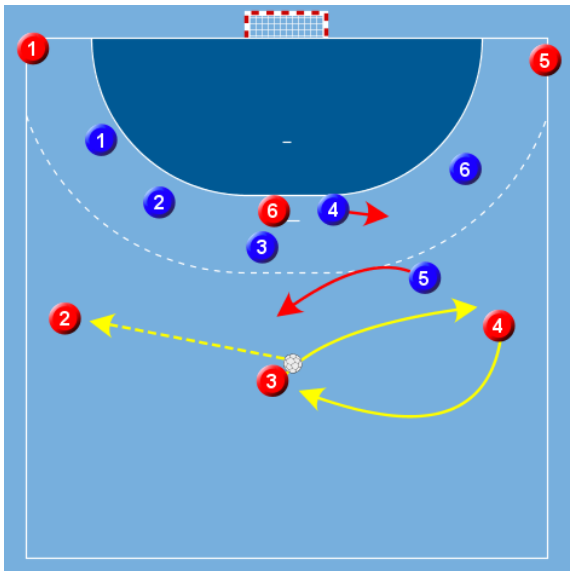
aggressively to prevent a block as well as reacting properly if the right back tries to fake the crossing and goes wide penetrating the vulnerable area behind the forward.

In both situations the forward has to solve this problem offensively. He may not let himself block but try to get between the pivot and the right back!

The midleft has to cover the area behind the forward in case the pivot goes for a 1 on 1 himself. The center covers the left back coming to the middle while the midright depending on the further movement of the playmaker covers the second lineman or center back on the left side.

If the inside sweep is played from the right side the crucial situation is to stop the playmaker from penetrating the area behind the forward as this is one big weakness of the eccentric 5:1.

Empty crossing – crossing without ball:

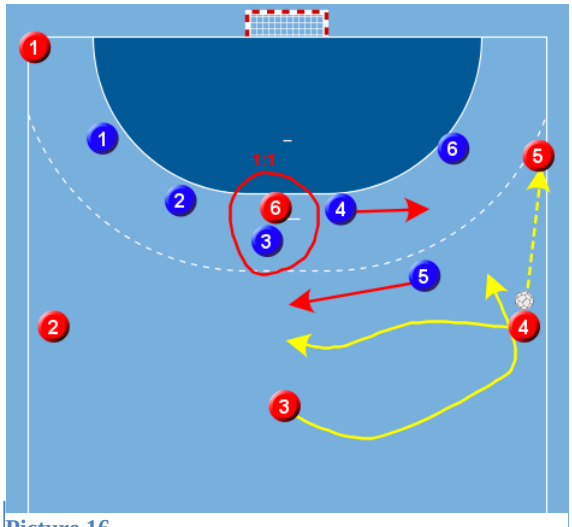


Picture 15

Another often played team tactic is the so-called empty crossing or crossing without ball.

This move is very dangerous for the eccentric 5:1 as according to the basics the forward follows the right back to the middle and therefore the playing field is not narrowed any more.

So why does the forward not only stay on his side? The problem with the forward not moving inside is that the 5:1 normally is also played against the best shooter. By letting him run away a very dangerous situation is created as the main shooter comes with a lot of speed on the defense. For this reason the forward moves inward with the right back, opening the space on the right side. Important to cover this play is that the forward moves to the middle over a low position coming from 9m so that there is no fast pass between left back and playmaker possible. If the playmaker gets the ball on the right side the midleft has to cover this area and center has to fight the pivot.



Picture 16

Empty crossing on the right side:

The empty crossing on the right side requests a good anticipation of the play from the midleft as he has to cover the 1 on 1 situation against the playmaker on the right side.

At the same time, center has to cover the pivot.

As with all empty crossings the forward moves with the right back again doing this from a low

position over 9m to prevent a fast pass from the right wing.

If the forward has to move to the middle with the right back it depends on the strengths of the opposing team whether the further moves are based on a central 5:1 or a 3:2:1.

Profile of qualification – „player profile“:

Outside right:

- Quick feet as he must stop left wing from receiving a ball
- Good positioning
- Good defensive 1 on 1
- Good anticipation - stops or diverts the winger running-in by checking

Midright:

- Tall and athletic
- good blocking as he has to prevent shots from a wide position in cooperation with the goalkeeper
- Good anticipation
- Good work against the pivot

Center back:

- „Best athlete and defender“ as he has to work against the pivot as well as winning a lot of 1 on 1 situations against the back players.
- Leadership qualities as he guides the whole defense
- Good anticipation
- Quick feet

Midleft:

- Good anticipation and positioning as he is in charge of the vulnerable area behind the forward
- Good work against the pivot
- Good 1 on 1 to defend center back going wide to his dominant hand
- Good blocking

Outside left:

- Good 1 on 1
- Good positioning and anticipation as he often has to defend in a 1 on 2 situation
- Quick feet to cover the space

Forward:

- Quick feet
- Strong defender
- Good athlete: put a lot of physical pressure on the playmaker
- Good positioning
- Good anticipation – good feeling for the situation – when to stay with the right back and when to check the center back or intercept the pass

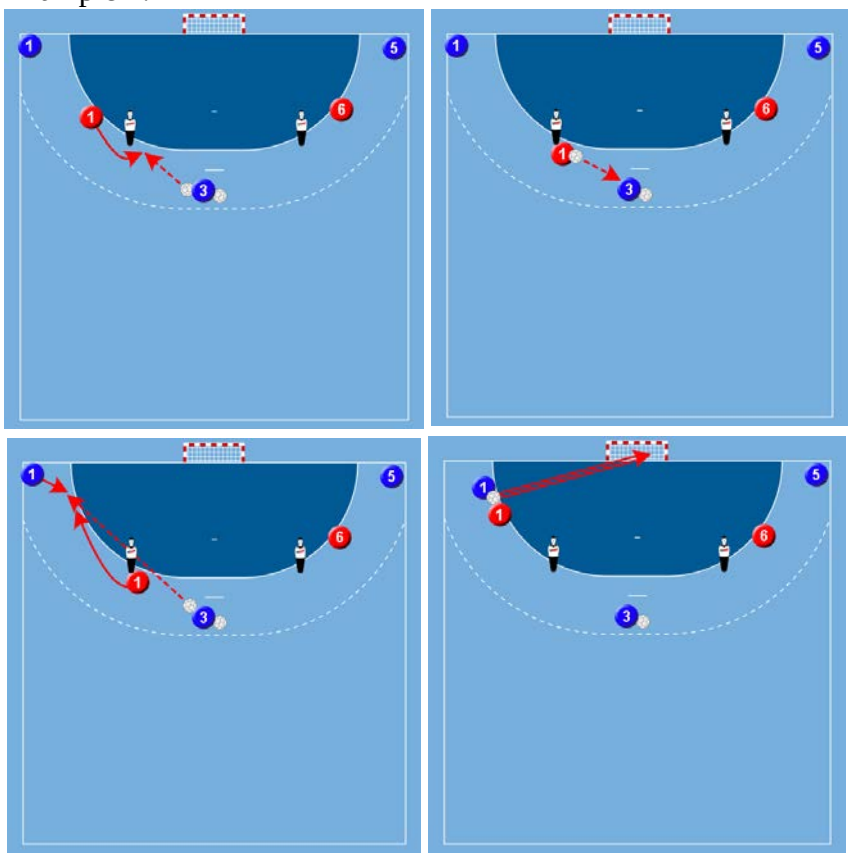
Methodology:

Step one – training of individual skills – some examples:

Outside right / Outside left:

- Defending 1 on 1 on his position
- Multiple defense action:

Example 1:



1) On a signal outside right starts round the Airbody covering a simulated pass to the pivot. Pass center – outside right

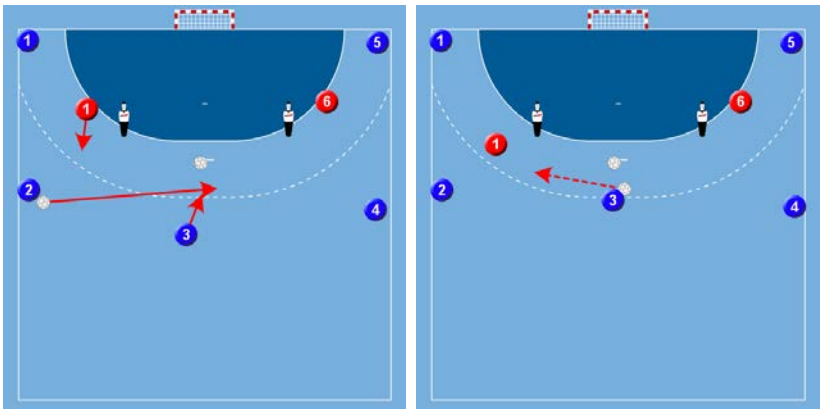
2) Pass outside right - center

3) Pass center – left wing; outside right tries to keep the space for the winger as small as possible.

4) Shot left wing

Picture 17

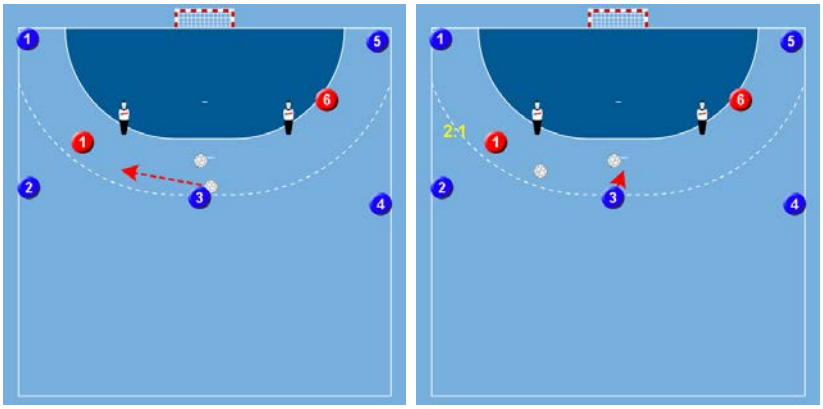
Example 2:



In the second example we extend the basic exercise with a 1 against 2 action. Therefore we need additional back players on both sides.

1) Pass left back to center back who penetrates the 9m area. Outside right anticipates a 1 on 2 situation and gets a bit more offensive.

Picture 18



Picture 19

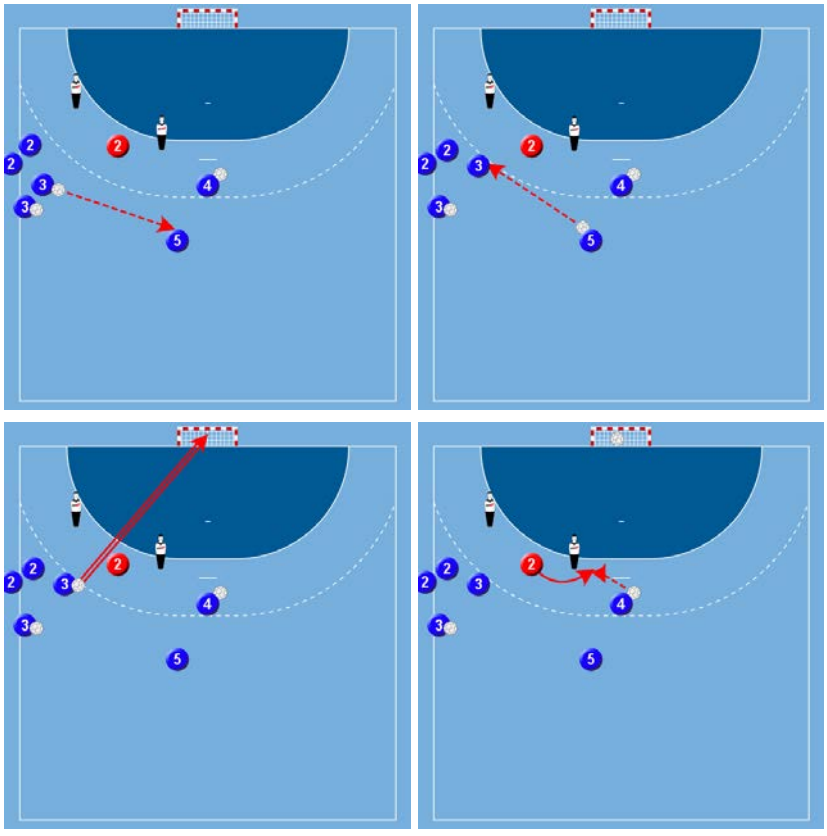
2) Depending on the behavior of the outside right the center back passes to the left back or left wing with a shot taken from uncovered position.

The rest of the exercise is like in example one with a coverage of the pivot and then trying to cover the winger.

Midright:

Multiple defense action:

Organization: 2 Lines of left backs; 2 players for passing



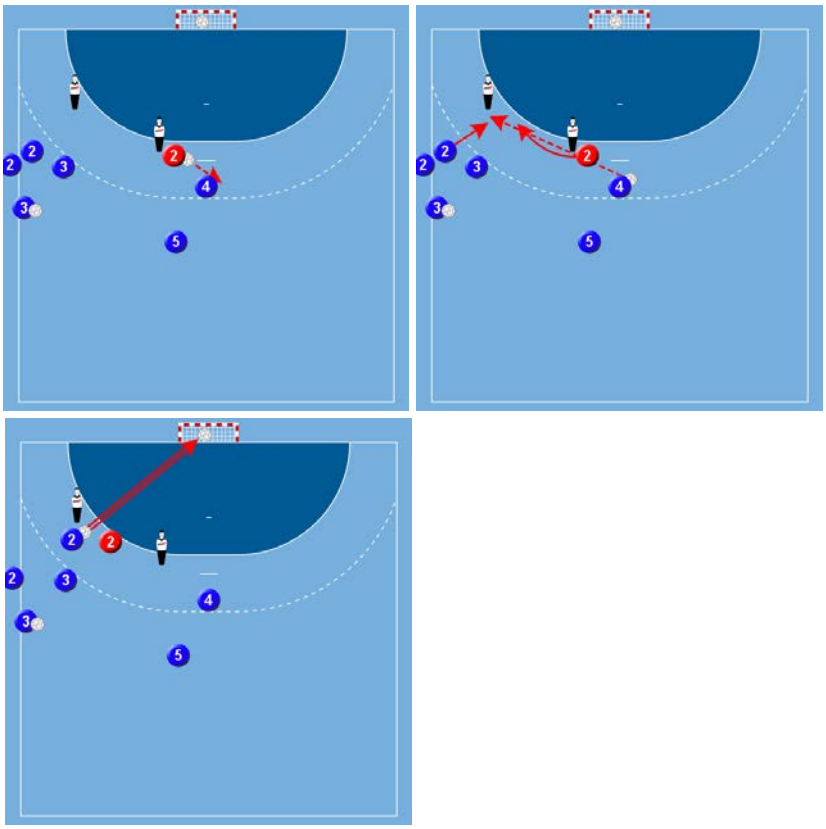
Picture 20

1. Defense action: Pass Nr.3 to center back and back

Shot Nr 3 against defensive block on 7-8m. Cooperation with the goalkeeper!

2. Defense Action: Coverage of the pivot: Double pass nr 4 to midright and back to nr 4.

3. Defense Action: Pass nr 4 to nr 2 and midright tries to narrow the space for a breakthrough as much as possible. Nr 2 shoots after breakthrough between position 1 and 2.



Picture 21

As the intensity is rather high midright has to be changed after a few rounds or switches each time with a second defender.

Depending on the number of players and emphasis on specific defenders this exercise can also be done on both sides.

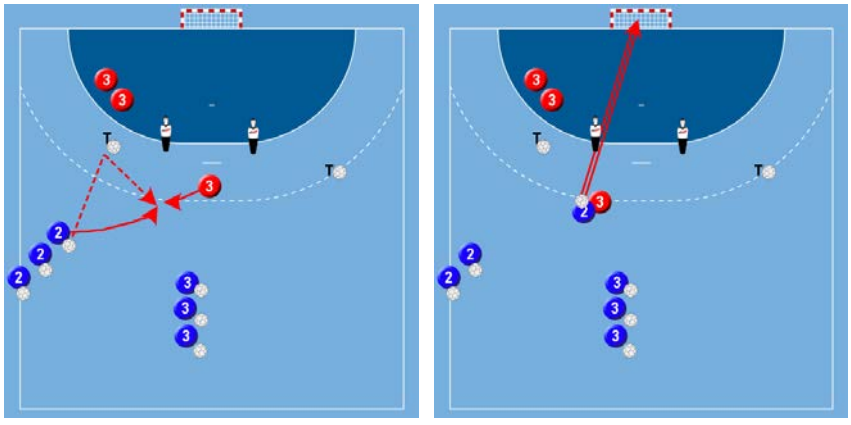
In this case the defending player can be throughout the exercise or change each time (e.g. after his shot nr 3 becomes defender on the right side).

By changing the defending player each time this exercise is also a good defense drill to work on general defense skills.

Center:

- 1 on 1 central
- Multiple defense action:

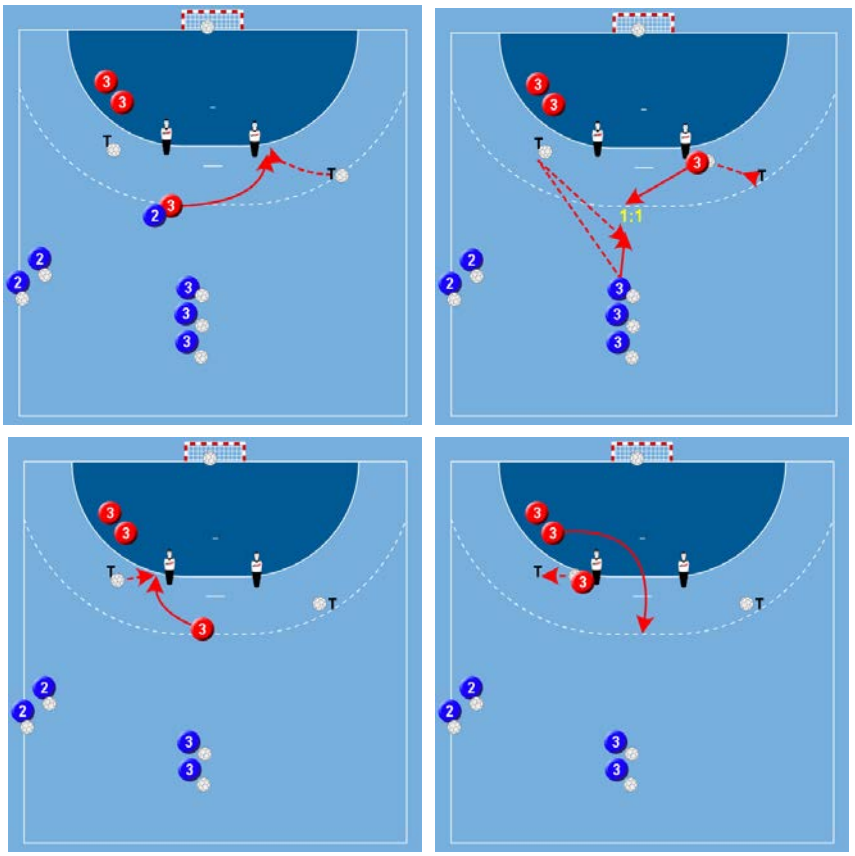
Organization: 2-3 center defenders who switch each time, 2 coaches or players only passing; left and center backs with ball



Picture 22

1. Defense action: left back passes to left T and gets the ball back immediately. Shot from the middle.

2. Defense action: center tries to cover the right pivot → double pass with right coach



3. Defense action: Double pass between center back and left coach followed by a 1 on 1 situation in the center.

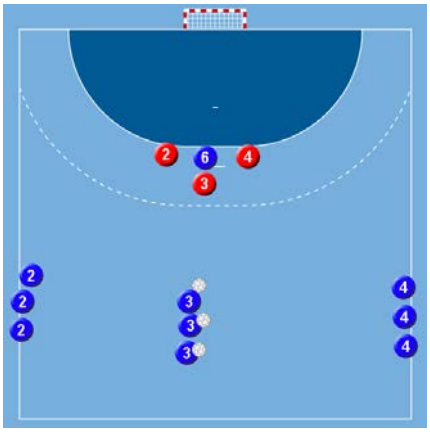
4. Defense action: center tries to covert he left pivot → double pass with left coach

In the meantime the second center heads into position and the next round starts.

Picture 23

Step two – cooperation and task distribution:

- 4 against 3 central:



The objective of this exercise is a perfect cooperation between the central defenders against shots from a wide/ position and passes to the pivot.

The attackers always play a double crossing starting from the center back. They have the opportunity to shot from a central position or pass to the pivot at any time.

For reasons of variety the offense can also play an empty crossing followed by further crossings.

- 5 against 6: without pivot and no transition allowed
- 6 against 6:
  - No transition allowed and pivot in the center
  - No transition allowed but pivot can move
  - With transition

Conclusion:

Every defending system has its advantages and its problems. The question which system is to prefer should be rather based on the kind of players that are available and the next opponent than on philosophical reasons.

However, the narrowing down of the available playing field to nearly a half, as well as the chance to often stop the game flow are good arguments to play this system against teams that prefer a lot of team tactics with wide movements. If the defense can stop these wide movements and tactics and tempt the attackers into a lot of individual situations chances of easy saves or interceptions grow substantially.

Nevertheless, the central defenders have to be in a strong physical shape and cooperate on a high level as they have to cover a lot of space with good shooting areas.

Although the eccentric 5:1 might not be the preferred standard defense formation, it might be a good choice as a second defense system as most offences do not have standard solutions for it.

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How to make handball more attractive and recognized internationally in other continents than Europe

Mohammed Elkedim

England

Summary

All in all, it is safe to argue that handball is a sport that is growing every day. It is more popular in Europe though, where countries such as France, Sweden and Serbia are very known all around the world. Question is though how we can make other countries more recognized and developed outside of Europe, internationally?

One could definitely argue targeting players at a young age to be the number one strategy. Skills and techniques will have time to develop for a long time and then that players could take their team into winning, for example the Olympics. Winning the Olympics or other big tournaments will definitely have an impact in how recognized a country is within a specific sport. Reason being because people will talk about who has won the Olympics in the media quite a lot but also the recognition the team or country gets nationally. It could create new curiosity with children and they might want to try out this sport.

Schools could be a factor which needs to be considered more. They need to get more involved in the sport to make it more attractive to the children and also make it more accessible to the children. Adding it to PE hours would be a first step and also one could consider having handball classes outside of school hours for children to try it, which means one needs to also consider to market handball to a younger public.

In essence, making handball more developed and recognized in continents except from Europe, could be proven to be difficult. But with hard work, passion and skilfulness, one will definitely increase ones odds in making it a more world-wide recognized sport. Of course, with regards to marketing handball, proper funding is needed as well.

Introduction

Handball is a well-known sport in many countries in Europe, where it is known to be most popular in countries like Sweden and France. It is today the second biggest sport in Europe for men and first for women. In countries such as France, handball is being developed amongst children at a young age, enabling them to make a living out of this sport at an older age. Outside of Europe, handball is not as known and popular as in Europe. Further reading can give insight in how to develop handball in countries (continents) outside of (apart from) Europe, enabling these countries to compete with the best European countries at tournaments.

History

There are two stories where handball first started; one view is that it was invented in Germany back in the 19th century. It was an outdoor sport to keep players fit during the summer months. It was meant for football players and kicking the ball was forbidden, you were only allowed to use your hands.

Another view is that handball can be tracked back to the antiquity, where it started on a tombstone in Athens, Greece in 600BC.

The first handball game however, in our time, was played in 1917 in Germany and first appeared in the Olympics in 1936. Handball's governing body was formed in 1928 and was called Federation Internationale Handball Amateur and was later in 1946 changed to today's International Handball Federation (IHF). Before 1940, it was very common that handball was played outdoors. In Copenhagen however, in 1940, it was brought indoors for the first time where it was played on a court a little bit larger than a basketball court and the indoor goals were a little bit smaller than the outdoor ones. Indoor handball flourished in Germanic countries (such as Germany and Sweden) during these times. This, in essence, could be seen as an argument to why it is big in Germanic countries today. Today however, the indoor variant is far bigger than the outdoor, which is rarely played anymore.

According to Salfordhandball (2010), handball has always been a sport dominated by European nations and when it was played outdoors, it was mainly dominated by Germany, Austria and Denmark, as not many countries outside of Europe played the sport back then.

This could also be seen as a key indicator to why it is more developed in Europe today and more recognized here, rather than outside of Europe.

In the Olympic competitions, the three top nations in the women's team are Denmark, Korea and Russia and for the men there are Russia, Yugoslavia, and Sweden (London2012.com). A conclusion one can draw from this is that, with the exception of Korea, all teams that have been proven to be the most successful in big competitions are European countries.

In the late 19th century, handball was developed in Denmark, Sweden and Germany. It used to be played outdoors and it used to be called field handball.

In addition, after World War II, the sport became mostly dominated by eastern European countries such as Soviet Union, Romania, East Germany, Yugoslavia and Hungary. These countries were regularly in the top three in most international competitions. Sweden was the sole country showing a somewhat resistance to the eastern European bloc also competing in the top.

Because of the economic downturn after the collapse of the eastern European alliance, many of the teams lose their winning spirit and also lose good coaches as well as players. It made other countries dominating such as France, Spain, Algeria and Egypt (Salfordhandball.org.uk, 2010). These countries especially started to make an impact around the Olympics in the late 80's and early 90's.

An estimation is that about 7 million players are registered with a handball club today (Salfordhandball.org.uk, 2010). It is played on every liveable continent on our planet and a majority of clubs in Europe are professional (Salfordhandball.org.uk, 2010). One can also find professional clubs in Asia who are becoming more competitive internationally. In Africa, America and Oceania there are many amateur clubs, thus very enthusiastic. In the UK, there are many handball clubs which are amateur, even though the sport is not very recognized and developed.

That there are 7 million players registered in the world today, means that handball actually could and should be more recognized than it is today, having so many people playing the sport already. Amateur clubs in Africa, America and Oceania could be used as targets to develop and make them more recognized and brought in to a professional level, which later could then become more internationally known. Doing this one could argue, could be

difficult, as hard work comes with it. But with right strategies and with hard work, it could work out.

All in all, passion, hard work and skilfulness could be what it takes to make handball more recognized in other continents than Europe.

Handball in England, Brazil, India, United States of America and Africa

As an example of looking at handball and its development outside of Europe, I have chosen to focus on four countries which are India, Brazil, the US, and also England as they are working a lot on the development of handball and it could be interesting looking at what they are doing in comparison to countries such as Brazil and India. Also, I have chosen to have a look on African handball and how it is developing there.

India

An aim of Indian Handball, according to Indiahandball (2012), is to create a quarterly Handball News Magazine where the news of handball could easily be spread around the country. This way, people will find out more about what handball is about and could be seen as a good way of marketing. Coaching camps are also on the agenda, which could be beneficial as coaches will be more educated.

Handball in India is quite known as well as developed, though only nationally at the moment, but directors of Indian Handball claim that international tournaments need to be organised in India, in order for Indian handball to be developed and more recognized in Asia. And by doing this, India will be more exposed internationally and also then more recognized according to Indian handball officials. If recognized internationally, handball could possibly be more developed in India. If Indian handball becomes more recognized abroad, children might see an opportunity to make their country more famous as they might want to pursue a professional career within handball, whether nationally or internationally.

Handball in India has great potential both nationally and internationally, where the Indian representatives have been invited to the IHF headquarters to meet with the president of IHF, where obtaining new training techniques, training aids and international standard field would be on the agenda.

Brazil

A governing body of handball in Brazil has been around since 1979 when the Brazilian Handball Confederation was founded. Handball has been around before this year as before 1979, the Handball Confederation was a part of Brazilian Sports – CBD. They are members of the IHF and the current president of the Confederation has opened technical schools of handball to ensure that Brazil participates in tournaments in South America. Since the current president lives in Bangkok, Thailand, the Confederations headquarters are also located there.

Handball in Brazil is quite developed and they are doing many projects to get children involved. One of them is "mini-hand", which is a ball game for children aged 6-12. "Mini-Hand's" philosophy is that this ball game should convey positive experiences such as happiness and pleasure to play. It should be adapted to schools and for different clubs, especially for sporting events. The developments, such as coordination of movement, education and the understanding of different behaviours of the game, such as team spirit, are crucial. The game is more important than the result. This is a good aspect, as children learn that developing techniques and doing things the right way are more important than actually winning the game. This way, children could develope at a quicker pace.

Mini-Hand is an activity of attraction, where IHF has also given directions and recommendations on how to practice the game with children. When children are stimulated to play sports at a young age, they are more likely to continue doing it at a later age. And when older, they might want to try a professional career abroad or in a professional level nationally. Handball could be further developed with proper educational materials such as videos and good coaches. This could lead to more people starting to practice handball.

Furthermore, Brazilian handball is working with talent hunters who are out on the field of where handball is played to spot possible talents. This is a good way as to doing so might increase the skilfulness of the national team. And if they are skilful enough, they might be able to compete against top countries in Europe, such as France. The talent agent needs to have the adequate knowledge to spot a talent though, which could be difficult if handball is not thoroughly developed in that specific country. Looking at female handball in Brazil, one strategy that has been adapted is to send players over to play in Europe (Brasilhandebol.com.br, 2012). The reason behind this could be because they want to get an insight in how European handball is and take it to South America to make it more diverse.

Female handball in Brazil is very recognized and they have won the Pan-American championships many times. In the London Olympics 2012 they finished sixth place (Brasilhandebol.com.br, 2012).

England

Even though England is in Europe, I find it interesting to have a closer look at it since handball is not as known a sport, as football and cricket. England is however trying to develop handball in the country by going out in schools to attract young children to get involved in the sport.

EHA, the England Handball Association, is trying to compete with neighbouring countries by trying to develop handball further nationally. Hosting the Olympics in London is according to EHA (2012) a great chance for handball to be further developed and more recognized as an important sport.

At present, there are 415 clubs that are school-based across England that are connected to the playing of handball in some way to be able to attract more coaches and players. This is a good way to try to get it more recognized as a sport as when it is available for the public to see and speak about, the rumour about handball can spread to the easiest marketing way – word of mouth.

In a video from Skysports (2012), Jesper Holmris, Great Britain's coach of the women's team, argues that handball will be more known and recognized in England after the Olympics, which is being held in London this summer. My opinion is that it all depends on how well they perform. If they don't perform well, people could actually end up forgetting about the handball results of Great Britain. However if they perform well and for example come second, it will be a triumph for British handball and media will write a lot about it, which could possibly increase interest in the sport amongst youngsters. Even if they do very well during the Olympics and end up 5^{th} or even 6^{th} place, it will be a triumph for British handball and it will be written about. This could increase awareness of handball in England.

Children need to be "targeted" at a young age. It needs to be played for fun first, where results don't matter. A good knowledgeable coach is also crucial, who knows how to deal with young children. If you have a good coach, one could argue that you are more likely to continue the sports you are practicing.

Furthermore, it is also important to mention that handball, along with volleyball, are two sports in the UK that have not been funded by the government (Guardian.co.uk, 2012).

Also, it is of high importance to mention England's collaboration with Denmark. Especially when it comes to the preparing for the Olympics in London 2012, where most of Britain's players spent almost two years training and preparing at Århus training academy (Guardian.co.uk,2012). They were training for six hours a day, played friendly matches against regional teams and they were also playing in the national league, an important aspect to mention in regards to the development of English handball. One issue though, with English handball is that it is fairly new and the teams have been built from scratch (Olympics.time.com, 2012), with many of the players not knowing handball prior to joining the England squad.

Africa

Important also is to touch on the African continent, where countries such as Egypt and Algeria are already dominating the sport. Question is though, how countries like these could be more recognized outside of Africa?

Africa has seven zones with seven presidents, where they are working on the development of handball (Cahbonline, 2012). It is a much known sport in countries such as Tunisia, Egypt and Algeria but many of these players that play in the national team, actually play abroad at a professional level, such as in France. Reason could be because of financial reasons but also because it is easier to get signed with a club there since the sport is more recognized and developed there.

However, countries such as Angola and Tunisia are qualified (after winning the African Cup) to participate in the Olympics. Looking at the history of the African Cup, Tunisia along with Algeria have won this cup the most times, closely followed by Egypt (Wikipedia, 2012). If one continues to look at the amount of appearances in the Olympics – and any other big tournaments – Tunisia, Algeria and Egypt are the top countries which are represented by the African continent (Olympic, 2012). A conclusion one can draw from this is that big national tournaments are needed for countries to be recognized internationally.

Other countries apart from the African countries mentioned are not very developed and recognized, which is unfortunate. Reason could of course be because of poverty, but also because other sports, such as football, is dominating in these countries.

In addition, female handball in Africa looks a bit different. Africa, which is a continent known to suffer by poverty, is a continent where handball amongst women is not very developed. This could be due to the fact that there are not many participants in tournaments (Wikipedia.org, 2012). One example is the Junior Women's Championships, which was cancelled in 1994 due to lack of participants. It is held every two years and a pattern one can see is that there are very few participants each time (Wikipedia.org, 2012).

Female handball in Africa is difficult to find information about, which is worth mentioning as if they want to be more known, one should consider this aspect through advertising.

Overall in the African Women's Championships, Angola and Congo are very good as they have won many times (Wikipedia.org, 2012). Algeria, Tunisia and Egypt are not as good here as their equivalent men's teams are. Reason behind this could be because of religion and tradition in these countries where some religious families don't want their daughters to practice sport where you will have to mix with boys and reveal your body in ways they are not used to.

United States of America

One important aspect to mention when it comes to the recognition and development of American handball is that once one inserts the words "American Handball Association" in Google, one is referred to a different sport played against a wall, with gloves and a smaller ball (Ushandball.org, 2012). A conclusion one can draw from this is that people actually find it difficult finding the correct sport they are after. Also, one could conclude from this that handball is not a known sport, as a different sport comes up first when searching for handball.

The United States does have a handball team though and they are playing in different tournaments, such as the Pan American Tournament (Teamhandballnews.com, 2012). This tournament is held in Argentina.

Furthermore, one issue with handball being more recognized and developed in the United States of America is that the country is rather big. This could mean long distances for teams

to travel to compete against each other. NBA basketball could be argued to be the biggest sport in America, as well as American football, which could mean that these two sports take a majority of players and media awareness, which as an effect could mean that handball is not being spoken about. So with that being said, one could argue that people in America don't want to put funding in handball, as there are so many other sports that are dominating and because of the size of the country itself, it will cost teams a lot of money travelling between states to compete against each other.

Methods

There are various methods to develop handball outside of Europe. A few of them are discussed below.

Handball could easily be developed and more recognized outside of Europe if the sport is more known to people and is played by people more. An easy way to make the sport more known is to use marketing as a tool to reach out to the public. Marketing helps people to find out more about the specific subject or item one wants to sell or increase the awareness of in order to generate business.

One could argue the setting up of a proper business strategy to be the most appropriate way to go forward and spread the word and knowledge of handball across the world. However, one needs to be aware that this could cost a federation or association a large amount of money however, which one needs to be aware of.

Marketing

Other means of marketing ranges from advertising, newspapers, and television commercials. As previously mentioned, these means could be rather expensive but it could actually pay off in the long run if one has a clear business strategy how to go about spreading the word of handball outside of Europe, making it more developed and recognized.

Furthermore, one must have in mind that marketing is an important aspect when it comes to making handball more recognized in other continents than Europe. Taking Europe as an example, one could argue that football is the most advertised sport. It is very rare for one to see an advertisement about handball, if it is not just before a big tournament. So in essence, it could be of great importance to work with *marketing* handball and making it visible to the public through advertisement on TV but also advertisement on billboards and in newspapers.

This way, handball gets more accessible to the public (like football) and people could get more interested in coming to try the sport. A good marketing strategy is essential to make handball more recognized in other continents than Europe where social Media, such as Facebook, could be of good help as it reaches out to a younger generation. Also good advertising could make a difference.

Schools

Attending schools and setting up programmes for children around 7 years of age could be argued to be a good approach in order to boost the dominance of handball in various countries. The sooner you start a sport, the more likely you are to continue the sport. At a young age like this, it is also important for the child to enjoy what he or she is doing. If you are too serious about what you are doing, the child might get bored and try another sport that is more fun. This is why it is important to have a qualified coach to teach handball. He or she needs to know how to deal with children in a good way, stimulating their senses making it fun to come to training. Once skills are more developed after a few years, one could get more serious about the sport, as by that time one could argue the player takes it more serious, wants to progress and develop, wants to win games and play handball at a professional level.

So in essence, a good coach is crucial at the very beginning of a child's development in handball.

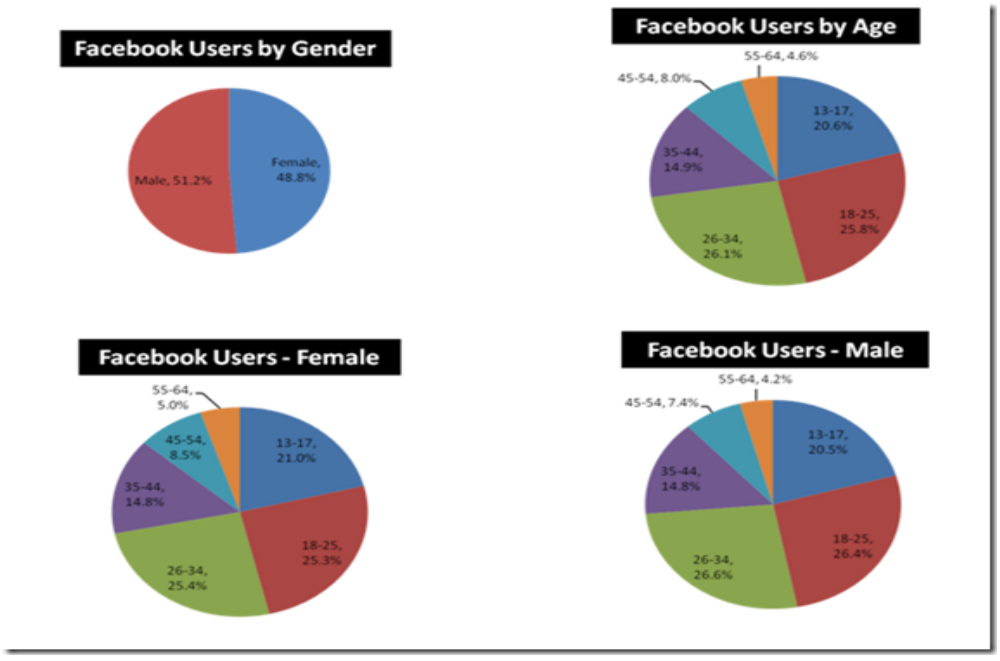
Moreover, to be able to get a hold of good coaches, one needs to make sure that there are good education for them either nationally or internationally, where skills and techniques can be developed. Also, it needs to start from an early age where interest is caught for handball, perhaps, first as a player and then at a later age, as a coach.

Word of Mouth

Word of mouth is also a way where handball can be spread. But for it to be able to work, one could argue that handball needs to be fun for the person who plays the sport. If the person playing the sport, presumably a child, will tell his or her friends about how much he/she enjoys playing handball, which could create a curiosity with the people who hear about how fun handball is. And this way, this person might want to try it and if he/she enjoys it too, he/she might tell his/her friends.

In addition, as previously mentioned, for handball to be fun, a good qualified coach who knows how to deal with children is essential.

Social Media



According to Howmanyarethere (2012), Facebook has over 900 million active users today and is primarily used by young adults, although discussions have been made to open the platform to under 13 year olds too. At the moment, about 21% of all Facebook's users are between the age of 13-17 (Kenburary, 2012). With this statement, one could assume that it is rather important to use Facebook as a marketing tool, as it could help raise awareness to young adults about handball. The age 13-17 could also be argued to be an important age to where a child decides what sport to play. In addition, Facebook with almost 1 billion users, where 21% of the users are between the ages 13-17 could be a good way to start marketing the sport as it could be easier to target a specific age group through this Social Media. It could lead to an increased awareness of Handball, which in essence could lead to many more children wanting to try the sport.

	Total Users	Male	Female
13-17	14,402,580	6,646,820	7,719,380
18-25	50,679,700	23,004,960	27,048,020
26-34	29,703,340	13,588,320	15,577,380
35-44	23,596,860	10,216,440	12,775,140
45-54	17,425,520	6,915,900	10,176,980
55-64	10,459,580	3,982,340	6,301,480

Countries such as Turkey, Indonesia, United States and Philippines are amongst the countries with most users too (Kenburary, 2012). All are non-European and it could be argued that this is also a reason why it is of importance to reach out to young adults through Facebook.

This could be a great opportunity for the marketing of handball, as it could be used as mass marketing to many people at the same time.

Other Social Medias, such as YouTube and Twitter, could also be used but one could argue Facebook being more important, as it is used daily and it could be easier to reach younger adults through Facebook.

To be able to make handball a more attractive and recognized sport in continents other than Europe could be difficult. This is because usually football is a sport which is dominating in a majority of countries. But what one could do is to target children at a young age, perhaps working on setting up a club in schools.

Also, it is essential to have a good coach, one who understands the importance of how children function and makes it fun for them. If it is fun, children are more likely to stay and want to develop. At a later age, the coach can change tactics on how to develop them.

Conclusion

To conclude, there is a lot of work to be done in getting handball more recognized in other continents. One could conclude from the history of handball that Europe has always been dominating handball and one could assume that being one of the reasons why it still looks like that today. More dominating sports like American football and football make it difficult with regards to funding and advertising.

A way to reach out to people and after a few years possibly make handball more internationally recognized and developed would be to start with children in schools. An introduction to handball at a young age with a coach who is trained on how to deal with kids and who can make the sport not just rewarding physically, but also fun, could be seen as a good way to start. With proper funding, advertising and other marketing ways would also be seen as an advantage to recognizing handball.

However, the main point would be to get children more interested in handball at a young age. If nations can go in with funding and with the adequate equipment and coaches, it will not be an issue as these things happen daily in countries such as France and Sweden. As a result, these countries make it big in tournaments such as the Olympics and World Cups, which could mean younger generations want to repeat what their team has done.

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It’s All Mental:

Mental training in youth sports

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In this article I present an overview of a highly effective mental skills training approach for youth handball players. The programme is described as a comprehensive, systematic, skill-oriented approach to develop mental toughness. Step by step the young players are introduced to the use of psychological tools – goal setting, relaxation, imagery, self-talk, communication - to build the mental skills or attributes which are essential for success (motivation, energy management, attention, stress management and confidence - "mental toughness"). The aim of this program is to help athletes to achieve their full potential. Every module involves a three-phase process: education, acquisition, and implementation. The young players develop awareness of their strengths and weaknesses, acquire basic competences in using mental tools and skills, and then over-learn and incorporate them into competitive situations.

Keywords: mental skills training, youth sport, goal setting, relaxation, imagery, self-talk, communication, energy management, attention, stress management

1. Introduction

The importance and the dimension of sport psychological interventions and care measures in top-class sports have increased significantly in Germany during the last years. In academic discourse the effectiveness of sport psychological interventions in top-class sports is considered to be proven (Beckmann & Kellmann, 2008; Martin, Vause & Schwartz-man, 2005). Through the increasing number of application-oriented publications newly developed psychological training programmes have become more differentiated and thus to a larger degree oriented on the conditions of each individual sport. (Beckmann-Waldenmayer & Beckmann, 2012, Beckmann & Kellmann, 2008; Burton & Raedeke, 2008, Dosil, 2006; Eberspächer, 2004; Williams, 1986; only handball: Rathschlag & Draksal 2003; Siva 2006, Wegner & Dawo 2012).

For youth sports, however, the data base still seems to be small. This is really astonishing as it is exactly in this stage of human development that – exactly as in the development of technical-tactic and athletic preconditions – the foundations are built that enable a person to persist in the world of top-class sports.

Therefore, it seems to be important for the development of talents to identify the psychological skills that have a huge impact on success and career in sports at an early point to be able to influence them systematically by training measures in the long run (Beckmann, Elbe & Seidel, 2008, 297).

Within the course of our supervision programme, the German Handball Association (DHB) offers a psychological training programme, that starts early in an athlete's career and is characterized by its orientation on the recipient's needs and carried out by the application of psychological tools; thus crucial psychological skills are developed, expanded and stabilized.

2. Programme overview

Target group of the training programme is the male youth national team, that is put together through central talent scouting for each age group and that is complemented by players of the next age group at the beginning of the following year. During each training course the squad includes 20 players at the age of 15 to 16 years. The training programme is meant to contribute to enlarge those psychological skills of the players that determine their performance and thus wants to optimize the performance of the team with regard to the youth World Championship. With this emphasis, the trainings programme eventually contributes to the development of the personality of each player. Therefore, the aim of the program is also in line with the requirements set by the former national coach Heiner Brand, according to whom the development of strong personalities should be a central task in junior sports (Brand, 2008).

The training programme follows a structured sequence. The sequence of the training steps is constructed in a similar way as it is proposed by the DHB in the teaching of technical or tactical skills in Handball: from the teaching of basic skills over the build-up training up to the high performance training (general training conception of DHB). At the beginning, basic psychological procedures are being introduced, practiced during the training, and finally applied during competition (basic skills training). Afterwards special procedures are introduced, which are designed for the individual conditions of each player or team (build up and high performance training). Crisis intervention comes before implementation of training measures.

Fig.1: Overview of the steps and modules of the mental training program

Basic training	Build up and high performance training	Crisis intervention
Relaxation/activation	Attention	Individual oriented
Goal setting	Stress management	Team oriented
Imagination	Preparation for competitions	Coach oriented
Self-talk	Teambuilding	
Communication		

The program is divided into modules. To improve the psychological skills, first all players have to pass a basic skill training that includes the following modules: goal setting, relaxation/activation, imagination, self-talk and communication. The realization of the programme follows an educational approach – as it was suggested by Williams (1986), Gill (2000), Horn (2002) or Burton & Raedeke (2008). Each individual module is subdivided into three steps: the education, the acquisition and the implementation within the training and competition.

Fig. 2: Overview of the steps of teaching

Education phase: Raising awareness	- Developing of awareness of mental strengths and weaknesses - Explanation of the meaning of mental skills for success in sports - Information on skills and training opportunities
Acquisition phase: Learning	- Teaching of basic skills
Implementation phase: Revising and applying	- Practicing of acquired skills - Simulation of competition situations - Putting competition-specific demands and provoking of stress situations - Observing competitions and evaluating behaviour in pressure situations

The first step is the education phase, in which basic psychological concepts and influences are explained, which are important for the success of a high performance athlete. In this phase, the players learn the meaning of the different skills and abilities for them and how they can be

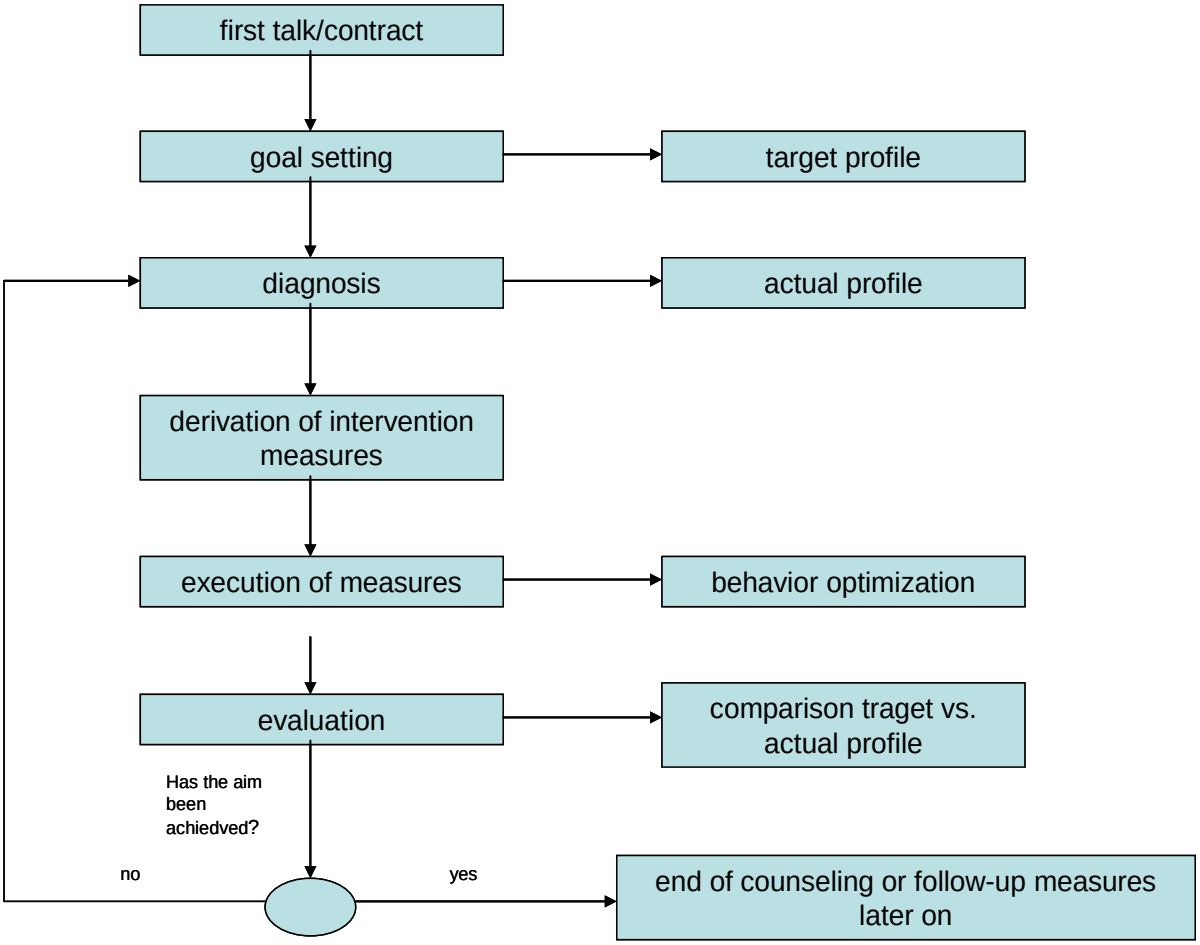
trained. Through self-experiencing, their own preconditions are addressed and through exercises, the chances to enlarge their competences are shown. Knowledge about skills and understanding of their effects are considered to be the central requirements for the personal training effort in the following training session and its overall success. In the acquisition phase, the new-learned components are practiced. Therefore, the exercises are becoming more and more complex and are linked with different training parts. Within the implementation phase, the techniques that have been trained before are integrated in the normal training procedure. Starting with specific training exercises and by using mental techniques, and continuing with targeted competition simulation up to the application within the competition, the acquisition of competences and the stabilization under pressure are practiced further on. As physical skills, mental skills and tools are maximally effective only when the athletes have over-learned them to the point they become a habit and can be used automatically. Through behaviour-oriented homework the players establish their newly learned skills within their repertoire during the time between the training sessions.

In the run of the process diagnostic tools that are mentioned in the respective literature, are used or developed at an appropriate point of time, in order to gather progress within the several fields of sport and to show the effectiveness of the mental work (Burton & Raedeke, 2008). A continuous athlete- and coach-feedback broadens the evaluation of the modules.

According for Burton & Raedeke (2008) the existing confidence base in relationship between psychologist and athlete is the key to the success of psychological intervention measures in sport. The work of a sport psychologist is considered to be an integral component of the training process due to the close connection to the ´normal´ training practice. He accompanies the training during the course measures and attends all competitions.

The second part of the training programme focuses on the use of mental skills during the execution of high performance sport or the handling of personal strengths and weaknesses. Players should be enabled to cope with stressful situations effectively. The following procedure is oriented on the process model of sport psychological intervention according to Beckmann & Elbe (2008). The following chart illustrates the necessity of referring to diagnostic measures to control the process of supporting and counselling. (see fig. 3)

Fig.3: Process of sport psychological counselling (Beckmann, Elbe & Seidel, 2008)



Player- and coach-interviews, systematic game observations and the use of questionnaires such as the Competition-Anxiety-Inventory State WAI-S, (Ehrlenspiel, Brand § Graf, 2009), which registers cognitive anxiety, somatic anxiety and confidence, are given priority. Taking into account the results of the diagnosis, the psychological measures will be personalised and oriented towards individual performance, depending on training goals. In addition to group training, individual training measures can take place.

The formation of a team and arrangements of groups of players as well as the preparation of the world championships gains growing significance towards the end of the counselling process. Players are supposed to utilize their skills in situations of mental pressure. The simulation of possible situations in a competition and training of stress-management are emphasized. Studies and analyses of competitions are the basis to draw conclusions about the realization of the trained skills and the stabilisation of the team.

The setting of new priorities in the second phase, the build-up training and high performance training, should be done by working closely together with the coaches.

The third part of the programme comprises the continuing, demand-oriented crisis-intervention. If problems occur in the team, in the coordination with coaches, or caused by injuries, or in case of personal problems, an appropriate intervention has priority over the

scheduled training process. Such interventions can be athlete-oriented, team-oriented, or coach-oriented.

The total counselling process can be complemented and supported by an additional monitoring (e.g. the recovery-strain-questionnaire by Kallus & Kellmann), if this is considered necessary by the team of coaches (Beckmann, Elbe & Seidel, 2008).

3. Contents of the modules

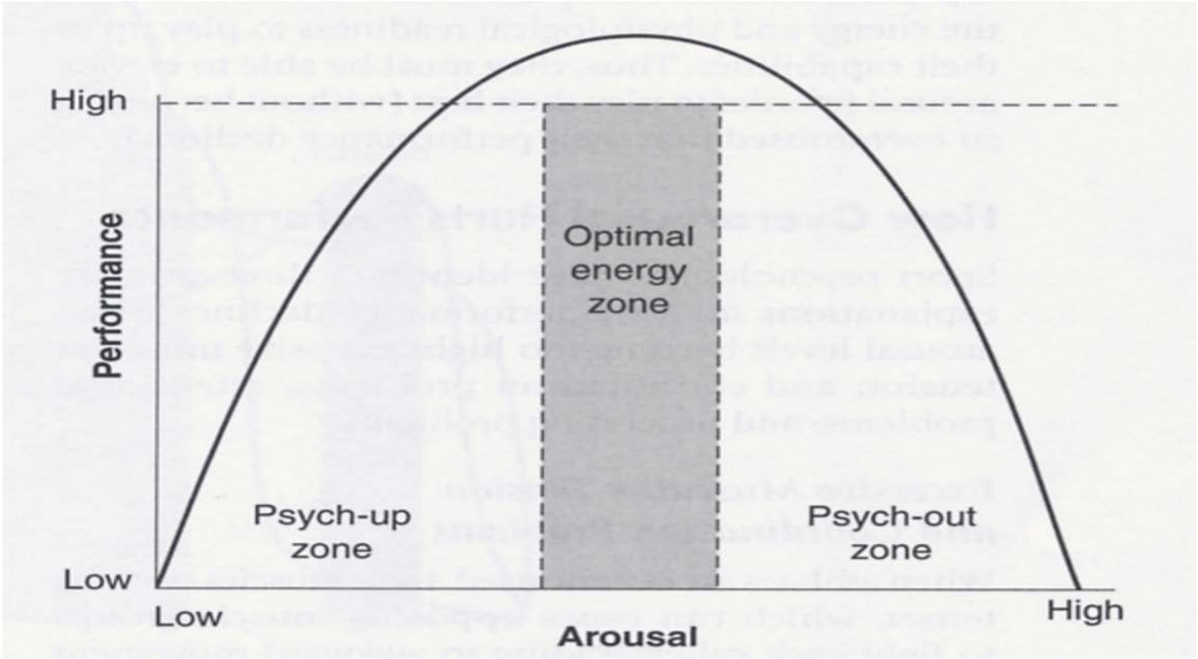
3.1 Basic training

Basic training creates comprehensive premises for further training- and performance-development by individual training. Furthermore, training tasks that have to be worked on between the courses promote the independence and self-reliance of the players. In this training phase the players get to know various tools, which will be adapted to the individual stress-profile in the following training process.

Relaxation

The right "energy-management" is part of an effective competition preparation. The relation between arousal and performance is described as a reversed U-function in a comprehensible model: the Yerkes-Dodson law (Yerkes & Dodson, 1908, see fig. 4).

Fig 4: The relation between arousal and performance



Simply put, the model says: an optimal performance is only possible with an optimal ("medium") level of tension – sometimes called "zone". Derived from this model, the task for the players is to experience where their "optimal zone" lies and how to regulate their arousal level. For this purpose two basic techniques – breath relaxation and progressive muscle relaxation as developed by Jacobson - are introduced and acquired (Vaitl & Petermann, 2000). With the breath relaxation technique the focus is aimed at breathing. By breathing deliberately (diaphragmatic respiration) the tension level can be lowered immediately. By imagining a keyword like "calm", the effect can be intensified. With progressive muscle relaxation the athlete concentrates on specific muscle groups. Through a systematic switch between contraction and release of muscles, a considerable change of tension should be felt (training of the "muscle sense" according to Jacobson) and a relaxation should be achieved. The relaxation can spread through the whole body if more than one muscle group is involved. For competitive athletes, it is often practical to introduce them to a short and basic programme, since their body perception is already well developed and in most cases not much time is available to practice the techniques - especially during training courses. The use of music and the development of an individual music programme can be seen as additional methods to regulate arousal ("my personal relaxation music", "my personal motivation music").

Goal setting

For a medium- and long-term motivation the development of specific goal setting is mandatory. Ambitious goals can release additional energy, which was proven various times by world-class athletes who had a clear goal in mind since their early childhood. The film "Projekt Gold", that documents the preparation and the course of the World Cup 2007 for the German national team, which had a very specific goal when they went into the tournament, offers further inspiration. For the setting of personal goals, the distinction between outcome-, performance- and process-oriented goals and the possibility of controlling and influencing these goals (Williams, 1986, p. 195 f.) plays a vital role. Using the "SMART" principle (specific, measurable, attractive, realistic, time phased) helps to support a "favourable" verbalisation. To achieve a personal change in behaviour, it is often helpful to let the players be inspired furthermore. As homework they have to find images, metaphors and quotes or phrases that help them to execute their plans and goals. Crucial for the achieving of goals are methods that "tie" the players to the idea and that increase their responsibility for the process. Therefore further strategies have to be acquired that help to change personal routines and to implement new modes of behaviour.

Imagination

Defined as production or reproduction of an experience in one`s mind, imagination is a mental skill which increasingly gains on importance. Imaginations are used as learning aids for technical and tactical training, to regulate arousal and stress, to increase motivation and to build and boost self-confidence. In addition to that, imagination exercises play a central role in competition preparation for many competitive athletes. Recent studies show that through positive imagination even recovery processes after injuries are influenced significantly. In this module the imaginative ability is trained and improved by guided imageries. The players are enabled to imagine and to experience specific situation with all senses (seeing, hearing, feeling and possibly smelling). In doing so, they acquire further possibilities to focus and to channel their concentration. Linked to this, is of course a specific regulation of emotions as a result of a change of their own imaginations. “Thoughts are free” means that athletes can put themselves into any mental state they would like to and that they can direct their “inner movie” accordingly. With the help of attention exercises during training sessions the players' attention can be directly aimed at certain aspects of movements and techniques. The combination of practising actively and visualising motions mentally has proven to be the most efficient method of learning movements. By analysing videos and considering alternative actions, a deepened processing of tactical sequences is achieved. If those sequences are memorized, players can react faster to specific sign stimuli. Very often those processes take place unconsciously (“priming”). The aim of mental competition preparation should be that every player has a clear image of his opponent and his tasks. Through simulation of movements and sequences (“to do as if”) alternative actions are also “played” and memorized in mind.

Self-talk

The “inner dialogue” - the talk with oneself – often comes to the fore when for example in situation of failure, like after a missed throw or a careless turnover, after a “stupid” defence mistake or a lost tackling, a player blames himself or ponders in self doubt after multiple mistakes. Often the player's posture also signals disappointment and frustration. In doing so the individual internal monologue aims at the player's own mistakes - sometimes a player even insults himself (“in his mind”) in a way no coach would ever do. In those situations a “positive” self-talk has proved to be effective, but it has to be systematically learned and over-learned by many athletes – especially by those with a low or negative self-esteem (Eberspächer, 2007, Mayer & Herrmann, 2009). Those inner dialogues can be used as self-

motivation (“pull yourself together”), for reassurance (“stay calm and relaxed”) or empowerment (“Power- stay tall”), to channel focus and attention (“pay attention to your throwing arm”) or for solving problems (“defend offensively at the crease”). In the module “self-talk” it is important for the players to understand how inner dialogues can control and steer behaviour. They will be challenged to find corresponding situations for negative self-statements. Those non-”functional” thoughts will then be transformed into target-aimed ones. After this entry-phase the transforming will be practised on examples. During this process the athletes will constantly be reassured by sport psychologists that they are “creators of their own thoughts” and therefore able to decide which cognitions e.g. soliloquies they choose.

Communication

The improvement of communication asks for methods that promote mutual trust. The joined participation within the different modules and the contemplation of own experiences in front of the group will already change the social climate in a positive way. Determining common rules and standards together for group sessions but also for training as well as for free time, actively promotes the communication process. For further team development, specific team-building processes offer promising results. Here the athletes will experience individual aspects of well-functioning communication in a playful way and will be able to translate those experiences into a team and competition context in a subsequent contemplation phase (e.g. “blind person guiding” for the aspect trust). Finally there will be rituals developed for salutations and farewells as well as routines for helping and interacting during training and competition. By giving feedback to each other with advices of help (“what is it that my partner can improve?”) after games, the players can learn to communicate in mutually respectful and helpful way. The players will get drawn with another, so that there is a permanent change of partners.

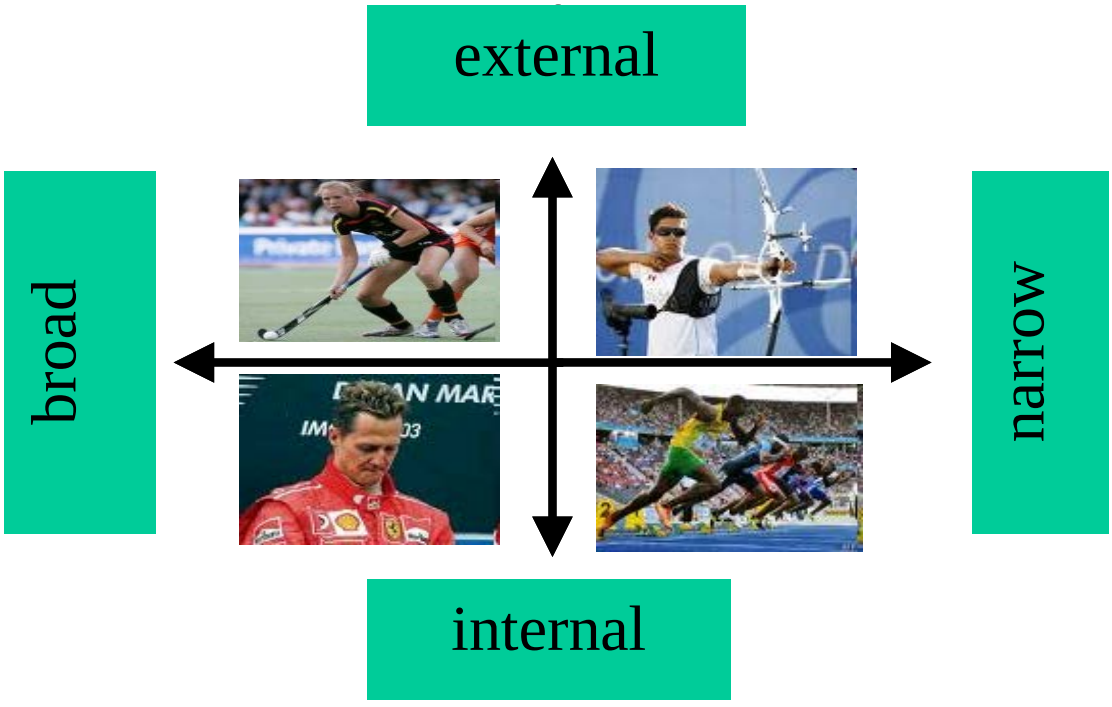
3.2 Build-up and high performance training

In the build-up and high performance phase the mental tools will be brought together as complex skills to deal with pressure situations. Each player develops and improves his own repertoire of methods. Additionally, there are significant aspects of team psychology, like teambuilding and team development, dealing with difficult situations and competition preparation.

Attention

An essential requirement for the realization of mental training methods is “concentration”. This can be defined as the focus of attention on a task that has to be accomplished. Together with the players the relevance of attention and concentration will be clarified and possible reasons will be shown why athletes can easily “lose” them. To illustrate the focus of attention, the “light beam” of a flashlight has proven to be a metaphor that is easy to understand: only what is inside the light beam can be perceived. If the light beam is pointed at a wrong area, I won't be able to get important information. Furthermore, the capacity of attention is defined as limited. That means that only a certain amount of information can be perceived and processed at once. In a situation of fatigue the capacity of perception is even smaller than in a situation of optimal performance. According to Nideffer (1976) the requirements for the players can be classified into two dimensions (width: broad/narrow and direction: internal/external., see fig. 5).

Fig. 5: Directions of attention according to Nideffer



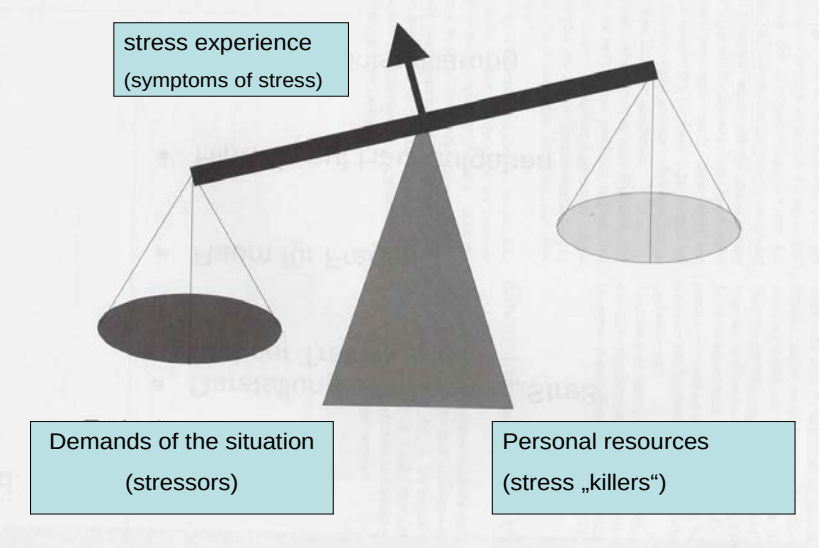
Attention span and switch of attention will be practised specifically during training sessions. The players perceive the difference between a narrow (“where is the gap?”) and a broad width of attention (“where are my team members, where are the defenders?”) as well as a focus that is aimed internally (“what am I doing here?” or “do I pay attention - am I awake”?) and a focus that is aimed externally (“this is the strategy of the opponent's defence”). Handball

specific exercises with multiple tasks are as useful to train the focus of attention as well as specific perception exercises (e.g. responding to a signal), decision situations with multiple options or exercises with artificial pressure conditions (e.g. training in a noisy environment). Keeping up the chosen focus (attention span) will be trained with technical exercises (e.g. passing) that have to be accomplished without making mistakes over a longer period of time (also with distractions and interferences).

Stress management

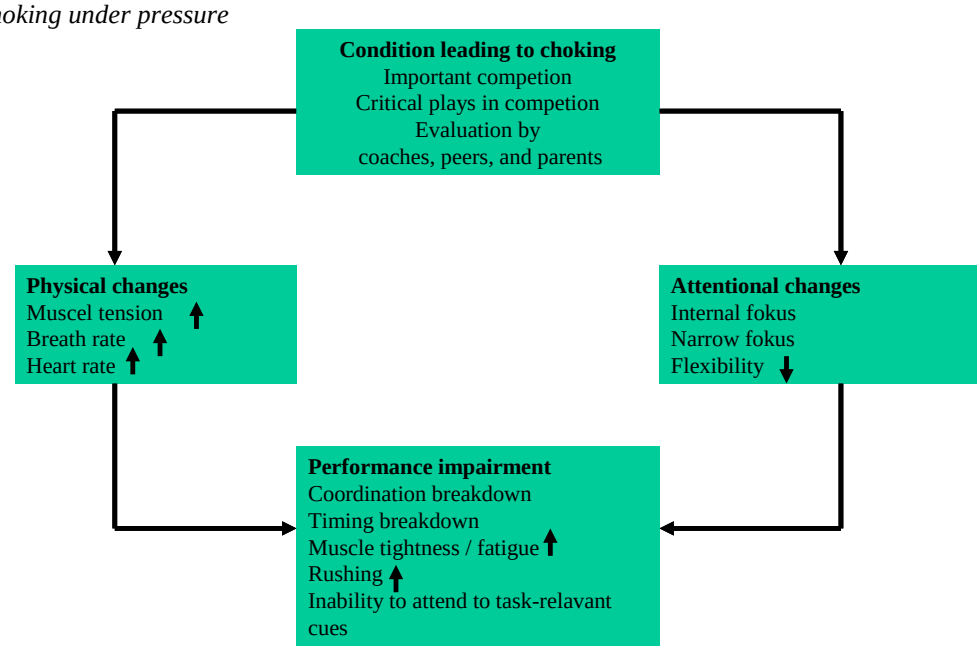
"Coping with pressure" is another important aspect of sport-psychological work. In teams like the national youth team, the players' individual performances during training courses are relevant for further nominations, which understandably put permanent pressure on them. In addition to that come the strain in their home teams, where young players want to establish themselves in higher leagues (2^{nd} or 3^{rd} division) and have to prevail over older, more experienced teammates. Finally, the association and the media's expectations on German teams in international competitions are always very high. In this module handball specific pressure situations will be gathered, systematized and analysed in a mutual talk with the players. Afterwards, possible reactions on these stressors will be described (vegetative-hormonal, cognitive, muscular, behavioural) and personal patterns will be constructed. With Lazarus' cognitive stress-model - which can be figured in simplified terms as "scales-model" (see fig. 6) - the relation between requirements in a situation, individual capabilities, and coping strategies will be made clear to the players (Burton & Raedeke, 2008, p. 172). The importance of the personal assessment is crucial for the emergence of stress reactions. In simplified terms: "I create stress for myself".

Fig. 6: Scales-model of stress experience (simplified illustration of Lazarus' cognitive model)



In small groups, possible solutions will be developed for the pressure situations that were described initially. Here the players can draw on the skills they have acquired during their basic training. When necessary (“choking under pressure” - a sudden decrease in performance, see fig. 7) individual skills will be practised and trained again. In individual conversations (initiated by the coach or by individual players) personalized strategies to cope with pressure to perform will be developed and practised in training sessions - or determined as homework for the training with their home teams.

Fig. 7: Choking under pressure



Preparing for competitions

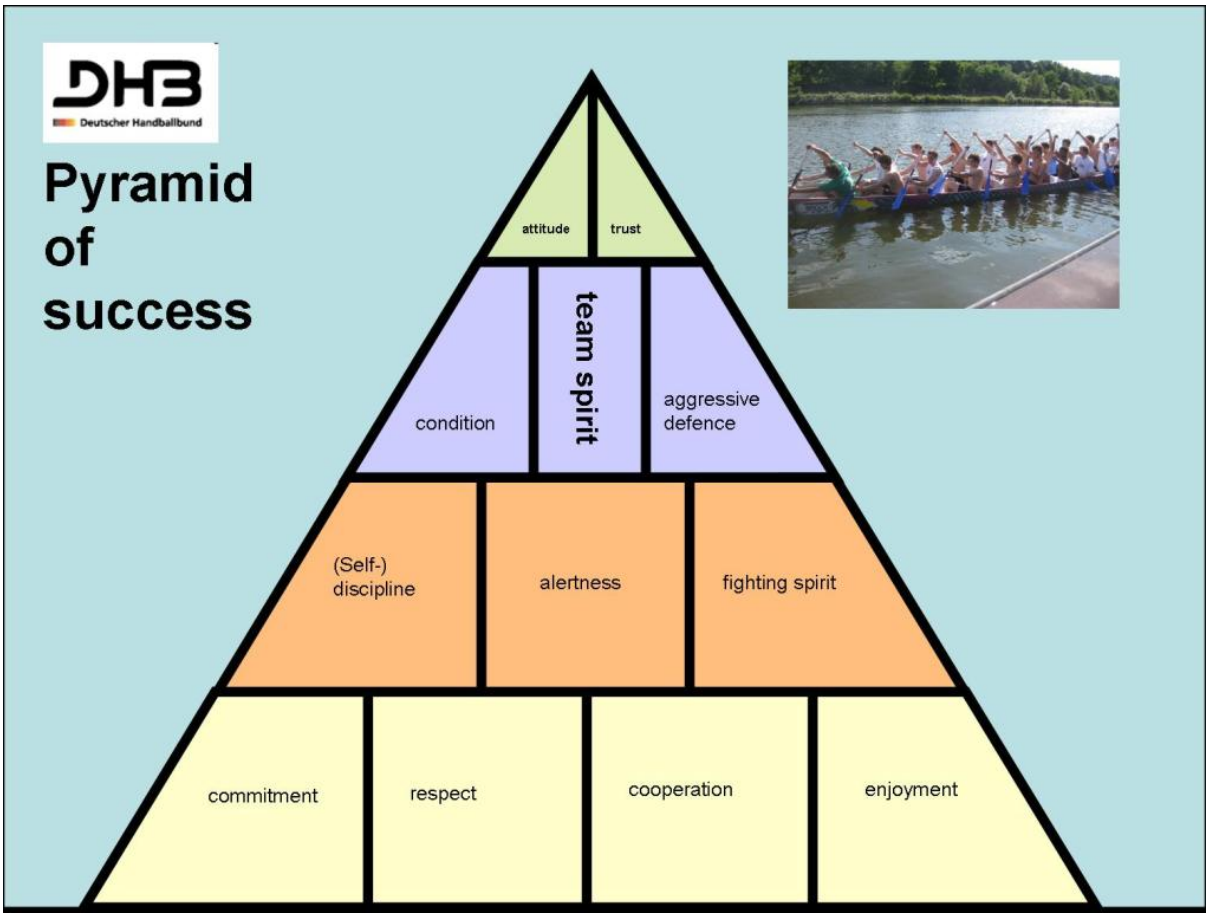
Players must also work on mentally preparing themselves for a competition to be able to resist choking under pressure. This module will deal with the preparation for competitions, thereby focusing on central mechanisms such as reducing insecurities and regaining control of the situation as means to prepare effectively but also individually for competitions. The coach as well as the mental trainer prepare pre-game meetings (with video analysis).The main aim is to set distinctive goals for every player concerning his performance during the game (to get a ‘clear image‘ of what he is supposed to do). Afterwards, the game will be analysed separately by the players and the coach who then discuss their findings together. These findings will then determine the focus of the following trainings. The following units should concentrate on simulation practices and pressure training (training under difficult conditions) as well as further group dynamics exercises (with the mental coach) to strengthen the team spirit and to improve the communication among the players.

Teambuilding

Success in handball requires the individual quality of the players as well as teamwork. The DHB’s focus is on the development of the players, but the teamwork is decisive in showing each player’s potential. The team will only be successful if the players are ready to give their best for the benefit of the entire team.

The fact that all success is initially based on teamwork must be strongly considered in working with a team. The first five modules already focus on the continuous work with a mental coach as the main basis of trustful, open minded communications among the players and the coaches. Therefore, all interventions and exercises are also effective in steadily improving the social climate of the team. However, there are still large events such as the European or World Championships at which players have to prove themselves and want to bring successes to the DHB. After the team has essentially been put together, the training should focus on team development measures in preparation for these large events. By comparing and analysing essential criteria of other successful teams with the current situation of the team, weak and strong points will be revealed. In the following, goals will be set together with the coaches (goal setting) and measures to ensure commitment will be taken (goal commitment).

Fig.8: Pyramid of success (German team)



3.3 Crisis intervention

Dealing with critical situations such as personal problems (difficulties at school/on the job, injuries, relationship problems, problems within the different teams such as a series of defeats) always take priority over the regular work in the modules.

A mental coach acts as a counsellor or mediator. In case of individual problems outside the sport, further specialists such as therapists, specialized psychologists or students` counsellors must be consulted.

Regularly held feedback sessions deal with the relationship between the coaches and the players. They act as catalysts in the development of the team. First and foremost, the players will be given feedback on their performance and the resulting nomination/exclusion decisions.

4. Evaluation

The results of the major competitions (European and World Championships) can be considered as the first milestones for the development of the players and the effectiveness of all training measures. After the European Championships an evaluation of the programme and the counselling process will be carried out therefore. The outcomes lead to the other key activities in the field of build-up and high performance training in preparation for the World Championship.

To evaluate the entire psychological intervention standardized scientific methods are used. Here, the English-language questionnaires were translated before use and checked for their test-quality. With the evaluation sheet of Partington and Orlick (1987) (The Sport Psychology Consultant Evaluation Form) the quality of consultant is requested. The analysis is supplemented by structured interviews of players and coaches. With handball specific adaptations of the English Athletic Coping Skills Inventory - 28 (ACSI-28: Smith, Schutz, Smoll & Ptacek, 1995) and the Test of Performance Strategies (TOPS: Thomas Murphy & Hardy, 1999, Reusser, Seiler, Birrer , & Schmid, 2006 German version), the mental skills which are available in pressure situations are tested. Selected aspects of the game performance (e.g. throw ratio) are considered as an additional measure of effectiveness.

5. Summary

In recent years the DHB has paid more attention to the personal growth of the players and the development of a ‘player personality’. In this context, the ‘mental thing’ is of superior importance. An immense reserve of performance is seen in this area which often decides over success and failure. Today the professional player is placed into demanding competitive and training environments that require extraordinary mental skills to perform optimally. With the sport psychological counselling work at the male youth national team, a psychological training programme was started, by which the players are introduced early in their development and systematically in small steps in the use of psychological tools – goal setting, relaxation, imagery, self-talk, communication - to build the mental skills or attributes which are essential for success (motivation, energy management, attention, stress management and

confidence - ‘mental toughness’). The aim of this programme is to help athletes to achieve their full potential.

Much like physical skills, mental skills can be taught and learned. Everybody probably readily acknowledges that physical skills need to be learned and mastered through well-developed learning progressions and countless practice repetitions. The same is true for mental training.

Learning skills takes time, effort and patience. Mental skills training of DHB is a skill-oriented approach that requires systematic practice.

Mental skills training is also training in life skills such as learning how to set goals, how to deal with pressure and criticism, and how to stay focussed on the task at hand. These skills can enhance sport performance, but they can also improve performance in any achievement area – school or job environment. Not only for players but also for coaches.

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Appendix

ACSI-28	almost never	some-times	often	almost always
1. On a daily or weekly basis, I set very specific goals for myself that guide what I do.	0	1	2	3
2. I get the most out of my talent and skills.				
3. When a coach or manager tells me how to correct a mistake I've made, I tend to take it personally and feel upset				
4. When I am playing sports, I can focus my attention and block out distractions.				
5. I remain positive and enthusiastic during competition, no matter how badly things are going.				
6. I tend to play better under pressure because I think more clearly.				
7. I worry quite a bit about what others think about my performance. 0				
8. I tend to do lots of planning about how to reach my goals.				
9. I feel confident that I will play well.				
10. When a coach or manager criticizes me, I become upset rather than helped.				
11. It is easy for me to keep distracting thoughts from interfering with something I am watching or listening to.				
12. I put a lot of pressure on myself by worrying how I will perform.				
13. I set my own performance goals for each practice.				
14. I don't have to be pushed to practice or play hard; I give 100%.				

ACSI-28	almost never	some-times	often	almost always
15. If a coach criticizes or yells at me, I correct the mistake without getting upset about it.				
16. I handle unexpected situations in my sport very well.				
17. When things are going badly, I tell myself to keep calm, and this works for me.				
18. The more pressure there is during a game, the more I enjoy it. 0 1				
19. While competing, I worry about making mistakes or failing to come through.				
20. I have my own game plan worked out in my head long before the game begins.				
21. When I feel myself getting too tense, I can quickly relax my body and calm myself.				
22. To me, pressure situations are challenges that I welcome.				
23. I think about and imagine what will happen if I fail or screw up.				
24. I maintain emotional control no matter how things are going for me.				
25. It is easy for me to direct my attention and focus on a single object or person.				
26. When I fail to reach my goals, it makes me try even harder.				
27. I improve my skills by listening carefully to advice and instruction from coaches and managers.				
28. I make fewer mistakes when the pressure's on because I concentrate better.				

SURVEY OF ATHLETIC EXPERIENCES
SCORING KEY

The survey you just completed is designed to assess seven different psychological skill areas: Coping with Adversity, Coachability, Concentration, Confidence and Achievement Motivation, Goal Setting and Mental Preparation, Peaking under Pressure, and Freedom from Worry. Each of these psychological skills has four items associated with it on the questionnaire. This scoring key will help you convert the responses you circled into numbers using the following guidelines: Almost Never = 0, Sometimes = 1, Often = 2, Almost Always = 3. This will be the conversion that you use for all the questions EXCEPT those with an asterisk by them (question numbers 3, 7, 10, 12, 19, & 23). These questions are reverse scored so you will need to number them in the opposite manner: Almost Never = 3, Sometimes = 2, Often = 1, Almost Always = 0. The following example demonstrates how to score a hypothetical set of responses to the Coachability questions. So, if you answered the four Coachability questions in the following way..

3.* When a manager tells me how to correct a mistake I've made, I tend to take it personally and feel upset.

(Almost Never 3)	**Sometimes 2**	**Often 1**	**Almost Always 0**

10.* When a manager criticizes me, I become upset rather than helped.

Almost Never 3	**Sometimes 2**	**(Often 1)**	**Almost Always 0**

15. If a manager criticizes or yells at me, I correct the mistake without getting upset about it.

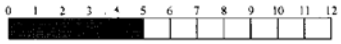
Almost Never 0	**(Sometimes 1)**	**Often 2**	**Almost Always 3**

27. I improve my skills by listening carefully to advice and instruction from managers.

(Almost Never 0)	**Sometimes 1**	**Often 2**	**Almost Always 3**

...you would convert them to numbers like this. Note how the question numbers with asterisks were reverse scored. To get your score for this psychological skill, add up the four numbers, put the sum over the TOTAL, and then shade in the appropriate number of boxes below.

2. Coachability: $\frac{3}{3^*} + \frac{1}{10^*} + \frac{1}{15} + \frac{0}{27} = \frac{5}{\text{TOTAL}}$



Turn the page over and use the worksheet provided on the back to score your survey responses.

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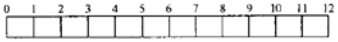
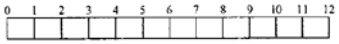
SURVEY OF ATHLETIC EXPERIENCES
SCORING KEY

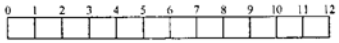
1. **Coping with Adversity:** ___ + ___ + ___ + ___ = ___
   Item Number: 5 17 21 24 **TOTAL**



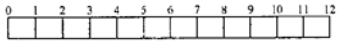
2. **Coachability:** ___ + ___ + ___ + ___ = ___
   Item Number: 3* 10* 15 27 **TOTAL**



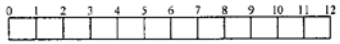
3. **Concentration:** ___ + ___ + ___ + ___ = ___
   Item Number: 4 11 16 25 **TOTAL**



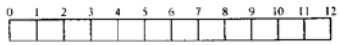
4. **Confidence & Motivation:** ___ + ___ + ___ + ___ = ___
   Item Number: 2 9 14 26 **TOTAL**



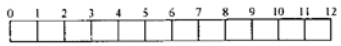
5. **Goal Setting & Mental Prep:** ___ + ___ + ___ + ___ = ___
   Item Number: 1 8 13 20 **TOTAL**



6. **Peaking under Pressure:** ___ + ___ + ___ + ___ = ___
   Item Number: 6 18 22 28 **TOTAL**



7. **Freedom from Worry:** ___ + ___ + ___ + ___ = ___
   Item Number: 7* 12* 19* 23* **TOTAL**



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The Athletic Coping Inventory (ACSI-28)

The Athletic Coping Skills Inventory (ACSI-28), created in 1988, contains seven sport specific subscales: coping with adversity (COPE), 'coachability' (COACH), concentration (CONC), confidence and achievement motivation (CONF), goal setting/mental preparation (GOAL), peaking under pressure (PEAK) and freedom from worry (FREE) (Smith, Schutz, Smoll & Ptacek, 1995).

The subscales are defined as follows:

Coping with Adversity: remains positive and enthusiastic even when things are going badly; remains calm and controlled; can quickly bounce back from mistakes and setbacks

'Coachability': open to and learns from instruction; accepts constructive criticism without taking it personally or becoming upset

Concentration: not easily distracted; able to focus on the task at hand in both practice and game situations, even when adverse or unexpected situations occur

Confidence and Achievement Motivation: is confident and positively motivated; consistently gives 100% during practice and games and works hard to improve skills

Goal Setting and Mental Preparation: sets and works toward specific performance goals; plans and mentally prepares self for games and clearly has a "game plan" for the offence and/or defence behaviour

Peaking under Pressure: is challenged rather than threatened by pressure situations and performs well under pressure; a clutch performer

Freedom from Worry: does not put pressure on self by worrying about performing poorly or making mistakes; does not worry about what others will think if he/she performs poorly

My Top Ten Guiding Principles for Mental Training

1. *Mental training can't replace physical training.* An athlete needs to be talented and well prepared physically for competition.
2. *Physical training and physical ability are not enough to succeed consistently.* Mental training needs to supplement physical training for consistent success.
3. *A strong mind may not win an important competition, but a weak mind will lose you one.* Although mentally strong athletes do not always win games due to a variety of conditions (e.g., health, training), athletes with a weak "mental game" virtually never win at the biggest competitions.
4. *Coaches frequently don't know what their athletes are thinking.* Although most coaches know athletes' behaviour and know that psychological factors are important for competition success, few are aware of an athlete's mental state before and during the game.
5. *Thoughts affect behaviour.* Consistency of thinking = consistency of behaviour. Understanding and controlling the thinking process help athletes control their behaviour.
6. *Coaches have a different view of changing technical mistakes versus mental mistakes.* Coaches work with athletes for years trying to fix technical errors but don't spend near as much time helping with mental errors.
7. *Coaches must be involved in the mental training process.* Although they don't have to be the prime provider of mental training, coaches need to be involved and support mental training for their athletes.
8. *Sometimes it is OK to force athletes to take the time to do mental training.* Just as coaches "force" athletes to work on certain technical skills, at times it is appropriate to "force" athletes to work on certain mental skills.
9. *Like any other skill, mental skills need to be measured in order to maximize performance of these skills.* "What gets measured, gets done." This saying applies to training mental skills just as much as physical skills.
10. *Coaches need to think about their own mental skills.* Coaches can benefit from the same mental skills that help their athletes because they too need to deal with pressure, maintain confidence, keep attention focused, and so on.

ESTABISHMEN OF A HANDBALL CLUB IN A DEVELOPING COUNTRY

DR ANDREA ONGARO

IRISH OLYMPIC HANDBALL ASSOCIATION

IRELAND

INDEX

SUMMARY

This thesis discusses the establishment of a handball club in a country where handball is a largely unknown sport. It describes the general scenario, the lack of general interest in the sport, lack of players, lack of facilities, lack of funding, lack of basic knowledge of what governs the sport activity in its more general terms.

Hence, it reviews why I came to the decision to form a new club, the first steps, the support I got, and the day to day learning of club development and management. I have tried to write this thesis in a way that should help the reader to capture the key learnings.

I also have reviewed the challenge of taking a women team to an EHF competition for the first time in Irish Handball history. The technical/tactical work done with the team is briefly outlined.

KEYWORDS

Club, Development, Handball, Organization, Ireland

INTRODUCTION

This thesis will discuss the creation, organization and development of a handball club in Ireland. Handball in Ireland was firstly introduced in 1975, and went through several cycles of development and fall-backs. When I first arrived in Ireland in the year 2000, handball was at the very beginning of the latest of such cycles. At senior level there was no formal league or players/members registration. Simply, playing games was all that mattered. Players were allowed to be part of more than one team to facilitate the sustaining of more teams and matches. Despite this, only four teams were regularly existing, three of which from colleges hence not having a club identity as more commonly intended. The junior sector was sustained by the hard work of a few volunteers, which managed very well to bring handball in primary schools, but were not enough to break through the secondary school system. At the same time Ireland was going through an unprecedented and unique economic boom and the immigration from Europe was consistently increasing. Europe itself was expanding to include more east European countries. These two factors became the key differences between the previous development attempts and this last one. The EHF marketing strategy also needs to be mentioned as, via television and internet broadcast, it brought handball under the eyes of young players, in a country where the name handball is simply unknown (actually there is a sport called handball, but it is some sort of squash player without a racket, but bare hand).

A German coach who created a handball club in Sligo (North-West of Ireland) described the overall handball reality in a few words: Robert Hamm: "I tried to put together a few key points. I found it very difficult; there are so many interwoven aspects. Money, culture, infrastructure, facilities, but also in our case: travelling distances, for children and teenagers; (local) media coverage; material supplies; competition (or lack of); international contacts; coaches (again: lack of) - referees (absent altogether); schools - clubs - community games; players disappearing after the leaving certificate; players disappearing before leaving cert; 40-yr old ex players (having played in France twenty years ago) getting injured very quickly; students coming and going. You start thinking about one aspect and immediately the others follow, like a domino-effect".

Very quickly I found myself heavily involved in this new reality. I was playing, coaching, refereeing, helping with coaches development, organising the senior league, and working with the Men's National Squad. Irish handball needed all the help it could get, at any level. I was playing and coaching in my College team, and coaching the senior team of the only non-college based handball club in Dublin. It is important to mention that the teams connected to colleges have a purely social and entertaining nature, these are mainly constituted by beginners and the occasional European student that quickly realises the very different environment compared to what they were used to at home, and happily embrace it. Conversely, the non-college based team had the ambition to becoming a "proper club", but actually had no concept of what that meant as it seems that the "club-concept" was limited to wearing a tracksuit with the club name on it. The acquired knowledge of what was missing with the Concept of "Club" helped me later, when I moved on to create a new Club.

Over the years the entire handball environment has changed a lot, and undoubtedly the influence of the massive immigration of handball players from continental Europe made a heavy contribution.

Many changes were introduced upon player suggestions and desires for a more structured environment. It was a short step for the National Governing Body (NGB) to take the

opportunity to introduce proper player registration and fees. But still there was no direction or requirement whatsoever for clubs internal organization and structure.

College Teams were and still are an exception as the Sport office within the College offered logistical support, and enforced a minimal organization, with the nomination of a Captain, Secretary, Treasurer, etc and the submission of a constitution, and yearly review. But at the same time, because of the nature of the teams (restricted to students), the executive changes almost every year with the only constant factor being that young people with no experience are running the club administration.

In this environment I saw the need for a new club to be created. There was a growing number of players that had just left college or were about to leave, the immigration was slowing down but was still bringing new players, and a small number of very junior players would soon need a senior team to join over the following year or so. Hence, I came to the decision to create a new Club: Astra Handball Club (AstraHC).

METHODS AND DEVELOPMENT: THE CLUB

This section contains the key areas that need to be considered and developed if we are aiming to create/develop a successful club.

The creation and development of AstraHC was not the result of a well planned and defined project, but it was more the evolution of a vision, and a series of learning steps. In other words it was an evolution by doing and comparing.

Firstly, the historical sequence of events and key steps are presented, as I believe it is very common and likely it would unfold in a similar way to others who wish to set up a new club or more generally a new community activity.

Subsequently the key areas are discussed with the purpose to provide both a checklist and a explanation of why these areas are important, and their role and the main characteristics.

AstraHC was founded in 2007. As outlined in the introduction in that period the Irish handball environment presented possibly the best conditions for a new club to step on the Irish Handball stage. There was the need, the opportunity, and the availability of people with the right knowledge (the perfect crime: motive, means, and opportunity).

After a few years of strong immigration and handball being a constant presence in colleges, there was a good number of players looking for a team. Some of these players had experience in coaching junior team in their home country. At the same time some local volunteers that so far worked only with junior players started to face the issue of not having enough manpower to enlarge and sustain their area of action and keep supporting the developing player.

The first step was to put together this spread potential under one name, and suddenly Astra HC was created. The club had two senior women's teams, one senior men's team, and both boys and girls in various age groups.

AstraHC wanted to be recognised and recognizable, and was registered with the NGB for handball: the Irish Olympic Handball Association (IOHA). A unique logo was created, club colours were picked, and a website was opened. As a new club on the horizon it was important to push-on the image so that other clubs and potential new members would immediately recognise it and the club's members acquired a sense of belonging.

A new club of this size needed administrative, financial and logistical support.

Registering with the local County Council Sport Partnership (CCSP-local branch of the Irish Sport Council) entitled the club to apply for grants available for new developing sport clubs; moreover AstraHC got the support necessary to find a home venue. With the grants from the CCSP the Club was able to purchase materials and got a brand new hall marked for handball. Hall-time is also available at a discounted rate. The requirement from the CCSP was to set up a proper structure within the club: a bank account, a chairman, a secretary, and treasurer.

The CCSP revealed to be the biggest support for AstraHC through the years, not just financially, but also AstraHC fully benefited of the new sport development policy of the CCSP. The CCSP's sport development plan was not simply offering financial support through grants, but it was aiming to get clubs to improve their administrative and coaching structure by organising Forums, where clubs were sharing experiences, events, seminars, and

training sessions for administrators and coaches (basic coaching knowledge like first aid, and children protection, etc).

Through the past five year AstraHC went through constant improvement and new learning. Not without setbacks, it went from being the new kid on the block to being the main driving force of the entire national development plan for women in handball.

Based on the AstraHC experience the key learning and the main items a club should include in its development plan are listed below.

Players and Coaches

It seems an obvious topic, but sometimes the obvious needs to be stated. In order to exist, a Handball Club needs to recruit Coaches and Players. At the very beginning Astra HC didn't need to work on this as the availability of players and coaches was what motivated the creation of the Club. However, today the recruitment of more coaches and players is one of the hot topics on AstraHC's development agenda.

Taking inspiration from various European countries the IOHA tried various strategies to get more kids to play handball. The one strategy that seemed to give better results was to get a strong presence into the school system. Most of the senior Irish players have been introduced to the game while in primary school, they became passionate about it and decided to join the local club. The connection to highlight is that it was one of the club coaches to bring handball into the school and likely delivering training sessions and supporting the teacher in setting up afterschool activities and a school team. AstraHC is a clear example of the success of this strategy.

Recruiting coaches is more difficult and a much slower process. The IOHA and AstraHC follow two strategies. The first one is to involve physical education teachers, and the second one to give coaching education to the players that show interest and some talent. The first step would be to get young players to experience the coaching side of the sport by getting them to act as assistant coach to the younger age groups The first returns a larger numbers of coaches who can introduce a large number of kids to handball, but unfortunately, being handball a rather unknown sport in Ireland, in most cases these teachers/coaches have a very basic knowledge of handball techniques and tactics. The second should return highly prepared coaches, but it is a very slow process, and as off today AstraHC had only one young coach on the coaches' development ladder.

Name, Logo and Image

This in the very first step to take when creating a new Club. It is true that a *handball* club only exists if there is *handball* i.e. the players, but without a name there will only be a bunch of good friends playing handball for the fun of it. The name and the Logo are like the identity card for people. It is what people use to identify the club, and the image they imprint in their minds. It is what your players are joining.

Astra as a name was chosen because, it was short and easy to remember, and bears a connection to the College where most of the senior players were coming from (AD ASTRA is the motto of the University College Dublin, which uses "Astra" to name various buildings, halls or events, and is incorporated in the original crest of the university, Fig-1). Moreover, the name Astra has no geographical definition so players feel they can join even if they live

far from the training and match venues, and do not limit the scope of action of the club to a particular constituency.

Fig-1

The Club also made the choice to drop the name OLYMPIC HANDBALL in favour of simply HANDBALL. In Ireland what it is referred to as the sport handball is called Olympic handball in order to distinguish it from a popular Irish sport also called handball, which resemble squash, but played without a racquet. The reasoning was quite simple: those who know the sport would call it handball, and those that don't, do not call it at all.

The creation of the logo was commissioned to a young graphic designer, with the guidelines to make something "cool", something appealing to younger players, who were the club's target costumers, see Fig-2.

The choice of the club colours (the most discussed detail) was also made carefully, as AstraHC wanted to be distinguished, different, and recognizable. The colours of the CCSP were chosen as AstraHC is the only handball club in the county and wanted to be known as THE club of the county.

Fig-2

In a country like Ireland, where the competitiveness level is rather low, AstraHC decided to project the image of a friendly environment, where players can enjoy the sport, and where the focus will be on the development of young players. The club policies are clearly listed on the website.

Vision and Mission Statement

The Club vision of the future, its place in it, and the Club's mission statement are very important flags that deserve a paragraph of their own. It is important that all the members share this vision, and the mission statement must be clear and simple, as it directs all the Club's activities, its organization and use of resources. A project, can succeed only if everybody involved works in the same direction, and have a clear understanding of the direction taken, and the goal fixed. The club's vision contains what do we want our club to be and how do we get there.

The mission statement is a short message that gives the general guideline the club follows and believes in. It is what the outside people should see. It is what we do and what we sell. It is what we put on our website to show why we are different from other clubs.

For a young club like AstraHC it is important to make sure the little resources we have are working toward the same goals. And these goals are discussed and agreed.

If the club wants to be known as a club that develops good players, then Coaches need to know that they have to give young players space, focus on their development. Older players need to know their roles and responsibilities. New members need to know why they have chosen to join this club, See Fig-3

Fig-3

As said above the competitiveness of the Irish league is pretty low and "winning" the league is not really a high challenge. For the past 12 years the winner has always been the team with the highest number of players from continental Europe. Far more challenging would be to be able to create players with skills at the same level of other European countries. Here is where AstraHC wishes to see its place. Putting people first, so everybody can enjoy the sport and the environment. Where less experienced players can have their time on the court, build up confidence and work on their skills. But it is not just about game time, AstraHC desires to educate its players to become better players, coaches to become better coaches, and administrators to become better administrators. It aims to educate members to the sport, respect and a healthy lifestyle. AstraHC wishes to help players, coaches and admin to perform at their best.

Note that the word "winning" is not mentioned in the logo, as winning should be the result of good policies, not the starting point.

Organization

As mentioned before, the Irish handball landscape is poor in Clubs, and what makes things more difficult is that there is a lack of "Club Mentality": what a club represents in its wider meaning. This concept is just hitting the IOHA executive now. The IOHA is currently trying to enforce clubs to have a basic administrative structure, but still lacks in guidelines and support (the knowhow). Luckily the Irish Sports Council (ISC), through the CCSP, started to provide training for Club administrators. Handball and Clubs in Ireland are still supported by the work of a few volunteers. But this is hardly the recipe for long life, and therefore development will always be limited by the amount of work that a single person can do.

AstraHC has ambitions of becoming a solid and well organised club, and it wasn't long before realising that it was important to assign roles and responsibilities to different individuals. From a purely administrative side of the club there are a few key roles that are

generally mentioned: the chairman, the secretary and the treasurer. These must be complemented with sport specific roles, like coaches, someone responsible for materials, and someone taking care of logistics, like hall booking, team communication, i.e. some sort of team manager.

The secretary is a key figure in the club. Just to list a few basic but vital functions: the secretary takes care of club affiliation with the NGB, insurances, general Club legal requirements, members registration, and oversees all club expenditures and income. Moreover the secretary is responsible for finding and applying for public grant, hence gives a key support to the club's life and survival. An example was given above when mentioned how vital it was for AstraHC to be registered with the local CC and satisfy all requirements in order to apply for the CCSP's and ISC's sport grants. AstraHC has been granted these funding every year since 2007.

Other club key figures are the coaches, who in small clubs often also cover the role of team managers. They have the role to not only train the player, but also make sure the sport activity is carried out in a enjoyable environment. From a more competitive point of view we can say that players perform at their best when they are put in the condition to perform at their best. Players development and players retention are strongly linked to the team environment, so these are directly under the responsibility of the team manager.

AstraHC is slowly building its organization. Currently, a few persons cover many roles, but the aim is to involve more volunteers, tapping into older players, and parents. Parents especially represent a large pool of people with various skills where we can just dig in and pick-and-choose.

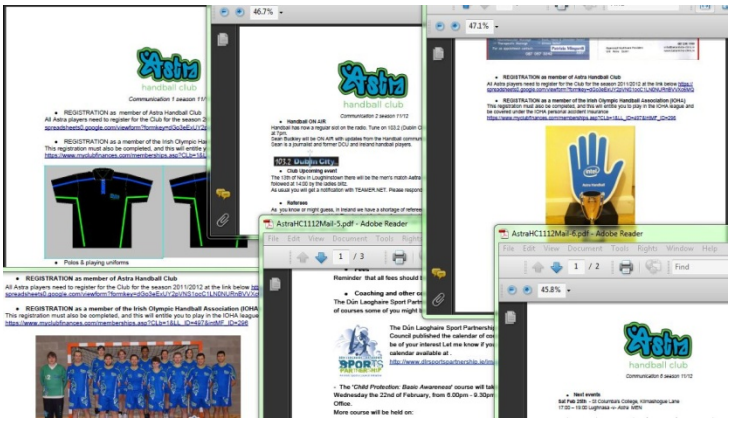
At the last Annual General Meeting (AGM) the scheme below was shown to the audience. This should represent the AstraHC philosophy and organization, see Fig-4. This circular shape was preferred to the more traditional pyramidal representation as the idea was to step away from an image where somebody is at the top or above others and players are at the bottom. Players and Members instead represent the biggest and central circle. They are the core of the Club and determine its size and relevance. Coaches are a ring around the players as something to keep them inside and together. And outside again the administrative roles which again keep together what is inside their circle. This Image represents AstraHC's vision and believes: players are the most important asset of the club.

Fig-4

"Ní neart go cur le chéile" this is an old Irish saying which means "there is no strength without unity".

Connection, Communication, Cohesion

The experience accumulated by working on the AstraHC project highlighted other areas that are important to a clubs development and life. What helped the club at the beginning and is still important was the building and maintenance of connections. The connection with the local CCSP gave AstraHC a guidance with the setting up of AstraHC's own internal organization, it helped financially, helped in finding a home venue for training, found a hall for home matches and bore the costs for the line marking and purchase of the goals. Furthermore, the CCSP helped AstraHC in getting in contact with local schools and to organise demonstrations during community events. Connections with other clubs, not necessarily handball clubs, helped to share costs, experience, organise events, friendly matches, training camps etc. Connection with the wider handball community helped to find new coaches or volunteers that were there, just waiting for somebody to ask for their cooperation.



Communication within the club and beyond is one of the activities that AstraHC has just recently begun to work on. There is a lot going on within the club at senior and junior levels. Being AstraHC a rather young club and with still a considerable number of its members being new arrivals from continental Europe, it is natural that among members there is a poor knowledge of what else happens within the club. Since 2011 newsletters are published periodically. These summarise the recent club activities, contain general information for new members, and outline what the next commitments for the club are. The use of pictures is suggested to catch the curiosity of the reader and make the publication generally less bland. Other effects of improved communications are a stronger feeling of belonging, a better understanding of the club vision and mission, and a better use of resources and coordination among club activities. There always is the one member that would have said: "if I knew before…".

Connection and Communication help the general cohesion of the club. Club cohesion is important independently of the size of the club. Big clubs might break-up and small clubs never realise their potential if there is no cohesion. If people do not work together, stay together and enjoy each other's company, the club will never be a Club. Generally this is the main role of the President or Chairman. To make sure the club moves in the direction outlined in its mission statement, to make sure every member work accordingly, and ensures the club's cohesion.

Constant development

5 years have passed since AstraHC was firstly created, and many things have changes and improved. But, there is still room for improvement. Every year it is a new experience, and every new year builds on the experience of the previous. AstraHC's mission statement contains the word EDUCATION, which means the education and the improvement of all its members, not only the development of young players, but the development of coaches and administrators and the general organization of the club. Ideally, there should be a yearly review of the activities in order to highlight what can be improved. AstraHC performs this activity during its AGM.

Website

The Club website is possibly the item that seems to contribute less to the Club administration and development, and it is also quite difficult to find someone with the time and expertise to set it up and maintain it. But there are many advantages in having a website, and setting up of a simple page with basic information is rather easy. There are many solutions available, from simple html pages, to Blogs to Facebook pages. The club's presence on the web is the means to put all the relevant information and makes it available to the world: location, training time, senior and junior teams, venues, match dates and all other information that we want to make available to everybody. Just as an example, during this last summer AstraHC got contacted by 15 potential new senior players and 4 parents looking for a handball club where their kids can take up the sport.

Finances

This is one of the most important and difficult aspects to manage. The treasurer of the club has the role to make sure the club does not overspend and works within its budget. But it is everybody's responsibility to look after this matter: pay the fees that are due, look after materials, and where possible look for sponsorships. In Ireland it is very expensive to practice sport. There is an absolute lack of public facilities and the private facilities are quite expensive. This is the one item that cannot be purchased abroad. The cost for one hour of hall time is in the figure of €50 up to €70, which means that hall costs are up to 70-80% of the overall club expenses. The constant look for sponsorships and financial support is a must. By experience, it is also very important to keep a good record of members and membership fees. This is often under-looked and year after year a good 20% of potential fees income is lost in the negligence of membership fees collection. According to the ISC guidelines this is an issue very common to many sports clubs.

METHODS AND DEVELOPMENT: THE TEAM

This section will review the formation and evolution of the Astra women team that participated to the EHF Challenge Cup in 2009.

The picture given in the previous section about Irish Handball would suggest that entering an Irish women's team in such a highly ranked competition was a premature decision. But this was part of a 5 year development plan started in 2007

When AstraHC was founded in 2007 the senior women team was formed by the merging of two teams. One group was made up of Irish players coming from a long term development plan, and most of them were just turning the age of 21. These players were the back bone of what was going to be the Women's Irish National Squad. The second group was made up of players from continental Europe, about 25 years old in age and bringing great skills and experience to the team.

Since early 2009 AstraHC was supporting the IOHA development plan for the Irish senior women's team. The Irish players were all involved in such plan and the non-national players played a key role by being the main sparring partner during training camps.

When the Irish senior women's development plan came to an abrupt halt in early 2009 it caused a major setback for the entire women's environment. The sudden lack of motivation and lack of alternative plan caused a large number of drops outs for the sport, and as a consequence a reduction of the number of teams.

AstraHC had to intervene with its own development plan for its women players. In this contest motivation was the key word[1]. Without a development plan for the young Irish players, and with a home league less and less competitive, AstraHC had to set up a high goal to work towards, a reason to come to training and worth the effort and concentration. The EHF Challenge Cup represented such goal.

To give to the players the opportunity to be exposed to a higher standard would motivate the players of higher skills, help the development of the younger players, and in the long run also support the development of those interested in taking up a coaching role.

Within the club, players and coaches agreed and committed to the project. The guidelines of the project were to prepare the team to play and understand an organised defence, and to be able to read and understand the opposition's tactical disposition.

Defence

AstraHC decided to adopt the 3:2:1 as main defence system. This was mainly dictated by the smaller size of the players compared to the European average. The objective was not only to have a team able to play such defence, but to get the players to understand it, and in the long term to be able to pass the learning onto the younger teams. A large part of the training time was dedicated to defence practice. Starting with the very basic and general defence movements and timing to the complete defence, taking into consideration strengths and weaknesses of the 3:2:1 system. Particular attention was put in finding positions specialists and where possible to have two options for each position. Players were provided with drawings and moving cartoon that could easily be uploaded and played on their mobile phones hence easily accessible. A brain-washing experiment!

The key pillars of the 3:2:1 defence were repeated over and over to make sure they were assimilated and understood, enabling the players to make decisions upon various attaching situations.

These were: Keep the centre clean; Keep a diamond shape in front of the ball (Fig-5),

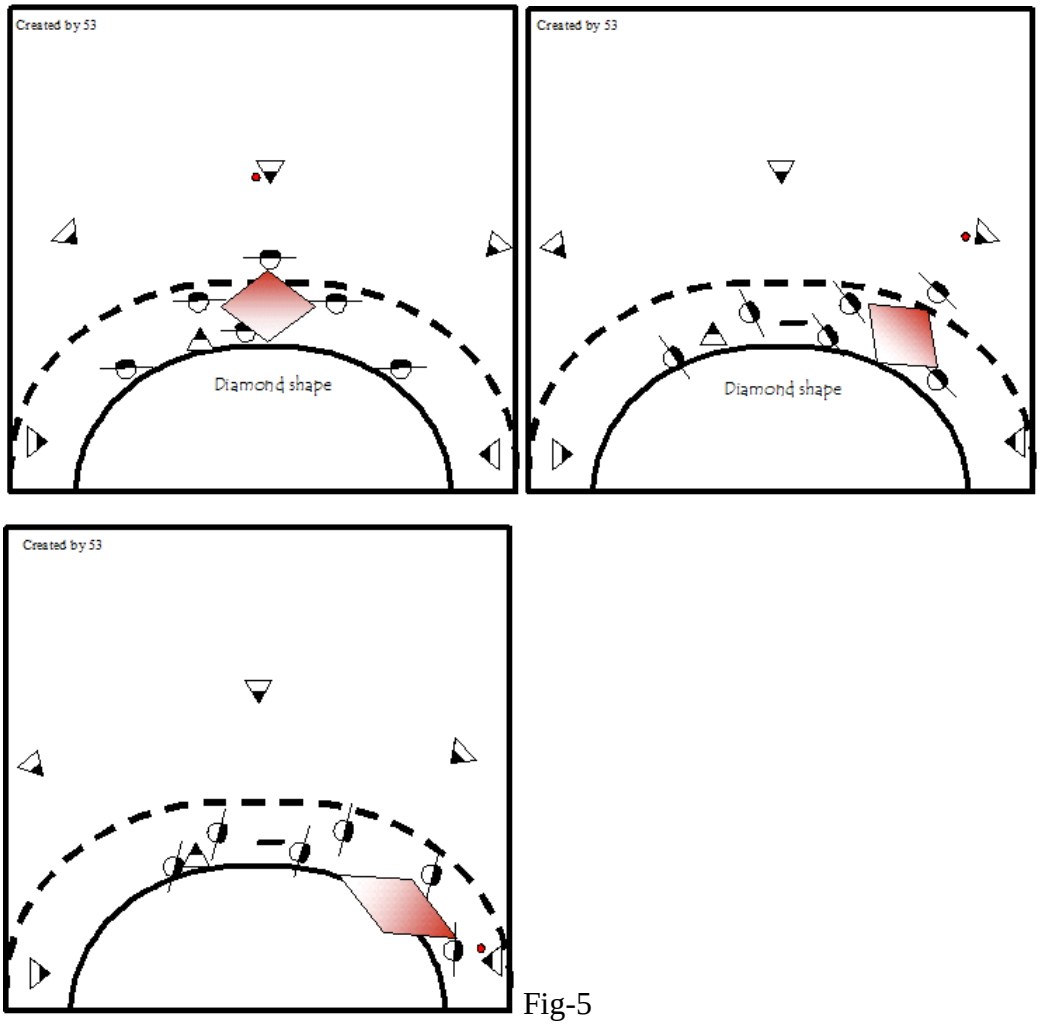


Fig-5

Enable the Back Centre (BC) to follow the position of the ball despite the position of the Line Player (LP) and effectively work as a libero by sharing the marking of the line among other players.

The Front Centre (FC) should move within the posts (Fig-6)

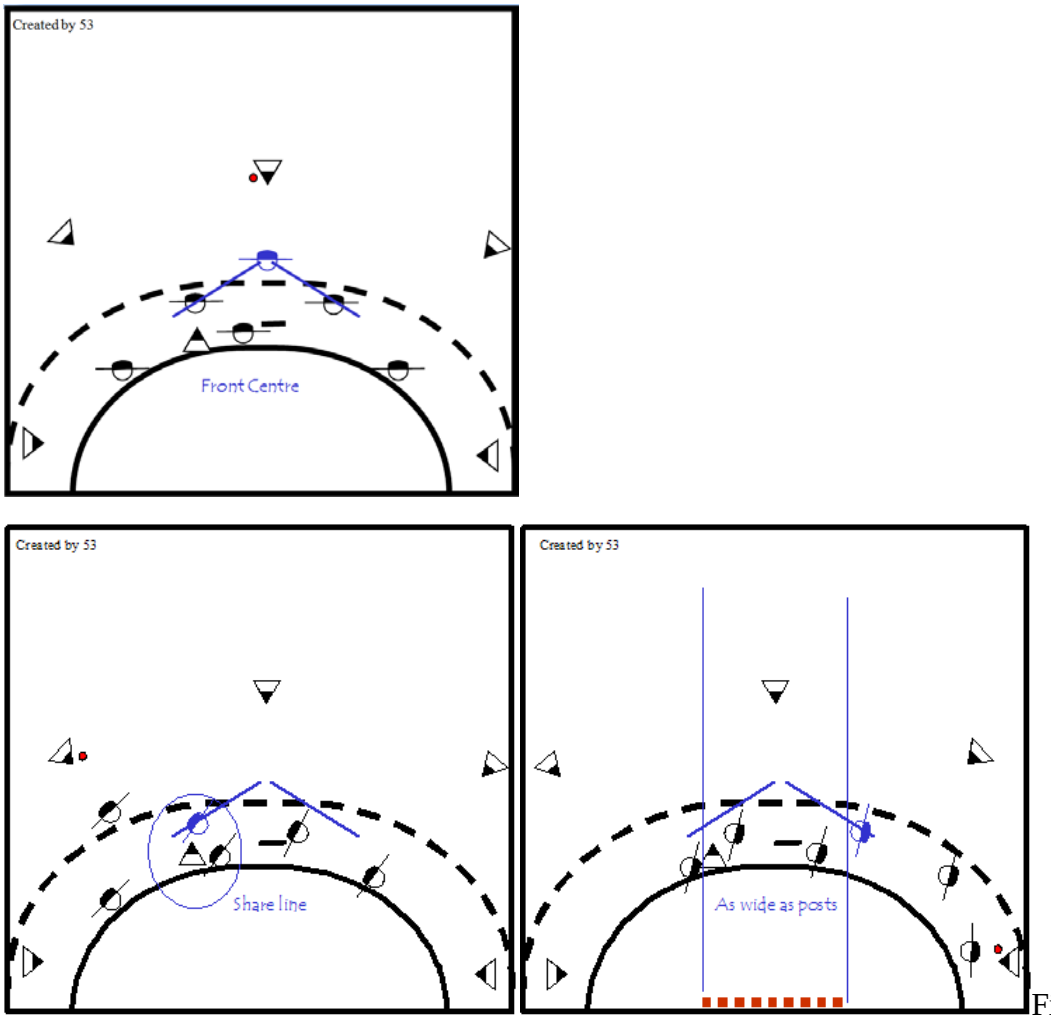
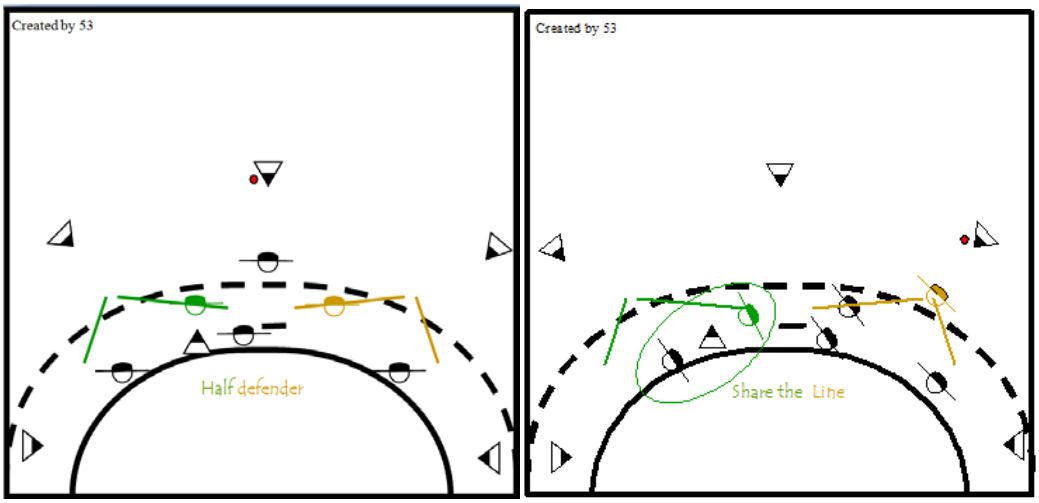


Fig-6

The marking f the (LP) is the responsibility of all players, and all players are constantly active defenders independently of the position of the ball (Fig-7a,b).



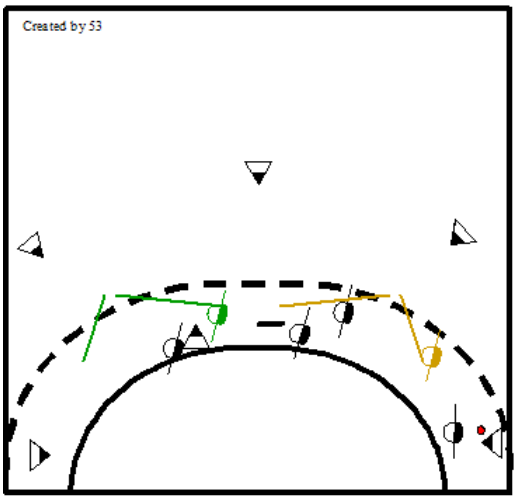
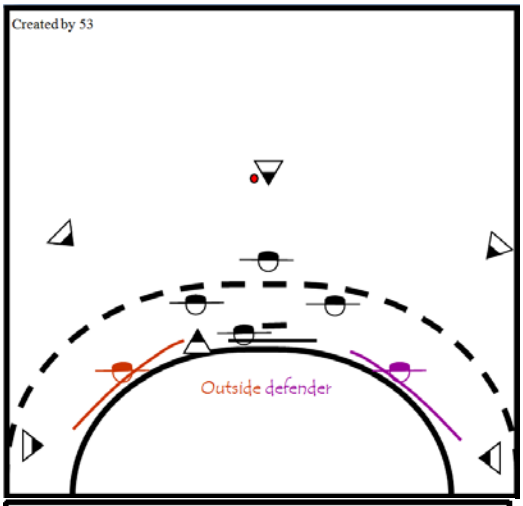
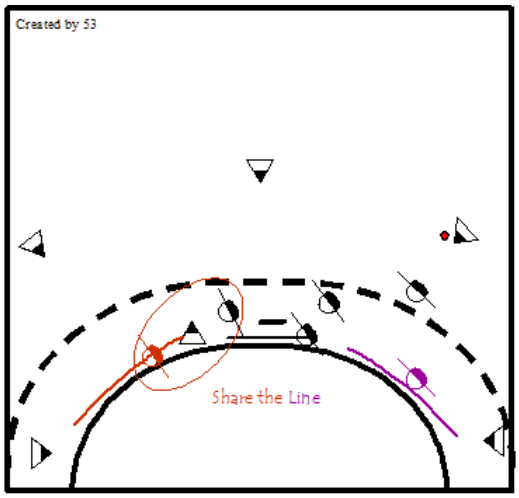


Fig-7a





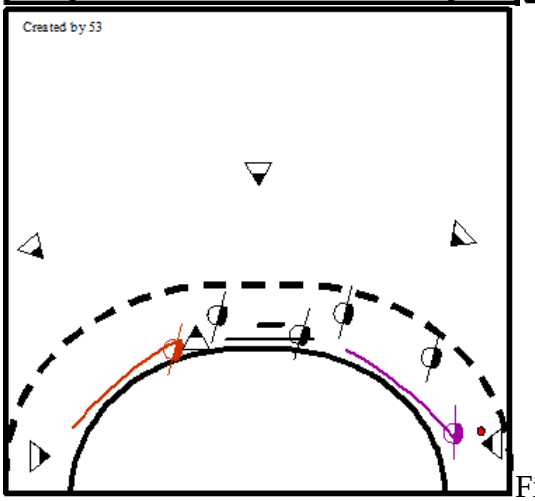
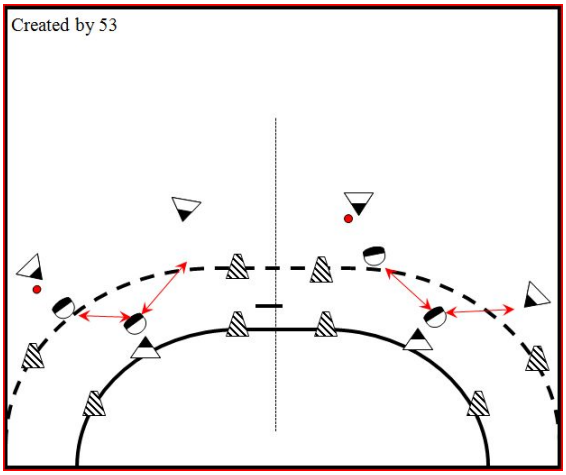
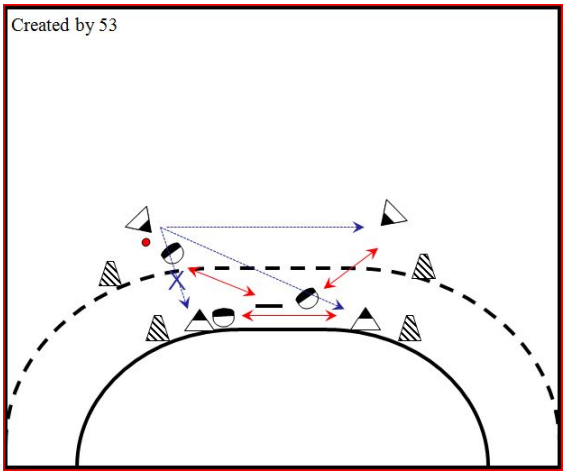


Fig-7b

The 3:2:1 is an attacking defence. Pressure should be put on the offence to make decisions they are not comfortable with, but have been forced in making. AstraHC wanted to imprint a change of mentality in those players who were more inclined towards a wait and see style of defence.

Following are some example of progressing basic training exercises.





Ex-1 Ex-2

All defence work was done in numerical inferiority and using two line players. This to stress the players to keep their position ball oriented and not Line oriented and also to show that a well working 3:2:1 is efficient vs. double line attacks.

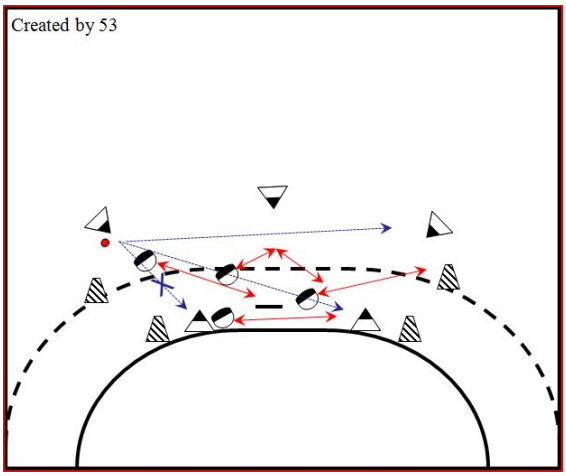
Note naming of position used in this text is listed below.

Attack: Wings (W), right wing (RW), left wing (LW), Backs (B), right back (RB), left back (LB), play maker (PM), line player (LP).

Defence: Outside (O), right outside (RO), left outside (LO), Half (H), right half (RH), left half (L,H) Inside (I), right inside (RI), left inside (LI), back centre (BC), front centre (FC)

Ex-1 is a simple 3vs2 with two outfield players and a (LP). The focus of this simple exercise is the footwork of the defenders, the in/out coordinated timing, body position and body orientation.

Ex-2 builds on Ex-1 and adds the (BC) basic movements. Because of the absence of the Outside defenders it was asked of the Backs not to pass the balls to the (LP) right in front of them. The focus for the (BC) was to stay ball oriented to coordinate/commands the movements of the half defenders, to be ready to close down if a Back succeeded in passing its defender. And very important to find a position where it is possible to cover a direct shot from the Backs to the far goalpost.



Ex-3

Ex-3 again builds on the previous two exercises. The limitation for the Backs is again not to pass to the (LP) on the same side. The Focus for the (FC) is to find a position and timing which is efficient in covering the Backs penetration in the centre, aggressively defend on the (PM) and cover a cross pass to the second (LP). Also under scrutiny are the players overall timing, and the coordinated movements and positions.

Attack

Because of time constrictions in the training, time reserved for the game's attack phase was much less compare to the time dedicated to the defence. The idea was to give the team an attacking style, to teach the players how to read the opposing defence system and weaknesses, and to avails of a few attacking set pieces.

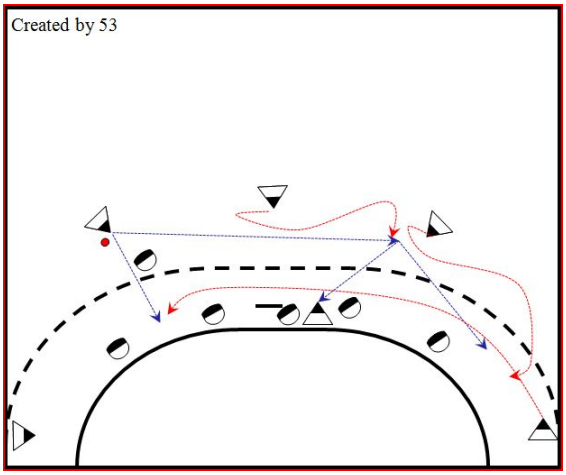
Being AstraHC a club devoted to player's education, the objective was to give to the team an attacking mentality and playing style that involved all players, and kept their minds open to movements and collaborations. In a few words, the idea was to educate the player to see AstraHC attacking formation as a sort of 3:3, with the 3 back players in one group and the second group composed of the two wings and the Line, which were asked to interchange theirs positions regularly during the attacking phase. Many attacking exercises focused on the various opportunities that would come available when a wing runs as a second line, the movement of a couple of players on the 6m and inside the core of the defence, and, the support that a wing player could offer against various styles of defence. Again, the idea was to get the wing players to adopt an open mentality and not just stay in a corner and offer a pass back to the Back players.

At the same time emphasis was put on the importance of movements without the ball, supporting the ball carrier player by forcing the defence to divert from its flowing movement and by offering to the ball carrier opens and passes opportunities.

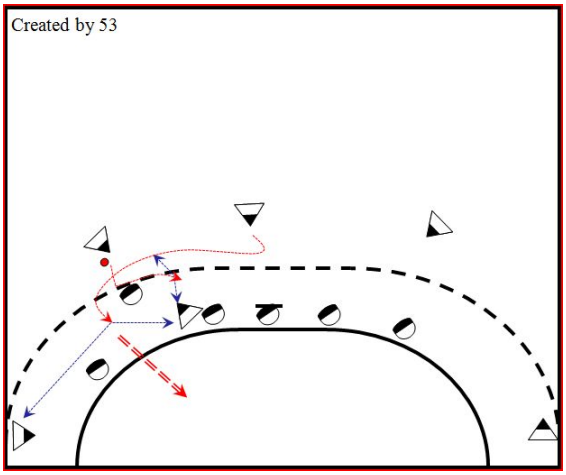
Some set pieces were rehearsed in order to have heavily drilled options available that would give confidence to the team during those phases of the game when energy and ideas run low. In particular one set piece was dedicated to a 5vs6 situation. This move was introduced in order to help the team maintain control and posse an aggressive and fearless mentality, and avoid giving the opposition a further advantage.

Specific training was done for penalty shooting. The attention was not on the shot itself, but on the metal readiness. Penalties should be easy goals, from a short distance and free from defenders. But paradoxically it is a more complex psychological situation than a shot when two or three defenders are trying to block the shooter. What was asked the player was to "have a plan". Penalty takers need to have a clear plan A and a clear plan B. Nothing more. When the time comes, the shooter should not be influenced by the tiredness, score, phase of the game, and other external factors. No need to think but simply execute the plan[2].

Follow some basic drawings of the attacking set pieces.



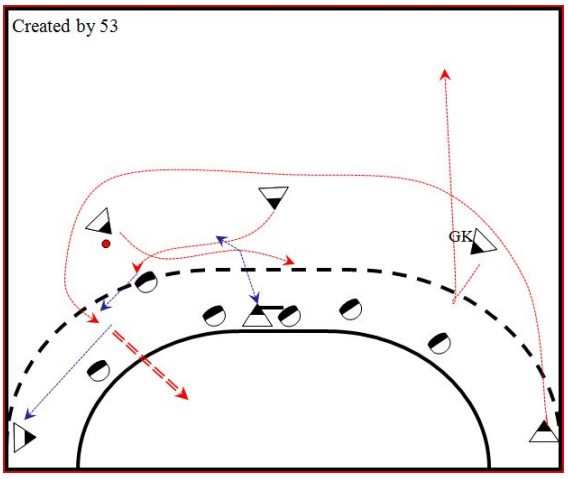
Ex-4



Ex-5

Ex-4 is a simple wing cut, with the ball travelling from left to right. The position of the (LP) will determine which Wing (W) will run. In this depicted example the (LW) should take the space behind the (LH) defender, in front of the (RB). At the same time the (PM) opens on the Left side (the running wing), so the (LB) also moves and are both ready for a counter drive, with options to pass to (LP).

Ex-5 is a switch between (B) and (PM). Again (LP) position between (O) and (H) is important. (RB) has to take the (LH) defender toward the centre and switch with (PM) who should have a few options.



Ex-6

Ex-6 was prepared for 5vs 6 situations and involved the goalkeeper. In this movement the GK has the simple task to complete the 6 players attacking formation, drive the ball and return to the goal. In the depicted example the ball travels from left to Right. (LW) will run on the outside. (RB) on the opposite side would switch with (PM). This switch has two functions: one is to move the defence toward the centre (against the W run) or stop its natural drift which goes with the (LW) run, and second to give (LW) more time given his/hers long run. Again (LP) position is important in cutting the defence and giving more options to (RB) when moving toward the centre. After (PM) has received the ball from (RB) there should be plenty of options involving (PM), (LW), (LP) and the (RW).

RESULTS

AstraHC is a club undergoing continuous development and improvement. In its five year history, it has become a more complex entity with a proper administrative structure, and clear sport development mission.

The club has a good reputation within the Sport Forum of the local County Council Sport Partnership, which has rewarded AstraHC with development grants every year since Astra HC's establishment. This funding was invested on players and coaches development. As of today AstraHC's youth coaches are the only coaches in Ireland to pursue further and continuous education, by attending the EHF youth coaches seminars. AstraHC has financially supported the attendance of its coaches to the EHF seminar in the years 2010, 2011, and 2012, and will try to have a presence in such seminars in the years to come. This is clearly a major achievement in a nation where there is a clear need for coaches' development and where the "in house" education is still at an introductory level.

Women's Handball in Ireland suffered a major set-back in 2009, when the IOHA decided to stop the running women's development plan without offering a new one. AstraHC took ownership of the issue, with the plan described in the previous section. One of the outcomes of such a decision is that AstraHC senior women players are now leading the women development plan strongly requested by AstraHC drafted and supported by the IOHA.

The impact of AstraHC's decision to participate to the EHF Cup is well expressed in the Team Captain's words. Lauren Sweeney: "I think one of the biggest aspects of that trip was how we were all very separate players and we came together as a team in the training before and during the trip. This was a main component of our training learning to play as a team, and use each other's strengths on the court. During the trip we played against extremely good young teams where we were pushed to play to the best of our ability and I think because the games were such a high level it made us better individual players, but also helped us to play as best we could as a team. That trip to me was fundamental in the starting up of Astra.... And also was a huge step for Irish handball for both men and women as we were now competing at EHF level."

The one thing the Team was not prepared to do was "winning". It was clear to everyone that the opposition teams were of a higher standard, but after the second round of matches unexpectedly the possibility to pass to the second round didn't appear to be too remote. One of the four teams in the group forfeited all its matches, changing the group of four teams to a three-team competition. Astra lost the first match 34-14 to the group winner, but the local team from Prilep also lost against the same team with the same score. Astra and Prilep had identical scores and were to face each other for second place, which would also result in access to the next round. The seed of the thought "it is possible" was implanted in players' heads, and they were not prepared for that. This resulted in a very poor first half performance, where fear (or anxiety actually[3]) led to poor shooting and a general loss of concentration when presented with a scoring chance. The opportunity to eliminate the negative thought came at half time, when it was explained to the players what the issue was. The problem was not the quality of the players, nor the quality of the overall game the team was playing, but purely and simply it was the fear of missing an important goal, or even the fear of winning. Luckily the pep talk worked and the second half was the best 30 minutes the team ever produced.

Lorraine Hatier : "I remember a few things you said during half time of our match against Prilep. You said : "There is one thing my team will never feel: it is fear. And now you are afraid".

DISCUSSION AND CONCLUSION

This thesis summarises the knowledge I accumulated whilst creating and developing a handball club in a country where the sport is almost completely unknown and practiced mainly by European immigrants. The aim was to organise this knowledge in a way that can be easily read and understood by others who wish to embark in the challenging task of setting up a brand new handball club.

Coming from Italy, a nation where handball is certainly more popular than Ireland (although not as much as in central Europe) played in my favour, as I had a clear idea of what and where I wanted the club to be and go. At the same time, I was familiar with the difficulties of playing a sport with poor popularity.

Also, from a technical/tactical point of view my experience in Italy was with a middle ranked team, which is where Ireland still aims to get, but not too high to make my coaching experience not compatible with players of lower skills.

The club is now one of the most organised and reliable in the Irish environment, but with still large margins for improvement. Moreover, the connections with local schools need to be reinforced.

Few key steps and pillars for club development were discussed and are listed below. These should be seen as checklist of club creation

Name, Logo and Image: Who are you?

Website: What are you doing?

Vision and Mission Statement: Why are you doing it?

Organization: Who is doing it

Connection, Communication, Cohesion: How are you doing it

Constant development: Where are you going?

Next steps

AstraHC development and consolidation is far from over. In the near future there are two key areas that need to be reinforced. First of all, the club needs to connect with more schools in the south Dublin Area, especially secondary schools. Set up regular training sessions there and support the school teams to play in the schools competitions. Secondly, the club needs to recruit more volunteers and coaches in order to be able to sustain the growing number of junior teams.

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EUROPEAN HANDBALL FEDERATION

REYKJAVIK THE HANDBALL CLUSTER

NO ICELANDIC MAGIC

Konrad Hatlemark Olavsson

10/20/2012

Summary

In my opinion there is no magic behind the success of Icelandic handball the last decades. The success is a direct result of a number of parameters in place working together to create an extraordinarily fertile breeding ground for talented handball players. The combination of all those factors makes Reykjavik a unique Handball cluster in the world but such a Handball Cluster can be created almost anywhere.

If this is the case, Reykjavik as a handball cluster should be examined more thoroughly trying to give insight into what parameters have to be in place and how they should interact, what steps are to be taken first and the timeframe of the total formation.

This knowledge is not only useful in creating new clusters but also in identifying existing ones and providing a strategy of how to protect them and develop further.

Keywords

Business Clusters – Assertive Communication – Flat Organization

Introduction

As a former handball professional and national team player, I have been getting the same question again and again: "How can Iceland produce so many good handball players and trainers since the nation counts only around 320 thousand inhabitants?"

The last years I have often spent time thinking about why this is so and trying to come up with a classic nationalistic answer. Of course there has to be some good explanation unrelated to cultural heritage, DNA or economy. But what is it then?

Methods

I started to simply gather all information I could about different parameters in Icelandic handball. Those parameters are such as how many sport halls are available, how many people participate, how many training sessions per week and other quantitative information. I also gathered information about the experience and education of trainers trying to shed light on qualitative parameters.

In the end I was able to form a theory build on my experience as a handball player and trainer in different countries and to use my business education to try to explain why so many good handball players can come from such a small nation.

Reykjavik as a Handball Cluster

As put forward by Michael Porter in his writing from 1990, The Competitive Advantage of Nations, the Wikipedia definitions of business clusters is as follows:

(Ref. 1)

> *"A **business cluster** is a geographic concentration of interconnected businesses, suppliers, and associated institutions in a particular field. Clusters are considered to increase the productivity with which companies can compete, nationally and globally.[1] In urban studies, the term agglomeration is used.[2] Clusters are also very important aspects of strategic management."*
>
> *"Michael Porter claims that clusters have the potential to affect competition in three ways: by increasing the productivity of the companies in the cluster, by driving innovation in the field, and by stimulating new businesses in the field. According to Porter, in the modern global economy, comparative advantage, how certain locations have special endowments (i.e., harbor, cheap labor) to overcome heavy input costs, is less relevant. Now, competitive advantage, how companies make productive use of inputs, requiring continual innovation, is more important.[2]*
>
> ***Put in another way, a business cluster is a geographical location where enough resources and competences amass reach a critical threshold, giving it a key position in a given economic branch of activity, and with a decisive sustainable competitive***

advantage over other places, or even a world supremacy in that field (e.g. Silicon Valley and Hollywood).”(Ref. Wikipedia)

My theory is that such a cluster has developed in Reykjavik, Iceland during the last 30 years or so. This development was accident and not planned but gave the same results as Michael Porter would have predicted or extraordinary competitive advantage.

The identification of such a cluster is usually made by using one of the following criteria:

1. *Geographical cluster*
2. *Sectoral clusters* (a cluster of businesses operating together from within the same commercial sector)
3. *Horizontal cluster* (interconnections between businesses at a sharing of resources level e.g. knowledge management)
4. *Vertical cluster* (i.e. a supply chain cluster)

Reykjavik as a Geographical Cluster

Iceland, being a rather isolated island in the North Atlantic Ocean has people living in a very few concentrated areas, Reykjavik being the largest one by far. More than half of the population is concentrated around Reykjavik.

Of only 16 handball clubs in Iceland, 13 are located directly in Reykjavik or very close by. Only 3 clubs are not located directly in the Reykjavik area.

In Reykjavik there are over 50 sport halls available for practicing handball. Endless number of fitness studios, swimming pools, soccer facilities and so on.

Handball being by far the most popular sport in Iceland, there is more than enough access to sport facilities in the area. In Iceland, there are about 6500 participants in handball and that makes approximately 2% of the nation. (Ref. 5)

Reykjavik as a Sectorial Cluster

The fact that there are so short distances between clubs in the Reykjavik area and the isolation of the country forces them into a unique situation where they interact, cooperate, compete and share knowledge across all clubs.

Media follows handball very closely and the interest and understanding of the population is perhaps more than is usual in a city of similar size.

Reykjavik as a Horizontal Cluster

Most of the clubs in Reykjavik have direct or indirect access to all sport facilities in the area. This means that all sport halls can be used by all clubs if that was necessary. All extra facilities like running fields, fitness rooms, doctors, physiotherapy and any other services needed can be easily shared by all. It takes not more than 30 minutes to drive from one end of the city to the other.

For a handball trainer, Reykjavik is an excellent place to work. You have more than enough facilities to train in and you can easily attract new players since they all live very close. Networking and exchanging knowledge between trainers is very easy and something that most of them do willingly. Almost all trainers in Iceland – on all levels – are former handball players themselves, who have played, in some cases, in many clubs around the city, making personal interaction between the clubs very informal and easy.

Reykjavik as a Supply Chain Cluster

As a handball player around Reykjavik, you can easily choose from any of the clubs located around the city to find the appropriate training and matching that fits your needs. Although like elsewhere, you have your “mother club”; many players change clubs during their carrier and that is not considered a problem. This fact distributes knowledge, good culture and evens out the teams competing, making them all stronger in the end through more overall competition.

This easy flow of players and trainers between clubs makes the supply of needed talents very fluent. No one has to move or change school, job or any vital thing in ones day to day life.

Table 1. (Ref. 2)

	Club	Division	Area	Hall available	Team per club	Hour per week	Hour per team	Training per week
1	Haukar	1	Reykjavik	3	16	195	12,188	8,125
2	Akureyri	1	Akureyri	3	16	195	12,188	8,125
3	Fram	1	Reykjavik	2	16	130	8,125	5,417
4	FH	1	Reykjavik	3	16	195	12,188	8,125
5	HK	1	Reykjavik	2	16	130	8,125	5,417
6	IR	1	Reykjavik	2	16	130	8,125	5,417
7	Valur	1	Reykjavik	2	16	130	8,125	5,417
8	Afturelding	1	Reykjavik	3	16	130	8,125	5,417
9	Stjarnan	2	Reykjavik	3	16	195	12,188	8,125
10	Selfoss	2	Selfoss	2	16	130	8,125	5,417
11	Vikingur	2	Reykjavik	2	16	130	8,125	5,417
12	IBV	2	Vestmannaeyjar	3	16	195	12,188	8,125
13	Grotta	2	Reykjavik	2	16	130	8,125	5,417
14	Throttur	2	Reykjavik	1	16	130	8,125	5,417
15	Fjolnir	2	Reykjavik	2	16	130	8,125	5,417
16	Fylkir	2	Reykjavik	2	16	130	8,125	5,417

As can be seen in Table 1, all teams around Reykjavik have access to more than enough hall training hours. Typically the youngest teams train 2 or 3 times a week rising to once a day or more in senior teams. During critical development years, most of the handball players are active in other sports as well. All areas in Reykjavik have a world class swimming pool and a heated soccer pitch with flood lights. In addition to that, many participate in gymnastics and basketball.

Because of this very good access of sporting activities, most young handball players are training at least once per day since the age of 12 years, in many cases. All handball players, 16 years or older, train at least once per day for 2 hours. All training facilities have their own strength equipment that are all free to use at all times and is often used before or after training. This quantity of training is the rule for all players and no one can participate without being there 100%, even though most of them are amateur players.

Quality of trainers

It is very common that the most experienced players in the clubs become trainers for younger teams. This is often the only way for the club to justify paying players for their participation. Thus, a very big part of the monetary resources in the clubs is used for paying the trainers. There are very little travelling costs or any other cost since the use of the sport halls is in most cases free.

In recent years, trainers have been adding to their experience formal training education making the quality of training even better.

The cultivation of good handball trainers started about 30 years ago. Until that time most handball trainers were local and limited to the handball knowledge in Iceland at that time. The turning point was that two especially good trainers came to Iceland: one from Russia and one from Poland. Those two trainers changed training methods and discipline in their clubs, teaching a couple of generations all they knew.

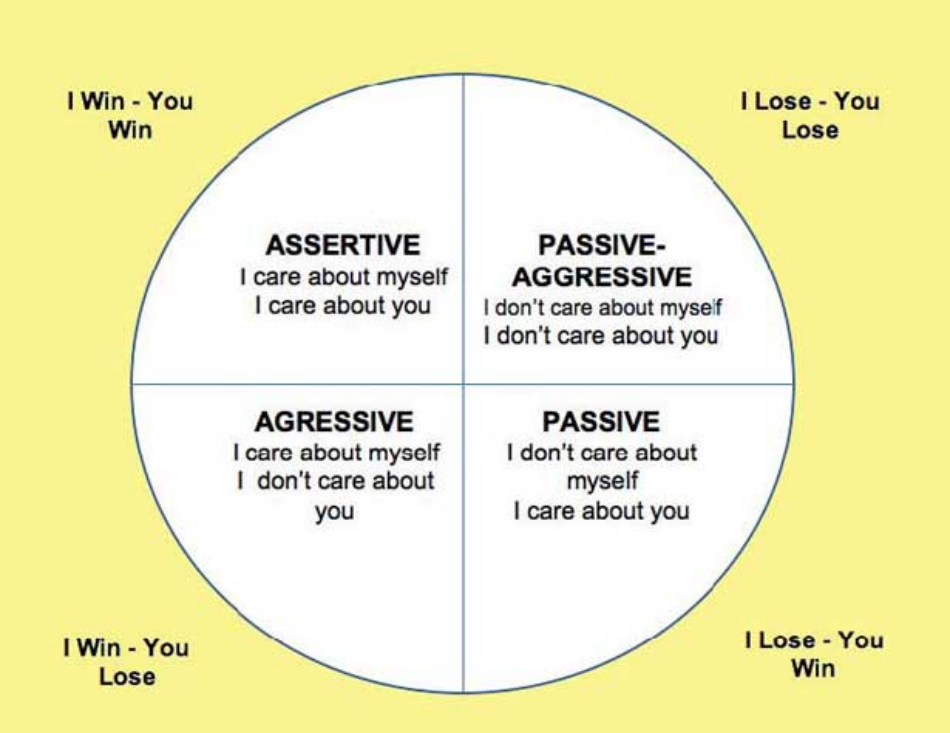
As a result we have had a series of trainers who are 1. generation after those two incoming resources. Most of them have had very good success internationally. Some years later, Icelandic trainers started to go abroad to learn handball and sport training in general and have been coming back to Iceland adding to the knowledge pool in Reykjavik: a knowledge pool that does not leak.

Communication Style of Icelandic Handball Trainers.

The communication style of Icelandic handball trainers is very clear and direct. In the early years of the east European influence it was very negative criticism but as more trainers got additional education in Scandinavia more positive communicational style has developed.

Communication styles are often categorized as Aggressive, Passive, Passive-aggressive and Assertive. Icelandic communication style was for a period very aggressive but has grown to be more Assertive, even though many trainers still have a lesson to learn here.

Picture 1. (Ref. 3)



(picture: Victoria Wylie and Alina Baugh)

Passive Communicator

If your style is passive, you tend to hold back and not speak your mind. People might see you as shy or easygoing. However, oftentimes your avoidance of expressing your opinions, feelings, and needs is born out of low self-esteem and a fear of conflict. You might not realize it, but the message you are sending to others is that your thoughts and feelings are not as important as other people's. Instead, grievances and annoyances can start to mount and cause internal conflict. That internal conflict may lead to anxiety, resentment, anger, and stress.

Aggressive Communicator

If your style is aggressive, you are very good at expressing your opinions and advocating for yourself. However, you may come across as a bully that disregards the feelings and needs of others. Very aggressive people violate others' rights through humiliation and intimidation. Even though you might end up getting what you want, you will undercut trust and mutual respect of others around you. When you alienate people, life can become very isolating as others start to avoid you.

Passive-Aggressive Communicator

If you have a passive-aggressive communication style, you are expressing aggressive behavior in a passive way. You appear to be in agreement on the surface but are really undermining or acting out anger towards others behind their back. Often passive-aggressive behavior stems from powerlessness and resentment due to inability

to be direct about your needs and feelings. Over time anger can build up and create stress, damage relationships, and leave you lonely.

Assertive Communicator

Finally, if your style is assertive, you have the unique ability to clearly state your opinion and needs while respecting the rights of others. Assertive communication is direct, honest, and open. Your ability to express yourself effectively lets people know that you are a firm advocate for your rights. Behaving assertively helps you with self-confidence by asking and getting your needs met. An assertive approach with others also gains you their respect. A simple but polite "no" avoids you over committing and brings balance into your life. Also, assertive people tend to have less conflict with others because they want to create a compromise that is a win-win situation. Most importantly, being assertive helps reduce stress by reducing the interpersonal turmoil in your life.

(Victoria Wylie and Alina Baugh)

Flat/Matrix Organizational Style in Iceland

Icelandic people are extremely occupied by equality of all. This results in a very flat management style where the boss very often acts out as a coordinator and facilitator instead of being a figure of power. A trainer in Iceland is very often a coordinator of a group of specialists, each with his own field of expertise. In some cases, those experts are among the players in the team. This way of organizing work gives room to all opinions and a healthy discussion of methods and exchange of experience. Some teams have some sort of a strong Matrix structure with a clear and direct coordinator acting almost as a project manager.

Ref. 4

Flat organization (also known as horizontal organization) refers to an organizational structure with few or no levels of intervening management between staff and managers. The idea is that well-trained workers will be more productive when they are more directly involved in the decision making process, rather than closely supervised by many layers of management.

This structure is generally possible only in smaller organizations or individual units within larger organizations. When they reach a critical size, organizations can retain a streamlined structure but cannot keep a completely flat manager-to-staff relationship without impacting productivity. Certain financial responsibilities may also require a more conventional structure. Some theorize that flat organizations become more traditionally hierarchical when they begin to be geared towards productivity.

The flat organization model promotes employee involvement through a decentralized decision-making process. By elevating the level of responsibility of baseline employees and eliminating layers of middle management, comments and feedback reach all personnel involved in decisions more quickly. Expected response to customer feedback becomes more rapid. Since the interaction between workers is more frequent, this organizational structure generally depends upon a much more personal relationship

> *between workers and managers. Hence the structure can be more time-consuming to build than a traditional hierarchical model. (Wikipedia).*

In my experience, this sort of organizational culture cultivates very many talented players in Iceland. But for those same talents to become good they usually have to move to a more formal area with more hierarchy focusing on streamlining the way of playing. This is very often the case when those same players move typically to North Germany or Denmark or to other handball clusters such as the corner of Germany, Switzerland, Austria and France.

Working Culture in Iceland

Research has showed that difficult environments result in a culture of very hard working people. Until recently, Icelanders could very easily have been categorized as workaholics. This is of course very productive but one can discuss the quality of life under such working mania. As a result, no one questions the fact that handball players show up for training every day for two hours or more after a full working day and spend most of their weekends playing.

Conclusion

In my opinion there is no magic behind the success of Icelandic handball the last decades. The success is a direct result of a number of parameters in place working together to create an extraordinarily fertile breeding ground for talented handball players.

Reykjavik is a very dense handball cluster with extraordinary good access to free resources. There is a culture of looking for new knowledge outside Iceland and a very flat organizational heritage inside. There is also an extremely clear and direct communication style that is getting more assertive with the years, as well as a culture of hard work and long working days. And last but not least, monetary resources are mainly used for developing new good trainers instead of using the money on travelling or salary for players.

The combination of all those factors makes Reykjavik a unique Handball Cluster in the world but such a Handball Cluster can be created anywhere.

Creating a Handball Cluster

If we look closely, many similar handball clusters can be found. I would suggest that North Germany and Denmark form one strong handball cluster. But can such a cluster be created? In my opinion it certainly can. But there has to be a cooperative government long term plan, building up sport facilities creating enough quantity of training opportunities; clubs focusing on attracting participants with good organization and good trainers focusing on quality of training; cooperation and healthy competition between clubs in the area without killing of each other but building up instead the mass of clubs and participants in the area; offering talents a local opportunity to develop as top handball players. But the real creators of a cluster must be the clubs in any area: a bottom up creation and not top down creation of government.

European Cluster Policy Michael E. Porter

Clusters Increase Productivity / Efficiency

–Efficient access to specialized inputs, services, employees, information, institutions, training programs, and other "public goods"(local outsourcing)

–Ease of coordination and transactions across firms

–Rapid diffusion of best practices

–Ongoing, visible performance comparisons and strong incentives to improve vs. local rivals

–Proximity of rivals encourages strategic differentiation

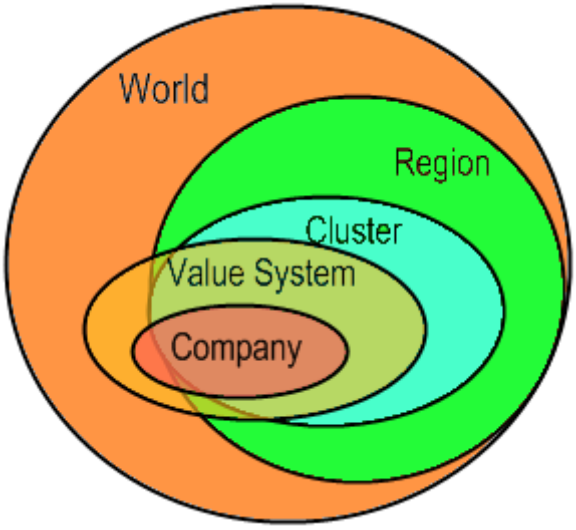
Clusters Stimulate and Enable Innovations

–Greater likelihood of perceiving innovation opportunities (e.g., unmet needs, sophisticated customers, combinations of services or technologies)

–Presence of multiple suppliers and institutions to assist in knowledge creation

–Ease of experimentation given locally available resources

Clusters reflect the fundamental influence of linkages and spill-overs across firms and associated institutions in competition



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MASTER COACH

Goal setting and success:

The Icelandic men‘s handball team at the 2007 World Cup and 2008 European Championships

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December 2012

Abstract

This essay analyses and discusses the importance of realistic goal setting in professional sports. The method that is used consists of examining first the conditions of the players of Iceland's men's team before two major tournaments – The World Cup in Germany in 2007 and the European Championships in Norway in 2008. The results of the team in those tournaments are then described and the positive or negative correlation between the players' conditions and the team's goal setting. The main conclusion is that goal setting for the former tournament was very realistic and sensible. Goals were set as the team progressed, expectations were moderate and, consequently, the team's performance was generally appreciated. On the other hand, preparations for the latter tournament were marred by unrealistic expectations, partly because how well the team did in 2007, and despite of the fact that the physical condition of players was obviously worse in 2008. A detailed analysis of the matches which Iceland played in both tournaments is in an attachment, with a special emphasis on the performance of the team's key players.

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Introduction

Everyone who wants success needs to set himself or herself specific goals. This essay deals with the importance of goal setting in professional sports. At a first glance, it might seem obvious that goals and aims in that field are always simple – to do one's best all the time and enter all tournaments and matches with a simple determination: To win. Still, the fact remains that goal setting is one of the most difficult things coaches face in professional sports (Guðjón Þórðarson, interview 16 January 2008).

This essay will deal with two tournaments, where Iceland's men's team competed. They will be compared and contrasted. The team's goal setting was different before these two tournaments, as will be analysed. The matches on both occasions will be analysed. As part of the work for this essay, key players of the Icelandic national team were interviewed and asked about the team's goal setting on both occasions. Sports psychologist, Sigurður Ragnar Eyjólfsson, as well as the coach of Iceland's women's football team were interviewed.

Information will also be provided about how players were performing with their local teams before each tournament; how many games they played, how many goals they scored, and how many shots the goalkeepers saved. The reason for this is simple: realistic goals must be based on a realistic assessment of the team's condition. In team sports it is particularly important that the team as a whole is strong and that all players show up for battle fit and strong. This essay will demonstrate that quite well.

1. Goal setting

The importance of good goal setting cannot be overemphasized, as Trevor Slack has for instance summarized (Slack and Parent, 2006). Furthermore, Kyllo and Lenders (1995) have demonstrated the benefits of goal setting, and the same conclusion was reached by Winberg, Burton, Yukelson and Weigand (1993). We are what we think, and the person with clear aims will find it easier to concentrate on the task ahead. The aims must be specific and demanding, but it is equally important that they be realistic for the person in question.

Also, aims can be divided into conclusion-based aims, performance-based aims and progress-based aims. All must be specific and set for the long term. Then, short-term aims are reached on the road to achieving the long term aim (Weinberg and Gold, 2003).

A common problem in goal setting is the setting of unrealistic aims. Indeed, one needs to aim high for improvement to take place but the aim must not be totally unrealistic; unachievable. In particular, sportspersons are often tempted to set unrealistic long-term aims and do not pay enough attention to how they are realistically to be reached (Orlick, 2000). Coupled with this, the following factors can ruin the basic and important task of proper goal setting:

- Setting too many aims
- Forgetting to evaluate the aims on a regular basis
- Not giving oneself enough time to achieve aims
- Coach sets aims for the team unilaterally
- Management sets aims for the team and its coach unilaterally
- Aims are not specific enough
- Coach does not manage to convince the players of the importance of proper goal setting (Weinberg and Gold, 2000).

A good example of mistakes of this kind was the experience of the English men's football team before the 2006 World Cup in Germany. One of its key players, Steven Gerrard, later explained that when they arrived in Germany, the players were too cocky. They felt that they had it all in their hands, that they were invincible. Thus, they put too much pressure on themselves by saying that they were going to win the tournament. Expectations rose too high. Gerrard then added that they will never be guilty of this again and the English players would learn to be humble, and calm, instead of walking around arrogant before returning sheepishly back home (Viðar Halldórsson, interview, 28 September 2006).

Maximum results can only be achieved when everyone in and around the team is somehow involved in the goal setting. It is therefore, noteworthy that the players of the Icelandic national team, who were interviewed, all stated that they had not been that much involved in goal settings before the World Cup in 2007 and the European Championships. This was clear in team captain Ólafur Stefánsson's replies and Vignir Svavarsson stated: 'No, there was not a specific meeting, like for instance the Danish team does, where everyone gets together and sets out a common goal.' Still, these players, as well as Guðjón Valur Sigurðsson, Logi Geirsson and Birkir Ívar Guðmundsson, all agreed that goal setting is extremely important. Stefánsson went so far as saying that it mattered more than anything else. On the other hand, Svavarsson said that for him personally goal setting was not that important.

How do we define good goal setting, then? Sports psychologist Sigurður Ragnar Eyjólfsson has focused actively on goal setting, especially in his position as coach of the women's Icelandic national football team. For instance, he uses a questionnaire which he asks each player to fill out:

1) How far do you want to reach as a football player? What goals do you have?
2) Where do you see yourself in the world of football after 1 year? 2 years? 3 years?
3) What do you need to do (be specific) to achieve these aims?
4) When are you going to start to try to achieve these aims?
5) How much effort are you willing to make in order to get optimal success with Iceland in the next tournament?

According to Eyjólfsson, it is important to put this questionnaire up on a wall where players see it often, for instance in the dressing room or on the refrigerator at home. Then the players will always recall what they are aiming for and that should improve the likelihood of success. The aims should be revised regularly and questions asked whether the right track is being followed. Aims should be specific and detailed, measurable, active (i.e. demanding work from the players), realistic and connected to specific dates (when are you going to reach each specific goal?)

The replies from the players should provide a rough image of the mindset of players and then a common goal can be shaped. The asset lies in the fact that the coach sees clearly how much effort the players claim to be willing to make and also how they evaluate themselves. Based on this information, a clear process of goal setting can start.

Once the rough image is there, more specific details can be constructed. Eyjólfsson then puts together a more detailed questionnaire which the players reply to. The positive results of the Icelandic women's national football team in recent years demonstrate the usefulness of this method.

2. The World Cup in 2007.

In January 2007, the men's handball World Cup was held in Germany. The Icelandic national team qualified through playoff games against Sweden, a four-goal victory in Stockholm and a one goal's loss in Reykjavík, on Iceland's Independence Day, 17 June, before a packed sports hall. This achievement demonstrated that when the team played at its best, it could beat the best teams in the world. Still, it has to be kept in mind that all of the team's key players could take full part. They were not plagued by injuries and this was the key reason why the team made it to the World Cup. This chapter will discuss the team's goal setting, the performance in Germany, the physical and emotional condition of players prior to the tournament and how that connects with the aims set.

Goal setting for the World Cup

Caution was the key word before the World Cup in Germany. This was demonstrated well by the head coach, Alfreð Gíslason who said before the tournament: 'Of course it would be great to advance from our group with a full house, maximum points, but that will not be easy at all. This first step, of advancing from our group in Magdeburg, that is what I mostly think about. The main aim will be to advance from the group and reach the intermediary stages' (Ívar Benediktsson, 2006). Judging by this, the aim was simply to think first about the three games in the preliminary round. A 'dream target' would be to win all the matches in the round but even if that would not be achieved, the aims would be achieved by advancing to the next stage. In other words, the aims were fairly open and consisted basically of beating Australia and Ukraine, certainly weaker teams than Iceland (at least Australia).

Gíslason also stated that the struggle to advance from the group would be fought between Iceland, France and Ukraine. The preparations for the tournament were not ideal. Still, Logi Geirsson, then playing for TBV Lemgo, stated that the team was steadily advancing and he would not worry at all about its performance once it started. For him personally, it would be very exciting to perform at such a big stage ('Logi vildi svara gagnrýni', 2007). Interviews with Geirsson, Birkir Ívar Guðmundsson, Vignir Svavarsson, Guðjón Valur Sigurðsson and Ólafur Stefánsson all revealed the conviction that goal setting before the World Cup in 2007 was very realistic.

Preliminaries

The first match was against Australia, known as one of the weakest teams in the tournament. The match turned out to be an easy practice session and, in reality, the tournament had not really started for Iceland.

The second game was against Ukraine. This was by all accounts a key game in the tournament, as was demonstrated by a great deal of stress within both teams. The Icelandic performance was poor on all accounts. Technical fails were far too numerous, 17 in total, and around 50% of all errors if mistaken shots are included. The goalkeeping ratio was also poor, only around 25%. The final result was a loss, 32–29. This was a tremendous disappointment but the aim before the tournament, to advance from the group, was still achievable. After the match, coach Gíslason was of course highly disappointed and said for instance that the players had been far too stressed, made far too many unforced errors and taken undue risk that might explain the high number of technical failures (‘Allt of mörg mistök’, 2007).

The third and final game in the group was against France, the reigning European champions. This match presented the final opportunity for the Icelandic team to reach its realistic aim, of advancing to the next round. The team started with a vengeance and it was obvious to all that unity and the will to win shone from every player’s face. In short, the French team never had a chance against the Icelandic team, playing probably one of its best games ever. The defence was rock solid, and the goalkeeper ratio of saved shots around 40%, or 15% higher than against Ukraine. Technical mistakes were around 10% and the goals-from-shots ratio was excellent, or around 75%. Thus, Iceland advanced from the group, with France, with two points. The swing from a poor performance to a masterful match was incredible but the main aim for the tournament had been achieved (see appendix A).

2.3. Second round

The first match in the next round was against Tunisia, a team that plays a different version of handball than most of the European nations, with defence so high on the field that the opponents often have a hard time finding the correct response. But the Icelandic players were clearly very focused and the positive result against France was still fresh in their minds. A good victory was achieved, 36–31. Again, the goals-from-shots ratio was excellent, around 70%. Seven technical errors were made and the goalkeepers saved some 32% of all shots, an average performance. Only five goals were scored from fast breaks but most of the goals came from normal attacking play, 10 goals from the nine-metre line, 16 from 6 metres. Hence, the second round could not have begun better for Iceland.

The second match was against Poland and ended in a loss, 35–33. For the most part of the game, the Icelandic team played well but as Guðjón Valur Sigurðsson put it: 'This match and the result demonstrates that handball is the kind of sport where it is enough to lead and be better for 50 minutes' (Ívar Benediktsson, 2007). As the final result demonstrates, both teams played well in attack and the goals-from-shots ratio was acceptable in the Icelandic case, around 58%. But defence and goalkeeping was highly disappointing. Shots saved only amounted to 30% and the Polish team scored a highly unsatisfactory 17 goals from outside the nine-metre line (Appendix A).

The third game was against Slovenia. Victory would secure a seat in the quarterfinals, thus achieving the new aim of the team after the first one was achieved. This was an even game throughout were Iceland ultimately had the upper hand. This time, the goalkeepers shone and saved around 45% of all shots, and the goals-from-shots ratio was also good, around 62%. Furthermore, 16 goals came from outside the nine-metre line. The end result was 32–31 and a seat in the quarterfinals was secured, even if one game remained, against Germany. The outcome of that contest would only determine what opponent Iceland would get in the quarterfinals (Appendix A).

The game against Germany was poor and never exciting. Both teams had secured their place in the quarterfinals and many key players were rested. The goalkeeping ratio was 33% and the goals-from-shots ratio 56%. Most positive was the individual performance of Markús Máni Michaelsson who scored 10 goals from 13 attempts.

2.4. Quarter finals: Iceland – Denmark

The game against Denmark in the quarterfinals ranks as one of the most tense games that the Icelandic team has ever played. Extra time was needed, where Iceland was close to victory, with a shot hitting the post with 15 seconds left but instead the Danish team scored from a fast break with two seconds left. Snorri Steinn Guðjónsson played the game of his life and afterwards he said: 'This result brings tears to one's eyes because I still think that we have a better team than the Danes. But when the defence fails us so does the goalkeeping and these factors are the reason behind our loss' (Ívar Benediktsson, 2007) The shots-saved ratio was exactly 29.41%, clearly not enough in a match of this magnitude, and was definitely the deciding factor. Also, the defence was poor as is demonstrated by the fact that the Danish team managed to score 21 goals from outside the nine-metre line, which was simply unacceptable. On the other hand, the goals-from-shots ratio was fabulous, 72% and Guðjónsson scored a spectacular 15 goals from 18 shots.

After the match, the players could understandably not hide their disappointment. The team was simply so close to reaching the semi-finals. But coach Alfreð Gíslason insisted that he was proud of his players, adding that the tossing of a coin might as well have decided the result of this exhilarating match; so close was it from start to finish (Víðir Sigurðsson, 2007). Similarly, the Danish goalkeeper Kasper Hvidt, arguably the best goalkeeper in the world at the time, said after the match that the Icelandic team had shown the best and most entertaining attacking efforts at the tournament ('Ísland með besta sóknarleikinn', 2007).

2.5. Matches for places 5–8

Iceland's first match was against Russia, and the winning team would compete for seats 5–6, but the losing side for seats 7–8. Obviously the dramatic match against Denmark had taken its toll, both physically and emotionally. The Icelandic team never really started the game. The goals-from-shots ratio was 50%, saved attempts 35%, and 13 technical errors. This was a difficult game, coming so close after the huge disappointment against Denmark and the result was a defeat, 25–28. Thus, the last game in the tournament would be against Spain, for seat 7.

After the loss, coach Gíslason mentioned one of the long-lasting problems of the Icelandic national team; the lack of breadth in the team. Too few players bore the brunt of each performance and Gíslason mentioned, as an example, that five players had played practically every minute of Iceland's matches in the tournament (Ívar Benediktsson, 2007). A realistic chance to win a medal at a major tournament would not appear until this issue had been solved.

The match against Spain was fast, with neither team paying much attention to defence. As for Iceland, the defence was poor and the goalkeeping ratio a terrible 20% which was simply not acceptable at a major tournament. The attack, however, was fine, as was demonstrated in a 62% goals-from-shots ratio. Fast breaks also gave 17 goals but the end result was a Spanish victory, 36–40 and Iceland therefore had to settle for eighth place in Germany in 2007. Afterward, Gíslason stated the bitter truth: 'If we are going to hope to win such a strong opponent at the World Cup we need more action and we simply do not have the same number of excellent players that Spain can use' ('Skorti breidd á við Spánverja', 2007).

2.6. Tournament analysis

The Icelandic national team won 4 games in Germany, against Australia, France, Tunisia and Slovenia. It lost 6 matches, against Ukraine, Poland, Germany, Denmark, Russia and Spain. In the following analysis of the tournament the match against Australia is excluded since it would otherwise have a distorted effect on the total outcome, due to the fact that the Australian team was considerably weaker than the other teams in question.

After the tournament, coach Gíslason again mentioned the lack of enough world-class players which led to the fact that too few players had to carry too much responsibility on their shoulders. I therefore conclude that in this case it is therefore even more important that key players should be well prepared for a major tournament of this kind, fit and playing a big role with their home team. When individual players are examined it becomes clear that this factor was satisfactory before the 2007 World Cup. Guðjón Valur Sigurðsson played all games with his team, Gummersbach. Róbert Gunnarsson played 17 of that team's 18 matches, and the same went for Snorri Steinn Guðjónsson with GWD Minden. Logi Geirsson played all matches for TBV Lemgo and Alexander Petersson 14 of the 17 matches for Grosswallstadt. Birkir Ívar Guðmundsson was always on the team sheet for TUS N-Lübbecke and played a total of 536 minutes, around 50% of the total minutes that the team played. For further information on this, see the appendix. These players are specifically mentioned here because of the key roles they have played for the Icelandic national team in recent years. Ólafur Stefánsson is excluded because he was one of the world's best players, having shown that time and again, so there was need to analyse that specifically.

Thus, the preparation for the tournament could not really have been any better. The key players were performing well for their home teams and usually played a big role there. Maybe the biggest worry was the fact that goalkeeper Guðmundsson did not play more than 50% for his team, and that he was usually on the losing side.

2.7. Realistic aims?

The Icelandic national team revised its advancing aims at the 2007 World Cup. Initially, the aim was simply to advance from the group stages. A dream target was to win all the matches but the realistic one simply to advance. In light of the players' preparations and situation these aims were realistic and also demanding. In my opinion, this was a case of good and proper goal setting. Also, this goal setting was put forward in the correct manner, with a certain modesty and dignity, leading to an acceptable result. True, the game against Ukraine was a shock but the players were clearly prepared adequately, both physically and emotionally, to tackle the backs-to-the-wall situation after that defeat. They enjoyed good team practice and were clearly ready for that fight, resulting in a magnificent victory against the mighty French.

Eighth place can be deemed a satisfactory outcome. The semi-finals were desperately close and only the bad luck of hitting the post with 15 seconds left decided the outcome against Denmark. Even though the team lost 6 games and only won 4 the total outcome is positive. The team won the right matches with the exception of the match against Denmark and the Icelandic attacking play was praised, as it was both varied and successful. The problems were to be found in defence and goalkeeping, as was underlined in an interview with the team's succeeding coach, Guðmundur Guðmundsson: 'The attacking play has been good and effective but the defensive play, plus the goalkeeping, have been lacking in the difficult games and we need to resolve this if we are to hope for better results' (Ívar Benediktsson, 2007).

Overall, this was therefore a good tournament for Iceland and the coaches expectations before it started were met: 'I said before the World Cup that this team could be very satisfied with seat 7 or 8. Maybe I am not quite as convinced about that now because there were only two instances in the match against Denmark, in the last ten seconds, which made all the difference between seat 4 and seat 8' (Víðir Sigurðsson, 2007).

3. The European Championship in 2008

The 2008 European Championship was held in Norway in January and February 2008. In the play-offs for a seat in the finals, Iceland had been drawn against Serbia. The Serbians won the first match on their home ground, by one goal. The second match was in Reykjavík, on 17 June, Iceland's Independence Day (just like the play off match against Sweden for the 2007 World Cup). In a fast-moving match, Iceland won by two goals, 42–40. Thus, Iceland again secured itself a seat in a major tournament ('Handknattleikur Ísland–Serbía 42:40 Laugardalshöll', 2007).

The relatively positive result in Germany naturally created the expectation and hope that Iceland would also do well in Norway. Unfortunately, good results at one tournament have often created high hopes in Iceland, whereas the team has often performed best when expectations have been low. This chapter will discuss the tournament and the team's preparation, in similar way as was done in Chapter 2. This comparison will demonstrate that while goal setting for the 2007 World Cup was realistic, goal setting for the 2008 European Championships was unrealistic and unfortunate, in light of the physical condition of key players.

3.1. Goal setting for the European Championship

'My aim for the European Championship which begins in Norway on 17 January is to play for medals. Nothing else is sufficient if we are to achieve our other aim of making it to the preliminary round for the Olympic games this spring. It is not enough for me to simply enjoy participating and get one of the top eight places.' Those were the words of coach Alfreð Gíslason in an interview with the Icelandic daily, Morgunblaðið, on 4 January 2008.

Gíslason added that the aim for a medal was exalted but also perfectly realistic. This view he based on the fact that the team had been so close to reaching the semi-finals in Germany in 2007 and that two players who were injured then – Einar Hólmgeirsson and Jaliesky Garcia – were now match-fit (Ívar Benediktsson, 2008). Still, after two bad performances against the Czech Republic in Iceland, just before the tournament, Gíslason

found it necessary to lower the expectations, saying e.g.: ‘In my mind it is perfectly clear that unless we learn our lessons from these two matches against the Czechs I must seriously warn against any optimism before the European Championship’ (Ívar Benediktsson, 2008).

It is true that the Icelandic performance against the Czech Republic was not convincing and a few players were either weak or injured. Alexander Petersson suffered from an ankle injury and Garcia and Sverre Jakobsson, the key defensive player, were injured. Still, when the team left for Norway the goal remained unchanged: To return with a medal around the neck.

3.2. Preliminaries

Iceland’s first match in the tournament was against Sweden, and the victory against that strong team before the World Cup was fresh in everyone’s mind in Iceland. It was obvious before the match that the Icelandic team was under great pressure because of its goal setting: A victory against Sweden was obviously vital. Before the match Gíslason stated e.g. that he was happy with all preparations before the tournament, in light of the injuries and illnesses that had been plaguing the team. To add the problems already mentioned, team captain Ólafur Stefánsson suffered from a slight injury and could not take part in the team’s last practice before the game against Sweden (Ívar Benediktsson, 2008).

The match began evenly but as the first half progressed, the Swedish team had clearly gained an advantage. At the beginning of the second half, the Swedes increased their lead and the Icelandic team was devoid of answers, both in attack and defence. The end result was a highly disappointing loss, 19–24, and a long time had passed since Iceland had scored so few goals at a major tournament. The goals-from-shots ratio was an unsatisfactory 41.30% and the goalkeeping ratio a tolerable 33.33%. Only conceding 24 goals was fine but scoring 19 was simply not acceptable. Only six goals came from outside the nine-metre line and the team was guilty of 13 technical errors.

The second match was against Slovakia. Now the Icelandic team had their backs up against the wall. A loss would mean that Iceland would need a victory against France to have any chance of progress in the tournament. The match began quietly, with few goals scored by either side. But as the first half progressed, the Icelandic team found its rhythm and gained a secure victory in the end, 28–22. Now, the defensive play was excellent, with Guðjón Valur Sigurðsson leading that effort. Also, the goalkeeping ratio was good, around 39%, a clear improvement. The goals-from-shots ratio was also better than against Sweden, around 55%. But the key to victory lay in excellent defence and more than half of Iceland's goals came after fast breaks.

The third and final match in the preliminary round was against the super strong team from France. For the first five minutes, the match was even but then the French simply overran the Icelanders. The end result was a big loss and disappointment, 21–30. Again, the attacking play was disappointing, with only 4 goals from outside the nine-metre line. The goals-from-shots ratio was 50% but goalkeeping only 28.57%. Also, technical errors were 14, a far too high number in a match of this magnitude. Maybe the key reason was the fact that Ólafur Stefánsson could not play because of his injuries, as indicated in an interview after the match with Alexander Petersson: 'To begin with, we missed Stefánsson who is the main brain in the team but also the French defence was simply too strong.' Petersson also mentioned that against Sweden and France, the team effort was lacking, with players trying too much to solve problems individually, and that was a recipe for disaster ('Verðum að nota hausinn' , 2008). This was absolutely true and it raises a couple of key questions: Was the team not ready physically and emotionally? Were the expectations before the tournament realistic or not?

After the match against France coach Alfreð Gíslason said everything that needed to be said. Asked to explain the great difference in Iceland's attacking play between the 2007 World Cup and the 2008 European Championship, he replied:

> It is very easy to explain this. Logi Geirsson is hardly playing at all with his team. Einar Hólmgeirsson hardly gets a chance with his team. Snorri Steinn [Guðjónsson] is slower than he was a year ago. Alexander Petersson has been plagued with [injury] problems. The preparation time we had did not suffice to get these players going, or get them in the necessary shape. For everything to work out fine we need to have every player in his best form. That's the way it has been last years when we have enjoyed success (Ívar Benediktsson, 2008).

In my opinion, everything here is correct. On the other hand, it raises questions about the exalted goals that were set before the tournament. Was it not known before the tournament that the players mentioned had not enjoyed good playing practice? The little team that the national team before tournaments does not suffice to get players into shape. The warning signs of this kind can be seen from the Icelandic men's football national team where professional players have come to play international matches, having been on the bench for their team for months and watched their team play. This is not to say that coach Gíslason should have picked different players for the European Championship. Better players were hardly available. But the goal setting before the tournament was unrealistic as Gíslason does indeed confirm himself.

3.3. Second round

The first match in the second round in Norway was against Germany. The Icelandic team suffered from a poor start. The Germans gained the upper hand and built up a good lead. Admittedly, the second half was better from the Icelandic team and when 15 minutes were left, the German team only enjoyed a two-goal lead. But then they pulled ahead again and won a decisive victory, 35–27. Iceland's attacking play was satisfactory, the goals-from-shots ratio 58% but, again, the goalkeepers did not enjoy a good day and only saved some 26% of all shots. So, the first match in the second round had been lost and the goal setting aim as well: Now there was now chance of playing for a medal.

The second game in the second round was against Hungary. The first half was even but in the second half the Icelandic team gained the upper hand. This was without doubt the team's best match in the tournament and the result a resounding victory, 36–28. The goals-from-shots ratio was outstanding, around 70% and the defence, as well as goalkeeping, finally, was very good, with the goalkeepers saving around 40% of all shots. For the first time, the three key components of attack, defence and goalkeeping were all in good order. Afterwards, Snorri Steinn Guðjónsson put the result in the proper perspective: 'Hopefully we can build on this before the match against Spain tomorrow. This will never end up as a good tournament for us but by beating Spain we can prevent it from becoming a "catastrophe" for us' (Ívar Benediktsson, 2008).

So, the third game in the second round, and Iceland's last match in the tournament, was against Spain. But as before in the tournament, the team never really showed up. Spain controlled the match from beginning to end and won a convincing victory, 26–33. The Icelandic team did not make it hard for them, committing 18 technical errors. The goals-from-shots ratio was satisfactory, around 64%, but the goalkeeping was abysmal, 19.51%. With a performance like that, matches can not be won.

3.4. Tournament analysis

The Icelandic team played 6 matches in Norway. Victories were achieved against Slovakia and Hungary, losses suffered in the contests against Sweden, France, Germany and Spain. Combined, the goals-from-shots ratio was 55.87% and goalkeeping 30.64%. Looking at individual players and how much they played with their teams before the tournament reveals that that part of the preparation was not satisfactory. Guðjón Valur Sigurðsson only played 11 of the 19 matches that his team Gummersbach played. Logi Geirsson only played 6 of the 18 matches for TBV Lemgo, scoring a single goal! Einar Hólmgeirsson only played 12 of Flensburg's 18 matches. Goalkeeper Birkir Ívar Guðmundsson was always on the team sheet for TUS N-Lübbecke but like the year before, was usually on the losing side with that struggling team.

It can be said, therefore, that the preparations for the European Championship were not as good as before the 2007 World Cup. The main reason is the fact that key players were not playing with their teams on a regular basis. A few players who played a key role in Norway had not enjoyed the ideal preparation. Sigurðsson had been injured and Geirsson as well, and when he had returned to fitness he was not selected in the starting line-up for his team. Hólmgeirsson was not a first-choice player at Flensburg. For the Icelandic national team, with a more limited choice of top-players than other national teams, all this together was serious setback. The necessary match practice and fitness can not be achieved in a few exercise sessions before a major tournament. For more detailed information about the players' preparations, see the Appendix.

3.5. Realistic aims?

When the playing time of the Icelandic team's players is looked at it is a fact that can not be denied that a few players played a bigger and more important role for the 2007 World Cup than the 2008 European Championship. Thus, it can be said that Logi Geirsson and Einar Hólmgeirsson had practically no game practice when they joined the national team before the 2008 tournament. Guðjón Valur Sigurðsson had also been injured, although it must be added that he was a world-class player with more experience than Geirsson and Hólmgeirsson, and thus more likely to overcome that adversity. Sigurðsson was

determined to play in Norway and made a tremendous effort to get into shape. His discipline and effort was admirable but, still, his preparation was not as good as before the World Cup in Germany. Sigfús Sigurðsson was not match-fit, having had a knee surgery in November 2007. Jaliacky Garcia had missed the World Cup because of a knee injury, having torn ligaments before that tournament. Before the European Championship he had played a satisfactory number of games but he was obviously not the same quality player that he was before the serious injury.

When the team got together before the European Championship all these facts were clear. Many players were not at their best. Thus, the aim for a medal was clearly unrealistic. Conversely, the goal for the World Cup in Germany was more realistic, and more open; to advance from the preliminary group and then set new aims. Achieving a medal was not a specific target, but rather to set a new aim as the tournament progressed. Judging by the condition of players it would in fact have been more realistic to aim for a medal in Germany in 2007 rather than Norway in 2008. The problem was that success in Germany led to increased expectations in Norway. This is what coach Gíslason pointed to when he was asked if the aim for a medal in Norway had not been too ambitious: 'If I had said before the tournament that our aim was to advance from our group and go for tenth place, with everything above that a plus, would people not have said that we lacked all ambition and drive, and just went there to show up?' (Ívar Benediktsson, 2008).

Furthermore, an additional factor was the fact that it was vital for Iceland to advance very far at the European Championship to secure a seat at the Beijing Olympics in the summer of 2008, as coach Gíslason also pointed out: 'Maybe it was never realistic to aim for a top-three seat at the European Championship. However, if we were to have any chance of securing a seat at the Olympics, we had to aim high' (Ívar Benediktsson, 2008).

What did the players themselves think? Before the European Championship, Birkir Ívar Guðmundsson said in an interview with me that he felt that a realistic aim was seat 1–6. Afterwards he said: 'It is the key players like Ólafur Stefánsson and Guðjón Valur [Sigurðsson] and the coach who are mainly responsible for setting the goals. Personally, I felt they were realistic and good and I agreed with them. I find it better to set the aim high and not to fool oneself just to prevent possible disappointment.' Yet, the aims that the team set were higher than that which he had described as realistic and desirable.

After the tournament in Norway, I also asked a few other players about goal setting and whether they were realistic or not. This was Logi Geirsson's reply: 'The aims were fine, after a good tournament in Germany I felt it was understandable to reach now for a medal.' Guðjón Valur Sigurðsson stated: 'Yes, I felt so then and still feel so. I want to win something and put us under positive pressure. Maybe they [the aims] were unrealistic but I am still content with them because then you have no excuses. The result at the European Championship will harden us as a group but presumably, it will be decided to set a bit more modest aims for next major tournament and lessen the expectations. In any case, the view people have of us is negative if we fail, regardless of aims beforehand.'

4. Conclusions

At the beginning of this essay, its aim was described: To analyse the importance of good goal setting in light of two major tournaments of the Icelandic men's handball team; the 2007 World Cup in Germany and the 2008 European Championship in Norway.

When discussing good goal setting the point was made that all experts agree on the need to set demanding aims – but they must also be realistic. Nobody benefits from aiming for something that is so obviously out of reach. This is not a case of whether one believes oneself, or that one is not entering a contest just to show up, but rather to achieve the optimal preparation, for instance by gradually setting new aims rather than aiming right away for the top, and run the risk of disappointment at the first mishap.

It has also been pointed out here that the goal setting by the Icelandic national team for the 2007 World Cup was very sensible in this regard. First, a certain target was set and then, when that had been achieved, a new target was set, and it was only through sheer bad luck that the latter one was not achieved as well. After the tournament, there was therefore general satisfaction about the performance, even though only eighth place was the result.

An analysis of the state of players before the tournament demonstrated that they were well prepared and that is especially important for a team like Iceland that cannot rely on a wide selection of individuals. Thus, the conclusion here is that goal setting for the 2007 World Cup was an ideal example of how it should be done. The aims were realistic, based on a sensible estimate of the players' condition and rising as the tournament progressed.

Conversely, the conclusion must also be reached that the goal setting for the 2008 European Championship in Norway was not as sensible, unfortunately. It was much higher and loftier – a medal place was to be achieved, and reference was often made then to the good performance in Germany the following year, with the further reasoning that it was only sheer bad luck that prevented Iceland from reaching the podium that time around. In short, no aims were achieved at the European Championship, in a tournament marked by disappointment.

Here an analysis of the players' condition reveals that they were nowhere nearly as well prepared then as they had been before the 2007 World Cup. If this fact had been acknowledged more fully, the aims should actually have been more modest, rather than more demanding, as the case was. It is by no means certain that the team or others interested would have felt it too modest to aim first for advancing from the preliminary group as was the case at the World Cup.

To sum up, the Icelandic national team was not adequately prepared to achieve the aims that were put forward prior to the European Championship, and this was primarily due to the fact that too many players were not playing as many minutes with their local teams as was desirable. For instance, Snorri Steinn Guðjónsson moved to Denmark where a different and slower type of handball is played than in Germany and that would explain coach Alfreð Gíslason's comment that he was too slow-moving at the tournament. The lack of many top-class players meant that the Icelandic team had to rely on players who were not in their best shape or not in the starting line-up with their teams. Coach Gíslason was in this sense dependent on team selections in Germany, Denmark and elsewhere.

Furthermore, the goal setting was faulty. The one-step-at-a-time approach that worked so well at the 2007 World Cup would have been more sensible. Maybe more demanding goals could have been set within the team but to the outside world it was not necessary to put such ambitious aims forward. It quickly became clear that the players did not handle the subsequent pressure, especially in the first match against Sweden. The lack of physical shape may also have played a role here. A good case in point here is the totally different performances in vital matches against France in 2007 and 2008.

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Appendix A. Individual Players

Guðjón Valur Sigurðsson, Gummersbach, Germany

2006–2007

Played all games with his team in Bundesliga. 18 games and 115 goals, one from penalty. Three times 10 goals in a game and on average 6.38 goals per game.

2007–2008

Played 11 of 19 games with his team in Bundesliga. Scored 62 goals, 10 from penalties. On average 5.63 goals per game, once 10 goals in a game. Missed 8 matches because of injuries. Underwent surgeries for knee and shoulder injuries.

Comparison

Before 2007 World Cup Sigurðsson playes all games for his team. No serious injuries. Before 2008 European Tournament only 11 of 19 games, yet manages a goal scoring average similar to before. Preparation for 2007 better than before 2008 in terms of playing time and injuries.

Róbert Gunnarsson, Gummersbach, Germany

2006–2007

Played 17 of 18 matches. Scored 60 goals, on average 3.52 goals per game. Evenly distributed, scores in all but one match, from 1 to 6 goals per game.

2007–2008

Played all 19 games. Scores 79 goals, on average 4.15 goals per game, an increase from previous season, of 0.6 goals. Scores in every match, 2-8 goals.

Comparison

Played one more game in **2007–2008** than previous season, scores more, and thus was better prepared for European Championship than World Cup, according to goals scored and playing time.

Snorri Steinn Guðjónsson, GWD Minden, Germany, G.O.G., Denmark

2006–2007

Played 17 of 18 games in Bundesliga. Scored 85 goals, 18 penalties included. On average 5 goals per game. Scored in all matches, max. 10 goals in round 10.

2007–2008

Played all 16 games for a new team. Scored 66 goals, on average 4.12 goals. Scored in all but one match, max. 9 goals in round 7.

Comparison

Number of games similar, goal scoring drops by 0.8 goals per game. The German Bundesliga is considered the best league in the world, followed by the French and Spanish top divisions, and then the Danish league. On the other hand, Snorri Steinn moved from a team traditionally neas the bottom of the Bundesliga in recent seasons (last 5-8 years) but joined a top team in Denmark. Also played in the Champions League with G.O.G. May have had a negative impact, however, that he did not play against as many strong teams in **2007–2008** as he did in previous season.

Ásgeir Örn Hallgrímsson, TBV Lemgo, Germany, G.O.G., Denmark

2006–2007

Plaed all 18 games, and scored 25 goals, on average 1.38 goals per match. Scored in 8 games, scoreless in 10 games. Was on his second year as professional.

2007–2008

Played all 16 matches for his new team. Scored 55 goals, on average 3.43 goals on average. Great improvement in scoring, scores in all matches.

Comparison

Same difference in competion as with Snorri Steinn, his teammate at G.O.G. Did not play a big role with Lemgo, so a move was uderstandable. On the other hand, Ásgeir Örn was no longer playing against top opponents in every match. But he gains bettet match practice so presumably better prepared in 2008 than in 2007.

Logi Geirsson, TBV Lemgo, Germany

2006–2007

Played all 18 matches with his team. Scored 70 goals in 16 of these 18 matches, including 8 goals in rounds 9 and 14. Average goalscoring ratio 3.88 goals per game. One of his team‘s key players.

2007–2008

Played 6 matches out of 18. Scored a single goal (an average of 0.18 goals per match). Is either injured or not on the teamsheet for 2/3 of the season‘s matches before the European Championship. Injuries clearly a big factor.

Comparison

The Comparison is stark here. Logi Geirsson moved from being a key player with a good goalscoring record to one who only played a minority of matches and scored one goal in the whole season.

Alexander Petersson, TV Grosswallstadt and Flensburg, Germany

2006–2007

Alexander played 14 of the team‘s 17 matches, scoring a total of 66 goals, an average of 4.71 goals per game. In rounds 12 and 18 he scored 8 goals. He scored in every single game of the season, in which he participated.

2007–2008

Alexeander moved to a bigger stage. With Flensburg he played 15 of 18 matches, an average of 3.4 goals per game. Scored in all matches, most 6 goals in rounds 2 and 11.

Comparison

In both seasons, Alexander was not involved in 3 matches. His goalscoring record was better at Grosswallstadt, by 1.3 goals per game. On the other hand, Flensburg is a stronger team so that should make Alexander better prepared for the European Championship than the World Cup in 2007.

Einar Hólmgeirsson, TV Grosswallstadt and Flensburg, Germany

2006–2007

Einar played 16 of his team's 17 matches. Scores in every single match, at most 7 goals in rounds 10, 13 and 15. Scores a total of 72 goals, an average of 4.5 goals per gam. Playes a big role in his team.

2007–2008

Moves to Flensburg with teammate Alexander Petersson. Only plays 12 of 18 matches, scoring 18 goals, an average of 1.5 goals per game. Out of these 12 matches he does not score in 7 matches

Comparison

There is a big change for the worse here. Einar thrived with a mid-league team like Grosswallstadt but becoems a fringe player with a topteam like Flensburg. With hindsight, he probably moved to a team that was too big for him. Thus he was not well prepared for the European Championship. He was in good shape before the 2007 World Cup but got injured just before the tournament.

Jaliezky García, Göppingen, Germany

2006–2007

García played 5 of his team‘s 17 matches, scoring 27 goals, an average of 5.4. matches per game. In round 4 he scored 9 goals but in round 5 he suffered a torn knee ligament and was out for the season.

2007–2008

García did not playe the opening match of the season but then he scored 5 goals in round 2. Overall he played 16 of 18 mathces this season and scored 62 goals, an average of 3.87 goals per match. This is slightly less than in previous season.

Comparison

Injuries prevented García from taking part in the World Cup. Thus all **Comparison** is difficult but it is fair to say that before the knee injury he was in good form. In **2007–2008** he played regularly, only missing 2 matches. Thus, his preparation for the European Championship was adequate.

Birkir Ívar Guðmundsson, TUS N-Lübbecke, Germany

2006–2007

Birkir Ívar was always on the teamsheet. He played a total of 538 minutes and saved 133 shots, including 10 penalties. Overall he played almost half of his team‘s matches, in his first year as a professional.

2007–2008

Again, Birkir Ívar was always on the teamsheet. In 18 matches he played 602 minutes, saving 127 shots, including 10 penalties. Thus he was in goal for 24 minutes more than in the previous season, saving 6 fewer shots.

Comparison

Birkir Ívar was considered Iceland‘s goalkeeper number one. His team in Germany only won 4 matches, and losing 14 in **2006–2007**. The same ratio occurred the following year. Thus, in two years he only enjoyed victory 8 times, and only played about half of his team‘s matches. This is a worrying statistic for a number one national goalkeeper. For instance, this can definitely harm player‘s self confidence.

Explanations for abbreviations

M9: Goals from outside the 9-metre line or further outside.

M6: Goals from the 6-metre line or corners.

K9: Failed shot from 9-metre line or further outside.

K6: Failed shot from 6-metre line, in regular play or fast breaks.

TF: Techincal failure. Missed pass, attacking foul or oher errors that cause the team to lose the ball.

H1: Goal from the first wave in a fast break

H2: Goal from the second wave in a fast break, i.e. when one or more players of opposing team have managed to run back into defence.

Pen.: Goal from penalty

V-K: Missed penalty

Explanations for goalkeepers
Saved shots from 6 metres: All shots, whether from line or corners

Saved shots from 9 metres: All shots from 9-metre line or beyond

Pen.: All saved penalties

H1: All saved shots from first wave fastbreaks

H2: All saved shots from second wave fastbreaks

Tactics of the Iceland team and its opponents

Tactic: When attack is clearly conducted according to a specific tactic.

H1: Goal from the first wave in a fast break.

H2: Goal from the second wave in a fast break, i.e. when one or more players of opposing team have managed to run back into defence.

Individual effort: A goal through individual effort, not a specific team effort.

Pen.: Goal from penalty.

+ or –
Team has a player advantage or disadvantage. Goals scored under those circumstances.

5+1 or 5-1 defence
One defender is on 9-metre line or beyond. Other defenders behind him. In 5-1 defence the defender is always in the middle of the defending line, facing the attacking midfielder.

6-0 defence
All defenders close to 6-metre line.

4-2 defence
4 defenders by 6-metre line, 2 by 9 metres.

3-2-1 defence
3 defenders by 6-metre line, 2 by 9-10 metres, 1 beyond that

Iceland – Ukraine: 29-32 **WC**
Germany 2007
Iceland goals (players)

	M-9	M-6	K-9	K-6	TF	H-1	H-2	Pen.	V-K	Goals/shots
Logi	3	1	3	1						4/8
Guðjón		1	1	1	1	3	1			5/7
Snorri	1		3		4			5	1	6/10 pen. 5/6
Róbert					2					
Ólafur	1		2		8			3	1	4/7 pen. 3/4
Sigfús					1	1				1/1
Alexander	1	3	1	1		1	2			7/9
Sverre					1					
Vignir		1								1/1
Arnór		1	1							1/2

	M-9	M-6	K-9	K-6	T-F	H-1	H-2	Pen.	V-K	Goals/shots
Combined	6	7	11	3	17	5	3	8	2	29/45

Goals scored	M-9	M-6	H-1	H-2	Pen.
Combined %	20.68%	24.13%	17.24%	10.34%	27.58%

Errors	K-9	K-6	T-F	V-K
Combined %	33.33%	9.09%	51.51%	6.06%

Shooting ratio	64.44%
T-F and shots	46.77%

Iceland

Goalkeepers

Saved	6-metres	9-metres	Pet	H1	H2
Roland	4	4	1	1	1
Birkir					

Goals conceded	6-metres	9-metres	Pen	H1	H2
Roland	4	12	3	7	1
Birkir		2	3		

	Shots saved	Goals/shots	Ratio
Roland	11	27/38	28.94%
Bikir		5/5	0%

Combined goals/shots
11 saves – 43 shots (25.58%)

Roland Eradze played most of the match, saving 4 shots from 6-metre line, 4 from 9 metres. Gets many goals from 9 metres, or 12 in all, and 7 fast breaks. Birkir Ívar saves no shot and concedes 5 goals

Defensive play

Iceland started with 5+1 defence against the opponent's leftwing shooter. On 38 minute, coach Gíslason changed tactics and moved to 5+1 againt the right-side shooter. A the end of the match the move was to 4-2 defence. When Iceland had a player advantage the 5+1 defence was used. Ukraine played 5+1 throughout the match.

Tactics

	Tactic	H-1	H-2	Individual	Pen.	+ or -
Iceland	6	5	3	4	8	3

Ukraine

	Tactic	H-1	H-2	Individual	Pen.	+ or -
Ukraine	4	7	1	8	6	6

Iceland-France: 32-24 WC 2007

Germany

Iceland goals (players)

	M-9	M-6	K-9	K-6	T-F	H-1	H-2	Pen.	V-K	Goals/shots
Logi	1	4	2		1					5/7
Guðjón		4		1		1				5/6
Snorri	1	2	2		3		1			4/6
Róbert					1					0/0
Ólafur	1	1	2		2			4		6/8 pen. 4/4
Ásgeir		2		1	1					2/3
Sigfús		2		1						2/3
Alexander	1	1				1				3/3
Ragnar					2			1		1/1 pen.
Vignir						1				1/1
Markús	1	1	2				1			3/5

	M-9	M-6	K-9	K-6	T-F	H-1	H-2	Pen.	V-K	Goals/shots
Combined	5	17	8	3	10	3	2	5	0	32/43

Goals scored	M-9	M-6	H-1	H-2	Pen.
Combined %	15.62%	53.12%	9.37%	6.25%	15.62%

Errors	K-9	K-6	T-F	V-K
Combined %	38.09%	14.28%	47.61%	0%

Shooting ratio	74.41%
T-F and shots	60.37%

Iceland

Goalkeepers

Saves	6-metres	9-metres	Pen.	H1	H2
Birkir	7	6	3 (one hit bar)		
Hreiðar			1 (fór yfir)		

Goals conceded	6-metres	9-metres	Pen.	H1	H2
Birkir	11	8	1	2	1
Hreiðar			1		

	Saves	Goals conceded/shots	Ratio
Birkir	15	23/38	39.47%
Hreiðar		1/1	0%

Combined
15 saves – 39 shots (38.46%)

Defensive play

Iceland played 6-0 defence throughout the match. With a player advantage 5-1 was used. France used 5-1 but from 32 to 54 minute they had a player on Ólafur Stefánsson. Then they went to 6-0 until end of match.

Tactics

	Tactic	H-1	H-2	Individual	Pen.	+ or -
Iceland	9	3	2	8	5	5

France

	Tactic	H-1	H-2	Individual	Pen.	+ or -
France	6	2	1	12	2	1

Iceland-Tunisia: 36-31 **Advance round WC**

2007 Germany

Goals for Iceland (players)

	M-9	M-6	K-9	K-6	T-F	H-1	H-2	Pen.	V-K	Goals/shots
Logi	6	1	3	1	1					7/11
Guðjón		3	1	2	1	2				5/8
Snorri	1	2	2	1			1	2	1	6/10 (pen.2/1)
Róbert		3			1					3/3
Ólafur	3	2	2	1	3		1	2		8/11
Ásgeir		3			1					3/3
Sigfús				1						0/1
Alexander		2				1	1			4/4

	M-9	M-6	K-9	K-6	T-F	H-1	H-2	Pen.	V-K	Goals/shots
Combined	10	16	8	6	7	2	3	4	1	36/51

Goals scored	M-9	M-6	H-1	H-2	Pen.
Combined %	27.77%	44.44%	5.55%	8.33%	11.11%

Errors	K-9	K-6	T-F	V-K
Combined %	36.36%	27.27%	31.81%	4.54%

Shooting ratio	70.58%
T-F and shots	62.06%

Iceland

Goalkeepers

Saves	6-metres	9-metres	Pen.	H1	H2
Roland	4	9	1 (over goal)		
Birkir		1	1 (over goal)		

Goals conceded	6-metres	9-metres	Pen.	H1	H2
Roland	9	8		1	2
Birkir	1	4	2	1	2

	Shots saved	Goals/shots	Ratio
Roland	13	20/33	39.39%
Birkir	1	10/11	9.09%

Combined saves/shots
14 Saves – 44 shots (31.81%) ratio

Defensive play

Iceland began by playing 6-0 defence until 11 minute, when 5+1 was used, until 15 minute when the left-shooter was focused on. On 22 minute Iceland reverted to 6-0. At the start of second half Iceland used 5-1 and stayed with that until the end of the match. Tunisia began with 3-2-1 and then on 39 minute they turned to 5+1 with focus on Ólafur Stefánsson. On 56 minute they went back to 3-2-1 defence.

Tactics

	Tactic	H-1	H-2	Individual effort	Pen.	+ or -
Iceland	10	3	3	8	4	8

Tunisia

	Tactic	H-1	H-2	Individual effort	Pen.	+ or -
Tunisia	6	2	4	10	2	6

Iceland-Poland:33-35 **Advance round WC 2007 Germany**

Goals for Iceland (players)

	M-9	M-6	K-9	K-6	T-F	H-1	H-2	Pen.	V-K	Goals/shots
Logi	3	1	3	1	1					4/8
Guðjón		3		2		1	2			6/8
Snorri	2	2	3	1	2		1			5/9
Róbert		4			2	1	1			6/6
Ólafur	4	1	1		4			1		6/7 (1/1 pen.)
Ásgeir				2	1					0/2
Arnór			1							0/1
Alexander	2	2			1	1	1			6/6

	M-9	M-6	K-9	K-6	T-F	H-1	H-2	Pen.	V-K	Goals/shots
Combined	11	13	8	6	11	3	5	1	0	33/57

Goals scored	M-9	M-6	H-1	H-2	Pen.
Combined %	33.33%	39.39%	9.09%	15.15%	3.03%

Errors	K-9	K-6	T-F	V-K
Combined %	32%	24%	44%	0%

Shooting ratio	57.89%
T-F and shots	48.52%

Iceland

Goalkeepers

Saves	6-metres	9-metres	Pen.	H1	H2
Birkir	4	6	2	1	
Roland		2			

Goals conceded	6-metres	9-metres	Pen.	H1	H2
Birkir	2	14	1	4	4
Roland	4	3		2	1

	Shots saved	Goals/shots	Ratio
Birkir	13	25/38	34.21%
Roland	2	10/12	16.66%

Combined
15 Shots saved – 50 shots (30%) Ratio

Defensive play

Iceland began by playing 5+1, focusing on Poland's righside shooter. On 21 minute Iceland turned to normal 5+1 and did so until 34 minute when 6-0 was used until the end of the match. Poland played 6-0 throughout the match.

Tactics

	Tactic	H-1	H-2	Individual effort	Pen.	+ or -
Iceland	4	2	5	10	1	11

	Tactic	H-1	H-2	Individual effort	Pen.	+ or -
Poland	3	6	5	12	1	8

Iceland-Slovenia: 32-31 Advance round WC 2007

Germany

Goals for Iceland (players)

	M-9	M-6	K-9	K-6	T-F	H-1	H-2	Pen.	V-K	Goals/shots
Logi	7		1		2		1		1	8/10
Guðjón		1		2	3	1	2			4/6
Snorri	3		3				1	3	1	7/11 (4/3 Pen.)
Róbert		1			2		1			2/2
Ólafur	3		5		2			1	1	4/10 (2/1 Pen.)
Ásgeir				1						0/1
Sigfús		2		1						2/3
Alexander	1	1		2	1		1			3/5
Vignir				2	1					0/2
Sverre					1					0/0
Markús	2									2/2

	M-9	M-6	K-9	K-6	T-F	H-1	H-2	Pen.	V-K	Goals/shots
Combined	16	5	9	8	12	1	6	4	3	32/52

Goals scored	M-9	M-6	H-1	H-2	Pen.
Combined %	50%	15.62%	3.12%	18.75%	9.37%

Errors	K-9	K-6	T-F	V-K
Combined %	28.12%	25%	37.5%	9.37%

Shooting ratio	61.53%
T-F and shots	50%

Iceland

Goalkeepers

Saves	6-metres	9-metres	Pen.	H1	H2
Roland	2	1	2		1
Birkir	6	7		2	4

Goals conceded	6-metres	9-metres	Pen.	H1	H2
Roland	1		1		1
Birkir	11	7	2	1	7

	Shots saved	Goals/shots	Ratio
Roland	6	3/9	66.6%
Birkir	19	28/47	40.42%

Combined
25 Shots saved – 56 shots (44.64%) Ratio

Defensive play

Iceland began by playing 6-0 and did so until 44 minute when 5+1 was used to the end of the match. Slovenia also began by playing 6-0 and changed on 46 minute to 5+1, using that method until the end.

Tactics

	Tactic	H-1	H-2	Individual effort	Pen.	+ or -
Iceland	8	1	6	6	4	7

	Tactic	H-1	H-2	Individual effort	Pen.	+ or -
Slovenia	2	1	8	15	3	2

Iceland-Germany: 28-33 **Advance round WC**

Germany 2007

Goals for Iceland (players)

	M-9	M-6	K-9	K-6	T-F	H-1	H-2	Pen.	V-K	Goals/shots
Logi	1	1	2	1	1		1		1	3/6
Guðjón		3	1	2	2	3	1			7/10
Snorri			3		1					0/3
Róbert		2		1						2/3
Ólafur	3		2							3/5
Ásgeir			2	1						0/3
Arnór			2		1					0/2
Alexander	1	2		1	2					3/4
Vignir				1						0/1
Markús	7	3	3		2					10/13

	M-9	M-6	K-9	K-6	T-F	H-1	H-2	Pen.	V-K	Goals/shots
Combined	12	11	15	7	9	3	2	0	1	28/50

Goals scored	M-9	M-6	H-1	H-2	Pen.
Combined %	42.85%	39.28%	10.71%	7.14%	0%

Errors	K-9	K-6	T-F	V-K
Combined %	46.87%	21.87%	28.12%	3.12%

Shooting ratio	56%
T-F and shots	47.45%

Iceland

Goalkeepers

Saves	6-metres	9-metres	Pen.	H1	H2
Hreiðar	4	4			
Birkir	3	5			

Goals conceded	6-metres	9-metres	Pen.	H1	H2
Hreiðar	7	3		1	2
Birkir	3	8	1	3	5

	Shots saved	Goals/shots	Ratio
Hreiðar	8	13/21	38.09%
Birkir	8	20/28	28.57%

Combined
16 Shots saved – 49 shots (32.65%) Ratio

Defensive play

Iceland began by playing 6-0, moving in second half to 5+1. In last 6 minutes, 6-0 was used again. Germany used 6-0 throughout the match.

Tactics

	Tactic	H-1	H-2	Individual effort	Pen.	+ or -
Iceland	7	4	2	10	0	5

	Tactic	H-1	H-2	Individual effort	Pen.	+ or -
Þýskaland	9	4	7	7	1	5

Iceland-Denmark:41-42 Quarterfinals WC 2007

Germany

Goals for Iceland (players)

	M-9	M-6	K-9	K-6	T-F	H-1	H-2	Pen.	V-K	Goals/shots
Logi	5		5		5		1			6/11
Guðjón	1	1		1	1	1	2			5/6
Snorri	3	4	2		2		4	4	1	15/18 (5/4 Pen.)
Róbert		3			1		1			4/4
Ólafur	2	1	4		3		1	2	1	6/11
Ásgeir						1				1/1
Sigfús							1			1/1
Alexander	1	1	1	1			1			3/5
Einar Örn					1					0/0

	M-9	M-6	K-9	K-6	T-F	H-1	H-2	Pen.	V-K	Goals/shots
Combined	12	10	12	2	13	2	11	6	2	41/57

Goals scored	M-9	M-6	H-1	H-2	Pen.
Combined %	29.26%	24.39%	4.87%	26.82%	14.63%

Errors	K-9	K-6	T-F	V-K
Combined %	41.37%	6.89%	44.82%	6.89%

Shooting ratio	71.92%
T-F and shots	58.57%

Iceland

Goalkeepers

Saves	6-metres	9-metres	Pen.	H1	H2
Hreiðar		1			1
Birkir	2	8	1	1	1

Goals conceded	6-metres	9-metres	Pen.	H1	H2
Hreiðar	2	2			
Birkir	15	19	1	3	

	Shots saved	Goals/shots	Ratio
Hreiðar	2	4/6	33.33%
Birkir	13	38/51	25.49%

Combined
15 Shots saved – 51 shots (29.41%) Ratio

Defensive Play

Iceland began by playing 6-0 but turning to 5+1 on 19 minute, focusing on the leftwing shooter in the Danish team. At the start of second half Iceland moved to 6-0 and again to 5+1 on 39 minute, but then focusing on the right winger. On 49 minute there was yet another change when 5+1 on the left side was used. In overtime regular 5-1 was used.
Denmark used 6-0 up to 41 minute when they focused on Ólafur Stefánsson, but only for a bit over one minute. 5 minutes into extratime Denmark moved to 5-1 style.

Tactics

	Tactic	H-1	H-2	Individual effort	Pen.	+ or -
Iceland	13	2	11	5	6	4

	Tactic	H-1	H-2	Individual effort	Pen.	+ or -
Denmark	19	3	0	13	1	6

Iceland – Russia: 25-28 Seats 5-8 WC 2007 Germany

Goals for Iceland (players)

	M-9	M-6	K-9	K-6	T-F	H-1	H-2	Pen.	V-K	Goals/shots
Logi	1		5	1	1					1/7
Guðjón		1		2		5				6/8
Snorri			2	1	3		2	1		3/6
Róbert				3	2					0/3
Ólafur	4		4		2			3	1	7/12
Markús		1	2		1					1/3
Sigfús		1			2					1/1
Alexander	1	1	1	2	1	1	3			6/9
Arnór			1							0/1
Sverre					1					0/0

	M-9	M-6	K-9	K-6	T-F	H-1	H-2	Pen.	V-K	Goals/shots
Combined	6	4	15	9	13	6	5	4	1	25/50

Goals scored	M-9	M-6	H-1	H-2	Pen.
Combined %	24%	16%	24%	20%	16%

Errors	K-9	K-6	T-F	V-K
Combined %	39.47%	23.68%	34.21%	2.63%

Shooting ratio	50%
T-F and shots	39.68%

Iceland

Goalkeepers

Saves	6-metres	9-metres	Pen.	H1	H2
Birkir	6	7	1 (over the goal)	1	1
Hreiðar					

Goals conceded	6-metres	9-metres	Pen.	H1	H2
Birkir	15	4		3	6
Hreiðar					

	Shots saved	Goals/shots	Ratio
Birkir	15	28/43	34.88%
Hreiðar		0/0	0%

Combined
15 Shots saved – 43 shots (34.88%) Ratio

Defensive play

Iceland began by playing 6-0 and did so until the end of the match. Russia began by using 5-1 but on 24 minute they focused on Ólafur Stefánsson. At the start of the second half Russia went to their traditional 5+1 defence. On 43 minute they again focused on Ólafur and did so until the end of the match.

Tactics

	Tactic	H-1	H-2	Individual effort	Pen.	+ or -
Iceland	2	6	5	5	4	3

	Tactic	H-1	H-2	Individual effort	Pen.	+ or -
Russia	3	3	6	12	0	4

Iceland – Spain: 36-40 Seats 7-8 WC 2007 Germany

Goals for Iceland (players)

	M-9	M-6	K-9	K-6	T-F	H-1	H-2	Pen.	V-K	Goals/shots
Logi	3		1				2			5/6
Guðjón	1	2		3	1	4	1			8/11
Snorri		2	2	2	1		3		1	5/10
Róbert		1		1		1				2/3
Ólafur	5		5		1		1	2		8/13
Vignir				2		1	1			2/4
Sigfús				1	2					0/1
Alexander	2			4		1	2			5/9
Arnór		1			1					1/1

	M-9	M-6	K-9	K-6	T-F	H-1	H-2	Pen.	V-K	Goals/shots
Combined	11	6	8	13	6	7	10	2	1	36/58

Goals scored	M-9	M-6	H-1	H-2	Pen.
Combined %	30.55%	16.66%	19.44%	27.77%	5.55%

Errors	K-9	K-6	T-F	V-K
Combined %	28.57%	46.42%	21.42%	3.57%

Shooting ratio	62.06%
T-F and shots	56.25%

Iceland

Goalkeepers

Saves	6-metres	9-metres	Pen.	H1	H2
Birkir	6	2			
Hreiðar	1	1			

Goals conceded	6-metres	9-metres	Pen.	H1	H2
Birkir	12	9	4	2	8
Hreiðar	1	2	1		1

	Shots saved	Goals/shots	Ratio
Birkir	8	35/43	18.60%
Hreiðar	2	5/7	28.57%

Combined
10 Shots saved – 50 shots (20%) Ratio

Defensive Play

Iceland began by playing 6-0, moving to 5+1 on 21 minute, focusing on Spain's midfielder. On 28 minute 6-0 was used again. With 2 minutes left of play Iceland adopted the man-on-man approach. When they had a player's advantage, Iceland used 4-2 defence and took 2 Spanish players out of their play. Spain used 5+1 with focus on Iceland's midfielder and did so throughout the match.

Tactics

	Tactic	H-1	H-2	Individual effort	Pen.	+ or -
Iceland	8	7	10	4	2	5

	Tactic	H-1	H-2	Individual effort	Pen.	+ or -
Spain	11	2	9	7	5	6

Combined statistics for players at WC Germany 2007

	M-9	M-6	K-9	K-6	T-F	H-1	H-2	Pen.	V-K	Goals/shots
Logi	30	8	25	5	12		5		2	43/75 (57.33%)
Guðjón	2	19	3	16	9	21	9			51/70 (72.85%)
Snorri	11	12	22	5	16		13	15	5	51/95 (53.68%)
Róbert		14		5	11	2	3			19/24 (79.16%)
Ólafur	26	5	27	1	25		3	18	4	52/84 (61.90%)
Ásgeir		5	2	5	3	1				6/13 (46.15%)
Sigfús		5		3	5	1	1			7/10 (70%)
Alexander	10	13	3	11	5	6	11			40/54 (74.07%)
Einar Örn					1					0/0 (0%)
Vignir		1		5	1	2	1			4/9 (44.44%)
Markús	10	5	7		3		1			16/23 (69.56%)
Arnór		2	5		2					2/7 (28.57%)
Ragnar					2			1		1/1 (100%)
Sverrir					3					0/0 (0%)

	M-9	M-6	K-9	K-6	T-F	H-1	H-2	Pen.	V-K	Goals/shots
Combined	89	89	94	56	98	33	47	34	11	292/453 (64.45%)

	M-9	M-6	K-9	K-6	T-F	H-1	H-2	Pen.	V-K	Goals/shots-errors.
Combined	89	89	94	56	98	33	47	34	11	292/551 (52.99%)

	M-9	M-6	H-1	H-2	Pen.
Goals %	30.47%	30.47%	11.30%	16.09%	11.64%

M-9 and M-6	H-1 and H-2	Pen.
60.94%	27.39%	11.64%

Errors	K-9	K-6	T-F	V-K
%	36.29%	21.62%	37.83%	4.24%

Icelandic goalkeepers

	Shots saved	Goals/shots	Ratio %
Birkir	92	212/304	30.26%
Roland	32	60/92	34.78%
Hreiðar	12	23/35	34.28%

	Shots saved	Goals/shots	Ratio %
Combined	136	295/431	31.55%

Varin shots	6-M	9-M	Pen.	H-1	H-2
Birkir	34	42	5	5	6
Roland	10	16	3	1	2
Hreiðar	5	6			1

Combined Ratio

	6-M	9-M	Pen.	H-1	H-2
Shots saved	49	64	8	6	9
%	36.02%	47.05	5.88%	4.41%	6.61%

Goals by Iceland

	Tactics	H1	H2	Individual	Pen.	+ or -
Goals	67	33	47	60	34	51
%	22.94%	11.30%	16.09%	20.54%	11.64%	17.46%

Goals by opponents

	Tactics	H-1	H-2	Individual	Pen.	+ or -
Ukraine	4	7	1	8	6	6
France	6	2	1	12	2	1
Tunisia	6	2	4	10	2	6
Poland	3	6	5	12	1	8
Slovenia	2	1	8	15	3	2
Germany	9	4	7	7	1	5
Denmark	19	3	0	13	1	6
Russia	3	3	6	12	0	4
Spain	11	2	9	7	5	6
Combined	63	30	41	96	21	44
%	21.35%	10.16%	13.89%	32.54%	7.11%	14.91%

Iceland – Sweden: 19-24 Preliminary round

EC 2008

Goals for Iceland (players)

	M-9	M-6	K-9	K-6	T-F	H-1	H-2	Pen.	V-K	Goals/shots
Logi	1		6				2			3/9
Guðjón			1	2		2		2		4/7
Snorri		1	2	2	2			1	1	2/7
Ólafur	3		1		5			1	1	4/6
Róbert		1		2	1		1			2/4
Ásgeir	1			1			1			2/3
Einar H.	1		5	1	1					1/7
Hannes					1					0/0
Alexander						1				1/1
García				1	2					0/1
Vignir				1	1					0/1

	M-9	M-6	K-9	K-6	T-F	H-1	H-2	Pen.	V-K	Goals/shots
Combined	6	2	15	10	13	3	4	4	2	19/46

Goals scored	M-9	M-6	H-1	H-2	Pen.
Combined %	31.57%	10.52%	15.78%	21.05%	21.05%

Errors	K-9	K-6	T-F	V-K
Combined %	37.5%	25%	32.5%	5%

Shooting ratio	41.30%
T-F and shots	32.20%

Goalkeepers

Saves	6-metres	9-metres	Pen.	H1	H2
Birkir	1	5			2
Hreiðar	3	1			

Goals conceded	6-metres	9-metres	Pen.	H1	H2
Birkir	5	9	4	3	
Hreiðar		2		1	

	Shots saved	Goals/shots	Ratio
Birkir	8	21/29	27.58%
Hreiðar	4	3/7	57.14%

Combined
12 Shots saved – 36 shots (33.33%) Ratio

Defensive Play

Iceland began by playing 5+1, against the left wing on the Swedish side. On 43 minute Iceland switched to the right-wing shooter until the 49 minute when 6-0 was tried, until the 56 minute when 5+1 to the right was tried again. Sweden used 6-0 throughout the match.

Tactics

	Tactic	H-1	H-2	Individual effort	Pen.	+ or -
Iceland	2	3	4	4	4	2

	Tactic	H-1	H-2	Individual effort	Pen.	+ or -
Sweden	7	4	0	6	4	3

Iceland – Slovakia: 28-22 Preliminary round

EC 2008

Goals for Iceland (players)

	M-9	M-6	K-9	K-6	T-F	H-1	H-2	Pen.	V-K	Goals/shots
Logi	1	1	4		2	1	1			4/8
Guðjón		2	1	2		5			1	7/11
Snorri	1		3					1	1	2/6
Róbert		3		1	3		1			4/5
Ásgeir		1	1	1	1	1				2/4
Einar H.		1	3	1	2					1/5
Hannes		1			3					1/1
Alexander			1	3	2	3	2			5/9
García		1			1					1/1
Vignir						1				1/1

	M-9	M-6	K-9	K-6	T-F	H-1	H-2	Pen.	V-K	Goals/shots
Combined	2	10	13	8	14	11	4	1	2	28/51

Goals scored	M-9	M-6	H-1	H-2	Pen.
Combined %	7.14%	35.71%	39.28%	14.28%	3.57%

Errors	K-9	K-6	T-F	V-K
Combined %	35.13%	21.62%	37.83%	5.40%

Shooting ratio	54.90%
T-F and shots	43.07%

Goalkeepers

Saves	6-metres	9-metres	Pen.	H1	H2
Birkir	3	1	1	1	
Hreiðar	2	6			

Goals conceded	6-metres	9-metres	Pen.	H1	H2
Birkir	4	2	2	2	
Hreiðar	2	1	3	3	3

	Shots saved	Goals/shots	Ratio
Birkir	6	10/16	37.5%
Hreiðar	8	12/20	40%

Combined
14 Shots saved – 36 shots (38.88%) Ratio

Defensive Play

Iceland played the whole match 5+1 against the left wing player of Slovakia. Slovakia played 6-0 throughout.

Tactics

	Tactic	H-1	H-2	Individual effort	Pen.	+ or -
Iceland	3	11	4	2	1	7

	Tactic	H-1	H-2	Individual effort	Pen.	+ or -
Slovakia	0	5	3	5	5	4

Iceland – France: 21-30 **Preliminary round EC 2008**

Goals for Iceland (players)

	M-9	M-6	K-9	K-6	T-F	H-1	H-2	Pen.	V-K	Goals/shots
Logi		1	4		1			1	1	2/7
Guðjón		2	2	1	3	2			1	4/8
Snorri	1	1	2		2			2		4/6
Róbert		1		1	5		1			2/3
Ásgeir			2	1						0/3
Einar H.	1	1	4							2/6
Hannes					1					0/0
Alexander	2	3	1							5/6
Sigfús					1					0/0
Vignir					1	1				1/1
Bjarni F.				1		1				1/2

	M-9	M-6	K-9	K-6	T-F	H-1	H-2	Pen.	V-K	Goals/shots
Combined	4	9	15	4	14	4	1	3	2	21/42

Goals scored	M-9	M-6	H-1	H-2	Pen.
Combined %	19.04%	42.85%	19.04%	4.76%	14.28%

Errors	K-9	K-6	T-F	V-K
Combined %	42.85%	11.42%	40%	5.71%

Shooting ratio	50%
T-F and shots	37.5%

Goalkeepers

Saves	6-metres	9-metres	Pen.	H1	H2
Birkir	2	4		1	
Hreiðar	1	3	1		

Goals conceded	6-metres	9-metres	Pen.	H1	H2
Birkir	5	5	2	1	2
Hreiðar	6	4		2	3

	Shots saved	Goals/shots	Ratio
Birkir	7	15/22	31.81%
Hreiðar	5	15/20	25%

Combined
12 Shots saved – 42 shots (28.57%) Ratio

Defensive play

Iceland began the match by playing 5-1. Already in 9 minute 5+1 was used, to the right. On 21 minute, 6-0 was attempted. When 10 minutes of the match remained, 5+1 to the left-wing shooter was used until the end of the match. France played 5-1 throughout.

Tactics

	Tactic	H-1	H-2	Individual effort	Pen.	+ or -
Iceland	5	4	1	3	3	5

	Tactic	H-1	H-2	Individual effort	Pen.	+ or -
France	5	3	6	10	2	4

Iceland – Germany: 27- 35 **Advance Round, EC 2008**

Goals for Iceland (players)

	M-9	M-6	K-9	K-6	T-F	H-1	H-2	Pen.	V-K	Goals/shots
Logi	1		1		1					1/2
Guðjón	2	1	5		1		3			6/11
Snorri	2		2	1	4					2/5
Ólafur S.	3		2	1	3		1	4		8/11
Ásgeir				1						0/1
Einar H.	1		3							1/4
Hannes		1		1	1					1/2
Alexander		2		1	1	1	1			4/5
Vignir		2		1		2				4/5
Bjarni F.				1						0/1

	M-9	M-6	K-9	K-6	T-F	H-1	H-2	Pen.	V-K	Goals/shots
Combined	9	6	13	7	11	3	5	4	0	27/47

Goals scored	M-9	M-6	H-1	H-2	Pen.
Combined %	33.33%	22.22%	11.11%	18.51%	14.81%

Errors	K-9	K-6	T-F	V-K
Combined %	41.93%	22.58%	35.48%	0%

Shooting ratio	57.44%
T-F and shots	46.55%

Goalkeepers

Saves	6-metres	9-metres	Pen.	H1	H2
Birkir	2	7			
Hreiðar	1	1		1	

Goals conceded	6-metres	9-metres	Pen.	H1	H2
Birkir	6	6	1	2	2
Hreiðar	6	6	1	4	1

	Shots saved	Goals/shots	Ratio
Birkir	9	17/26	34.61%
Hreiðar	3	18/21	14.28%

Samanlögð Ratio/shots
12 Shots saved – 47 shots (25.53%) Ratio

Defensive play

Iceland began by playing 5-1 but as soon as 5 minute 5+1 against the left-wing shooter was used. On 12 minute 6-0 was attempted and that was used until one minute was left of the game when 5+1 to the left was used again. Germany played 6-0 as they usually do.

Tactics

	Tactic	H-1	H-2	Individual effort	Pen.	+ or -
Iceland	2	3	5	8	4	5

	Tactic	H-1	H-2	Individual effort	Pen.	+ or -
Germany	8	6	3	8	2	8

Iceland – Hungary: 36-28 Advance Round EC 2008

Goals for Iceland (players)

	M-9	M-6	K-9	K-6	T-F	H-1	H-2	Pen.	V-K	Goals/shots
Logi	2									2/2
Guðjón		2	1	3	1	2		2		6/10
Snorri	4	3	2		3	1	2	1	1	11/14
Ólafur S.	3		2	2	2		1	1	1	5/10
Róbert		4		2	1		1			5/7
Ásgeir		1								1/1
Hannes		2			1					2/2
Alexander		3		2		1				4/6

	M-9	M-6	K-9	K-6	T-F	H-1	H-2	Pen.	V-K	Goals/shots
Combined	9	15	5	9	8	4	4	4	2	36/52

Goals scored	M-9	M-6	H-1	H-2	Pen.
Combined %	25%	41.66%	11.11%	11.11%	11.11%

Errors	K-9	K-6	T-F	V-K
Combined %	20.83%	37.5%	33.33%	8.33%

Shooting ratio	69.23%
T-F and shots	60%

Goalkeepers

Saves	6-metres	9-metres	Pen.	H1	H2
Birkir		1			
Hreiðar	6	9	1	1	

Goals conceded	6-metres	9-metres	Pen.	H1	H2
Birkir	2	3	2		4
Hreiðar	4	5	5	1	2

	Shots saved	Goals/shots	Ratio
Birkir	1	11/12	8.33%
Hreiðar	17	17/34	50%

Combined
18 Shots saved – 46 shots (39.13%) Ratio

Defensive play

Iceland began by playing 5-1 but in 9 minute 9+1 to the right was used. Again in 13 minute 5-1 was used. After 22 minutes 6-0 was used until the end of the match. Similarly, Hungary began with 5-1, moving to 6-0 in 23 minute but three minutes later again to 5-1. In the whole second half they played 6-0.

Tactics

	Tactic	H-1	H-2	Individual effort	Pen.	+ or -
Iceland	11	4	4	4	4	9

	Tactic	H-1	H-2	Individual effort	Pen.	+ or -
Hungary	4	1	6	5	7	5

Iceland –Spain: 26-33 **Advance Round EC**

2008

Goals for Iceland (players)

	M-9	M-6	K-9	K-6	T-F	H-1	H-2	Pen.	V-K	Goals/shots
Logi		2	2		2		1			3/5
Guðjón	1	3	1	1	5		1	2	1	7/10
Snorri	1	5	3	1	2			1		7/10
Ólafur S.		2	1		5					2/3
Róbert		2		1	1					2/3
Einar H.	2		3							2/5
Vignir				1	1	1	1			2/3
Hannes			1		1					0/1
Alexander		1			1					1/1

	M-9	M-6	K-9	K-6	T-F	H-1	H-2	Pen.	V-K	Goals/shots
Combined	4	15	11	4	18	1	3	3	1	26/41

Goals scored	M-9	M-6	H-1	H-2	Pen.
Combined %	15.38%	57.69%	3.84%	11.53%	11.53%

Errors	K-9	K-6	T-F	V-K
Combined %	32.35%	11.76%	52.94%	2.94%

Shooting ratio	63.41%
T-F and shots	44.06%

Goalkeepers

Saves	6-metres	9-metres	Pen.	H1	H2
Birkir	2	1			
Hreiðar	1	3	1		

Goals conceded	6-metres	9-metres	Pen.	H1	H2
Birkir	3		2	2	1
Hreiðar	7	9	3	1	5

	Shots saved	Goals/shots	Ratio
Birkir	3	8/11	27.27%
Hreiðar	5	25/30	16.66%

Combined
8 Shots saved – 41 shots (19.51%) Ratio

Defensive play

Iceland began by using 6-0 and did so until 17 minute when 5+1 to the left was used. In 25 6-0 was again attempted and used until the end of the match. Spain used 5-1 throughout.

Tactics

	Tactic	H-1	H-2	Individual effort	Pen.	+ or -
Iceland	8	1	3	4	3	7

	Tactic	H-1	H-2	Individual effort	Pen.	+ or -
Spain	7	3	6	7	5	5

Players combined, 2008 EC in Norway

	M-9	M-6	K-9	K-6	T-F	H-1	H-2	Pen.	V-K	Goals/shots
Logi	5	4	17		6	1	4	1	1	15/33 (45.45%)
Guðjón	3	10	11	9	10	11	4	6	3	34/57 (59.64%)
Snorri	9	10	14	4	13	1	2	6	3	28/49 (57.14%)
Róbert		11	2	5	11		4			15/22 (68.18%)
Ólafur	9	2	6	3	15		2	6	2	19/30 (63.33%)
Ásgeir	1	2	3	4	1	1	1			5/12 (41.66%)
Sigfús					1					0/0
Alexander	2	9	2	6	4	6	3			20/28 (71.42%)
Vignir		2		3	3	5	1			8/11 (72.72%)
García		1		1	3					1/2 (50%)
Bjarni				2		1				1/3 (33.33%)
Hannes		4	2	1	7					4/7 (57.14%)
Einar H.	5	2	18	2	3					7/27 (25.92%)

	M-9	M-6	K-9	K-6	T-F	H-1	H-2	Pen.	V-K	Goals/shots
Combined	34	57	75	40	77	26	21	19	9	157/281 (55.87%)

	M-9	M-6	K-9	K-6	T-F	H-1	H-2	Pen.	V-K	Goals/shots-errors
Combined	34	57	75	40	77	26	21	19	9	157/358 (43.85%)

	M-9	M-6	H-1	H-2	Pen.
Goals %	21.65%	36.30%	16.56%	13.37%	5.73%

M-9 and M-6	H-1 and H-2	Pen.
57.96%	29.93%	12.10%

Errors	K-9	K-6	T-F	V-K
%	37.31%	19.90%	38.30%	4.47%

Goalkeepers

	Shots saved	Goals/shots	Ratio %
Birkir	34	82/116	29.31%
Hreiðar	42	90/132	31.81%

	Shots saved	Goals/shots	Ratio %
Combined	76	172/248	30.64%

Saved shots	6-M	9-M	Pen.	H-1	H-2
Birkir	10	19	1	2	2
Hreiðar	14	23	3	2	0

(Three missed penalties not registered as saved shots)

Combined

	6-M	9-M	Pen.	H-1	H-2
Shots saved	24	42	4	4	2
%	31.57%	55.26%	5.26%	5.26%	2.63%

Goals by Iceland

	Tactics	H1	H2	Individual	Pen.	+ or -
Mörk	31	26	21	25	19	35
%	19.74%	16.56%	13.37%	15.92%	12.10%	22.29%

Goals by opponents

	Tactics.	H1	H2	Individual	Pen.	+ or -
Sweden	7	4	0	6	3	4
Slovakia	0	5	3	5	5	4
France	5	3	6	10	2	4
Germany	8	6	3	8	2	8
Hungary	4	1	6	5	7	5
Spain	7	3	6	7	5	5
Combined	31	22	24	41	24	30
%	18.02%	12.79%	13.95%	23.83%	13.95%	17.44%

Appendix B

EMOTIONAL STRENGTH – A SURVEY OF ICELAND'S NATIONAL SOCCER TEAM (WOMEN)

Fill in the form as you think is most accurate. Be completely honest. The conclusions will only be used to help you improve yourself as a player, but in no way in connection with team selection. The conclusions cannot be traced to single individuals. Take good time to consider each statement and think carefully before you reply.

Rate yourself on the scale 0-10

0: Completely disagree – 10: Completely agree

___1. I have full confidence in myself as a player

___2. I like challenges

___3. I have great self-discipline

___4. I am ready to make sacrifices to achieve success in soccer

___5. I enjoy training with the national team

___6. I enjoy competing with the national team

___7. I play well under pressure

___8. I bounce back quickly after errors

___9. The Icelandic team has a good team spirit

___10. The Icelandic team has a good coach

___11. I am ready to do whatever it takes to achieve success

___12. I accept criticism and use it constructively

___13. I make an extra effort when that is needed for the team

___14. I am proud to play for Iceland

___15. I enjoy being part of the Icelandic national team

___16. I enjoy playing soccer

___17. I work hard in practice

___18. I do not let errors get me down

___19. I am very resilient and do not give up that easily

___20. I accept responsibility for the errors I make

___21. I am now doing everything I can to go as far as I can in my sport

___22. I want to get involved and get the ball when the team is under pressure

___23. I always give my 100% effort

___24. I have set myself goals for the season

___25. Even though we are behind, I stay focused and do not lose faith

___26. I prepare myself mentally before each match

___27. I have a routine before each match

___28. My self-confidence on the scale of 0-10 is

___29. My focus on the scale of 0-10 is

___30. My mental strength on the scale of 0-10 is

___31. The football ability of the Icelandic team on the scale of 0-10 is

___32. The mental strength of the Icelandic team on the scale of 0-10 is

___33. My belief in sports psychology as a tool for my improvement on the scale of 0-10 is

___34. The manager's ability to encourage the team on a scale of 0-10 is

___35. The manager's ability to encourage myself on a scale of 0-10 is

___36. I know my role in defence and attack

Finally, there are two question after players have answered these 36 questions

1. In a few words describe your thoughts on the mental state of the Icelandic team:_____
   _____
   _____
   _____
   _____
   _____
2. Here you can write whatever you want to convey to the national team or the coach, in full confidence, whether you want to learn more about sports psychology or anything else:_____
   _____
   _____
   _____
   _____
   _____
   _____

Once players have finished the questionnaire the answers are sent to the coach. He reviews them and finds out averages, and notable points. Players will have marked their sheets with a pseudonym so they only know their answers and can also see how they do compared to others on the team.

OPTIMISATION OF GOALKEEPER'S TRAINING ON A BASIS OF A SYSTEMIZED APPROACH TO A GOALKEEPER'S PLAY.

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2012

TABLE OF CONTENTS:

1. INTRODUCTION.

Without exaggeration, it's possible to say that position of a goalkeeper is a clue to a successful game, and that his actions affect the result of the game a lot.

Every coach is interested in improving goalkeeper's skills, but it's really hard to understand how to do that.

Especially when there is a coach team (head coach, assistant coach, goalkeeper's coach, athletic coach, video analyst, etc.), and all of them affect the skills of goalkeeper.

The goalkeeper's training is versatile, so it's really important to choose a correct main concept of the training, and to fulfill that plan.

The correct understanding of a goalkeeper's role and systems approach to his game tasks will be helpful in planning the training process, and in implementing it.

2. GOALKEEPER'S OBJECTIVES. SYSTEMS THINKING.

The primary objective of the goalkeeper is to defend his team's goal and prevent the opposition from scoring a goal. So there are only two results of a goalkeeper's actions either a ball scores a goal, or a goalkeeper beats off the ball.

A goalkeeper is able to do almost anything while inside his goal area (but he must follow the player's code of conduct and health and safety requirements).

It's impossible to completely cover a goal just by standing in one place. So, to improve the results, goalkeeper must move. And that's the way he needs to play.

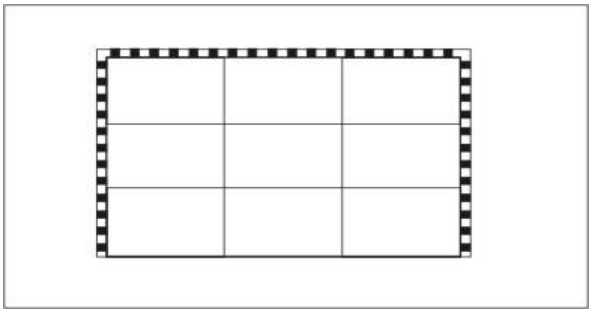
Every motion is a change in position of an object with respect to time. So, a goalkeeper must choose a correct place, correct time and speed of a movement. That's why he must analyze and estimate the situation.

So a goalkeeper's task is to understand, when, where and why he must move. And solving this task as soon as possible, to successfully perform an action is what we call a goalkeeper's fixed action pattern. And that complex is made from different parts: technique, tactic and strategy. Using this complex while trying to solve a task is called algorythm of goalkeeper's playing.

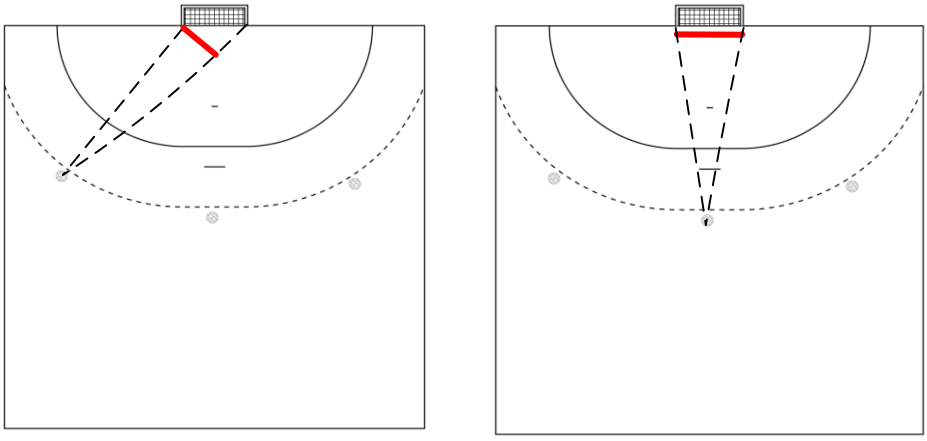
2.1 Technique.

Goalkeeper's technique in handball can be absolutely diversing (because rules don't forbid any technique), but technique must be effective and efficient, so a goalkeeper would be able to successfully accomplish a different tasks that can occur at any moment, and be easy to learn if it's possible.
So the technique of a goalkeeper, based on an individual physical characteristics of a goalkeeper (strength, speed, coordination, litheness of a body) and using principles that are equal for every human, like the principles of an anatomy, physiology, and biomechanics of a human body, is used to help to a goalkeeper to complete his objectives as soon as possible.

To make analyzing of ways of completing an objectives of a goalkeeper more convenient, coaches are often separating the area of a goal by a segments (p. 1.).



Picture 1.



Picture 2.

It's possible to describe a goalkeeper's technique using only three simple but important signs of a technique:

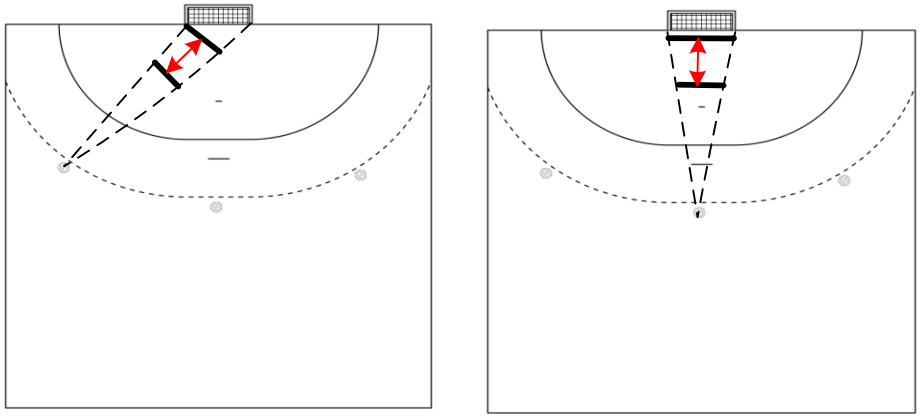
- By the way goalkeeper beats off the ball.
  Goalkeeper can prevent the ball from reaching its destination two different ways – he can try to actually beat off the ball or he can cover the goal with his body. So there are two categories of the technique in this section.
  - Technique of beating off the ball
  - Technique of covering the goal with goalkeeper's body.

- By the motion's amplitude.
  Projection of the goal's area depends on the attacker's angle and goalkeeper's position (p. 2., p. 3.). It means that goalkeeper's technique depends on different circumstances: a required amplitude of a motion, and a moving parts of a body, so the motion's amplitude
  - Short (fast, simple)
  - Long (slow, hard)

- By the type of tasks
  - Main (preventing the ball from reaching goal)
  - Subsidiary (motion, fake motion).

2.2 Tactic.

Goalkeeper tactic contains choosing appropriate movement and positioning correctly proceeding from possibilities of a goalkeeper while estimating situation.
A goalkeeper can change his position regarding the goal (forward and backward), and change his position on the goal-line regarding the center of the goal (left – right), to change the size of an area that he is able protect (p. 3.).



Picture 3.

The size of an area is directly proportional to amplitude of motion that is required to cover that area: the smaller the area – the smaller the motion that is required to cover the area by the amplitude.
In it turn – amplitude of motion is directly proportional to the time required to perform a trick.
Because the attacker's position can't be changed by goalkeeper, goalkeeper's correct positioning is able to give a goalkeeper some much needed free time to save a goal.
These two parameters – the amount of time that a goalkeeper has to perform a block and the size of an area that he is able to protect are interconnected. And if we take the smallest area that goalkeeper must protect and the biggest amount of time possible as optimum parameters, we can see that they are connected with each other with inverse proportionality (decreasing the size of an area under protection, reduces the amount of time the goalkeeper has). It means that there is no optimum variant, and that the goalkeeper must choose either he wants more time to perform a block, or he wants to protect more area.
When goalkeeper reaches his position, he is able to perform a block.
Because goalkeeper is only able to perform a block before the ball reaches its destination, the goalkeeper must finish his motion before the ball scores a goal.
Knowing his possibilities and skill, goalkeeper can understand how much time he will need to perform a block and how much area he will be able to protect.

If a goalkeeper is trying to beat off the ball by predicting where it will be thrown, the block will require much more time to perform (because he will have to analyze a situation by determining a direction and speed of a ball).

Goalkeeper's tactic has three signatures:

- Different ways of reacting on a throw.
  Tactical tricks can be separated by the amount of time that is required to successfully perform them.

- Tricks that are based on a pure reaction. A goalkeeper is starting to perform a trick after the ball has been thrown.
- Tricks that are based on an intuition only. A goalkeeper is trying to predict where an opponent will try to throw a ball, so he starts to move before a ball was thrown to save a goal.
- Preventive tricks. Also called a fake move. A goalkeeper starts to move before the ball was thrown while planning to perform a block in different direction, provoking his opponent to throw a ball in direction that goalkeeper wants.

❖ Area signature.
Tactical tricks can be separated by the different size of an area that is protected from opponent's attack by a goalkeeper.
- Protecting a whole area.
- Protecting only a part of a goal.

❖ Play style of a goalkeeper.
- Active. A goalkeeper's position is far from a goal.
- Passive. A goalkeeper's position is close to a goal.

2.3 Strategy.

Strategy of a goalkeeper depends on the interaction of a goalkeeper and his team, and on choosing his role in general concept of the team's defense.
Strategic setup is a basis for analyzing a game situation by a goalkeeper and choosing a correct way to win.

Goalkeeper's strategy is separated on two parts:

❖ Can the goalkeeper choose his own strategy?
- Goalkeeper plays individually
- He can't choose his strategy (he plays cooperatively or his strategy is already chosen by a coach).

❖ How risky is his strategy (allowed risk)
- goalkeeper's actions are risky (risk is allowed)
- goalkeeper's actions are not risky (risk is not allowed)

2.4 Algorithm of goalkeeper's play.

When determining the optimum algorithm of a game taking into account some specific only for a goalkeeper factors is a must:

- A goalkeeper is a final protective line in defensive actions of his team. So he is able to coordinate his own actions with actions of his teammates, but the final result depends only on his own actions.
- A goalkeeper is a dependent side in a process of a game, because the time, place, direction and the speed of a throw are chosen by the opponent's team player, who carries a ball. All actions of a goalkeeper are dependent and defensive. But meanwhile goalkeeper is always forced to enter a game if an opponent is trying to throw a ball into a goal.

- A goalkeeper can't guarantedly block a throw, that is performed at an unknown place and at unknown time, and can only hopefully try to resist him and to prevent a ball from reaching a goal.
- This task is solved by a goalkeeper with a few methods (beating off the ball, covering a vulnerable part of a goal with his own body) and with some tactical tricks: (tricks based on a reaction, tricks based on an intuition, preventive tricks). Active forms of defense (beating off the ball and tricks based on reaction) are more preferable, because they give a possibility to actually control the situation to a goalkeeper.

Goalkeeper's motions are a complex. And this complex contains: motion by itself (technique) ← positioning motions in time and place (tactic) ← choosing the type of motion (tactic) ← analyzing a situation (tactic) ← choosing canons for analyzing (strategy).
So, in that case to perform a maneuver, a goalkeeper must go through all that system in inversed order (strategy → tactic → technique), which can be actually called an algorithm of goalkeeper's play.
Because of his objectives and specific of a game, a goalkeeper can most effectively affect the situation only when the situation is identified and when he can calculate the speed and trajectory of a ball's motion. This happens right at the same time, when an opponent's team player has ended performing of a throw, and a ball is in free-flying operation. From other side a goalkeeper's motions are restricted because he can do something only before the ball is out of his reach zone, so the time of a ball's flight from player (after the ball was thrown) to a goalkeeper can be called an optimum time of a goalkeeper's play.
Average speed of a ball's flight in handball according to the data of [Eliasz], and some top players can send a ball with even higher speed.[m/s]

Throw	X ± SD	min	max
on the spot	20,0 ± 1,65	18,1	23,3
with a cross-over step	21,4 ± 1,80	19,5	25,1
with an upward jump	19,5 ± 1,24	17,8	21,1

It's possible to count how much time a goalkeeper has on different distances.[s]

	9m	6m	4m
on the spot	0,39 - 0,5	0,26 - 0,33	0,17 - 0,22
with a cross-over step	0,36 - 0,46	0,24 - 0,3	0,16 - 0,2
with an upward jump	0,43 - 0,51	0,28 - 0,34	0,19 - 0,23

Taking into account that a minimum time of a common reaction is 0,15 sec., and of a hard reaction 0,4 sec. and more, it's possible to surely tell that a goalkeeper can't do all the complex of actions in a time of ball's flight.
So he needs to complete some actions before the ball will be thrown, and before the situation will be identified.
Because of that, an optimum algorithm of a goalkeeper's play will be a goalkeeper performing a motion during a ball's flight, and match all of his other actions with different phases of opponent's attacks.

2.5 How to rate a goalkeeper's play.

Rating is a part of any activity.
It helps to estimate the results of the previous games and to understand what he could do to improve the results of a game, and by doing that he will know how to avoid his previous mistakes and will score better results next time.
Goalkeeper's game is a fixed action pattern and that's why it's so important to decide the parameters and canons of rating, and to decide what is that rate for (both the fixed action pattern itself, and the parts of this pattern).
There are only two results of the goalkeeper's actions, and it's possible to give the final rate to these results – either he beats off a ball, or he fails and ball scores a goal. This rate shows a general efficiency of a goalkeeper and it also can be used by analysts in sport to compare two goalkeepers.
That general comparative rate can be presented in some different forms (EURO 2012):

N		Name		MP	TP	Saves	Shots	%
1	12	Stanic D.	SRB	8	05:45:37	84	200	42%
2	1	Landin J.N.	DEN	8	07:38:23	105	293	36%
3	20	Angelov P.	MKD	7	00:39:23	11	31	35%
4	16	Ristovski B.	MKD	7	06:03:58	81	230	35%
5	22	Sjostrand J.	SWE	5	03:08:44	45	129	35%
6	1	Andersson M.	SWE	4	00:46:34	10	29	34%
7	25	Alilovic M.	CRO	8	06:38:08	80	240	33%
8	12	Fazekas N.	HUN	6	03:27:19	48	145	33%
9	12	Wichary M.	POL	6	03:16:11	41	124	33%
10	12	Heinevetter S.	GER	6	04:38:55	58	177	33%
11	12	Sierra J.M.	ESP	8	03:50:44	46	142	32%
12	16	Prost P.	SLO	7	02:13:32	32	100	32%
13	12	Skof G.	SLO	7	04:46:28	67	211	32%
14	12	Palicka A.	SWE	6	02:03:56	29	94	31%
15	16	Omeyer T.	FRA	6	05:46:32	69	224	31%
16	16	Lichtlein C.	GER	6	01:21:29	16	53	30%
17	12	Edvarsson A.R.	ISL	3	00:16:11	3	10	30%
18	1	Marjanac D.	SRB	8	02:14:23	22	74	30%
19	16	Mikler R.	HUN	6	02:32:41	26	90	29%
20	1	Gustavsson B.P.	ISL	6	05:14:49	59	210	28%
21	12	Karaboue D.	FRA	6	00:13:28	3	11	27%
22	1	Hombrados J.J.	ESP	8	04:09:16	43	160	27%
23	16	Wyszomirski P.	POL	6	02:43:49	27	104	26%
24	20	Clrverly M.	DEN	8	00:21:37	4	17	24%
25	12	Losert V.	CRO	8	01:21:52	12	53	23%
26	16	Gudmundsson H.L.	ISL	3	00:29:00	4	24	17%

This rate is a bit relative, because it can't fully show the conditions of every goalkeeper's play. So it can't be actually used by a coach because it can't show the way how to actually improve the goalkeeper's play.

	All	7m		9m		6mC		Wing		BT		FB	
	Saves	Shots	Saves	Shots	Saves	Shots	Saves	Shots	Saves	Shots	Saves	Shots	Saves
DEN	35%	8%	27%	31%	53%	30%	26%	13%	33%	7%	22%	10%	29%
SRB	39%	9%	27%	35%	47%	20%	39%	18%	44%	7%	28%	12%	22%
CRO	31%	14%	26%	34%	41%	16%	35%	17%	34%	9%	4%	10%	21%
ESP	30%	8%	12%	26%	41%	20%	22%	19%	41%	11%	12%	16%	28%
MKD	35%	7%	32%	33%	43%	20%	25%	16%	40%	12%	24%	12%	35%
SLO	32%	7%	13%	34%	47%	13%	15%	27%	39%	6%	11%	13%	15%
GER	32%	7%	20%	39%	44%	22%	27%	15%	24%	5%	36%	13%	17%
HUN	31%	8%	16%	34%	48%	12%	21%	17%	33%	11%	23%	17%	20%
POL	30%	7%	29%	32%	51%	21%	15%	24%	27%	6%	23%	10%	4%
ISL	27%	11%	32%	36%	37%	14%	29%	20%	20%	9%	4%	8%	15%
FRA	31%	7%	13%	28%	48%	15%	34%	19%	30%	14%	15%	17%	22%
SWE	33%	9%	26%	35%	46%	13%	34%	21%	28%	6%	31%	16%	18%

That form of a statistical data can be used by a coach to give a rate to a general efficiency of a goalkeeper and defensive actions of a team on certain positions. And with their help it's possible to improve the defense in general.
It's also very important to notice that the total score of a game is always a result of a goalkeeper's fixed action pattern that only in sum gives the positive result. While the negative result can be gained from only one mistake in one element in goalkeeper's fixed action pattern. And it can be a mistake in any of these elements. That's why, to rate a goalkeeper's play you need to rate every element in a system.
Because all of goalkeeper's actions are a complex and all elements are connected with each other, it's important to choose a priority of rating. Optimum priority of rating must match with algorithm of goalkeeper's play – strategy → tactic → technique. For example:
Choosing canons of rate → analyzing a game situation → choice of a tactical tricks → performing tactical tricks → performing a technical trick.
Because elements of a system are completely different, it's also very important to choose correct parameters and canons of rate. For example performing of a technical trick can be rated by trajectory, speed, accuracy of a move, or it can be rated more generalized (correct – incorrect). Analyze of a situation, or of a choice is often generalized (more effective - less effective, more optimum – less optimum).
When rating a goalkeeper's actions it's also important to take into account, if it was the goalkeeper's strategy, or he was following someone's setups. If a goalkeeper used his own strategy – then you have to rate the choice and how it was performed. And in a situation when a goalkeeper was following a setup – you have to rate, how he performed that setup, and was the setup correct by itself.

3. FACTORS THAT AFFECT A GOALKEEPER'S TRAINING.

When developing a training process, it's a must to take in account a game load of a goalkeeper. Game load of a goalkeeper can be determined on a basis of a situations that goalkeeper will have to face in a process of a match and how often will they happen (quantitative and qualitative). And because a training process is all about preparing a goalkeeper for future games of a sportsman, it's really important to prepare a goalkeeper for situations that will occur, by predicting some possible changes in team's actions on basis of a way how will the team's actions change, and how will a tendencies of a handball change in general.

3.1 Quantitative part of a goalkeeper's play.

Rate of a quantitative part of a goalkeeper's play gives a possibility to see how many times a goalkeeper have faced a situation in a match, how hardly this type of a situation does actually affect a play of a goalkeeper in general and how important this situation is to a coach.
For a quantitative part it's possible to separate attacks by a different game positions, and from which of them a ball was thrown the biggest number of times. It helps to analyze a collected data, because most of the data is universal (standard statistics).

Let us take a closer look at the quantitative part of a goalkeeper's play on the example of EURO2012:

	All	7m		9m		6mC		Wing		BT		FB	
	Shots	Shots	%	Shots	%	Shots	%	Shots	%	Shots	%	Shots	%
DEN	39	3	8%	12	31%	12	30%	5	13%	3	7%	4	10%
SRB	34	3	9%	12	35%	7	20%	6	18%	2	7%	4	12%
CRO	37	5	14%	12	34%	6	16%	6	17%	3	9%	4	10%
ESP	38	3	8%	10	26%	8	20%	7	19%	4	11%	6	16%
MKD	38	3	7%	13	33%	8	20%	6	16%	5	12%	4	12%
SLO	44	3	7%	15	34%	6	13%	12	27%	3	6%	6	13%
GER	38	3	7%	15	39%	9	22%	6	15%	2	5%	5	13%
HUN	39	3	8%	13	34%	5	12%	7	17%	4	11%	7	17%
POL	38	3	7%	12	32%	8	21%	9	24%	2	6%	4	10%
ISL	41	5	11%	15	36%	6	14%	8	20%	4	9%	3	8%
FRA	39	3	7%	11	28%	6	15%	7	19%	6	14%	7	17%
SWE	42	4	9%	15	35%	5	13%	9	21%	3	6%	7	16%

From the table, it's possible to see that the goalkeeper's in-game stress in different teams is different. Mostly it was depending on the defense concept of a team. So, a differences were the number of throws in goal overall from 34 (SRB) to 44 (SLO), and a balance of throws from different positions of different teams.
Balance between throws from a distance (9m) and throws in 1vs1 confrontations with a goalkeeper differed from 39%-61% (GER) that had more passive defense, to 26%-74% (ESP) that had active defense.

3.2 Qualitative part of a goalkeeper's play.

Qualitative changes of a goalkeeper's play must be analyzed only when the quantitative part can't fully describe the situation.
Because analyzing the qualitative changes of a goalkeeper's play takes much more time, it's desirably to mark out only the most important parameters, which are used to plan a training process and are important for a goalkeeper's results. That's the most important results in qualitative changes.

Throws from a back line (9m):

- By a position of an attacker
  - from a center(SB)
  - from a middle (LB,RB)
- By the style of an attack
  - throwing a ball while standing on the earth
  - throwing a ball with an upward jump
- By the actions of a defender
  - blocking an opponent's player
  - attacking an opponent's player

Throws from a corner (Wing):

- By the degree of an angle
  - small degree
  - middle degree
  - big degree

Throws from a line or the throws after running through defenses. (6mC, BT):

- By the type of throw
  - free throw
  - throw in confrontation with a defender

3.3 Tendencies.

Handball has changed a lot past ten years. Main efforts of EHF and National Handball Federations are first of all aimed to popularize the handball. It has resulted in handball becoming more dynamic and also stimulated more kind of an action that attracts viewers in the game – aggressive play style and goals.
In different times it was bringed to life with different methods.
In 80-90 years there were some tries to bring into service a law that would add the time limit to an attack, so the player would have to throw a ball before the time runs out.
Nowadays it's possible to talk about regulating a game by correcting the rules of referees in the game. These rules are increasing the penalty for a dirty play and for trying to interrupt the chances to score. Preventing teams from playing too passive and looking for an opportunity to attack, makes games slightly faster and also stimulates both teams for an active attack.
Individual technique of players are always improving, especially the technique that is connected with dynamic motion and the technique of throwing the ball.
And because of these changes some of the most popular schemes of passive defense (6-0, 5-1), that are based on defenders moving near the goal area and blocking throws from the back line, are losing their efficiency and popularity. There are fewer situations when blocking can actually save the goal, because of increased number of attacks, and confrontations when the attacker is trying to outlay the defender 1vs1, that are ended in goal area are now being punished by the penalty (if a defender steps inside the goal area) and if a defender attacks an opponent from a behind, he is also send off the field for a 2 minutes.
And this forces teams to find another ways of adapting their defenses to new conditions.
Nowadays teams are trying to start a confrontation far away from a goal area, to end it before reaching a penalty zone. This helps, in case of failure, to limit the attack's capability by a foul.
Some teams are modernizing their basic systems of defense in an active form (open 6-0, open 5-1), while the others are using an active defense only as a reserve variant (3-2-1, 3-3, 1-5).
Changes in organization of defense are followed up with qualitative and quantitative changes of a play style of goalkeepers.
The quantitative changes are the changes in number of throws that are performed from the back line (9m) and in a 1vs1 confrontation with a goalkeeper (6mC, Wing, BT).

		All	7m		9m		6mC		Wing		BT		FB	
		Shots	Shots	%	Shots	%	Shots	%	Shots	%	Shots	%	Shots	%
DEN	2012	39	3	8%	12	31%	12	30%	5	13%	3	7%	4	10%
	2008	40	4	9%	15	38%	3	8%	5	12%	7	18%	6	15%
	2006	44	5	11%	19	42%	6	14%	7	16%	5	11%	3	7%

		All	7m		9m		6mC		Wing		BT		FB	
		Shots	Shots	%	Shots	%	Shots	%	Shots	%	Shots	%	Shots	%
CRO	2012	37	5	14%	12	34%	6	16%	6	17%	3	9%	4	10%
	2008	37	4	10%	12	33%	4	10%	8	21%	2	4%	5	14%
	2006	42	4	10%	12	29%	5	11%	8	20%	4	9%	4	8%

		All	7m		9m		6mC		Wing		BT		FB	
		Shots	Shots	%	Shots	%	Shots	%	Shots	%	Shots	%	Shots	%
GER	2012	38	3	7%	15	39%	9	22%	6	15%	2	5%	5	13%
	2008	40	4	9%	18	44%	3	8%	8	19%	3	6%	5	13%
	2006	42	6	14%	17	40%	6	15%	5	12%	3	8%	5	13%

		All	7m		9m		6mC		Wing		BT		FB	
		Shots	Shots	%	Shots	%	Shots	%	Shots	%	Shots	%	Shots	%
FRA	2012	39	3	7%	11	28%	6	15%	7	19%	6	14%	7	17%
	2008	39	3	8%	17	45%	5	13%	4	11%	4	10%	5	13%
	2006	40	3	8%	18	45%	7	17%	5	13%	3	6%	4	11%

		All	7m		9m		6mC		Wing		BT		FB	
		Shots	Shots	%	Shots	%	Shots	%	Shots	%	Shots	%	Shots	%
SWE	2012	42	4	9%	15	35%	5	13%	9	21%	3	6%	7	16%
	2008	40	4	10%	18	45%	7	17%	3	8%	3	7%	5	13%

The qualitative changes are the changes about interaction of a goalkeeper with a back line (playing with a block → playing with an active defender), and the changes in a situation when an opponent's player force attacking from a long distance or from a bad position.
Also it's possible to notice that a number of throws from bigger angles has increased because the border defenders are now helping to protect the center of a game field much more times because of an active defense.
And increasing a number of free throws from a line and the throws after running through defenses, because in case of losing defenders didn't tried to stop the throw by breaking the rules anymore.

4. OPTIMISATION OF A GOALKEEPER'S TRAINING.

It's possible to optimize a goalkeeper's training by adapting a training process to objectives that the goalkeeper will have to face.
An algorithm of a goalkeeper's play: strategy → tactic → technique, can't be directly projected on creating a training process, because in that case it will create false cause and effect connections. If every situation will have its own strategy of solving, and that strategy will include tricks in itself, a goalkeeper's actions will become too predictable and the goalkeeper will have to pay more attention on choosing a trick, rather than analyzing a situation, and that's a mistake too because a trick is not a way he have to play, it's just a mean of playing.

It's more optimum and didactic correct to create a goalkeeper's training using a principle: technique → tactic → strategy. But you have to plan a training using a principle: strategy → tactic → technique.
It means that while training a technique it's also really important to notice that they must be a follow-up to a tactical objective of a goalkeeper. With that basis, to create a data base of a goalkeeper's tricks, a coach must use individual physical characteristics of a goalkeeper (strength, speed, coordination, litheness of a body, motion coordination), and the chosen tricks are a tricks that are capable to use the best sides of a goalkeeper. In its turn, tricks that are based on solving a game situation are already known by a goalkeeper, so he is able to perform them at any time. So he already knows the best way to solve a situation, and he mustn't waste his time on choosing a motion.
Already learnt technical tricks a goalkeeper must then learn how to tactically perform them, in optimum projecting them in time and place. It's also better to orientate a goalkeeper on solving in-game strategic tasks. When learning how to choose between an amount of time and amplitude of motion, a goalkeeper also learns how to rate how will this balance change when he changes his positions concerning a goal, and then how to choose an optimum balance between those two parameters.
Already learnt tactical tricks a goalkeeper must then learn how to integrate them in general concept of a team's defense, how to correctly analyze a situation, actions of other players and how to optimum plan his actions concerning his possibilities.
By improving his basic physical characteristics during a training process, a goalkeeper is improving his in-game possibilities. It can happen in a few different ways. Improving goalkeeper's physical characteristics increases speed of a technical trick (decreases time) or increases amplitude of a motion (during equal time).
In its turn this can increase tactical arsenal (possibility to choose more tricks to solve a game situation), or it can also increase a strategic arsenal (possibility to choose a tactical trick in game situation).
Because actions of a goalkeeper are always different, there are a lot of different exercises to train him. Most of them are complex. When choosing an exercise it's important to take into account that the most important thing, is not the exercise itself, but the parameters of those exercises and how do they fit in the orientation of training. Also, it's a must to separate a training of new tricks, and training how to correctly use them. That's why it's so important to first of all, choose what element of a goalkeeper's play do this exercise improve, and then choose an appropriate rhythm and amplitude of motions, and if it was an exercise on throwing a ball, a distance, a direction and a rhythm of throws.
It would be also really good idea to teach a goalkeeper an objectives and orientation of training. It will help him to successfully improve needed element of a play.
This way you can create an optimum training of a goalkeeper and help him to avoid forming false stereotypes of motions and actions in him.

5. CONCLUSION.

When trying to describe a goalkeeper's play you can surely see that there are some opposite conceptions in its description.
Some people think that goalkeeper's play is only individual and it's a kind of a "black box". The others think that it's a precise scheme of a game, and that it's possible to standardize and unify that scheme.

But nor the first, nor the second approach to the goalkeeper's play can't fully show the reality. First individual approach's conception can't show how to actually improve a goalkeeper's results and how to train him.
And the second concept a goalkeeper's play is losing the very element of a game itself, losing the individual style and flexibility of a goalkeeper.
It seems that the optimum conception is somewhere between these two concepts and it is made of a separated and unified parts that are connected with a versatile algorithm.
It's possible to unify the elements of a goalkeeper's play – strategy, tactic, technique by describing their components on the basis of universal signatures.
In that case there are a lot of possibilities to show individual specialties both in making decisions and in performing tricks.
There also appears an opportunity to standardize the objectives of a training process and coordinate efforts of a coach team that are working on improving a goalkeeper's skills.
It is important to divide the planning of the training process and its implementation, as they have different purpose.
The planning and formulation of tasks performed by the head coach on the basis of the main concept of the team´s defense, and is implemented by different coaches on the basis of individual characteristics the goalkeeper in the framework of common concept.
This approach will help to didactically correctly organize the goalkeeper´s training process and optimally integrate the goalkeeper's actions in the team play.

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