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Svenska Ishockeyförbundet  
Elitekurs

# **Skills and The Training To Game Transfer**

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# **1 Introduction**

Many times coaches, scouts etc. discuss which abilities make a quality player. Some like good skaters, while the others like hard working players who are not afraid to sacrifice their body for the betterment of the team. With this thesis project provides an angle for player development that looks at how a player's position affects playing in different game situational roles.

The greatest challenge in hockey coaching is to develop individual players in a way so that they are able to use all physical, technical and tactical qualities effectively during the game. For this reason this project has its principal objective of developing game transferable playing skills in both offence and defence depending on the player's position. Players should be able to identify their skill sets and be able to mix as one on the ice.

I introduce what the term "playing skill" means, and what technical and tactical skills and qualities a player has to master in order to perform playing skills effectively in different game situations during the game.

The focus of this project is in both offensive and defensive situations, because to develop better players for today's fast paced and individually demanding elite level hockey, a player has to have a comprehensive understanding of the game and advanced skill levels to succeed. The challenge in playing skills, especially when observing them based on playing position, is that there are not much data available and the terminology alternates a lot.

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## **2 Skill**

Skills are divided in two developmental stages; to basic skills and to sport specific skills. Skill is formed in interaction of genetic factors together with the nervous system, muscles and psychological factors. All the factors can be influenced with guiding and learning, excluding genetic factors. (Smushkin 1997)

Sport specific skills are used for the purpose in changing situations. It enables the athlete to change his technique, and also learn new skills. By developing basic skills, the sport specific skills can also be developed but developing a sport specific skill doesn't necessarily develop basic skills. (Smushkin 1997)

Skillful people can produce movements in changing circumstances without purposeful thinking of the technical elements of the performance. Movements made with a proper rhythm can be defined as a skill. Making many movements with a proper timing can be defined as a skillful performance.

### **2.1 Development stages of a motoric skill**

According to Belfry (2007) the perfect skill learning occurs through certain stages. Learning of motoric skills is regulated by hierarchical characteristics of the skill. Complicated skills are difficult to learn if the person doesn't control the earlier stages of skill learning.

Learning has also its obstacles. It is important to know that learning the most difficult skills and movements requires time and certain motoric capability. In some movements the low physical attributes and previous training level might cause difficulties. Lack of strength or flexibility may affect the performance of an athlete. (Smushkin 1997)

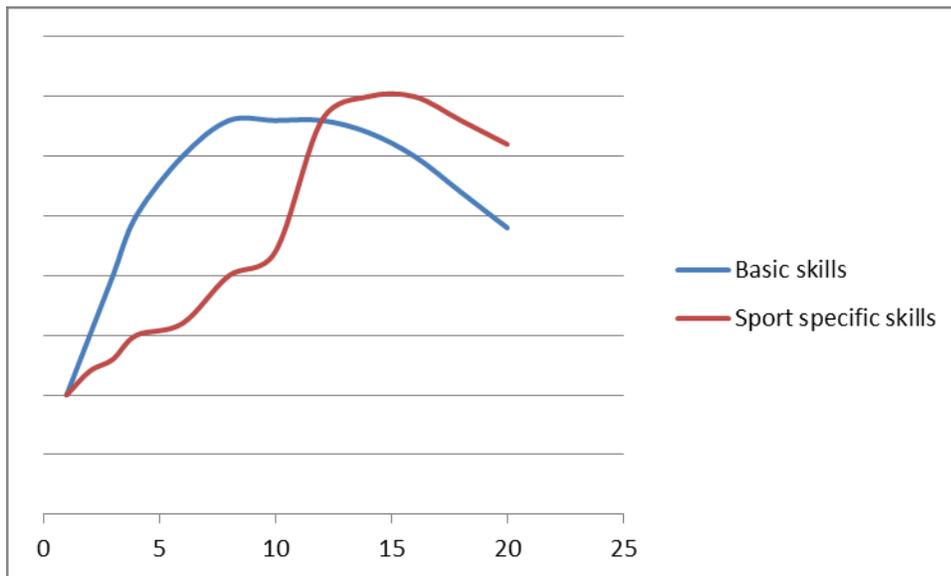


Figure 1. Modified from Mero (1990.) Developmental stages of skill.

**Figure 1** describes the developmental stages of skill. Blue and red arrows describe when it is optimal to develop basic skills and sport specific skills. Numbers under the graphic describes age. The picture describes the optimal stages to learn skills. From the picture we can see when to develop basic skills. Around the age of twelve the development of basic skills stabilizes but we are still able to improve sport specific skills.

In gross motor stage an athlete perceives the performance cognitively. Because there is no previous vision of the performance in the brains the skill is forming, meaning that the performance is still taking shape. In this stage it is very important to give as proper example performance as possible, so the athlete can make a right kind of vision of it to his memory. Errors in technique are occasional and the extrinsic feedback should primarily consider on trying and on the effort the athlete is putting in. (Fransen, Pion, Vandendriessche, Vandorpe, Vaeyens, Lenoir, Phillipaers 2011)

In fine motor stage the athlete can make a clearer vision of the performance. At this stage the type of given feedback is very important. Feedback should be corrective and reinforce the

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athlete in a positive way. (Fransen, Pion, Vandendriessche, Vandorpe, Vaeyens, Lenoir, Phillippaers 2011)

During the autonomous stage the athlete can automatize the skills and the proper movements. At this stage the athlete can produce a chain of movements without putting too much effort to thinking the technical details of the skill. (Fransen, Pion, Vandendriessche, Vandorpe, Vaeyens, Lenoir, Phillippaers 2011)

## **2.2 Elements of the Skill**

The elements of the skills are fundamentals for all sporting movements. They allow the athlete to develop sport specific skills. All the elements have to be taken into consideration, because many of them are required when performing a certain chain of movements. (Fransen, Pion, Vandendriessche, Vandorpe, Vaeyens, Lenoir, Phillippaers 2011)

- **Orientation** is an ability to define body position regarding to time and space together with an ability to combine and modify movements appropriately. It is very important when learning the early phases of new movements. Example situation in hockey: Opposite defender has just tripped the player with the puck but he is still able to make an accurate shot towards the goal.
- **Separation** is ability to separate the contractions and relaxations of muscles. Example situation in hockey: Forward in front of the opposite goal has tensed legs and mid-body but is still able to keep his hands relaxed for accurate and quick stickhandling.
- **Reacting** is an ability to react quickly and appropriately to visual, hearing, or feeling stimulus. Example situation in hockey: The puck bounces back from the goalkeeper and the player is immediately ready to shoot for a rebound opportunity.
- **Rhythm** is an ability to regulate muscular actions regarding to time. Good sense of rhythm helps to make movements correctly and appropriately. Example situation in hockey: Fluent and accurate wrist shot while in the skating motion.

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- **Balance** is an ability to obtain or maintain balance in certain positions or movements. Example situation in hockey: The player is able to keep himself playable despite the act of being pushed and hung onto by other players.
  - **Combining** is an ability to combine movements to fluent ensembles. This is needed especially in sports where the movements consist of many simultaneous movements. Example situation in hockey: The player can make a combination of deking and shooting or a combination of skating+deking+shooting.
  - **Adaptation** is an ability to adapt into changing circumstances and observe own and others' movements in environment. Example situation in hockey: The player is able to produce an accurate shot in a narrow space, or he can produce the accurate shot despite poor balance.
  - **Controlling** is an ability to control the movement to exact location and standardize it. Example situation in hockey: Player is able to produce an accurate shot to the top corner of the goal.
  - **Differentiation** is an ability to make differences of the movements between the similar movements. Example situation in ice hockey: The player is able to separate the old and new technique, for example, in skating.
  - **Agility** is an ability to make quick changes to the directions of body movements, while anticipation is an ability to utilize the dimension of movement resources.

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### 3 Long-term player Development

The ultimate goal of player development is to help the individual player to reach his full potential, measured by his season-long performance on ice. To be able to play hockey effectively a player obviously needs the skills to play the game on both sides of the puck; offence and defence. Playing skills are a combination of technical skills, as well as hockey sense, meaning that a player must understand what technical skill or combination of technical skills he must use to help his team the most effective way according to the situation. (Gendron 2003)

**Technical skills** e.g. skating, passing, and shooting, lay the foundation to move on ice and give a player the fundamental abilities to play the game.

**Hockey sense** is the knowledge needed to play the game according to the rules and objectives of the game, as well as an understanding of the game-situation roles needed for decision making for the advantage of one's own team during the game (Tarasov 1997).

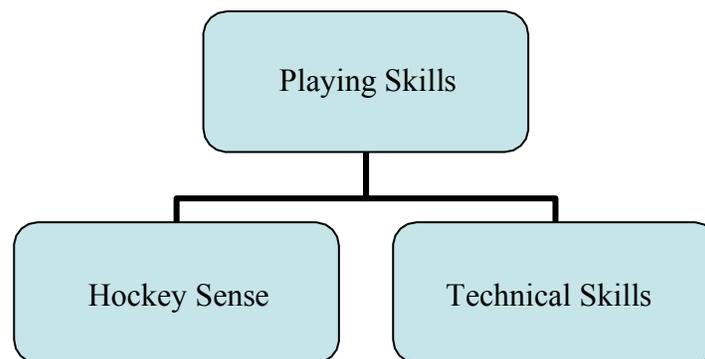


Figure1. Composition of playing skills (IIHF 2007, 2)

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### **3.1 Significance of Training**

In a long-term perspective of player development, the most important aspect is the “ten-year rule”. An athlete must practice his sport 10 years or 10,000 hours to become an expert in his field (Baker 2003, 86). The ten-year rule becomes important when doing periodization of the training. To have enough quantity and quality in training is highly important, especially in playing skill development because it is structured from two different components, technical skills and hockey sense. Most importantly, coaches and other people who are in charge of player development should aim to produce experts in their sport.

In his review article “Early specialization in sports” Baker (2003, 86) introduced the following characteristics to explain expertise in sports.

- Experts have greater task-specific knowledge.
- Experts interpret greater meaning from available information.
- Experts store and access information more effectively.
- Experts can better detect and recognize structured patterns of play.
- Experts use situational probability data better.
- Experts make decisions that are more rapid and more appropriate.

To link together the ten-year rule and the characteristics of an expert development of playing skills, the following factors must be understood for players to reach their full potential in adulthood.

- The amount of hours spent for training should be 1000 hours per year within 10 years, which means a child should be active in sports 2,7 hours a day from age 10 to age of 20 when he grows out of juniors.
- Game-like conditions must take place in each practice, so players can gain task specific knowledge to learn to understand the game.
- Coaches should give lot of data and models about the game to promote development of hockey sense.

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### **3.2 Challenges in Long-Term Player Development**

Professor Mark Williams has studied the training history behind elite level athletes in Britain. According to Williams, an athlete will have a chance to reach an elite level in adulthood if he has reached 10,000 hours of quality training. This contradicts a typical explanation that great players are just born or have great genetics for the sport they master.

Williams points out that most elite level athletes have spent more time practicing on their own during childhood than the ones who got close to elite level or stayed in recreational level. E.g. a 12 year old football player who reached Premier League trained 2500 hours on his own between the ages of six and the time they reached professionalism, while a player who only got to the recreational level trained 750 hours within the same period of time. The teenage years are said to be the most challenging time in long-term development due to growth spurts, other interests, increasing competition, and external demands. This might even be true in some cases, but according to research made by Williams, 13-16 year olds who later reached Premier League trained on their own an average of nine hours per week (Järvinen 2009, 8).

Williams also made findings about differences in visual observation abilities between the children who later reached elite level and the children who did not. Already at age of eight children who became elite level players were able to make faster and better visual observations during a game. The same development continued with 12 and 16 year olds (Järvinen 2009, 9). This is important to notice when talking about the development of hockey sense. Elite level hockey requires a player to make accurate visual observations and make correct reactions and decisions based on what he has seen. Related to Williams' results, hockey sense development should also begin earlier through play and questioning methods that are not too tactically complicated for young children. Williams also told that the ones who reached elite level also trained more (Järvinen 2009, 9).

Would better visual observation skills be explained with more time spent on playing? Or do better technical skills give player more time to focus on visual observations?

Children who are 12 and over should spend at least 18 to 20 hours a week for sports and other physical activities if they want to reach an elite level. These hours should be divided between playing and practicing during one's own time and organized sport.

## 4 Technical Skills

Technical skills are the foundation of playing skills. Without excellent technical skills a player will have limitations in his overall game. A player with excellent technical skills will have the “tools” to play the game. Ice hockey coaches should spend much time to developing technical skills when children join ice hockey teams. Practices should be fun and include high amount of repetitions to learn correct the techniques in skating, passing & receiving, puck control, and shooting (IIHF 2007, 1-2).

When you are teaching skills, correcting errors, solving problems, or explaining a new drill, it is done through communication (IIHF 2007, 3).

Skating	Puck Control	Passing & Receiving	Shooting	Body Contact - Checking
Forward Skating	Puck Handling	Moving	Wrist Shots	Angling
Backward Skating	Movement	Deception	Slap Shots	Stick Check
Turns & Crossovers	Protection		Backhand	Body Contact
Starts & Stops	Deception		One-Timers	Body Check
			Tips/Deflections	

Figure2. Technical Skills (Modified from Belmonte 2004, USA Hockey Skills Progressions Handbook)

### 4.1 Skating

Skating is the most important technical skill in ice hockey, because of the enclosed ice surface where the game is played, high speed, and transition.

The ability to skate is directly related to the performance of other technical skills such as puck control, passing and receiving, etc. Time spend on improving skating has thenmuch value to the development of all technical skills needed in ice hockey. (Hockey Canada 2005, 6)

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All skating in ice hockey should be economical and powerful. In forward skating the most important quality is to get from place A to place B as fast as possible with or without a puck. According to the nature of all invasion games, the transition part of the game is highly important, placing strong demand on a players' ability to change direction and pace by crossovers, turns, stops, and starts (Stamm 2010).

The basics of quality skating are: Balance on one foot, control of the inside and outside edges, weight transfer from one skate to another, good posture and knee bend, and weight on the middle of the blade (Stamm 2010).

#### **4.1.1 Body position**

A proper body position aids player to react to changing game situations and to prepare for choosing the appropriate decision. A good body position includes the player having a look in the game (International Ice Hockey Centre of Excellence 2012d.).

Other elements of good body position are rhythmical forward movements of arms and legs, thigh and shin of the leg that begins the kick having a 90-degree angle and upper body needing to lean forward. (International Ice Hockey Centre of Excellence 2012d.)

#### **4.1.2 Kick and stride**

Kick is the phase that pushes a player forward. Kick phase begins when weight is transferred on the leg that starts the kick. Proper kick is directed diagonally back. During the kick the weight is transferred from the middle of the blade to the toes. (International Ice Hockey Centre of Excellence 2012d.)

In changing game situations the player is not always able to skate technically correct or kick to the efficient direction. To be a fast player on the skates, he needs to have strong legs that keep him upraised and push him powerfully forward. (Twist 2007, 151-154)

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During the stride, the body position should be held low. Stride begins with the outer edge in front of the hip line and under the centerline of the body. When the stride proceeds, the weight is first transferred from outer edge to mid edge and then to inner edge. Stride turns into kick in this phase. The direction of the stride is forward and in kick it is diagonally back. (International Ice Hockey Centre of Excellence 2012d)

### ***4.1.3 Return of the leg***

When returning the leg after a kick, the player needs to activate his hip flexors. Skate is brought close to ice in front of the hip line, under the centerline of the body. The first contact after returning occurs with the outer edge. Foot and knee should be on the same line under the body. (International Ice Hockey Centre of Excellence 2012d.)

## ***4.2 Puck Control***

Puck control skills are needed to control the puck, and to beat an opponent during offensive and defensive situations. Even though players spend most of time on ice without a puck during a game they enjoy practicing with the puck the most. Due to limited time as a puck-carrier, the player should have good skills to be effective during that time (Hockey Canada 2005, 10).

Different puck control skills are; carrying the puck, puck protection, and deception. (USA Hockey 2006, 1-5). The teaching progression of puck control skills should begin from stationary to moving puck control (Hockey Canada 2005, 10). The player should master all the puck control skills while skating normally without looking the puck, so he is able to see the game.

### ***4.2.1 Touch to the puck***

Using different parts of the blade, using the wrists to control the motion and keeping the hands apart from the body are the key factors of the ability to touch the puck properly. (International Ice Hockey Centre of Excellence 2012b.)

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#### **4.2.2 Rhythm of legs and arms**

The key factors in proper rhythm of legs and arms are weight transfers to the puck's side and to the opposite side of the puck, fast hands and slow legs – slow hands and fast legs, setting the pace of skating and puckhandling, and deking. (International Ice Hockey Centre of Excellence 2012b.)

#### **4.2.3 Range of motion**

Key factors in range of motion are various movements to both sides and front and back, upper-body rotation to different directions, using the upper- and lower hands, and weight transfers made by legs and body. (International Ice Hockey Centre of Excellence 2012b.)

#### **4.2.4 Observing the game**

Key factors of observing the game are; the ability to see both the puck and what is happening around you, and the readiness to shoot, pass or deke. The player has to recognize where the puck should be located in the blade when making the decision. (International Ice Hockey Centre of Excellence 2012b.)

### **4.3 Passing and Receiving**

Without good passing and receiving skills it is very hard to play attacking game in hockey. Players have to be able to pass and receive in fast movements and read the game so he can decide which type of pass is the best in certain situations. By knowing proper techniques of various passing styles and receiving methods, the player has better capability to produce successful actions. To become a good passer is mostly dependent on training but also attitude-dependent.

Key factors of passing are looking at the receiver, having elbows off the body, having mid- and upper body rotation, lower hand pulling – then pushing, upper hand pulls, wrists and blade turning towards the receiver. (International Ice Hockey Centre of Excellence 2012e.)

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In the game situation the puck carrier has to be able to see the game and the puck at the same time, this provides him to make proper decisions. Good passer can produce hard and accurate passes, hide his decisions, use both; forehand and backhand passes, and pass during the skating movement and continue skating after the pass. (International Ice Hockey Centre of Excellence 2012e.)

In education situations the concentration is on two elements: can the passer hide his decisions and is the player able to give hard and accurate passes.

#### **4.3.1 Forehand pass**

Forehand passing has two different variations: wrist pass and snap pass. Snap pass is quicker to make but wrist shot can be more powerful and accurate. According to International Ice Hockey Centre of Excellence (2012f.) passing during skating movement includes weight transfer from a leg of lower-hand's side to the leg of upper-hand's side and skating should continue after the passing.

#### **4.3.2 Backhand pass**

Good backhand passing skill provides more variations for a single player to play attacking game. Backhand pass is often much slower than any types of forehand passes but the skillful player can pass from both sides quickly and hard. To put more power to the pass, the player makes the weight transfer from a leg of upper hand's side to a leg of the lower hand's side (International Ice Hockey Centre of Excellence 2012f.).

During educating the player the concentration includes the same kind of elements that are in the forehand pass; can the passer hide his decisions and is the player able to give hard and accurate passes.

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### **4.3.3 Receiving**

To receive the passes effectively, it requires the abilities to see the puck and using the blade to show where the player wants the pass. Arms are relaxed and apart from the other body, mid and upper-body rotates, and blade is rotated on the puck with the wrist movement. These combined together are the key factors of efficient receiving.

(International Ice Hockey Centre of Excellence 2012e.)

Depending on the game situation the player has to know what is going on around him. The player should follow the game and the puck alternately, keep the blade on the ice and show where he wants the pass, be aware of timing when showing the pass to come, be ready to receive the pass with both sides of the blade and to be able to receive the pass from skating and continue skating after receiving. (International Ice Hockey Centre of Excellence 2012f.)

### **4.3.4 Forehand receive**

Forehand receiving is the easiest way for the player to catch the pass. The elements of good forehand pass consist of three main objectives: is the player ready to play after receiving, can he receive hard pass, and can the player find free place where the puck is possible pass. Other observed elements are the ability to produce one touch pass and if the player is capable to receive bad passes.

### **4.3.5 Backhand receive**

Good backhand receiving includes the same elements as forehand receiving., Is the player ready to play after receiving the puck, can he catch the hard pass, and can he take himself to a free space where the puck can be passed

An effective way to receive a hard pass from the backhand side is to keep the stick in one hand. In this variation the blade is placed in front of the body and touches the ice. Arm is

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relaxed but the wrist is tight and the puck will stop as itself. (International Ice Hockey Centre of Excellence 2012f.)

## **4.4 Shooting**

Shooting is the most important technical skill for scoring. Different shots used in scoring are; Wrist shot, slap shot, snap shot and backhand shot. (USA Hockey 2006, 4)

The most important shot to learn and use in hockey is the wrist shot. It is the most versatile and quickest of all shots. The second most effective shot for scoring opportunities is the slap shot, which is usually the slowest to execute, but has the most power. The two most effective shots in scoring are the wrist shot and snap shot. Drills in practice should promote the use of these shots. As in all skill actions the basic techniques must be mastered before a player can be effective in a game situation where the time and space are limited (Tim Turk 2015.03.12).

### **4.4.1 Wrist shot**

Key elements of the wrist shot are a look at the goal, having hands off the body, having rotation of the mid- and upper body, lower hand first pulling then pushing or smashing, upper hand pulls, and in the end of the movement the wrists and blade turning towards the goal. Depending on the situation, the weight transfer occurs from the leg of lower hand's side to the leg of the upper hand's side or vice versa. (International Ice Hockey Centre of Excellence 2012g.)

#### **Wrist shots can be made with three different variations:**

1. Shot begins from behind the body and puck is onto blade all the time during the movement. In this variation the separate pulling and pushing phases with wrists are emphasized.
2. Shot begins behind the body but now the puck separates from the blade for a moment and the player snaps it forward. This version is called as a snap shot.
3. Shot begins from the front of the body. Use of the wrists is crucial. (International Ice Hockey Centre of Excellence 2012g.)

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Wrist shots have two different styles. Depending on the game situation the player can choose how to make a shot towards the goal. A good player can produce both styles in fast situations. Both styles include weight transfer from other side of the body to another. In the first version the player transfers his weight from the leg of lower hand's side to the leg of upper hand's side. In another version the player transfers his weight from the leg of upper hand's side to the leg of lower hand's side. (Tim Turk 2015.03.12)

#### **4.4.2 Slap shot**

Key factors of slap shot are looking towards the goal, having hands off the body, lower hand pushing – upper hand pulling, weight transferring from the leg of lower hand's side to the leg of upper hand's side, and blade and wrists turning towards the goal. (International Ice Hockey Centre of Excellence 2012g.)

#### **4.4.3 One timer**

One timer is a shot which is produced with only one touch after receiving the pass. The key elements of the one timer are looking towards the goal, making an immediate shot after the receiving, producing fluent movement of the whole body and weight transferring towards the same direction where the puck goes. (International Ice Hockey Centre of Excellence 2012g.)

When educating the one timer, the concentration is on weight transfer, accuracy and efficiency. One-timer shots can be made by wrist shot, snap shot or by a slap shot and very rarely with the backhand side. It is difficult for the goal keeper because there is less time to prepare for the shot than normally.

#### **4.4.4 Backhand shot**

The key elements of backhand shot are looking towards the goal, having hands off the body, having mid- and upper body rotation, pulling and pushing with both hands, weight transferring depending on the situation, and blade and wrists turning towards the goal. (International Ice Hockey Centre of Excellence 2012g.)

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Backhand shots are usually made after protecting the puck to surprise the opponent players and goalkeeper. It is difficult to put power on backhand shot but it can be very effective close to the goal. While educating the concentration is on weight transfer, body rotation, accuracy and efficiency. (Tim Turk 2015.03.12)

#### **4.5 Stick Checks**

Stick checks are important technical skills needed in defensive and offensive hockey. Hockey Canada (2005) has defined different stick checks in the educational “Skills of Gold” videos in the following way:

- **Lifting a stick:** Defending player slides his stick under the opponents stick and with a rapid movement lifts the opponents stick.
- **Poke check:** Defending player uses the blade of the stick to push the puck off the stick of an opponent.
- **Sweep check:** Defending player “sweeps” his blade against the opponent’s blade to eliminate puck control, a pass, or a shot. The key in sweep is to get the blade against the blade.

#### **4.6 Body contact**

One-on-one battles are one of the turning points during the game. To be able to win one-on-ones and play the game with fair play and respect, the basic elements of body contact should be taught to players.

According to USA Hockey (2008, 1) body contact includes contact confidence, body blocks, and takeout/rubout checks. All body contact techniques introduced previously aim to deny space from the puck-carrier by stopping the momentum.

##### **The basics of body contact include:**

1. Proper body position: Knees bent, wide base, and stick in one hand.
2. Power for the contact comes from the legs and hips.

- 
3. Never start any body contact unless there is a no gap between you and the opponent.  
(USA Hockey 2008, 7)

### **4.7 Body Checking**

Body checking is a fine aspect of the game and an important defensive skill to separate the opponent from the puck. All body checking must be understood and performed correctly by the official rules, fair play and respect. Body checking, in particular shoulder checks and hip checks are built on the foundation of all other individual defensive skills (USA Hockey 2008, 1) The official playing rule's definition of body checking is: "A legal body check is one in which a player checks an opponent who is in possession of the puck, by using their hip or body from the front, diagonally from the front, or straight from the side, and does not take more than two fast steps in executing the check." (USA Hockey 2003-2005 Official rules of ice hockey)

A legal body check must be done only with the trunk of the body, meaning the hips and shoulders, and must be above the opponent's knees and below the neck. Unnecessary rough body checking must be penalized. (USA Hockey 2003-2005 Official rules of ice hockey)

## 5 Hockey Sense

*Without good hockey sense or awareness, your other skills don't matter, and that's why so many players that can skate and have elements of skill do not succeed. It's not because they don't have the skill, its because they don't thave the intelligence. (NHL Scout Craig Button)*

Hockey requires not only technical skills introduced in the previous chapter, but also high level of knowledge and an understanding of the game itself.

A player with great hockey sense has cognitive expertise in the tactical field of the game. Cognitive expertise can be divided into two sub domains, tactical skills and decision making abilities. A super talented player with great hockey sense can see all the options available in half a second and is able to pick up the best possible option (Art of Scouting 2011).

Hockey sense can be developed by practicing on and off the ice by using games, game-situation or cooperation drills where a player must make decisions based on visual observations (USA Hockey Small Area Games).

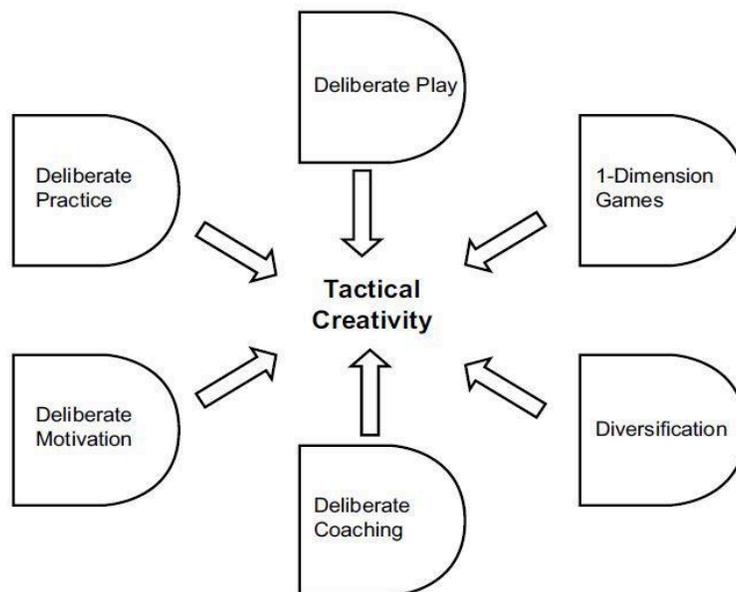


Figure 31.4 The six D's fostering tactical creativity in team and racket sports (see tactical creativity approach by Memmert, 2014).

Figure 31.4 The six D's fostering tactical creativity in team and racket sports (see tactical creativity approach by Memunett, 2014)

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While the player is moving constantly, observing surroundings, thinking and reacting to the rapidly changing situations, the player with good hockey sense can use his technical skills, physical and mental capacity optimally in the situation at hand.

**According to USA Hockey - hockey sense consists of three different parts:**

1. Understanding the game.
2. Reading the game.
3. Decision making.

To play the game effectively a player must understand the rules and objectives of the game and the action principles in different situations. When he understands the game and sees the game he can read and react to the current game situation. Based on that understanding and reading he can make the right decisions and use his playing skills during the game for the advantage of his team. (Gendron 2003)

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## **6 *Playing Skills***

Playing skills are an individual abilities composed from technical skills and adapted into game situations. (Belfry 2007)

As mentioned earlier, playing skills are the combination of technical skills and hockey sense. The purpose of playing skills is to win 1-1 situations and advance team play according to the team play objective in the current situation. Playing skills require good timing and observation of the opponent, compared to technical skills.

Before a player or team is able to play according to a certain team play system, they must have the playing skills necessary to master most typical game situations, e.g. 1-1, 2-1, 2-2, 3-2 and 3-3. Otherwise they are just like chessmen and the coaches the chess board, probably in the right place but don't know or can't do anything to solve the problem. Playing skills are, for example, scoring, puck protection, offering a pass option etc. in offence, shot blocking, awareness of the opposition, coverage and different checks etc. in defence.

Playing skills are tools for problem solving during the game, when the team play objectives, e.g. "winning space" is a theoretical objectives of the offensive team and for players in offensive roles, carrying the puck from small to big ice immediately after steal, in a defensive zone is a playing skill that can be practiced over and over again.

Learning fundamentals of the playing skills allows mastery of technical skills, but it also requires good hockey sense and wide base of physical and motor skills. Teaching and training of playing skills requires that the coach poses knowledge about game e.g. rules, objectives, roles, and ability to see the difference between technical skills and playing skills (Belfry 2007)

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## **6.1 *Playing skills of the elite player***

I have selected a minimum of two and maximum of five of the most important playing skills needed to achieve each team play objective. The purpose is to describe the playing skills of an elite player without dividing them according to the player's position and game-situation roles. A players' position effect on the use of a certain skill will be discussed in the following chapter. The playing skills represent in chapters

### **6.1.1 *Playing skills of an elite player in offence***

#### **1. Scoring skills**

- a) Shoots quickly from the movement
- b) Supporting actions (rebound, deflection, screen)
- c) Playing towards the slot area with or without the puck

#### **2) Skills to win space**

- a) Carry from small to big ice
- b) Pass to an empty space
- c) Offering a pass option for the offensive direction

#### **3) Skills to control the puck**

- a) Moving puck protection
- b) Cooperation with teammate by offering pass option sideways or backwards.

#### **4) Transition skills from offence to defense**

- a) Creating offensive pressure by shooting outside the slot
- b) Creating depth into the attack positioning under the play

### **6.1.2 *Playing skills of an elite player in defense***

#### **1) Skills to prevent scoring**

- a) Shot blocking with stick or body

#### **2) Skills to prevent opponent from winning space**

- a) Positioning on a defensive side
- b) Angling from big to small ice
- c) Body checking

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d) Back checking towards the middle

**3) Skills to regain possession of the puck**

a) Stick checks

b) Body check

c) Winning the loose puck

**4) Transition skills from defense to offence**

a) Winning the loose puck

b) Positioning on defensive side (low triangle)

The theoretical framework of this thesis is to serve as a learning foundation for playing skills and the subjects related to the development of them.

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## **7 Positional Playing Skills**

Positional playing skills define a players' ability to play effectively their position assigned by the coach. Mastery of game-situations the player faces repeatedly during the game due to his playing position is very essential for the successful team play. We also have to understand the development of the game, while looking at the players' actions in different playing positions. During the early years of development, division of the roles between defensemen and forwards was simple: defenders defend and forwards attack. While the game has developed, positional playing roles have become closer to each other.

Today all players must be able to play offense and defense in all game-situation roles, because to win the game-situations a player and his team must react and cooperate faster than the opponent. To be able to cooperate effectively the players must have common goals in different game-situations.

“A number of the skills are specific to positions and should be stressed for those playing a particular position. For example, pinching by the defenseman should be practiced if you wish this tactic to be part of your team play” (Brithen, 2011).

The playing position has an effect on the technical execution and visual observation required for decision making. Depending on the playing position (forward, defense, goalie) players will continuously face different kinds of situations, and so will need different tools to solve the problems, e.g. Hockey Canada (2008, 3) has set following positional skills criteria for the U17 national team defensemen and forwards.

### **Defensemen:**

- Must be mobile and agile with good lateral movement
- Be able to contain players in 1on1 situations
- Must be a good positional player
- Must be able to read and react in order to move the puck quickly
- Must understand the team concept

**Forwards:**

- Must have excellent skating skills such as speed, quickness, agility, and strength
- Must be an intelligent player that understands offensive and defensive systems
- Must understand the team concept

When moving towards a more competitive level a team play system has more effect on the individual players. Certain skills might be valued more than the others due to the style and strategy of the team play. Some teams and coaches value more puck control skills, when some others focus more on defense and quick transition, aiming to be productive that way. To understand the value of the positional playing skills we must understand that team play objectives are always the same in a game no matter what kind of system the team is using. This fact should be taken into account in long-term player development, because all positional playing skills are highly important to manage if we want to develop elite level players (Brithen, 2011).

Skating Focus	Puck Skill Focus	Timing Focus	Hot Zone Focus	Grit Focus	OZBD Focus	Shooting Focus	Opponent Specific Focus
-Apply your speed -Crossover per step -EI	-Use Speed to make plays -Separations -Closing Speed	Availability Dips Speed Behind the puck	Entries - Offensive - Defensive Pressure	-Seal Contacts -(+) Contact Ratio -Puck Recoveries	-Open Corner -Turn Skates -Force a Switch	-Changing Angles -Shooting off pass	-Reviewing team analysis -look for areas to expose

*Belfry Pro Playmakers Inc. Check List for skills and hockey sense 2012*

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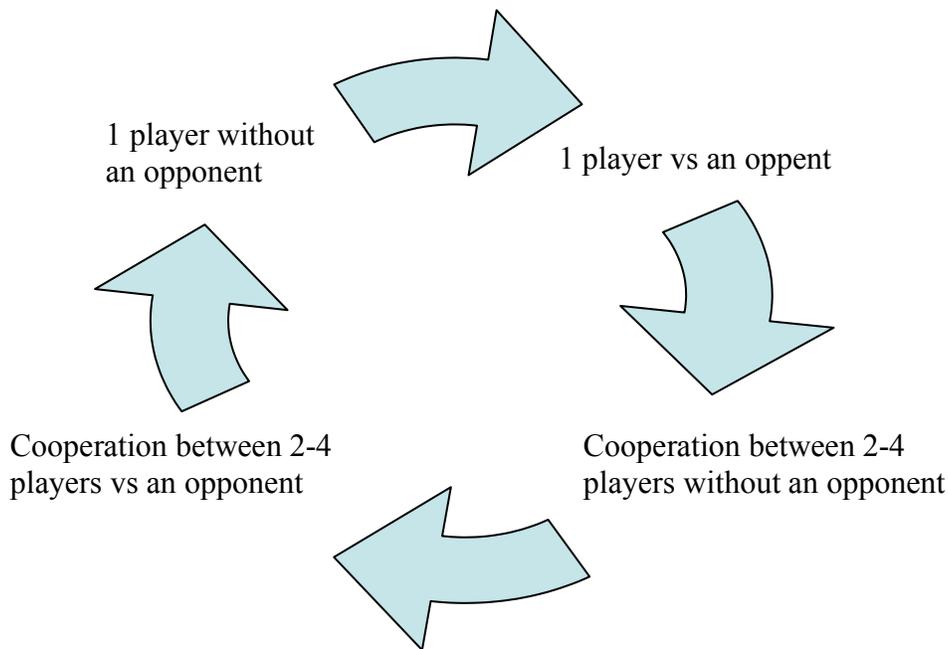
## **8 Teaching Positional Playing Skills**

A game-like setting or mindset plays a key role in the training process. A player must understand how the skill trained relates to the game, and have the understanding and skills to play together as pair, trio, and team. The hockey of today requires the player to have good physical abilities, good skills and mental abilities, but most importantly all the players must have the ability to think in cooperation with other players on the team (Hockey Canada 1995, 2).

To be able to develop better players a coach has to make sure his players are learning through the coaching process over time. To keep track of development the coach must know what learning is and how people learn. Learning, according to Schunk (2007, 3), is an enduring change in behavior or in the capacity to behave in a given fashion, which results from practice or other forms of experience. Learning is always a cognitive process. Cognition is the ability to store and use information for thinking, visualizing, problem solving, decision-making and communication (Vickers, J.N 2007, 2).

In the coaching process it is essential to use all the available time as effectively as possible (Wooden 2005, 155). By studying the learning process the coach is able to plan quality practice sessions, weeks, months, and through them a successful season. Most learning theories, regardless of perspective, share some common instructional principles (Schunk 2007, 19). This is very important information for the coaches, when developing positional playing skills due to the complex nature of them. Most common instructional principles taken into account are:

- Learners progress through stages/phases
- Material should be organized and presented in small steps
- Learners require practice, feedback, and review
- Social models facilitate learning and motivation
- Motivational and contextual factors influence learning



***Figure 8. Teaching progression of positional playing skills Based on the instructional principles presented by Schunk, the following teaching progression for the development of the positional playing skills was formed.***

To advance progressively, the on-ice drills were planned to begin with the skills of a single player without the opponent. The idea of this is to give the player a picture of a particular skill's related to the game-situation and the player's position. In the second phase an opponent is added to limit the time and the space to make training more game-like. In the third phase, especially in the drills to improve offensive skills cooperation with the other players is highly valued because of the timing of actions and understanding of the different game-situation roles. In the fourth and final phase co-operation must be done against an opponent to promote more decision-making skills. To understand the role of hockey sense in the development of positional playing skills we must look at the factors which affect the reading of the game and decision making.

Secondly, training should include lots of decision making e.g. should a player with the puck pass immediately when he gets the puck or should he win space by carrying and then passing to an open player? Decision making is an ability to make the best choice between set of alternatives

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(Vickers, J.N 2007, 167). To improve decision-making abilities in sports a training method called “decision-training” should be used.

***When a decision-training approach is used, the same emphasis is placed on technical and physiological training, but the cognitive skills underlying higher levels of performance are trained at the same time. Instead of using simple to complex drills tactical whole training is used where skills are trained within tactically oriented drills that stimulate parts of the game (Vickers, J.N 2007, 164).***

Based on all the aspects presented in this chapter, the following subjects must be taken into account when planning, running and evaluating the teaching process of the positional playing skills.

- Game-like drills/Decision Training
- Cooperation of players
- Learning process
- Time management
- Visuomotor coordination

**Case study with players born 2000-2002 in 2014 by Pro Playmakers Inc.**

1. Program 3 weeks totaling 13.5 Hours of Ice
2. 9 Hours individual skill combined with tactical skill development
3. 4.5 Hours of analyzed scrimmage

**Week Themes:**

Week 1: Turn from Pressure

Week 2: Turn from Pressure and pass

Week 3: L-Support Triangulation puck support movement principle

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### Significant Improvement Rates:

- 325 - total (both teams combined) number of possession differential between week 1 (319) and week 3 (644)
  - A. 100% improvement
- Escape Pressure, Pass, triangle support principles
  - B. 41 - less times turn to escape pressure was used in week 3 vs week 1
- Effective puck movement reduces need to escape pressure as often
- 26 - more puck possessions by top player in week 3 game to week 1
- 30, 28 and 26 top 3 players puck possessions in week 1
  - C. 56, 49 and 45 top 3 players puck possessions in week 3
- 7 - more puck possessions by bottom 3 players in week 3 game to week 1
- 7, 9, and 11 bottom 3 players puck possessions in week 1
- 14, 18 and 23 bottom 3 players puck possessions in week 3
- 3rd best possessions in week 1 was 26
- 3rd weakest possessions in week 3 was 23
- 13 - number of players who improved their # of possessions by more than 10 from week 1-3
- 5 - number of players who improved their # of possessions by more than 20 from week 1-3



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## **9 Discussion**

The aim of this thesis is to prove the importance of how we combine skill training to relate to positional playing hockey. In my own philosophy of player's development everything looked very simple, but the greatest challenge was to find scientifically proven support for my idea. What I found out during the project was that there was some research made about the game situation roles and the skills inside of them. All data I found always led into the game situation roles, but never to the positional playing skills inside of them. By the end of writing the theory part I believe I got together valuable information about teaching, in terms of what factors make a difference in teaching, learning and development, e.g. the importance of the decision training.

I personally believe that the positional playing skills are very important for the player development if we want to produce quality players, and so for increase the level of the game itself. Being able to isolate individuals and helping them find and train their skill sets, will in the end be able to produce a healthy learning environment.

Production part was easier to do because I had an everyday possibility to test the different drills and methods with my own team and get feedback from them. Challenge in the progression described in theory part and used in productive part is to find suitable drills to fit for the players' technical capacity and hockey sense, so the transfer from the practice to the game can effectively happen. This kind of method is simple but if the technical execution without an opponent is not carefully instructed and demanded the drills may easily become technical skill drills with game-like setting. Time, space and correct technical execution of the particular skill must be carefully accounted for to get positive development. An opponent must be added to the training as soon as the technical execution is at level a player understands how the skill used relates to the game. Training against an opponent and with decision making also motivates the players to work harder, and most importantly, increases their interest to know more about the game when they continuously have to be alert by reading the game and making accurate decisions.

The use of video is very beneficial for the coach when planning practices as well as individual trainings. If being used in an individual training setting, players are able to given instant feedback regarding their development. This also gives the opportunity to correctly educate the

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athlete. As for development training thru the use the of game video, this beneficial to both the team as well as individual. They are able to recognize the playing skills within their position, and can help them to evaluate themselves on what needs to be adjusted.

I find that use of the video really helps in finding out the key points from each drills and gives more understanding of how to compose my on-ice practices for athletes. Having a collection of films from individual and team trainings help to show you the coach your progression of skills, and how the athletes are responding. Video for us gives us the opportunity to continually learn and adjust to our athletes needs.

I think I was able to tie in the individual skill sets along with the playing positional skill sets and how they operate together. No matter what visions coaches and the others bring up, there will always be beforehand assigned positions. During the action, playing positions will get mixed, and they should if the cooperation between players is functioning in terms reading and reacting. It is still essential to master many skills in every position. The Soviets under Tarasov where always moving as a group of five, with no one keeping their own position, only making sure all lanes and options were covered as they moved up ice. This is beneficial as the ultimate goal is to score more points than the opponent and win all the inside the game-situation roles.

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