

Benchmarking for the IIHF Player Development Guide for the beginner level

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<p>This thesis focuses on the theoretical foundation for the Player Development Guide (PDG). The PDG, further developed by the International Ice Hockey Federation (IIHF) will give guidelines for on- and off-ice development and progression in ice hockey, develop good habits and life skills of players. The thesis will look into development of on-ice technical skills for beginners. This is important for the overall development of ice hockey throughout the world. One of the main objectives of the International Ice Hockey Federation (IIHF) is to develop hockey throughout the world. Thus, the purpose of the PDG is to help less developed countries to improve their player development and to grow the level of the sport.</p> <p>The emphasis of the PDG is not just to provide ready-made drills, but to also offer ideas to improve coaches' ability to design drills on their own. In order to do this, a coach needs a good foundation of what ice hockey requires in terms of technical skills. Thus, this thesis presents the most important on-ice technical skills that provide the base for further development of players. During the selection process of the skill requirements. I used multiple resources from the various federations and organizations throughout the world.</p> <p>As a result, I will present a showcase of exemplary videos that will be part of the end product of the IIHF PDG. The end product drills in the PDG will be set up in progression in groups of three; three stationary, three moving and three game like drills for each skill and developmental stage. However, as a showcase I'm presenting progression of one stationary, one moving and one game like on-ice puck handling drill for the beginner level so a reader can get the idea of the project.</p> <p>By providing the guidelines, the IIHF wants to ensure that no matter the skill level or age of players, all Member National Associations can more efficiently improve their player development.</p>	
Keywords Player Development, Coaching, Ice Hockey, Hockey Development	

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1 Introduction

During the last decade, the hockey world has rapidly expanded and changed. The International Ice Hockey Federation (IIHF) is a federation of 76 member national associations governing the sport of ice hockey and in-line hockey. As a governing body, the IIHF has diverse responsibilities in numerous areas. One of the objectives of the IIHF is to develop and promote hockey throughout the world. The IIHF has produced several guidebooks concerning athlete development and coaching (International Ice Hockey Federation 2018). However, they are outdated and are consisting material from last century.

For developing players and expanding hockey worldwide, it is crucial that coaches responsible for beginners are well educated. It is essential that people who are willing to start playing hockey begin the process with the appropriate drills for their skill level. The purpose of the IIHF Player Development Guide (the PDG) is to shift from an age specific development to the development, which is related to the skill level of the player. As stated before the IIHF is governing 76 MNA and several members have recruitment program for kids. Though, in some countries people are starting to train hockey only when they are teenagers and adults. Because of different ages of entering to ice hockey, the IIHF can't focus on age groups but rather has to focus on skill development. Countries with a long tradition of ice hockey such as Canada, the USA or Finland have developed player development models which are based on age specific training. For Canada it is the Long -Term Player Development Model (LTPD), for America it is American Development Model (ADM) and in Finland the Lions Pathway. These models have in common that they are all age specific because players are separated in age-specific teams and into age-specific competitions. The idea behind the PDG is not to replace existing material from developed countries, but to assist countries in need of such material.

In some countries hockey is still in its beginning phase and these countries have a large number of people stepping on the ice for the first time with an age that is categorized within the advanced developmental stage in the common long-term player development guidelines, which are guidelines focussing on age-specific categories. Therefore, they will skip most of the fundamental skills of hockey and quickly move to a more advanced stage. Coaches need to realise that with beginners, of teenager age, they need to do similar exercises than young kids are doing when they first start to play hockey.

The IIHF PDG is divided into two parts. The first part is about developing skills on-ice broken down into skating, stickhandling, passing/receiving, scoring, which are all fundamental

technical skills of ice hockey. This section also includes understanding the game alongside small area game concepts, which are more related to the tactical aspects of the game but are also used as a tool for developing technical skills. The second part of the PDG is consisted of drills and guidelines on how to develop athletic skills off the ice which will support on-ice development. As mentioned before numerous countries have a problem with the availability of ice, this section shows fundamental motor skills, ABC's (agility, balance, coordination and speed) which every athlete needs to master, but also demonstrates skills needed for performance on the ice: technical skills of skating, stickhandling, passing/receiving, scoring and understanding the game.

The player's life style that will be developed through hockey is as important as the development of hockey skills. The aim is to build better athletes, players and better citizens. Hockey doesn't just provide the opportunity to make better players but also to leave an impact, to create a better society through the interaction with players and parents. This is the coaches' chance to get the best out of the players concerning hockey and life. The PDG will provide coaches with guidelines and information how to provide and develop players with the capabilities of taking responsibility for their own life and their own development.

Throughout my thesis will benchmark material for the beginner level of the PDG. For understanding the big picture behind coaching, it is necessary to know the theory of coaching and how to select the right person to be the coach. After selecting right person, one needs to get tools to go into depths on technical on-ice skill development. Those two are important to understand for the sake of knowing what overall quality coaching is about, what kind of person we need to search for to execute quality coaching and how do we develop our coaches to become superior in coaching. Therefore, the thesis is divided into three parts, the first part is focusing on technical on-ice skill development, the second part is covering holistic player development and the third part talks about coaching and coach selection.

The IIHF Work Group is constructed of seven experts from several hockey organizations from around the World. The IIHF Sport Manager Aku Nieminen assembled Work Group consisted of dr. Frauke Kubischta (Project Coordinator, Vierumäki Sport Institute of Finland), Johan Bollue (Sports Director, Royal Belgian Ice Hockey Federation), Kevin McLaughlin (Hockey Development Senior Director, USA Hockey), dr. Stephen Norris (Performance & Development Consultant, Hockey Canada), Kalle Väliäho (Youth Hockey Manager, Finnish Ice Hockey Association), and I, Marko Valenčić. The Work Group has crucial role in constructing and deciding what sort of information needs to be put in the PDG. The Work Group provides guidelines on appropriate content shown in Table 2 which

is situated on the end of the thesis. The Work Group assigned four Task Force groups whom contains experts from top five nations - Canada, Czech, Finland, Sweden and USA; whom have been named by their National Association to be part in the project for certain tasks in the individual parts of the IIHF PDG that were broken down to their filled of the expertise. Each Task Force will propose drills and its key points for proper execution. When all the content is gathered from every Task Force subgroup, the Work Group will make a final decision about the content of the PDG. As a result, the PDG will have material for goalkeeper skill development, checking, technical and tactical on-ice skill development, off-ice skill development, life skills and practice planning of the PDG.

As stated in the IIHF Virtual Academy: Player Development Guide Project Plan extract for Coaching Committee (31st October 2017) made by Work Group the PDG has vital role in development of athletes, players, coaches and overall hockey:

...Through the guidelines of the PDG, players will be holistically developed through the application of appropriate developmental practices and trainings, on- and off-ice.

The PDG will also influence costs associated with participation. It guides optimal usage of the ice, promoting station-based training and thus enabling more players to participate. It will also illustrate how much player development can be done without ice. In the beginner stage, the PDG advocates a low priority on winning, game results and player statistics. In contrary, it prioritizes on fun ice sessions, introducing the game of ice hockey through games and playing. As the PDG advances to other skill levels, it gradually introduces the elements of more competitive game while emphasizing that there still should be an option for recreational participation sport.

The PDG is the foundation for player development and therefore one of the biggest benefits will be that the content can be directly utilized for player recruitment programs as well as for coach and coach developer education.

2 Developing on-ice technical skills

As stated in the Introduction, the PDG is extensive framework and guide for ice hockey organizations worldwide. The thesis is focusing on benchmarking the material existing for beginners skill development and coaching. Nonetheless, reader must be aware that there are several different areas of player development then just on-ice skill development.

The Finnish Ice Hockey Association (International Ice Hockey Centre of Excellence 2009) divided on-ice technical skills into four sections: skating; puck handling; shooting; passing and receiving. Each player should master these four hockey specific technical skills in order to move on to game tactics and game sense drills. Consequently, coaches have to emphasize these technical skills during the training before moving on to more complicated skills/drills.

At the beginner stage of a players' development the player needs to develop all four skills, but the main part of the practice time should be spent on skating skills and techniques. In order to proceed through the development stages, it is crucial that each player masters the skating skills and feels comfortable on-ice. Coach should develop players through fun drills and small area games in this development stage. (McLaughlin 18. July 2017.)

2.1 Skating

Skating is a skill that makes ice hockey unique. It is the first skill to learn when starting with ice hockey and is the most important hockey skill. Skating is a skill that players of all levels must continually work on to improve. Power, speed, endurance and versatility are the basis for good skating, which provide a solid foundation for training other ice hockey skills and their application in the game. Without skating ability, players will not be able to play hockey. (International Ice Hockey Centre of Excellence 2018a). With good skating technique player is able to move quicker and skate faster with less effort. With good skating technique player can focus more on changing situations during the game. *"Skating is the foundation upon which all other skills are built."* (Hockey Canada 2013, 91) Coaches must invest plenty of time on improving a player's skating, due to tremendous value of good skating skill in all aspects of the game. (Hockey Canada 2013, 91)

2.1.1 Balance and edge control

Balance on-ice is another essential skill for hockey. Without properly learning to balance; The player is unable to get up off the ice; To stand in basic hockey stance, or to move on the ice. When a player can efficiently balance on the ice he can develop other ice hockey skills. When first trying to balance player can start with holding the boards and lifting one leg, when feeling confident player should try doing squats while still holding the boards. Afterwards, when player feels confident on the skates, he can move away from the boards and repeat the same movements on the open ice surface without the help of supportive structures. (International Ice Hockey Centre of Excellence 2018b)

When a player masters the basic principles of balance and feels comfortable on-ice without any support, the coach can progress to training based around edge control. Edge control can't be duplicated on the off-ice trainings. When players are young they are still learning basic motor skills, so it could be a problem for them to balance on one edge or even one leg. When player feel comfortable on both feet, they should start learning how to use their edges. (USA Hockey 2016)

As it shows on figure 3, each skate blade has two edges of blade, that means that each player has four edges to master. The inside edge is used mostly for pushing, whereas the outside edge is used mostly for turning. However, mainly when skating, player uses inside and outside edges in a same time. When gliding both edges of one foot are used or when stopping with two feet inside edge of one foot and outside edge of the other foot are used combined. (USA Hockey 2016)



Figure 3. Edges of the blade

For good balance player must know how to distribute body weight on skates and how to position the upper body. When player has fundamentals of balance he will be able to learn

basic hockey stance. The back and core muscles are crucial in keeping body weight centered. When moving to next development stage balance will play crucial role in checking and getting checked. (Stamm 2010, 11&13)

2.1.2 Hockey stance

The International Ice Hockey Centre of Excellence (2018b) describes proper hockey stance or the “ready position” is first hockey specific skill that player needs to master and feel confident in. Player is also in ready position when executing all of the basic skills such as puck handling, passing and shooting.

Although hockey stance varies with individuals, there are six key points that are important to follow:

- Skates are parallel and shoulder width apart
- Legs are bent at the hips, knees and ankles
- The toes are pointing straight forward
- Head up, looking forward
- Stick hold in both hands and on the ice
- Body weight centered more forwards

Visual representation of a hockey stance is demonstrated on Figure 4.

In addition, players quadriceps should be almost parallel to the ice. By bending in your knees player has greater balance. The lower center of gravity, the more balance player will have, which means less falling down on the ice. The lower knee bend, the more power player can get from each skating stride push. (Rupke 2013.)



Figure 4. Hockey stance

2.1.3 Starting positions

Starting position of the feet is foundation of skating stride. The two basic starting positions in ice hockey are v-start and sideways start whose technique is explained in the paragraphs below. When training, beginners, should master ability how to start quickly. If player has a quick start he will have advantage in a game because hockey is a sport reliant on acceleration and deceleration, therefore a quick start can give advantage to a player.

“V-start” demonstrated on Figure 5, is starting position used for the start of skating from stationary position. Player is standing in “ready position”, brings heels together under his body so that toes are pointing in a wide V. Player leans and steps forward with one skate, and then pushes off explosively with the other one. The first steps are fast and short, the player looks like he is running on the ice. With every push, player is transferring the movement into proper, long and powerful skating strides. (USA Hockey 2018b)



Figure 5. V-start

The other starting position is the sideways start which is visually illustrated on Figure 6. When starting sideways players are using crossovers. It is similar to the v-start but in the sideways start the player’s first step is a crossover and after this the player continues with explosive and short steps in a forward direction. The crossover start is used when players need to start rapidly from the two-foot parallel stop or from a parallel position. (Pavlis 2003, 89-91)



Figure 6. Sideways start

2.1.4 Stopping

For safety reasons stopping should be one of the priority skills that players should overcome. Stopping is as important as starting in game for advantage of players and for avoiding "hits". Ability to stop fast is important when reacting to changes in a game.

There are three basic stopping techniques that a player needs to master. "One o'clock - eleven o'clock stop" is basic stop that players must learn. One foot stop is second one and is executed with the front foot's inside edge of the blade. After player learns it and feels confident executing it he can move on to the two foot stop. Proper technique will be described and shown in the paragraphs beneath (Hockey Canada 2013, 96-97)

As mentioned before, stopping should be one of the first skills players are taught. Knowing how to stop is essential for changing directions and avoiding collisions with other players. Easiest stop to master for beginners is the "one o'clock - eleven o'clock stop" exhibited on Figure 7. Movement is done from the ready position while moving. Player remains facing forward and pushes the feet out to execute the stop. One o'clock refers to the right skate that is pushing heel outwards, and the left skate is pushing the heel close to the eleven o'clock position. The toe of the skate is turned inward, and the heel is turned outward as described above. The player is keeping knees bent and back straight as in ready position. (International Ice Hockey Centre of Excellence 2018b)



Figure 7. One o'clock - eleven o'clock stop

One foot stop or outside leg stop is used by players that mastered one o'clock - eleven o'clock. As exposed on Figure 8, when stopping with one foot, the outside leg is turned at an 90° angle to the direction of the movement. In that moment the whole of the player's weight is transferred to the inside edge of the stopping leg so when the weight is transferred to the edge player it brings the player to a halt. The other leg is lifted slightly of the ice and is ready to start a new skating stride. (Hockey Canada 2013, 96-97)



Figure 8. One foot stop

The two feet stop is an efficient and quick way to stop. It should be the goal of each player to be able to stop with two feet at the same time. Starting of the stop is done in the ready position. When stopping both skates are rotating 90° to the direction of the movement. The weight should be evenly distributed onto both legs. When turning player is extending the legs while putting pressure onto the front part of the skate. The whole body is rotating in the same direction as the skates. In this movement the player is stopping with the inside edge of the outside skate and the outside edge of the inside skate. Head and shoulders are straight, and the stick is in both hands and the stick blade is on the ice. (International Ice Hockey Centre of Excellence 2018b)



Figure 9. Two feet stop

2.1.5 Forward skating

When player is skating forward, the body is positioned in the ready position. After starting, either with the V-start or the sideways start, player is trying to extend the lengthen the strides. The stride starts with the players' body weight on the pushing foot. The foot is pushed outward to the side. The pushing leg is done with the stride when it is completely extended, and the body weight is transferred to the gliding leg. The pushing leg begins with the recovery of the stride. The leg is slightly raised above the ice and recovered back into the starting position. During the skating movement, the other leg is steady and gliding forward. (International Ice Hockey Centre of Excellence 2018b)

When skating players should be in a low position so that the thigh and calve are almost describing a 90° angle. The shoulders and arms are following the rhythm of the skating

strides. The upper body is stable and facing forward. Proper skating stride is accomplished only when leg (hip-knee-toe pattern) is fully extended. During the start of the skating stride pressure is placed on the middle part of the pushing blade. (Kärki & Lamminaho 2011, 54)

When finishing the skating stride, the thigh muscles extend to their full length. Good mobility makes it possible to extend the hip-knee-toe to the straight line. The controlled movement of the shoulders and hands, through the rotation of the middle and upper body, gives extra kick to the skating stride. The end of the stride is done with the ankle extending to the maximum, pushing of the ice. (Kärki & Lamminaho 2011, 56)



Figure 10. Skating stride

The recovery phase starts immediately after the skate pushes off the ice. Skate is brought back as fast as possible to the starting position under the body, close to the other leg, which is still gliding forward and firmly in contact with the ice. When the recovered leg is brought back onto the ice it needs to be in the same line with the knee, hip, and shoulder. When the recovery motion has been completed, the next skating stride with the other leg can begin. (Bracko 2004, 48)

2.1.6 Backward skating

Backward skating is not just a defender's skill to master, every player needs to know how to skate backward efficiently. Knowing how to skate backwards is as important as skating forward. Each player needs to master both forward and backward skating due to the constant change of positions and direction during the game. (International Ice Hockey Centre of Excellence 2018b)

The one leg C-cut is the starting skill that players learn for skating backwards. Movement is visually demonstrated on Figure 11. The heel of the driving leg rotates outward as the hip, the knee, and the ankle are extended forward and sideways to cut a "C" shaped arc

on the ice. Movement is executed in the ready position. One leg is the guiding leg and other is the driving leg. The driving leg makes a powerful push to the side and recovers quickly under the body, back into the ready position. Movement is executed only with on one side until the player feels certain in performing the movement. (International Ice Hockey Federation 2010, 16)



Figure 11. C-cut

Alternating C-cuts are the foundation of skating backwards. The movement is executed in the ready position during which the player needs to keep hips and upper body calm without leaning forward. In this position the player is better able to maintain balance, as well as performing a bigger range of motion and longer movement for the C-cut. The movement is the same as for the one leg C-cut, only now when the driving foot recovers under the players' body, the gliding foot can start with the driving movement. That means that the feet are alternating the functions. (Glantz 2018)

2.1.7 Transition

During an ice hockey game there are numerous transitions from forward to backward skating and vice versa. Transition in hockey terms means to quickly move from offense to defense or from defense to offense. When talking about the technical skill of transition it includes change of direction of the movement. Transitions can be accomplished with stop-start movement, crossovers, pivots or turns. (Quinn 2016)

When transitioning, crossovers, pivots and turns are more energy efficient than stop-start movements. However, players must learn all the elements in both, the left and the right direction. If a player is capable of executing all the elements in both directions, he can react quickly to every event that is happening in the game. This skill is not learned easily, it is developed through a large number of repetitions. (Stamm 2016)

In chapter 4.1.4 stopping was already covered, because that is the base for every hockey player to train in a safe environment on the ice. After learning how to stop, a player can move on to learning how to execute glide turn. Turning movement begins with skates-shoulder width apart and it is initiated with head and shoulders moving towards the wanted direction of the movement. Then weight is transferred on both skates and body is leaning in the direction of the turn. To beginners, the coach can explain that gliding-turn as following the stick. That means that the stick is first going into the desired direction, followed by the skates. (International Ice Hockey Centre of Excellence 2018b)

When changing direction in a small space the player can stop and start skating again, or can use a tight turn. During a tight turn, the player's pushing force should be divided to the outside edge of the lead foot and the inside edge of the following foot. The player's body weight should be distributed as evenly as possible onto both of those edges. The player should lean forward with the upper body, so the center of gravity is ahead of the skates. In this position, the player will have good balance in the turn and will be able to make a crossover smoothly after the turn is complete to gain additional speed. (USA Hockey 2018b)

Before going into training crossovers, the player should exercise C-cuts around the circle. When performing C-cuts around the circle with the outside foot, the movement is fundamentally the same as with regular C-cuts. The player is pushing with the inside edge of the outside foot. The only difference when performing C-cuts around the circle is, that the body weight is slightly leaning over the inside leg and outside edge of the inside edge is more used than the inside edge. Both of the legs are all the time on the ice. The heel of the outside foot should turn outward and push into the ice. The recovery, bringing the outside foot as close as possible to the inside foot, is done immediately after full extension of the outside leg. (International Ice Hockey Centre of Excellence 2018a)

For accomplishing a crossover movement, player needs to have good balancing abilities on one leg. When doing a crossover, the body weight is transferred rapidly and consistently from one leg to the other. In the game crossovers are used for transitioning, while maintaining or even gaining speed. For efficient crossover, the player needs to bend the knees deeply and the upper body should lean forward and inside. The crossover begins by extending the outside leg to behind the body and outward. At that point, the player pushes off the ice with the inside edge of the same foot and shifts it over and in front of the inside foot. At that moment inside foot is moving outside and back to its full extension. Same leg is pushing off the ice with the outside edge of the blade and comes back into the starting position of the crossover. The motions of the movement are repeated over and over. (Rupke 2012; Pavlis 2003, 63-66)

When working on the transition skill, the backward movements are as important as the forward movements. The player should first learn how to do turns and C-cuts around the circle. After they are able to execute turns, C-cuts and forward crossovers properly, they can learn backward crossover. When doing a backward crossover, the player starts the movement by moving “active foot” in front and over the “stationary foot”. At the same time the “stationary foot” is extended to the back and outwards. With this movement, the player is creating power with both feet at the same time. The movement is complete when the “active foot”, which is at the moment at the inside of the body, is pushing out and the “stationary foot” is gliding into the original position. (Pavlis 2003, 71-74; Lode 2018)



Figure 12. Crossover

2.2 Puck handling

In order for a player to be able to handle the puck, he/she needs to know how to hold the stick. As mentioned in the section on the Hockey stance section (4.1.2.) the stick is held in both hands with the blade on-ice. The player's hands should be positioned on the stick in a comfortable distance away from the body. The upper hand is holding the stick on the top, and the lower hand is apart from the upper hand in a comfortable distance on the stick. (Gwozdecky & Stenlund 1999, 4)

Puck handling can be learned on- and off- the ice. Every skill related to puck handling is first learned using stationary drills. Learning puck handling through stationary drills is an essential skill to master before moving on to more difficult movements. After mastering stationary drills, the player will be able to progress to puck handling while moving/skating. (International Ice Hockey Centre of Excellence 2018c)

2.2.1 Stationary puck handling

When performing stationary puck handling drills, the player has to be positioned in a stationary skating stance which is similar to the ready position (4.1.1), with the knees bend

and the skates shoulder width apart as it is shown on Figure 13. The upper body and the arms are relaxed, and the upper body is slightly leaning forward. The stick-blade should be in front of the player flat on the ice. When players are learning to puck handle, at the beginning they are allowed to look at the puck. Later players should get a feeling for the movement and use only their peripheral vision, looking at the play while still seeing the puck. (International Ice Hockey Centre of Excellence 2018c)



Figure 13. Puck handling position

At the beginning the player learns how to puck handle in front of the body from side to side. The puck is controlled with the middle of the blade. The player should start with a range of motion that he finds comfortable, when progressing to wider range of motion, hands are positioned closer together – lower hand is moving closer to upper hand. The movement needs to be smooth and rhythmical without slapping the puck, to control the path of the puck through the whole motion. (International Ice Hockey Federation 2007a, 4-5)

In the IIHF Coaching Education material four different basic types of stationary puck handling are presented: front, side, diagonal and toe pull back. The front movement, as mentioned above, is the basic movement executed from skate to skate – a lateral movement in front of the player. On the other hand the side puck handling movement, in the game, is mainly used at the forehand side while the player is skating. But when practicing stationary movement puck handling drills, it should be learned on both sides – forehand and backhand. Progression from the side movement is the toe pull back movement. When pulling the puck back using the side movement, the backhand side of the blade is used. If the toe pull back movement is used, the puck is pulled back by the toe of the forehand side of the blade. The toe pull back movement can only be done with the forehand. The diagonal puck handling movement is a mix of the front and the side movements. In some literature it is also known as the twelve o'clock – nine o'clock or the twelve o'clock – three o'clock, depending on a players' blade side. All of these movements are used in the game

and therefore are useful to learn and master. (International Ice Hockey Federation 2007a, 5)

2.2.2 Puck handling while moving

Puck handling skills while moving (skating) are mostly progressions of the stationary puck handling movements. It is important that players have enough time to try, practice and develop the desired skills of puck handling while moving. Players should start with moving slow and progress towards more speed in time.

The first movement that a player should learn is pushing the puck forward. This technique is used with beginners when learning to move with the puck forward and with more advanced players when moving through the open-ice. The movement is executed with the stick held by the upper hand and the lower hand is moving freely through the skating movement (not holding the stick). The upper hand which is holding the stick is slightly extended forward and the stick blade is placed on the ice. The puck is pushed forward with the forehand side of the heel of the blade. Player is not dribbling but only pushing the puck into the wanted direction. (USA Hockey 2018b)

After learning how to skate with the puck, the player should learn basic front to side movement. The puck movement is similar to the stationary one; movement should be as smooth and rhythmic as possible. It is more complexed skill because the player is skating. The stick should be in front, so the player can use his peripheral vision, to avoid skating into other players. (International Ice Hockey Centre of Excellence 2018d)

When moving it is important to control the puck but also to protect it from opponents. The player is able to control the puck better and have more frequent handling of the puck by turning his upper body to one side. When player has the puck on forehand side of his body, he can dribble, pass, fake or shoot. At the same time, the player can protect the puck better. (Kärki & Lamminaho 2011, 45)

2.3 Passing

After a player is able to handle the puck he/she can start developing his/her passing and shooting skills. Passing is learned the same way as puck handling – first the player is taught how to execute passing and shooting drills stationary. At the beginning, when pass-

ing players should face each other and be relatively close to each other. Passer and receiver should be close to each other, so less power is needed for the pass, this way it is easier to steer the puck and to receive it. After stationary passing and receiving has been mastered, drills can progress to passing over longer distances; and later, while moving.

When teaching players to pass, they should first learn how to pass from tape to tape – player passing the puck delivers puck from his blade directly to the blade of the other player. The passing movement starts with player guiding the puck from the heel to the toe of the blade in the direction of the pass. After guiding the puck towards the wanted direction, the player releases the puck. If the player is slapping the puck, it is hard to control path of the pass and it could lead to an unvented direction of the pass. (Gwozdecky & Stenlund 1999, 8-10)

Players should first learn stationary passing. The pass starts with the puck at the heel of the stick. The blade is on the ice next to the body along the same line as the skates. When proceeding with the passing-movement, hands are extended so that the toe of the blade is following the movement and is directed towards the target of the pass. When performing stationary forehand passes players need to transfer the weight from the leg closer to the blade (when beginning) to the other one (when releasing the puck). When learning, the player can watch the puck on their own stick during movement and then watch the puck travel to the receiving player upon release. When player overcomes the basics, his head should be up all the time and should look the game and the player receiving the puck. (International Ice Hockey Centre of Excellence 2018e; Dwozdecky & Stenlund 1999, 4-5)

The movement for the backhand is similar to the forehand pass. The only difference is that the puck is on the backhand side of the blade. The player is transferring weight from the rear leg to front leg. The backhand pass is more challenging to execute than the forehand pass because if it is not performed correctly, the puck will be lifted off the ice into the air. In order to avoid this from happening, the player must keep the lead shoulder down so the puck stays on the ice when it is released. (Lifetime Hockey 2015)

2.4 Receiving

As stated above in section 4.3., the basics of passing and receiving the puck are first learned while in a stationary position. When the player masters receiving the pass in a

stationary position, he can progress towards receiving the puck while moving. A player receiving the puck must keep his blade of the stick on the ice to provide the passer with a target to deliver the puck. (Lifetime Hockey 2015)

When receiving the puck, the stick must be square to the puck. The player should put a bit of pressure on the stick, so lower hand doesn't bounce off the stick upon the puck touching the blade. The puck should be received roughly with the middle part of the blade. When the puck touches the blade of the stick, the player should cushion the puck with the blade while moving the blade slightly in the same direction as the puck. Puck is received close to the middle of the blade. (Rupke 2015)

After learning the basics of the receiving technique, the player should learn how to make himself/herself available, so he/she can receive a pass from another player. This is the beginning of the concept how to get open in a game. Later, when the player is able to understand the basics of being available and ready for receiving the pass, he/she can incorporate different lengths of the pass that he/she receives. By these, coach is guiding player how create and find good passing lanes. (USA Hockey 2014, 6-8)

2.5 Shooting

Every player wants to train shooting. With beginners, nothing makes them happier than when they are able to shoot puck so that it leaves the ice. However, before learning how to shoot, a player should master puck handling. Shooting begins with the puck handling (ready) position and it is important that the players' body is in a well-balanced position. (International Ice Hockey Centre of Excellence 2018f)

Players should eventually know a variety of different shots: wrist shot, backhand shot, flip shot, snap shot, slap shot, and others. At the beginning, they should learn how to shoot wrist shot, backhand shot and flip shot. After they master those three shots, they can progress to more advanced ones. It is important that the player is initially training execution technique of a certain shot. When the player masters basic movement of the shot, he/she can add more power to the shot. (USA Hockey 2014, 7-18)

As stick handling and passing, also shooting is first thought stationary drills. The shooting movement consists of three stages: preparation, execution and the follow-through. In the preparation stage the blade is behind the body and the player is in control of the puck. During execution phase of the shot, the player releases the puck. The follow-through phase starts when the puck is released. The follow through is when the puck is released

and the stick blade is pointing towards its target. Body weight transfer during shooting is happening in a similar manner, but with a greater extent, than when passing. During the preparation stage the body weight is on top of the back foot, when releasing the puck (stage two) and indicating the target (stage three) the body weight is transferred to the front foot. (Brown & Stenlund 1997, 6-8&15)

Certain rules are valid for all types of shoots. These rules are, that the upper hand is pulling, and the lower hand is pushing the stick; both feet are on the ice and the knees slightly bent for better balance and stability. During the first phase the puck is close to the heel of the blade, and when releasing it, it moves towards the toe of the blade. When learning the shooting technique, the player is allowed to look at the puck. When he feels comfortable executing the shot, he should look at the target where he wants to shoot the puck to. (Turk 28 March 2017)

The wrist shot is the base for all other shots. The wrist shot position is similar to the puck handling position. The puck is on the heel of the forehand side of the blade, and the blade is situated behind the body. The body weight is on the back foot. As mentioned before, when executing the shot, the body weight transfers onto the front foot. In one motion the upper hand is pulling the stick forward and then backward. The lower hand is pushing the stick down and then towards the target. When the movement has been learned correctly, the player is able to lift the puck off the ice by increasing the speed of the movements. (Hockey Canada 2015, 1; International Ice Hockey Centre of Excellence 2018f)

The backhand shot is performed with similar steps through all three stages as the wrist shot. The differences between those two shots are that the puck is located on the heel of the backend side of the blade; and that the upper hand is pushing, and the lower hand pulling the stick. For this movement the player is using more wrist and arm strength than for the wrist shot. (International Ice Hockey Federation 2007b, 3-4)

The flip shot is used when the player is standing close to the net and needs to shoot the puck up high as fast as possible. The flip shot can be performed on both side, forehand and backhand. The starting position of the flip shot is not behind the body, as is the typical position when preparing for shot. The blade of the stick is placed slightly ahead of the player and to the side. The knee closer to the blade side is slightly more bent than the other one. The lower hand slides slightly downwards along the length of the stick. The blade of the stick is opened upwards. When executing and following-through the flip shot, the blade is propelled high in the air by lowering the upper hand and raising the lower hand at the same time. (International Ice Hockey Federation 2007b, 8)

3 Holistic player development

Holistic development of a person means that one is interested in engaging and developing the whole person. To develop a person, one needs to develop his emotional, mental, physical, cognitive, social aspects of players' portfolio. Sport must potentiate development of a player to fulfil his potential not just as an athlete, but also as a human being. As a humanistic coach or athlete-centered coach one must focus on whole person and his development. (Walters & Kindman 2016, 83)

Before, kids were playing outside with friends' diversity of sport on different surfaces. Nowadays kids are playing tournaments, having a setup practices, playing hundred games and training throw the whole year. That is not good for their holistic development, they shouldn't train ice hockey twelve months of the year. They should play other sports, with different kids and different coaches. (Strombo 18 October 2013.)

International Council for Coaching Excellence (2013a, 6) is stating that a coach is assisting and supporting development of players as people, as part of communities, as cohesive team. Coach is promoting healthy and active life style outside the particular sport. They want to develop good citizens. Thus, Čerenšek (2014) is discussing that there is not just one right way how one can train and develop the athlete. The specificity of athletes' path and identity is of greater importance than improvement of the techniques needed for sport performance.

In player's development, associated with youth sport, there are three main categories of competence: sport, life and personal competences.

- Sport competence – technical, tactical and physical skills
- Personal competence – social, emotional and cognitive skills
- Life competence – combination of sport and personal competences that leave positive experience for player

All three competences are influencing and affecting each other. Therefore, coach shouldn't exclude importance of either. (International Council for Coaching Excellence 2013b, 34-35)

Chris Harwood (2008, 109-113) talks about coaches' guideline for player development, which he refers to as the 5Cs, that can leave positive output in players life and sport progress:

- Commitment: coach aims to create learning environment that fosters self-esteem, skill development persistence in players. Coach is focusing on a player's effort and their individual improvement.
- Communication: coach aims at developing a player's social skills and positive interactions between each other. Coach needs to teach players how to give and receive feedback, how to listen others and how to use verbal and non-verbal skills in communication.
- Concentration: coach is trying to develop player's focus on fight things in right place and at right time, while not giving attention to distractions.
- Control: coach helps players to develop control of his emotions and feelings. Player tries to be in state of optimal readiness and arousal.
- Confidence: player will feel confident when all his skills are in desired level and he has support from others.

Cliff Mallett (2013, 4-5) likewise talks about a model, which he refers to as the 4C's, to support the coaches need to help to develop in their players:

- Competence: coach should help player to have positive view of himself and to have sense of accomplishment.
- Confidence: coach needs to help player with positive self-efficacy and self-worth. Focus should be on self-reflected improvement and positive self-image.
- Connection: sense of belonging, coach needs to provide safe and positive environment for player to feel welcome.
- Character and caring: moral development and integrity, tolerance for difference, following the rules and good behaving should be one of characteristics that every player should possess.

4 Coaching

Coaching is privilege, practical skill and art. A coach should always be ready to listen and react if a player needs help or guidance. It is a great privilege to engage in the action and the accomplishment of your players development goals. It is considered a practical skill because a coach needs to try different ideas and approaches to see which are suitable for him and his team. There is great number of variables in a team such as different skill levels, personalities, habits. With every decision, coach is creating authentic picture of his team and him (Thomson 2014, IX)

Sport can be of great influence on a person's life. It gives participants chance of making lifelong friendships, learn and develop competences which are needed in life; leave positive influence in one's life. The coach should promote learning, developing and achieving goals that were set by the player, rather than accomplishments and results shown on a score board. A coach should award efforts that player is showing to grow as an athlete. The coach is a key component of a player's ice hockey experience and as such, he is a most influential person. (Mallett 2013, 3)

In today's world coaching is more interesting and exciting than ever before due to digital and social medias. Because of these new media everyone can find good practices for any skill possible, that's why coaching should be more than just drawing X's and O's. Coaching is not done only during the practice time, but a coach must also fulfil several roles during practice time and outside of the actual practice; these include to be psychologist, educator, manager, role model and mentor in order to develop players to the best of their abilities. (Lara-Bercial et al. 2017, 13)

Later in their book, Lara-Bercial et al. (2017, 16) are discussing about the broad amount of disparity related to payments and reimbursements of coaches. We have a spectrum of full-time payed coaches to volunteer coaches. Variations in the proportion of paid and unpaid coaches in many countries brings status of a coach and how coaching identity is perceived. Figure 1 is showing that every coaching role is connected to the next. Incentivized coaches are committed to professional approach, high standards and good organisation. If coaches are getting part-time job in coaching they are committed to professionalism and good organisation. Volunteer coaches, which are a majority in youth sports, are committing to non-payed roles and they try to do their best effort with the help of professionals.

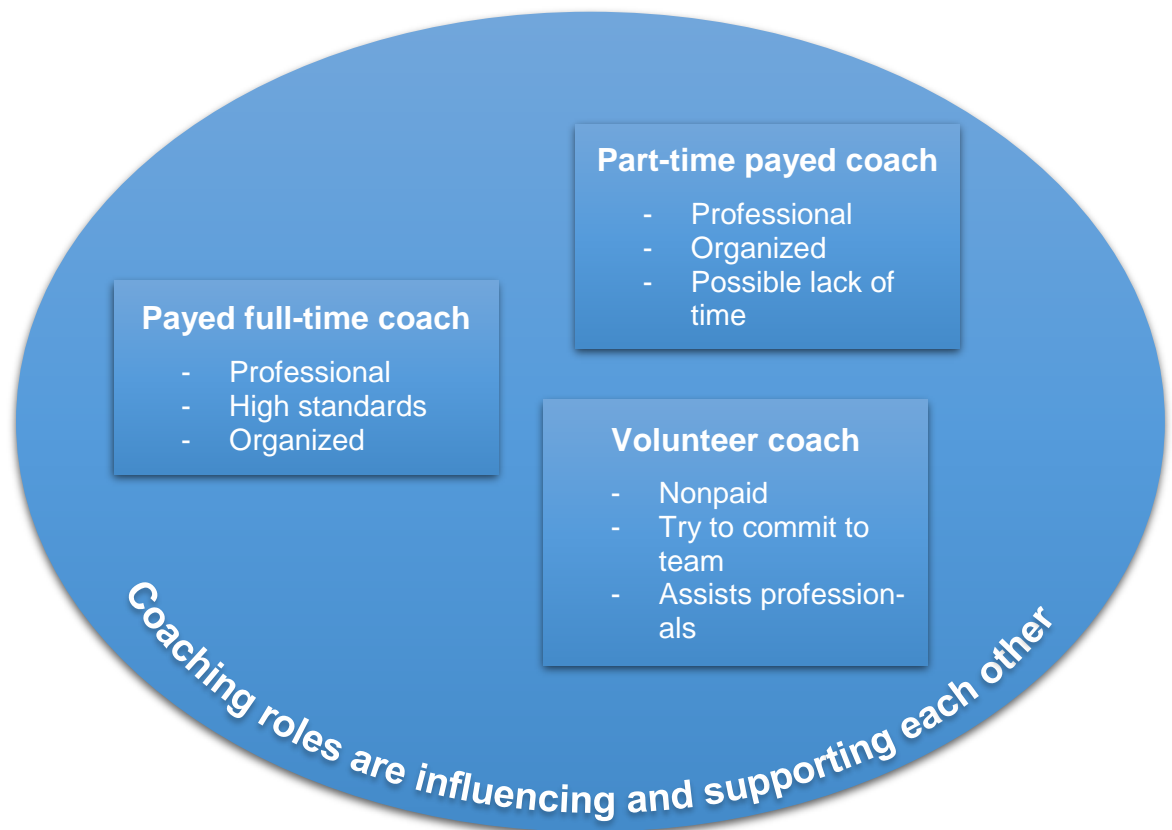


Figure 1. Categories of coaching after Lara-Bercial et al. (2017, 16);

When taking into consideration a coach's experience Cassidy, Jones & Potrac (2009, 53-54.) argued that it is beneficial to have a coach who is an ex-player, but caution needs to be exercised when making the decision of taking on an ex-player with no coaching experience. A good player does not automatically make a good coach. The ex-player might have good practical knowledge, but could lack knowledge in other aspects of coaching such as psychology, pedagogy, periodization, and player development. Every federation and club should have a standardized system with criteria's that a coach or potential coach needs to meet.

4.1 Code of conduct

Coaching is the greatest occupation if the prime objective is to influence other people's lives. Therefore, it is important that organization has a code of conduct clarifies organization's mission, values and principles. A code of conduct code should be a central guide when employers are making everyday decisions and actions. (The Ethics & Compliance Initiative 2018). But coaches should follow a Code of Conduct to assure proper conduct

when fulfilling their duties. USA Hockey has developed a Coaching Ethics Code (2018a) which educates coaches on ethic principles:

“Coaches will respect and protect human and civil rights and not knowingly participate in or condone unfair discriminatory practices.”

It is important that coaches are aware of this ethic code.: integrity, competence, accountable coaching, professional responsibility, concern and respect towards players.

- Integrity: Coach must be fair, respectful and honest.
- Competence: Regardless of one’s background, coach will make effort and continuous improvement of his skills
- Accountable coaching: Coach will respect the law and be responsible in his community and society
- Professional responsibility: Coach will clarify roles of each member in the staff team and hold to the professional standard of the task he is given
- Concern and respect for athletes: Coach will respect dignity, rights, values, welfare and opinions of every participants and be aware of differences. Coach will not mislead or exploit any player

Cassidy et al. (2009, 157-160) acknowledged that while coaching, coaches are faced with a variety of different ethical issues on a daily basis. It is important that the coach is able to recognize ethical issues with others and within themselves. Coach needs to be able to establish and operate appropriate content.

USA Hockey (2018a), in their educational material went more in depth about ethical standards that coaches need to be accountable for, the topics that were highlighted were; Discrimination, sexual harassment, bullying, personal conflicts, gambling, pornography, the use of alcohol, tobacco or drugs during their interaction with players. It was important that every coach understand that this behaviour is unacceptable, and what the consequence for their actions would be. The Coach must be aware that he is role model of players and he needs to act like one.

Coaching is a social activity. The coach needs to understand the differences and be careful when interacting with players, parents, other coaches, officials, stakeholders, and others involved in ice hockey. The coach needs to show respect when it comes to differences of ability, gender, race, and religion. People are involved in sport for multiple reasons, the coach is there to help them to meet their needs in sport, as well as in life. (Mallett 2013, 3-4)

Coach needs to respect and protect integrity and individuality of each player. His job is not just to support athletes in their sport specific development, but also to enable safe environment for their progress. Coach needs to ensure that players are going smoothly

through life transitions, such as school or home problems; as well as their playing transition. That should take big part in coaching role. (Lara-Bercial et al. 2017, 20)

4.2 Selection of coaches

When working with athletes, kids, adolescents or adults, we need to make sure that right person is selected for a job. It is important for player's development to have right person supporting him through his journey. When selecting a coach, one needs to keep in mind overall aspects of good coaching, being aware of code of conduct and knowing which characteristics are needed and desired for person to become a coach. Firstly, it needs to be established if the person is even interested to take up such a role. With taking up the role of a coach, the person is suddenly loaded with many diverse responsibilities and will need to spend many hours within that role every day. If a person does consider to commit in becoming a member of the team staff, before all else, they have to determine exactly why they want to pursue coaching. There are multiple reasons why people choose coaching, such as they want their child to become a star player or the team that their child is playing for is losing many games and they want to lead the team to victory. But the best reason for committing to coaching is that the person has a desire to teach athletes about the joy and benefits of participating in sport. Every person committing to coaching must bear in their mind that the highest priority is to establish values and develop athletes. (McLauchlan 2010, 11)

Thomson (2013, 164) points few questions concerning coaching, that are related to motivation of coach and putting right coaching staff together. Thomson is asking why one wants to coach, what is making him most fulfilling as a coach, what one finds difficult in coaching and how committed they are. With this question we can see one's motivation to become a coach as well as what are his strengths and weaknesses. When paring coaches into a staff, we can predict which people would work well together and how they complement each other.

When selecting coaches, as Lara-Bercial et al. (2017, 24-25) indicate, one has to look out for several characteristics in the coach: sport, life and personal competence. In sport competence they accommodate technical, tactical, cognitive and physical skills; and those are traditional values when assessing the coach's capabilities. After they are looking for people with life experience, people who can contribute with their life knowledge and are willing to give back to community. Coach must have competence to develop whole person, he needs to be aware of cognitive, emotional, social and moral aspects of coaching.

Theodoulides (2016, 46-49) points out that coach needs to develop enthusiasm, commitment, energy and awareness of constant development, combined with technical, tactical and physical knowledge. If one develops those for himself to his maximum, only then he can help development in such for his players.

As is indicated in The Canadian Tire First Shift (2017), there are two different coaching roles that one needs to search for: on-ice leaders / head coaches and on-ice instructors / assistant coaches. When selecting coaches, in their literature, they are reviewing several characteristics in potential candidates such as: one has to possess positive, patient, energetic, passionate and organized attributes.

4.2.1 On-ice leader

Adding on to previous chapters, there are certain skills that coach has to have. This chapter will go more in depth about qualities that on-ice leader needs to possess.

Head coach or on-ice leader needs to have coaching knowledge. The on-ice leader or coach should have a background in ice hockey because it will be almost impossible to teach and instruct fundamental ice hockey skills without any prior knowledge on-ice hockey. . Further, the coach or on-ice instructor should be experienced in working with children and teenagers. Strong communication skills, patience and passion while being enthusiastic and willing to help though the process is also of advantage. (Kubischta 31 May 2017.)

Furthermore, effective organizational, communication and interpersonal skills are of benefit. The head coach is committed to be present at all practices and as such, in charge of the on-ice program and development of the players. Other capabilities the coach or on-ice instructor's displays are good citizenship, sportsmanship, fairness as well as establishing good connections to the players and co-workers. (The Canadian Tire First Shift, 2017)

One of the on-ice leader's duties is to oversee his instructors/assistants, to do this effectively he needs to be capable of giving constructive feedback; Discuss with the assistant coaches on the effectiveness of practice; Motivate them to reach their full potential; Communicate with parents to answer questions and resolve any issues regarding the program. (Kubischta 31 May 2017.)

The International Council for Coaching Excellence (2013a, 25-26) suggests that the head coach is responsible for the planning, implementation and evaluation of practices. He

needs to have extensive knowledge and competence to run the session. One of his tasks is also to support the development of assistant coaches and engage them in planning practices.

4.2.2 On-ice instructors

After clarifying and refining capabilities that on-ice leader must possess, one can reflect on them and perceive who could, in long term, be able to develop those capabilities. Keeping that in mind, one needs to determine on-ice instructor or assistant coach for a team.

It is necessary that instructor is passionate about hockey, has patience and possesses good communication skills. Furthermore, they should have experience with working with children or a desire start to work with children and teenagers who are starting to play ice hockey. It is beneficial to possess a hockey background, but not crucial. A good assistant needs to have strong desire to learn and develop his instructional techniques of fundamental ice hockey skills. (The Canadian Tire First Shift, 2017)

And as Kubischta mentioned (31 May 2017) assistant coaches can be unexperienced but they need to be keen to develop themselves, as well as their hockey and coaching knowledge.

In the United Kingdom, they made guidebook with tips how to become a coach where is stated that assistant coach doesn't need to have qualifications related to sport but should be supportive and enthusiastic. Assistant coach should support players when practicing certain skill; after more experienced coach explains and demonstrates particular drill. Through that structure assistant coach can gain introductory knowledge how to establish safe environment, how to coach different age groups, why is important to care for players well-being; and he will gain sport-specific technical knowledge. With such a process it is important that the assistant coach is willing to observe and learn from the more experienced coaches and in such manner develop. When the coach is dedicated to the team, he is coming to more training, gains more knowledge, develops future and gets more responsibilities. (UK Sports Coach. 19 January 2018)

The International Council for Coaching Excellence (International Council for Coaching Excellence) (2013a, 25-26) suggests that assistant coach should have basic knowledge and competence to run sessions with guidance and under supervision. But the main task is to

assist in practices and games. And as stated earlier also the ICCE came to same conclusion that with more experience and development, assistant coach, gets more responsibilities and later becomes head coach.

4.3 Pedagogical principle of coaching

The coaching approach and pedagogical settings that coach creates, maintains and cultivates is important for athlete development. Mosston & Ashworth (2008, 18-20) presented in their publication the main idea of the teaching chain of the decision making and relationship among teacher/coach and learner/player. They created a framework transcended cultural and national boundaries through spectrum of eleven coaching styles from command style to self-teaching style.

Coach whose main focus is on result, in other words winning, needs to re-evaluate his attitude when coaching kids and teenagers, especially at the beginner level. When coaching beginners coach is in charge of developing the base for the further development of children and teenagers. If they are properly coached, they have a good starting base and possess a variety of different social skills to become good citizens and adults, as well as good athletes. In addition to this, the coach is in charge of establishing values for hard work and team work. Players and coaches shall focus on learning and development, as well as having fun and to regularly accomplish best efforts. (McLauchlan 2010, IX)

Historically there has been a strong connection between teaching and coaching because coaching was considered an educational and pedagogical activity. Teachers are expected to develop programme in which students could cultivate affective, cognitive and psychomotor skills. So, their focus was on student's feeling, thinking and physical domains of evolution. However, even today many coaches are only focusing on the physical development. Coaches however, should be more like educators: they should try to develop affective, cognitive and psychomotor capabilities. If coaches are trying to develop them through holistic development, they will need to be creative and more responsible. Sometimes it is hard to convince coaches, their job security might be tight to showing performance results such as wins. Thus, every coach should try to look at the big picture and try to incorporate long-term development goals of players in his everyday practices. If he does such, players' holistic growth will payoff and reflect on the results. (Cassidy et al. 2009, 32-33.)

As Lara-Bercial et al. (2017, 27-29) suggested that the coach should focus on six areas guiding improvement and development of a player. Firstly, they need to set a vision, followed by creating a safe environment for the athlete to develop. Athlete and coach must

build positive relationship through mutual respect and trust. Following, coach needs to plan and prepare practices that will suit athlete's needs. And lastly coach needs to reflect on his progress, evaluate their program, seek improvement and continuously learn how to get better development results (Figure 2.).

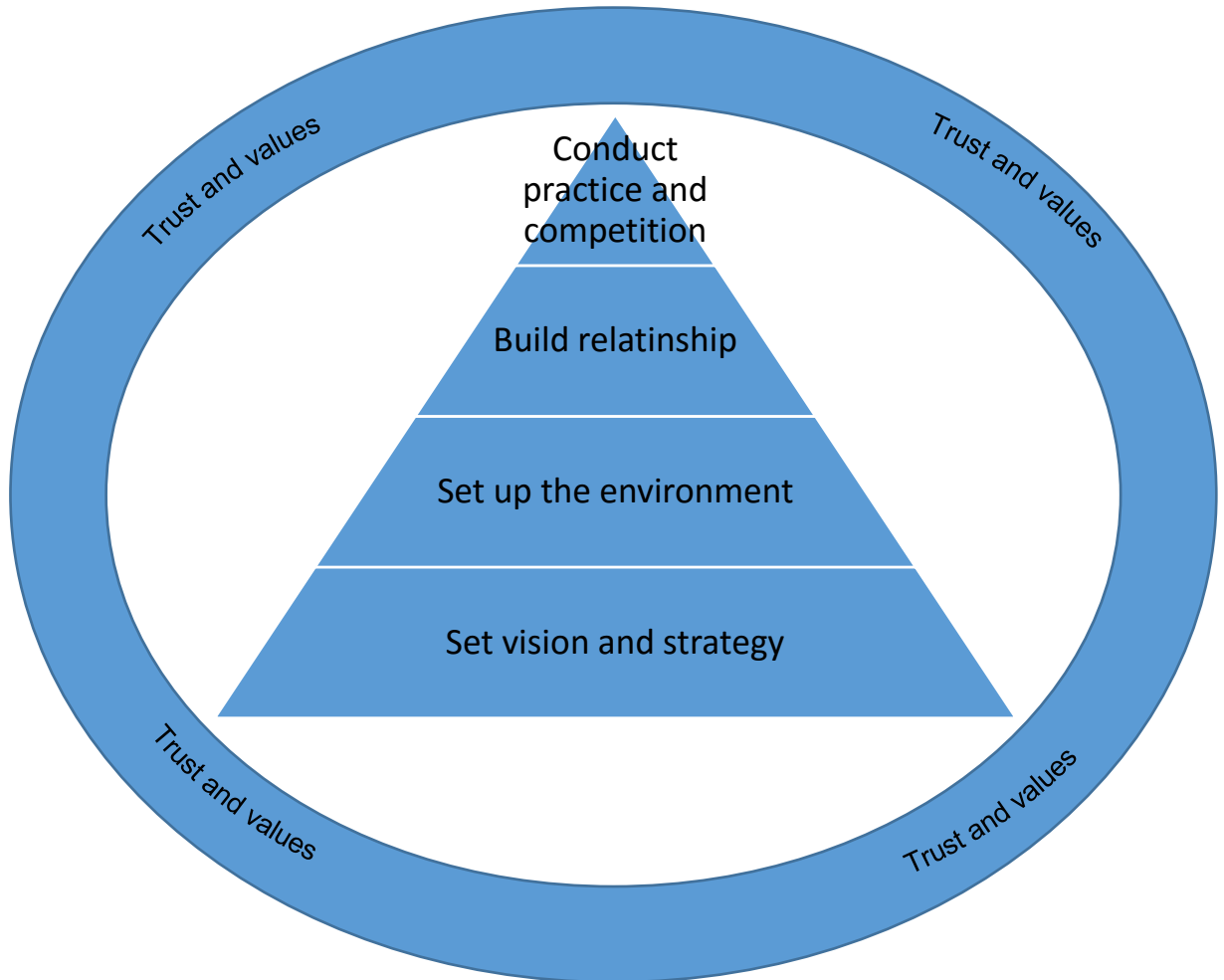


Figure 2. The primary functions of the coach (Lara-Bercial et al. 2017, 29).

In article by Gostkowski (7 October 2009.) for USA Hockey Magazine is discussed which are most important traits that coach should have. She is noting that overall hockey knowledge, organizational skills and ability to demonstrate movements are important in coaching. But the characteristics that are separating average coach from great ones are communication, passion, humanity, leadership and compassion.

Every coach has beliefs and values that are directing his behaviour and actions. Essential interest of coaching should be positive experience and development of players. Coach

needs to focus on needs and progress of players. His knowledge, competence and passion must be in place to coach certain skill/age category. (International Council for Coaching Excellence 2013a, 20)

Leadership affects the learning process with players. Player which is satisfied with their coach have better motivation and environment for development and progress. The coach's profession is complex, being a coach today is a great challenge to anyone who is willing give their potentials and part of themselves into a sport they love. Coach needs to transfer their enthusiasms in the sport and players regardless on which level they coach. A poor relationship between coaches and athletes can negatively affect their development process. Coaches job is extremely demanding, it needs to be approached with responsibly, ambitiously and creatively. Coaching style depends on coach's decision-making processes and how he is interacting with athlete. (Barić 2007, 108.)

For Thomas (2014, 27-28) listening to understand is the most important skill that you can develop as a coach. Listening efficiently to athlete's talk will help you build a relationship. Coaching is firstly a relationship between athlete and coach. When listening carefully coach will be able to help understand and help players to develop.

One of the main characteristics regarding modern coaching is open dialog and coach asking questions and as Thomas (2014, 30-31) later suggested, although closed dialog can be used in conversations, it is more beneficial to use open questions when talking with athlete. When using open questions athlete is encouraged to take responsibility and be aware of process. When talking with athlete, sometimes is suitable to use semi-open questions as well. Though they are grammatically closed, they are involving athlete to explore the future and possibilities ahead. Using this, athletes that have harder time involving, will be steered more into involvement.

For Thomas (2014, 27-28) listening to understand is the most important skill that can develop as a coach. Listening efficiently to athlete's talk will help build a relationship. Coaching is a relationship between athlete and coach. When listening carefully coach will be able to help understand and help players to develop.

Coach needs to develop environment, so athletes can learn more about them self (being self-aware) and develop their own psychology. In opposite coach needs to stop focusing on passing on his knowledge to players, and he needs to give them freedom to explore for them self (with his guidance). (Walters & Kindman 2016, 92-94)

Players are learning by playing games. They are not “just fun” but by playing them, players are training and developing diversity of skills. In any age category, we are trying to incorporate as many games as possible to our practices. Throughout games a player is utilizing their technical and tactical skills, game sense. Games are also valuable tool for developing decision-making and teamwork. Coach needs to be ready to adjust his games, every player must have successful and failed attempts. A coach needs to be ready to adjust change game content and rules. (Mitchell & de Souza 2016, 98-104)

4.3.1 Coach – Athlete relationship

Research done by Lara-Bercial and McKenna (2017, 54-56) highlights that coach has significant role in a player’s life. Especially when the player is young. Therefore, the coach first is a role model for the athlete. The coach needs to develop the system and his attitudes, which will suite the personal and professional needs of the youth players.

The player’s development relies on the player – coach relationship: coaches’ closeness to the athlete and team, his dedication to the team, and matching psychological characteristics between coach and player. It is not surprising that many top athletes in individual sports have been trained by one of the family members. (Čerenšek 2014.)

Coaching, among the other things, is also a relationship of trust and a series of conversations that coach has with athletes. Coach need to establish open and honest conversation. After gaining athlete’s trust, they can talk about his goals and developmental needs. That means that coach is working with athlete throughout conversations. (Thomson 2014, 10)

As Thomson (2017, 142-144) stated in his book, a coach needs to demonstrate positive attitude towards the players. The coach must care for the players also outside of the sport environment, by caring for a person and their problems. However, sometimes the coach might face problems in establishing a relationship of trust with a player. In those cases, the coach will need to investigate where the difficulties stem from and how to resolve this challenge.

Coach-player relationship is a two-way street. Some studies have shown that different personality types, coaching or leadership styles can be fatal for development and later on success of a certain players. Important part of coach-player relationship is transitioning responsibilities and roles, as well as exchanging and sharing opinions. If team develops good relationship with coach, and each other, they will have higher level of cooperation

and closeness, which can help with overcoming difficulties. (Pietzsch & Watson 2016, 132-133)

As Côté and Gilbert (2009, 309-315) advised for effective coaching, coaches consistently must apply and integrate three types of knowledge: professional (sport science, coaching theory and methodology), intrapersonal (knowledge of self and his philosophy and values, self-awareness and reflection) and interpersonal (social skills, how to connect with people and build relationships). One needs to constantly improve his knowledge and rethink his approach to athlete. To extract best out of athletes, one's approach must be consistent with own values, principles, social and sport skills.

Coaches and players have to set basic values and principles. They need to have same working ethic and similar philosophy. If they are not thinking alike there will be no progress and development will not occur. Over time that will lead to bad results and disappointment. (Lara-Bercial et al. 2017, 20)

5 Empirical part

Target of this thesis was to set bases for the IIHF PDG by exploring and benchmarking different literature concerning coaching and on-ice skill development. The product is formatted as videos of the drills, in order to emphasize and really show how drills should be done correctly which is impossible to do without the use of visual aids. As shown in the appendices videos are constructed to emphasize the importance of the correct execution. The other parts concerning on- and off- the ice development, season planning and structure, session planning, games and rules, team composition, equipment, lifestyle and parents will be done later on by the IIHF Work Group. Breakdown of the areas of development are shown in the overview table of the IIHF PDG framework (Table 2) attached on the end of the report.

When researching literature concerning on-ice skills development; dilemma how to approach this matter occurred. In particular literatures on-ice skills were explained as with drills that can be used to perform the correct execution of the wanted skill. In other literatures, skills are explained as combination of the movements that are performed in correct manner. The movements are taught with the key points of the correct execution. In the thesis I choose second approach to explain skill development because coaches' beginners should primarily understand what is correct technique of the execution of a skill, to be able to select proper drills for its benefits.

The objective of this thesis is to provide needed material to Members of National Associations. When creating a project plan, one of the first steps was to find out what kind of material the members are looking for. Together with IIHF experts, we made a survey that was filled out at the IIHF Hockey Development Camp 08-15 July 2017 in Vierumäki, Finland. The purpose of the survey was to investigate from coaches and LTP instructors from around the World, what kind of materials they would like to have to see in the new IIHF PDG. The total number of respondents was 67.

Survey was constructed of 47 questions. The following are shown results significant for this thesis and the PDG. As presented in Figure 14, 68.7% of people taking the survey think it is important that the IIHF produces a PDG framework. 83,6% people taking the survey think that their National Association would use such material (Figure 15). 88,1% people think that it is very important or important for their National Association to get such material (Figure 16).

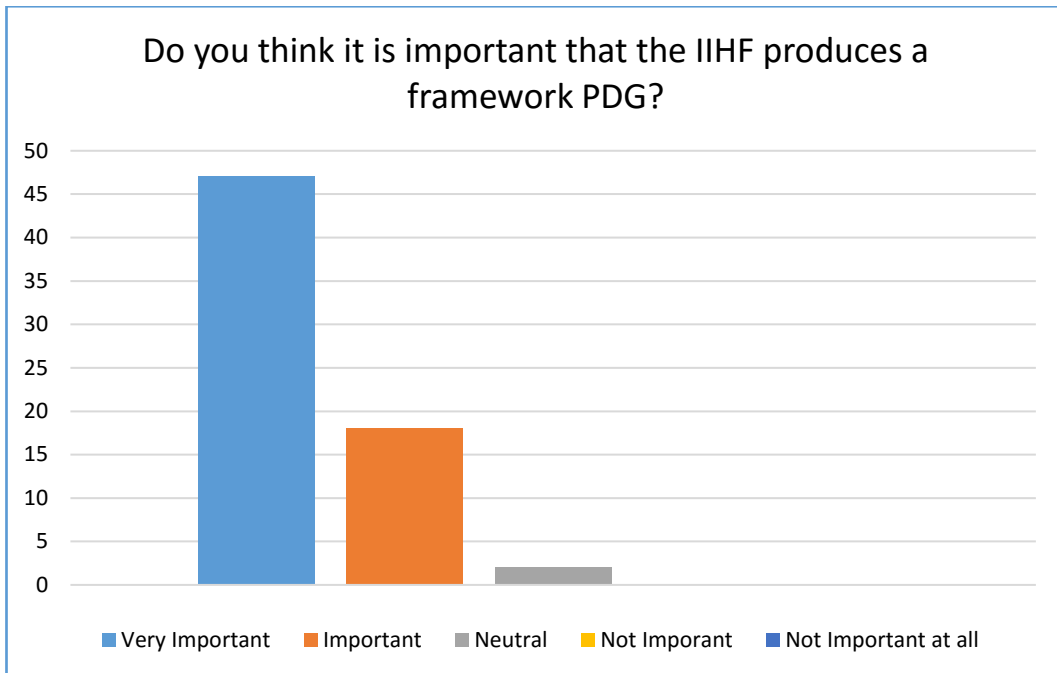


Figure 14. IIHF PDG Survey – Do you think it is important that the IIHF produces a framework PDG?

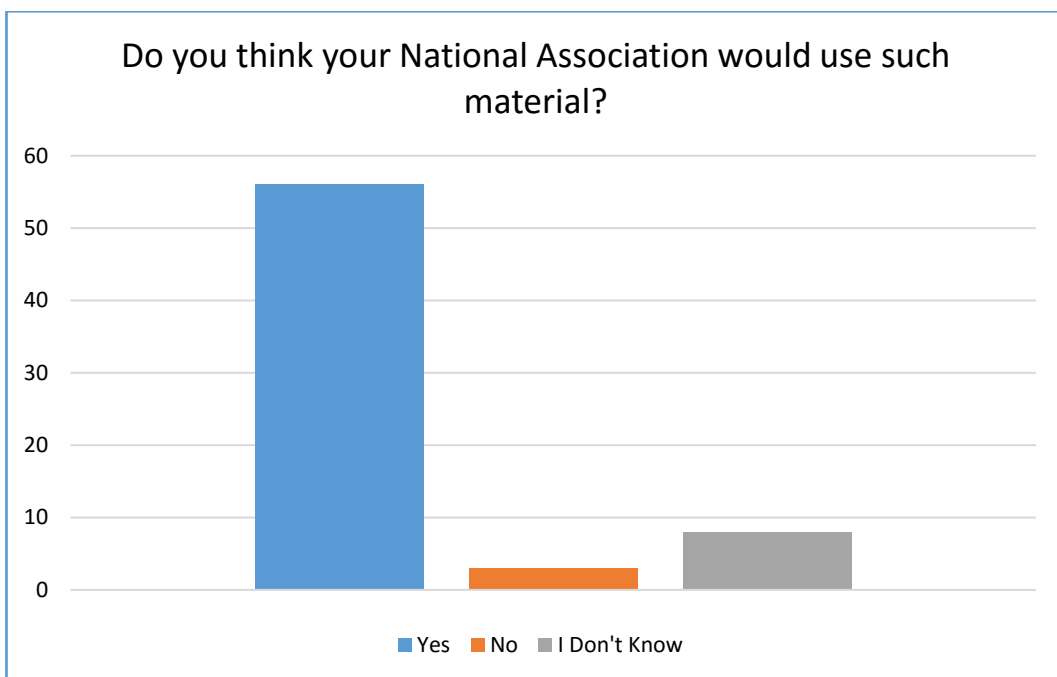


Figure 15. IIHF PDG Survey – Do you think your National Association would use such material?

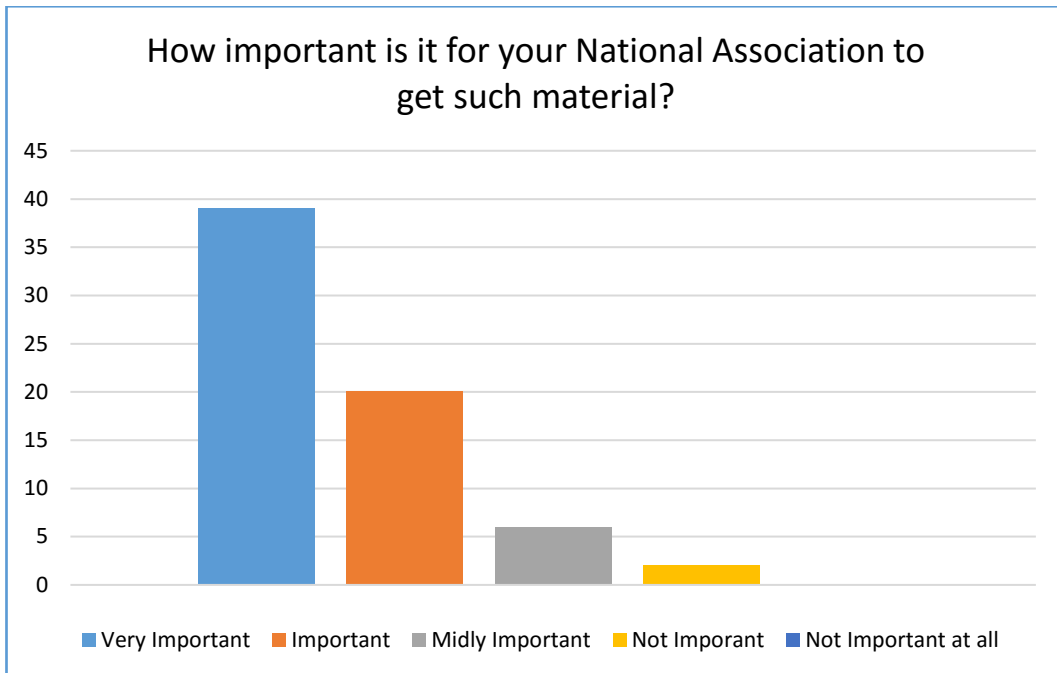


Figure 16. IIHF PDG Survey – How important is it for your National Association to get such material?

As shown in Figure 17, which consisted of multiple answer options for the respondents, concerning the format of coaching materials, the conclusion is that most of the respondents are looking for materials in video and/or text format that is downloadable to their own personal device. Taking this into consideration, the presented thesis consists of a written part, as well as the videos to more specifically show the executions of the drills; So that the user can see from the drill sample how to give guidance when correcting and teaching the skills.

	Very important	Important	Mildly important	Not at all important
Video	37	27	3	0
Video and text	42	23	2	0
Accessible on a homepage	23	34	8	2
Downloadable	44	20	2	1
Accessible through an app	24	30	8	5
Pictures	20	19	24	4
Posters	7	15	33	12
Activity cards	4	25	28	10
Manuals	22	31	14	0
Pictures and text	14	27	22	4
PPT/PDF format	25	33	7	2
Booklet	13	29	19	6

Figure 17. Taken from IIHF PDG Survey – In which formats would you like to access the materials?

After conducting the survey, Work Group had meeting in September where we opened up and discussed survey results. Our aim when making the PDG is to select and film drills and to prepare a list of essential points that the coaches need to check during skill assessment. With such material, coach should be able to see whether the players are able to execute them or not. If not, coach needs to adjust the practice plans. The idea was that I will develop material for the on-ice beginner development.

On our next meeting, during January 2018, my thesis plan changed from making set of drills for the beginner on-ice development to benchmarking the material for the beginner on-ice development. Task Force, made of specialist from top five nations, got the task to select and point out drills and key elements of the execution. After the Task Force selects suitable drills, I'm will be in charge of their filming process in the Vieurmäki.

During the thesis process an obstruction on finding literature with newer release date concerning on-ice skill development from meaningful sources appeared. As a consequence, most of the skill development sources are taken from older literature. That is one more reason for the need of the IIHF PDG. But overall thesis process was extremely interesting and significant for my academic and hockey coaching development. Regarding my academic development, I learned how to properly write reports, use source and references.

Concerning hockey coaching development, I widen my horizons and extended my knowledge on coaching, player development and on-ice skills.

6 Product description

This thesis is developed as a part of the project IIHF PDG. As discussed already in the Introduction, the IIHF PDG is extensive project which will compose large material collection and will also be developed to a greater extent with the Work Group. Work Group assigned four Task Force subgroups were composed in respect to ones filled of the expertise. Their task is selecting drills and establishing key points of proper execution of same. As an example, in Table 1 are presented experts from top five nations responsible for selecting drills for teaching/learning technical skills for on- and off- the ice.

Table 1. IIHF Task Force for Technical Skill On- and Off-ice

Technical Skills On- and Off-ice	
Corey McNabb	CAN
Pyry Lukkarila	FIN
Markus Korpinen	SWE
Zdenek Vojta	CZE
Scott Paluch	USA

The Task Force in charge of technical skill on- and off- the ice development is responsible of selecting three stationary drills, three drills in motion and three game like drills for the same skill in beginner, intermediate and advanced level. In the thesis product attachment is a showcase of one stationary drill, one drill in motion and one game like drill for beginners that are likely to be used for on-ice puck handling development in the IIHF PDG so reader can get idea about it. The IIHF PDG is planned to be published during autumn 2018 on the IIHF platforms.

7 Discussion

The IIHF Committee advised that it is of extreme importance for ice hockey development globally to develop guidelines for player development from beginner, through intermediate, to advanced development stages. As determined in the survey done by 67 respondents from Coaching and LTP program representing their respective MNA at the IIHF Hockey Development Camp 08-15 July 2017 in Vierumäki, Finland. Furthermore, 97% of the respondents confirmed IIHF Committee recommendation of importance of the PDG.

The thesis project started in May 2017 and the idea was to create whole set of drills for on-ice skill development for the beginners for the PDG. Thus, the project evolved the IIHF assigned Task Forces groups that are in charge of the selecting the drills. As part of the Work Group that is in charge of making framework for the PDG, my thesis process transferred in other direction. From selecting the drills for the on-ice skill development to the benchmarking and setting the base for the PDG for the beginner level.

The theoretical benchmarking about on-ice skills was done by researching literature from various organizations, and I took pictures to visually show the reader the correct execution movements. Afterwards I researched material on the holistic player development and coaching to give a reader more information about it. The actual product is made of the one stationary drill, one moving drill and one game like drill so reader can get the idea how the PDG will be look like.

During the creation process of the PDG, the IIHF decided that Work Group is in charge of making framework and setting the tone of the PDG. The Task Force is in charge of selecting drills and making key execution points. Task Forces had many ideas and great discussions about what is appropriate for each development stage. We weren't prepared on how much time wise it will take to decide what drills are suitable and what are key executing points of the skill. Due to experts in the Task Force busy schedule, sometimes it was challenging to have all experts from a group on conference call. Thus, many different suggestions of drill were presented on shared drive. We had roughly 50 drills for every section. The goal was to determine 9 that are most suitable for development area. Process of selecting which drill exactly to use was complicated, therefore in some areas we selected more than 9 drills.

The thesis was developed to set the bases of the PDG for the beginner part. The product with the video of the drills and the theoretical part of the thesis will be used as part of the PDG. The importance of them is in setting up bases for the future creation of the PDG.

Reader should not focus just on the product but also on the theoretical part of the thesis. During thesis process research of coaching and player development was done. In the future there could be more extensive literature review concerning different styles of coaching, skill learning and development processes. Furthermore, one could compare different styles of coaching showing similarities and differences.

As Figure 17 shows, for the MNAs is important that produced material is in video format. After benchmarking the on-ice skills and coaching, bases of the PDG are established. Project is pursuing and developing without delays. The Task Force groups are putting materials together for a review for the Work Group. Additional filming is planned to happen in the future. Some areas that are not part of this document needs to be developed such as psychological part; life skills, tactical skills, off-ice training and so on.

The videos presented in the Appendix are examples what will be filmed and presented in the PDG for the on-ice area of development. They are made after analysing the material that members of the Task Force presented in the shared drive. This thesis and thesis product are built to help coaches in their coaching process. After reading it, coaches should be able to determinate main execution key points of the son-ice skills. In addition, coaches can expend their knowledge on player development.

As a result of the thesis, Work Group has a base for the beginning part of the PDG. There is still need for additional work and research in area concerning holistic player development. During this year there will still be filming of additional drills or exercises. As mentioned before, idea of the IIHF PDG is that it is an evolving product and is continually developing and expanding. Consequently, there will be parts added to it in the future.

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Table 2. The overview table of the IIHF PDG framework

<u>ON-ICE</u>	BEGINNER (U10)	INTERMEDIATE (U14)	ADVANCED (U18)	ELITE (open)
<u>SKATING:</u> Skating-specific	Balance, forward, backwards and stopping Total 12 drills	Balance, forward, backwards and stopping Total 12 drills	Balance, forward, backwards and stopping Total 12 drills	
<u>TECHNICAL:</u> Stickhandling Passing Receiving Shooting	On all skills, 3 stationary, 3 moving and 3 game-like drills (9 drills per skill) Total 36 drills	On all skills, 3 stationary, 3 moving and 3 game-like drills (9 drills per skill) Total 36 drills	On all skills, 3 stationary, 3 moving and 3 game-like drills (9 drills per skill) Total 36 drills	
<u>TACTICAL:</u> Offense Defense PP & PK Contact & checking	Basic offensive and defensive drills based on the four roles. Body contact intro drills Total 8 drills	Continuation with four roles, individual tactics, intro to team tactics, PP and PK, intro to body-checking and angling (female) Total 18 drills	Continuation with individual tactics, team tactics, PP and PK. Intro to team strategy. Body-checking and full body-contact (female) Total 18 drills	
<u>GOALTENDING:</u>	Basic GK skills, skating, stance, positioning, save techniques, stickhandling Total 9 drills	Skating, positioning, save techniques, rebound control, transition, stickhandling Total 9 drills	Advanced GK skills, skating, positioning, save techniques, rebound control, transition, tactics Total 9 drills	

<u>OFF-ICE</u>	BEGINNER (U10)	INTERMEDIATE (U14)	ADVANCED (U18)	ELITE (open)
<u>TECHNICAL</u> (including Goaltending):	Same skills as in the on-ice section Total 18 drills	Same skills as in the on-ice section Total 18 drills	Same skills as in the on-ice section Total 18 drills	
<u>TACTICAL:</u>	Same skills as in the on-ice section Total 12 drills	Same skills as in the on-ice section Total 12 drills	Same skills as in the on-ice section Total 12 drills	
<u>GAMES & P.E.:</u> FMS ABC	Fundamental movement skills, speed, agility, balance and co-ordination Total 20 drills or games	Fundamental sport skills, speed, agility, balance and co-ordination Total 12 exercises or games	See below	
<u>PHYSICAL CONDITIONING:</u> Strength Training Conditioning	See above	Intro to lifting techniques and training equipment, mobility and stretching Total 10 exercises	Periodization (single or double), strength training and conditioning, also GK-specific Total 20 exercises	
<u>MENTAL:</u> Behavior Culture Sport Psychology	Fair play and respect, fun, enjoyment, self-confidence, integrity etc. Written and Video	Fair play and respect, fun, self-confidence, integrity, decision-making, concentration, goal-setting etc. Written and Video	Goal-setting, visualization, self-awareness and evaluation, leadership, integrity etc. Written and Video	

<u>OTHER:</u>	BEGINNER (U10)	INTERMEDIATE (U14)	ADVANCED (U18)	ELITE (open)
<u>SEASON PLANNING & STRUCTURE:</u>	How to construct a season plan based on-ice-availability Written Material & Templates	How to construct a season plan based on-ice-availability Written Material & Templates	How to construct a season plan based on-ice-availability Written Material & Templates	
<u>SESSION PLANNING:</u>	How to plan practice sessions (station-based etc.) Written Material, Templates & Video	How to plan practice sessions (half-ice and full-ice etc.) Written Material, Templates & Video	How to plan practice sessions (position-specific etc.) Written Material, Templates & Video	
<u>GAMES & RULES:</u>	E.g. cross-ice, blue puck, body contact, non-competitive participation Written material	E.g. cross- and full-ice, black puck, intro to body checking and angling, performance with recreational options Written material	E.g. full-ice, black puck, full body contact (for female), high-performance with recreational options Written material	
<u>TEAM COM- POSITION:</u>	E.g. 40 skaters on the ice, 16-skater teams, no full-time goaltenders Written material	E.g. 25 skaters on the ice, four lines, no full-time goaltenders recommended Written material	E.g. four competitive lines, full-time goaltenders Written material	
<u>EQUIPMENT:</u>	How little is needed in the beginning, used equipment utilization, sizing of equipment etc. Written material and Video	Optimal stick-flex etc. Written material	Optimal stick-flex etc. Written material	

<p><u>PARENTS & LIFESTYLE:</u></p>	<p>Emphasis on parents, guiding material for the time outside organized activities e.g. multiple sports, parent behavior and role</p> <p>Written and Video</p>	<p>Emphasis on players and parents, guiding material for the time outside organized activities e.g. multiple sports, cell phones and video games, nutrition</p> <p>Written and Video</p>	<p>Emphasis on players, guiding material for the time outside organized activities e.g. nutrition, cell-phones, recovery</p> <p>Written and Video</p>	
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Appendix 1

https://www.youtube.com/playlist?list=PLNa-ku5jFyhg6NP5PVKjKdzkZ7phEP6_q