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University of Applied Sciences

Ice Hockey Instructor´s Guide for EC Dornbirner Bulldogs

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Thesis
Vierumäki Unit
Degree Programme in Sports and Leisure Management
Spring 2010

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The title of your thesis Ice Hockey Instructor´s Guide for EC Dornbirner Bulldogs	**Number of pages and appendices** 54
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The purpose of this thesis was to build an ice hockey instructor´s manual for Austrian ice hockey club EC Dornbirner Bulldogs. The manual consists of information concerning the work of an instructor, practicing movement skills on ice and introduction of technical skills of ice hockey.

The objective of this thesis was to create a useful tool for every instructor of EC Dornbirner Bulldogs. The product of this thesis is a manual, which is implemented with explanations and still pictures. The parts of the manual concerning instructor´s work and practicing movement skills on ice are being presented with explanations. The part covering technical skills of ice hockey in being presented with still pictures and explanations.

This project-based work was started in the fall of 2009 and finished in the spring of 2010. Data for this thesis was gathered from literature concerning work of an instructor, physical and psychological development of a child and ice hockey.

The results and conclusion can be drawn after this manual is distributed to the target group and implemented into practice

Key words
Ice hockey, instructing, movement skills, technical skills, child´s development

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1 Introduction

Ice Hockey is a sport requiring many complex motor skills and versatile sport-specific skills. A person who is working as a trainer or instructor in children´s sport has to possess the information and know-how of how overall motor development and learning skills are linked with each other.

This project- based thesis was assigned by EC Dornbirner Bulldogs, which is an Austrian ice hockey club. The objective of this thesis is to expand the know-how of instructors working in the club on the areas of overall athletic skills and hockey specific skills. Early childhood is the most essential time in human development and that is why this project is aimed for development of young children.

Many instructors who are engaged in children´s sport in Austria are not full-time employees. This factor sets limitations on off-ice training. The main reason why the subject matter almost completely consist of on-ice training is because of the fact that ice training carries the most if not all weight in children´s ice hockey in Austria. The lack of educated instructors in Austria was also a major factor in starting this project. The ability to provide educative and useful material for instructors was a big motivator for this thesis.

As an end result of this project-based thesis is a practice manual for instructors of children engaged in ice hockey. The manual does not provide prepared and ready practice plans, but provides information on guidelines of practicing and basic technical performances with explanations and pictures. In addition to guidelines and technical performances, the manual contains information about working as an instructor in children´s sports.

The use of explanation and pictures was chosen as the style of representation because of the effectiveness of their combination. Explanations or pictures alone are insufficient to give a comprehensive impression of technical performances involving movement, but explanations combined with pictures makes these techniques support each other.

The aim of the manual part of this project is to be translated into German language and used for teaching and educating purposes in Dornbirner ice hockey club.

2 Motor Development

Motor development is a long process during which continuous changes and progression in child´s ability to adopt movement related skills occur. During this process significant development, maturation and growth take place in child´s body systems and in compositions and proportions of the body. The order of the occurring changes is predetermined by genes, and the differences between developing individuals are determined by the rate and the speed in which these changes take place. These differences in the rate of development are caused by genotype, biological age and differences in physical and psychological development. The experiences from previous social and physical living environment also constantly shape child´s development. (Jaakkola 2009, 240.) A child growing up in an atmosphere of safety, appreciation and love has better chances to grow up as a well balanced adult, because of the learned ability to trust in surrounding adults (Autio & Kaski 2005, 13).

In order to learn new movement skills, a child has to possess the ability to do so. The attempt to proceed into more challenging skills might be hindered by lack of capacities or basic skills. This is why every child has to be offered activities, which are in accordance with and support their ongoing motor development stage. (Jaakkola 2009, 241.)

2.1 Stages of Motor Development

The motor development of a child can be seen to proceed from head to the feet and from the torso to the limbs (Nikander 2009, 110; Autio & Kaski 2005, 13). A child starts to develop movement through comprehensive movements and proceed in to more differentiated movements. This development occurs through growth and training. (Autio & Kaski 2005, 13.) Maturation and growth are the most essential factors in the early stages of motor development. The early motor skills, which normally develop during the first year of a child´s life, develop normally, even if training the motor skills is strongly limited. (Autio 1997, 54-55.)

In motor development, five stages of accelerated adaptation occur. During these stages, learning and development takes place on a faster rate. Nevertheless, development of motor skills is evident throughout one´s life. Passing a window of accelerated adaption, does not mean that these skills cannot be learned. With training of adequate amount and quality, these skills can be learned and developed at a later age. (Jaakkola 2009, 242.)

Table 1. Stages of child´s motor development (Jaakkola 2009, 242).

Stage	Age
1.Infant Reflexes -stage	0-1years
2.Rudimentary Movement Abilities -stage	1-2 years
3.Fundamental Movement Abilities -stage	2-7 years
4.Specialized Movement Abilities -stage	7-15 years
5.Learned Skills Utilization -stage	>15 years

The first stage of child´s motor development consists of inborn reflexes, such as sucking and diving reflexes. These reflexes are intended for surviving the first months of life. (Jaakkola 2009, 240.) Little by little, an infant begins to piece together and consciously move. First the neck becomes stronger, after that shoulder region and back. Soon, an infant can roll from back to stomach and moving by crawling, rolling and crawling on all fours is often successful by an eight-month-old. A new element of movement comes along when a baby is approaching the age of 12 months. Baby´s willingness to move independently grows and balance can be trained after the skill to stand up with or without support is learned. (Autio & Kaski 2005, 17.)

When a child is entering the second stage of motor development, the movements are becoming voluntary (Jaakkola 2009, 240-241). Entering the stage, a child is usually already able to stand up and walk either independently or with the help of an adult. Although the motor development varies from child to child, it can be said that all children start walking before the age of two, with exceptions of course. (Autio & Kaski 2005, 21.) During this stage, a child starts to experiment running, throwing and jumping, which are already the basics of fundamental movement abilities. Due to the lack of coordinative development many of the child´s experiments are not successful. (Jaakkola 2009, 241.) The fundamental movement abilities are already developing or starting to develop and moving independently enhances child´s ability to understand how to use the body for movement (Autio & Kaski 2005, 22).

On an average, a child reaches the fundamental movement abilities –stage between ages two and seven. This stage can be divided into three developmental phases, during which all the divisions of child´s movements integrate into rightly performed coordinated wholeness. First phase is the elementary phase and it occurs between ages two and three. Characteristic to this phase are uncoordinated and arrhythmic movements. Second phase takes place between ages three and five and is called the basic phase. Coordination and rhythm are sharpened and

movements are being controlled better. The developed phase is the third and the last of these phases. Coming to the end of this phase, all the movements are well-coordinated. (Karvonen 2000, 34-35.)

During the stage, a foundation for later motor development is built through learning the majority of basic motor skills. The foundation is in an important role while learning specialized movement abilities. Through enhanced coordinative development, movements become more fluent and effective. (Jaakkola 2009, 241.) The basic motor skills consist of three main categories: balance skills (turning, stretching, bending, etc.), movement skills (walking, running, jumping, etc.) and skills related to handling objects (throwing, catching, kicking, etc.) (Jaakkola 2009, 241; Karvonen 2000, 34). Developing of balance skills at this stage should be paid special attention (Karvonen 2000, 34). For later motor development, it is important that majority of the basic motor skills can be automated before the stage comes to an end. (Jaakkola 2009, 241).

Approximately around the seventh year of life, a child enters the specialized movement skills – stage (Jaakkola 2009, 241; Hakkarainen & Nikander 2009, 141). A school aged child is keen to move and can already learn relatively difficult specialized movement skills, depending on the basic motor skills learning occurred on the previous stage. A child, that is used to using own body in different positions and functions can start practicing a sport of choice. Between ages 10 and 12 growth in height may cause a temporary loss of certain motor skills. During these ages, the differences between individuals´ motor skills become more noticeable. Clear differences are evident between those who participate in physical activities and those who do not. (Autio & Kaski 2005, 28-30.) Vasarainen and Hara (2005, 27) suggest that ages between seven and 11 are the best times to develop sport-specific skills. In other literature (Jaakkola 2009, 242), it is suggested that developing specialized movement skills time goes on to age of 15.

The last stage of motor development begins approximately around age 15. During this stage individuals utilize the motor skills learned in all previous stages. Utilizing learned motor skills takes place in the environment of competitive sports or recreational activities and hobbies. This stage lasts for the rest of one´s life. (Jaakkola 2009, 241.)

3 Skill and Technique

Performing movement rhythmically correct is skill. A skillful performance is continuous activity, which consists of rightly timed sequences in the right order. (Forsman & Lampinen 2008, 435.) Practicing skill and technique should be paid a great amount of attention right from the beginning of training in childhood, because of its undeniable importance in athletic performance. Human nervous system maturation occurs during childhood and it determines the window of accelerated adaptation of skill and technique. In order to learn sport-specific skills of different sports, coordinative qualifications are required. These qualifications develop naturally up to five years of life without any special attention paid on them. After this, active training is required, especially between ages six and ten, in order to further develop these qualifications to the demands of competitive sports. Through training of coordinative qualifications, general athletic skillfulness is also enhanced. Coordinative qualifications are the abilities to react, orientate, rhythm, balance, assort, combine and adapt. (Mero 2004, 241-242.)

Types of skill can be divided into general skillfulness and sport-specific skills. Sport-specific skills can be further divided into technique and style (Mero 2004, 241).

3.1 General Skillfulness

By general skillfulness is meant the ability to learn and master different skills of sports, but also those outside sports (Mero 2004, 241). Possessing a vast store of coordinative qualifications is beneficial in developing sport-specific skills. Their development takes place in all the familiar surroundings of a child, either through spontaneous playing or guided activities. Between ages three and six, the development rate of general athletic skillfulness and speed can be accelerated with structured playing activities, such as obstacle courses and play courses. In addition to all the daily spontaneous playing activities of a child, two to three structured training sessions in a week are needed to develop general skillfulness. (Mero 2004, 244.)

3.2 Sport-specific Skills

Around seventh year of life, the quantity of sport-specific skill training in practice has to increase. Training general skillfulness and coordinative qualifications needs still to continue. Executing numerous sport-specific skills repetitions shape the cooperation of nervous system, muscles and other tissues. This cooperation enables a skillful performance. Sports of running,

skiing, swimming and skating are important to engage in during childhood, because they create a wide base for selection of sport at the age of 10 or later. Geographical factors affect child´s possibilities to train sport-specific skills but through strong cooperation between home, school, sport clubs and instructors there is always a solution to the problems. (Mero 2004, 245.)

3.2.1 Technique and Style

Every sport has its own distinctive techniques and these techniques are being trained in practice situations and in games. Possessing a good sport-specific technique enables a better force production during performance. This affects the economy of movement through reduced energy consumption. Regarding competitive sports, the sport-specific technique should be almost fully automated at the age of 13 or 14, which should be preceded with three to four years of basic technique training. After 14 years of age, performance techniques are being further adjusted and automated in order to reach maximal sport-specific skill through optimal performance technique. Every individual athlete has a unique, personal way to express their sport performance and this is called style. (Mero 2004, 241-245.)

3.3 Skills Learning

We understand skills learning as a chain of events in the body induced through training, which leads into permanent alterations in the potential to produce movement. During this process, many things based on neurology, cognitions and emotions occur simultaneously in our bodies. Learning and training occur simultaneously, which makes it hard to perceive. Learning is a complex process of central nervous system, which might have been triggered long before the skill is being carried out. Learned skills are relative easy to reenact, because learning is relatively permanent. Sharpening and consistent performances and the ability to perform them in changing environments are closely related qualities of skills learning. (Jaakkola 2009, 237.)

3.3.1 Modern Model of Skills Learning

Earlier, in the centre of skills learning was the teacher, who transferred the knowledge through good instructing to a passive learner. Attention was not paid on the learner as an individual and the whole process was considered very mechanic. The modern model of skills learning is

comprehensive and extensive and it consists of three factors: learner, learning environment and task. (Jaakkola 2009, 238.)

Personal qualities and characteristics of the learner have an effect on the progress of learning process. These qualities are motivation, previous experiences of the task, bodily properties and proportions, inborn qualifications and fitness properties. In addition to these qualities, the current stage of motor development is an important background factor especially in children´s and youth sports. Emotions and socio-cultural factors contribute to the progress of learning. Socio-cultural factors are such as friends and family. (Jaakkola 2009, 238.)

There are factors in the environment, which can either positively or negatively affect a performance. Other people, fellow athletes or spectators together with the learner create a psychological atmosphere of action. This motivational climate is proven to have a connection with emotions, thinking and behavior. (Jaakkola 2009, 238.)

The characteristics of given task is the third factor in modern model of skills learning. The given tasks contain various demands from motor skills, planning of task implementation and decision making process. Athletes in different sports need different kinds of information and motor skills concerning the sport or body positions. (Jaakkola 2009, 238.)

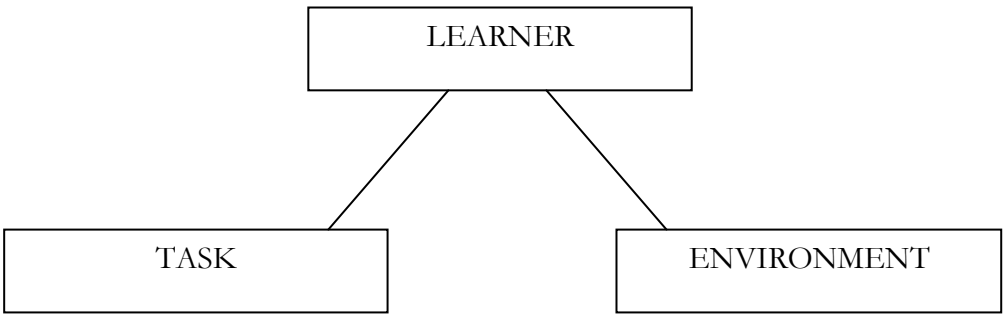


Figure 2. Modern model of skills learning (Jaakkola 2009, 239.)

3.4 Skills Training

Following a performance of a skillful athlete awakes strong experiences in our minds. All of the skillful athletes have gone through target-oriented skills training. Although many of the world´s top athletes have been talents already during the childhood, the basic skills had to be obtained by diligent training. (Kemppinen 1998, 53.) Every athlete reacts individually to teaching, which makes skills teaching a challenging task. Although the same result can be reached in multiple ways, there are certain regulations concerning learning and teaching, which are important for a person working with junior sports to know. (Jaakkola 2009, 250-251.)
Different qualitative stages in skills learning can be recognized. These stages describe the development of learner´s performance, automation of performance and the alteration of learner´s observational functions. First stage is the cognitive stage, during which the learner attempts to piece together and understand the given task as wholeness and tries to create an image of it. In this stage, the performances are marked by ineffectiveness and inconstancy, because every performance requires a large amount of brainwork. Performances may seem slow and clumsy and the learner does not necessarily trust in his ability to successfully fulfill the task. (Jaakkola 2009, 251.)

The second stage is called the associative or the training stage. During the stage, performances are relatively consistent due to learner´s success in forming a comprehensive image of the skill. Learner executes a large amount of repetitions during this stage, which is very characteristic to this stage. Ineffective performances can be corrected through increased understanding. (Jaakkola 2009, 251.)

In the final stage, a skill can be produced unconsciously, without any significant thinking or effort. The number of errors is minimal, performances are consistent and the learner is able of multi-tasking. This means, for example, the ability to control the playing object and observe the game play at the same time. To reach this stage of automated skills, it takes years and thousands of hours of hard work. (Jaakkola 2009, 251.)

4 Physical Requirements of Ice Hockey

Ice hockey as a sport is characterized with explosive speed, hard physical contact and numerous complex motor skills. Muscle mass and strength is needed to correspond with the demands of the game. On the other hand, lean body mass is needed for explosive power, efficient movement and high-speed agility. Ice hockey sets also high demands on motor skills. The unnatural movement of skating combined with a stick and puck handling skills, reacting to changing game situations, body contact and stopping, starting and changing directions makes ice hockey a unique sport. (Twist 1997, xiii.)

Physical fitness plays an essential role in striving for success in ice hockey. Short and rapid bursts of activity during shifts of 30 to 90 seconds are filled with different skating maneuvers and physical battles all over the ice sheet. Recovery time after a shift is two to three minutes. Therefore, Strength, muscular endurance, speed and power are needed. The game of ice hockey also sets high energy requirements and the recovery periods following a shift are used to restore this energy. (Bompa & Chambers 1999, 1.)

Many technical skills are involved with the game of ice hockey. Skills of skating, stick handling, passing and receiving and shooting are components for both defenders´ and forwards´ game. A goalie needs skills of skating, flexibility and quick reactions to be successful in his or her position. (Bompa & Chambers 1999, 1.)

4.1 Movement Skills

Overall athletic development should be emphasized in training of six to nine year-old children. Fundamental movement skills and ABC´s of athleticism should be further developed in ages of nine to 12. ABC´s of athleticism are Agility, balance, coordination and speed. (Long Term Athlete Development, 39-40.)

Agility is one of the important factors in the development of an ice hockey player (Bompa & Chambers 1999, 1). The ability to change directions quickly is probably the best definition for agility and it is perhaps the most important attribute of skating. (Blatherwick 1994, 22.) Agility can be a decisive skill when drawing a line between an average player and a star. An agile player is able to outplay an opponent with high speed and mobility. Being an agile player also means mastering a wide range of moves and the ability to stand up quickly after a body check

or a fall. (Stamm 2001, 179.) Training agility is often closely related with coordinative training because the exercises are pretty similar. Courses consisting of different kinds of movement tasks, games including throwing, basics of gymnastics and rhythmic activities are examples of agility training in ice hockey. (Nuori Suomi 2006, 84.)
Skating exercises such as 360-degree spin around, knee drops, dives and jumps over hockey sticks are all exercises for improving agility. All of these exercises should be started slowly, then with added speed, without the puck and finally with the puck. (Stamm 2001, 179-184.)

Great balance is one of the characteristics of a good hockey player. The importance of balance is often underrated and overlooked, but achieving balance is very beneficial because it enables the execution of various skills of ice hockey. The biggest affect balance has on skating skills, but also skills of shooting and delivering and withstanding body checks are strongly based on good balance. There are various situations in ice hockey, which require balance, and all of them should be mastered. There are big individual differences in balance skills between players. Some players have difficulties maintaining balance on one skate, although balancing on two skates is mastered. Difficulties related to the ability of maneuvering forwards but not backwards, slowly but not rapidly are also evident individual differences. Upper body positioning and weight distribution between skates control largely our balance. (Stamm 2001, 11.)

An ice hockey player needs both static and dynamic balance. Good examples of situations where static balance is needed are battles in front of the nets and face-offs. Dynamic balance is required in game situations when a player is moving. Fakes, battles and changes of direction are examples of these. The base for good balance has to be built in the childhood and balance skills' exercising has to be versatile. Exercises such as one on one battle in games, changes of direction in running exercises, one legged squats and gymnastics are examples of balance training. (Nuori Suomi 2006, 84-85.)

On-ice exercises such as standing up after falling, balancing with one and two skates, are good exercises for beginners. Using inside and outside edges while balancing on one skate, leg lifts, jumps and one legged squats are examples of more difficult balance exercises. (Stamm 2001, 11-25.)

Coordination is the intentional cooperation of muscles and nervous system and it the base for motor learning and controlling body movements. Every practice session should contain sport-specific exercises, which develop coordinative skills. The base for coordination is built in the

childhood and therefore it needs to be stressed in training. Coordinative training has to be versatile and new things presented when old skills are mastered. The level of difficulty has to be considered in practicing coordination. (Nuori Suomi 2006, 82-83.)

Exercises for coordination on and off-ice are all kinds of ball games, with different playing objects. Courses with movement tasks requiring balance, spinning and rolling movements are also examples of coordinative training. (Nuori Suomi 2006, 83-84.)

Speed can be defined as distance travelled in time. In ice hockey it can be measured with the distance covered with a single skating stride in a certain time span. Speed is extremely important in ice hockey. In order to achieve speed, one has to apply the principles of force applications correctly, explosively and with the right timing. Every skating stride has a pushing and gliding phase and a total transfer of body weight. The weight is always transferred as a sequence between the pushing edge and gliding edge. (Stamm 2001, 29.)

Motivating a child to perform rapid movement can be a challenge. Using different kinds of competitions and relays is a suitable way of speed training for children. Exercises with changing rhythm and pace of motion are also considered as good speed training. (Hakkarainen 2009, 228.)

4.2 Sport-specific Skills of Ice Hockey

The most important sport-specific skill of ice hockey is skating. The ability to skate with speed and efficiency are characteristics of a great hockey player, although all great skaters are not great ice hockey players. (Haché 2003, 60.) Without sufficient technique of skating, development of other skills of the game becomes extremely hard. (Cady & Stenlund 1998, 1.) Developing and maintaining skating skills is constant work for an ice hockey player. Demands in the field of skating get higher all the time as the game becomes faster. Skill of skating develops quite slowly and therefore training it has to be continuous. (Nuori Suomi 2006, 90.)

Practicing stick and puck handling skills is a long-term process which requires large amounts of repetitions. Developing stick handling skills sets also high demands on mastering other skills and qualities such as coordination, agility and mobility. As a good skater can create space in a game situation, a good stick handler can create a better chance for a bigger game situation

role with passes, steals and effective use of stick. Today´s ice hockey requires good stickhandling skills and the ability to execute these skills quickly. (Nuori Suomi 2006, 94.)

The best way to learn puck handling is to experiment all kinds of figures with a puck or a ball and by playing other closely related sports like rink bandy. A good puck handler does not have to spend energy on thinking of puck handling, but instead concentrate on game situation and reading the play. A player who masters puck handling is usually a good passer too. Such a player can work in confined space and make creative decisions while being in possession of the puck. (Nuori Suomi 2006, 94-95.)

To become a skillful passer is often a question of training and attitude. Practicing passing starts between ages of five and seven and continues all through playing career. The skill of receiving a pass is as important as the skill of passing. The ever quickening game emphasizes the importance of passing and receiving skills. Forehand sweep pass is the first technique of passing which is being taught to children. Backhand sweep pass follows forehand sweep pass in the order of teaching. Receiving techniques are taught in the same order as passing techniques. (Nuori Suomi 2006, 95.)

Shooting techniques are very much dependant on individual differences of physical characteristics of a player. A player learns the most suitable techniques through training and multiple repetitions. (Nuori Suomi 2006, 97.) There are differences in the teaching order of shooting techniques in available literature. Pavlis (2004, 84-85.) suggests that forehand sweep shot should not be taught to the youngest players because of its high demands of strength. Instead, Pavlis (2004, 84-85.) suggests to teach forehand quick wrist shot first. Nuori Suomi (2006, 96.) sets forehand sweep shot as the first taught shooting technique in the list of teaching order. Other styles of shooting are wrist shot from forehand and backhand side and slap shot. (Nuori Suomi 2006, 96-97.)

5 Instructing Children and Role of the Instructor

Instructing children requires above all strong motivation, will to instruct and educate from the instructor. An instructor has to be genuinely enthusiastic about the cause in order to pass the enthusiasm on to the children. The ability to motivate the ones being instructed is an important characteristic of an instructor, because it makes the instructed children strive to reach their objectives. (Karvinen, Hiltunen & Jääskeläinen 1991, 46.) Development of motivation is a part of human´s overall development. Through positive feedback and pleasant learning experiences a stone base for future motivation can be built in the early childhood. (Vasarainen & Hara 2005, 86.)

5.1 Moral Development

The moral development of a child begins gradually during the childhood, when a child starts to distinguish what the difference is between right and wrong. The behavior of parents and other adults have an influence on the development of a child´s conscience. Orders and forbiddances have only a small effect on the development of conscience, whereas apology, repentance and atonement effectively guide the development of conscience and moral. Increasing personal evaluation and consideration in relation to external authorities is considered as the essential thought in moral development. (Autio & Kaski 2005, 36.)

One part of moral development is forming an idea of right and wrong. Through increased understanding of right and wrong, a child learns to take responsibility of his or her own actions and value other people. The ability to distinguish right from wrong is not inborn but is based on external supervision instead. Children receive feedback from the environment and a three-year-old already knows what is allowed and what is not. There is a danger of mixing up wrong and right, if supervision is missing. Through just and consistent feedback the idea of wrong and right starts to internalize. (Autio & Kaski 2005, 36-37.)

It can already be expected of a child between five and six years to be able to take other people into consideration. In order for a child to develop in this direction, the values of sport community have to be based on justice, honesty, equality and mutual respect. This is why it is important to consider, what kind of set of values the instructor passes on to a child involved in physical activity. (Autio & Kaski 2005, 37.)

5.2 Emotional Skills Development

A natural part of mutual interactive development is also the development of empathy. This means placing helping other people ahead of seeking personal benefit. Through interaction, children learn to understand the emotional states of other people. Development of empathy is important, because it is linked with other social skills. A socially skillful person is a good listener and is able to take other people into consideration even in extremely demanding social situations. (Autio & Kaski 2005, 38.)

Permissive environment allows a child to experience, recognize and express his or her emotions. These are all important factors in the development of empathy. In permissive environment, all emotions are allowed and the children have an opportunity to interact and practice different situations. Learning from example of an adult is also a natural way for a child to learn. (Autio & Kaski 2005, 38.) Every instructor is being followed closely by children (Vasarainen & Hara 2005, 44).

5.3 Differences between Instructing Boys and Girls

An important thing to consider in instructing is the differences between sexes. There are naturally big internal differences within sexes, because every individual is different. Descriptive to boys´ physical activity is action centricity and doing, whereas girls build connections and share experiences. Physical activities of boys and girls shouldn´t be compared, but accept the fact of contentual distinctiveness instead. A good example of this is ice hockey. Boys´ ice hockey is characterized with physicality and speed, girls´ game is more based on tactical decisions and use of body in different game situations. (Autio & Kaski 2005, 38-39.)

5.4 Working as an Instructor or Trainer

An important skill for an instructor is the ability to inspire children to experiment and experience (Puhakainen 2001, 69). For a child or a juvenile an instructor represents an authority (Mero, Nummela, Keskinen & Häkkinen 2004, 410). An authority status puts an instructor under an obligation. An instructor is a role model for children, who is being obeyed and respected by a child. (Vasarainen & Hara 2005, 44.) An instructor is often an object of admiration and a child copies his or her behavioral model from the instructor (Autio 1997, 19) (Pavlis 2004, 35). This status requires sense of responsibility from the instructor. In order to help

children to express their ideas and learn new things, an instructor has to observe and guide, watch, listen, comment, correct and ask questions. Asking questions is an important way of controlling children´s attentiveness and making sure that everybody has understood. (Vasarainen & Hara 2005, 44.) A good instructor can guide a child to learn and understand the meaning of it as a positive thing. Creating the best possible climate for learning is an important task of an instructor. (Autio 1997, 19). By creating an encouraging climate, an instructor is able to motivate and make children feel good without a fear of outside threat factors. This climate is called motivational climate and it can be divided into task and competition orientated perspective. An instructor emphasizing the importance of development and effort is likely to create a task-orientated motivational climate, whereas emphasizing results and competitions is likely to shape a competition orientated climate. (Jaakkola 2009, 334-335.)

The most effective way to ensure high quality and learning in training is to create a task-orientated motivational climate. The action is based on experimenting and learning from individual starting points. Children are motivated, because the atmosphere does not set limitations for participant´s skill level. (Jaakkola 2009, 335.)

Although the importance of task-oriented motivational climate for learning is evident, competing and social comparison are also a part of children´s sports. Competitions and games, comparison and especially defeats can be educative experiences. Task and competition orientated climates do not exclude one another, but instead, created motivational climate always consists of both of them. (Jaakkola 2009, 335.)

In team sports, the trainer is responsible for the whole team and all the actions done by it. A trainer has to treat all the members of the group or a team equally. This is why it is important to pay attention to the quality of doing and the members´ positions in the group. Working in team sports requires various deals between the trainer and the team members, a part which are written and also unwritten regulations set by the sport. (Vasarainen & Hara 2005, 45.)

5.4.1 Interaction and Communication

Modern educational environment strives for constant interaction between the educator and the one being educated (Nuori Suomi 2006, 51; Vasarainen & Hara 2005, 53). It is also important to know what interaction is about, because too often a trainer or an instructor assumes that interaction is taking place without listening to the athlete. Interaction is defined as mutual,

an effort to communicate and a striving to influence another person. Vasarainen & Hara 2005, 53.)

Interaction always takes place interpersonally. Changing information occurs through speaking and receiving information through listening. Quite often our facial expressions and body language reveals our thoughts and messages, which enables interaction to occur without saying a word. Non-verbal communication consists of facial expressions, eye movement, postures, gestures, distance between persons, phenotype and volume, rhythm and tone of voice. That is why it always important to pay attention to the way of expressing oneself. A trainer should consider the way of communication if the message or instruction is not being understood among group members. (Vasarainen & Hara 2009, 55.)

Discussion is a good way of interacting with the players, because it enables a two-way flow of information. The ability to discuss can be beneficial in facing a difficult situation. A group which is used to using discussion as a tool of discharging pressure can get through a crisis with little adversity. Discussion can be started regardless to age. It is therefore important that a trainer uses his or her judgment in deciding whether a child is mature enough to engage in a discussion. During a discussion, a trainer can learn many things about their athletes. (Vasarainen & Hara 2009, 55.) A style of cooperative communication, which includes the leader and the group, is more humane and also a way to make the group members to work towards desired goals (Gendron 2003, 16).

A good way of learning about feelings and thoughts of the athletes is listening to them. When an athlete is talking to the trainer, eye contact is necessary and listening can be deepened by asking specified questions and being an active listener. (Vasarainen & Hara 2009, 55.)

5.4.2 Feedback

Receiving feedback helps a child to learn. Correct feedback reinforces the feeling of proficiency and boosts the motivation towards physical activity. Feedback has to provide reality-based information such as what went well and what needs to be improved. Encouraging and guiding feedback serves the development of a child because it helps a child to perceive the things happening in his or her own body. (Autio & Kaski, 2005, 83.)

Trainers give the athletes large amounts of feedback during trainings and competitions. In addition to this, athletes receive constant feedback from inside their bodies. Giving feedback is probably the most commonly used way of improving performances. Feedback can be divided into two categories. Internal feedback is produced by athlete himself and it consists of information concerning the performance. Internal feedback is received via muscles and tendons or senses of sight, hearing and smell. Differences in the ability to benefit from internal feedback depend on the athlete´s skill of interpret it. (Jaakkola 2009, 343-344.)

External feedback is received from an outside source, which can be a living person or an object. A trainer or a referee, a clock or a camera can provide information for the athlete in a way that is not possible through internal feedback. A trainer can control the use of external feedback which makes it an effective tool in instructing situations. The amount and quality of feedback varies from one situation to another. (Jaakkola 2009, 342.)

External feedback can be categorized according to the information it provides. Result related feedback provides information about how well an athlete was able to reach the set goals and targets. Therefore result related feedback is provided after the performance and is pretty much useless for learning purposes, because the same feedback is already been produced by the athlete through internal feedback. Although result related feedback does not provide information directly about the performance, there are sports in which the performance is being evaluated with a point system. In these sports, result related feedback is essential, because it tells an athlete the absolute truth about the success of the performance. (Jaakkola 2009, 342-343.)

The other type of feedback is related to the quality of the performance and the characteristics of it. This type of feedback provides information about trajectories, of equipment or objects and relations of the body compared to other athletes. Performance quality related feedback is also given after the performance and it is useful and effective for learning because the information provided is usually differs from the one being produced through internal feedback. (Jaakkola 2009, 343.)

5.4.3 Demonstration

Experiencing a visual demonstration can teach an athlete more than a thousand words. Types of demonstrations are many: demonstrations by the trainer, still pictures, a series of pictures, and moving picture with a video camera or a laptop. In addition to these, athletes receive

many demonstrations from fellow athletes during a training session. When a trainer demonstrates a movement or a skill, right positioning is important. A trainer has to make sure that everybody can see the demonstration. It is also essential to consider the direction the trainer is facing while demonstrating. Giving demonstrations is proven to be effective in the beginning phase of skills training. Too much information can make a demonstration ineffective. One or two main points should be emphasized and concentrated on in one demonstration. (Jaakkola 2009, 341.)

A demonstration is necessary, when skating is being taught to children. It is the trainer´s responsibility to get somebody to execute a demonstration if he or she is not able to do it properly. Demonstration is necessary for a child to be able to copy the movement of an adult. (Pavlis 2003, 9.)

6 Ice Hockey Instructor´s Guide for EC Dornbirner Bulldogs

Foreword

This training manual is made for the junior instructors of ice hockey club Dornbirner Bull-dogs.
This manual is aimed for instructors working with beginners aged 6 to 10 years-old. The first part of the manual deals with working as an instructor with kids. The second part concentrates on developing and training of motor skills with on-ice training through games, plays and fun-based activities.
In the third part of the manual, the very basic technical skills of ice hockey are being presented with pictures and main points of right technical performances and most common mistakes.

Juhani Suomalainen

Instructing and Teaching on Ice

The role of the instructor is essential when working with beginners. Using the often heard words "coach" or "coaching" is at this stage unnecessary. The learning experience should occur through a fun based activity involving lots of movement and repetitions, minimizing the time waiting or being stale.
Here is a list of things to remember when planning a practice session for beginners:

1. **You are on the ice for the players and their development**

   One practice session last from 45 minutes to one hour and this time you as an instructor are there for the kids.

2. **Be patient and be an example for the kids on and off the ice**

   As an adult and a leader you are a role model for the kids. The kids look up to you and imitate your actions and words. The practices with little kids do not always go the way they were planned and this requires patience from the instructor. Avoid offensive language and bad behavior on and off the ice.

3. **Plan; be organized and ready to adjust**

   Careful planning before every practice is the key of being organized. Go through the practice with all the on-ice instructors beforehand to ensure that everybody knows what is happening and when. Share responsibility and give all instructors an area of responsibility during the ice practice and make sure everybody knows their job. This helps greatly in practice execution and also saves time.

   Be ready to adjust. Always have some kind of a back-up plan. Be ready to adjust the drills or exercises if faults or withdrawal is being spotted. This often happens if the kids experience the exercise as too difficult or demanding. As well as being ready to make exercises easier, be prepared to make exercises more difficult and encourage kids to try the more difficult exercise in the frames of safety, of course.

4. **Teach in small groups, correct and give positive feedback to reinforce**

Every individual skill exercised has to be carefully taught first. Demonstrate the complete performance slowly, with the right technique and make sure that everybody understands. Reinforce every step through explanation and make clear which part of the body is working and how. It is important for the kids to have a picture of the whole performance before starting to practice.

Use small groups to teach new skills. When the group size is around 20 kids in one ice session, it is crucial to divide the group into several smaller groups to make the teaching more effective. There are many advantages of using small groups in teaching:

- Group control and discipline; it is easier to control 5 kids instead of 20 at the same time!
- Teaching, correcting and learning; the instructor has more time for each individual player making teaching and learning more effective. Technical errors are easier to correct from an individual player.
- Interaction and feedback; small group makes the interaction between the instructor and kids more effective. Kids need to feel special and in smaller group every kid gets attention. As well as interacting, giving feedback becomes easier.

Correct technical errors and show how to do it right. The instructor has to make sure that the skills are being practiced through right technical performances. Letting false technical performance slip through the fingers will make correcting harder later on. Corrective actions should also happen in a positive manner.

Give positive feedback. Learning can easily be reinforced by giving positive feedback. Positive feedback should be given even when the performance is not completely correct. In this case the feedback should be followed with a corrective statement and showing. It is pretty clear that learning is more effective in a positive environment, than in a negative. Negative feedback creates frustration and learning is being hindered.

5. Repeat and challenge

Repeat the already learned. Learned skills are nothing without repetition. A single skill needs thousands of repetitions before it becomes automatic. It is very important to make sure that all learned skills are repeated with the right technique.

Challenge the players by giving them something new and more difficult. Introducing new skills or already learned in a more difficult way inspires players and makes practicing fun.

6. Prevent boredom

Small children do not have the ability to concentrate for long times on one thing. This is why it is important to keep the skills teaching parts short, but effective, with lots of repetitions. When the teaching part lasts too long, kids get bored. This should be recognized by the instructor and at this point it is advised to stop the activity and move to another. To prevent boredom on ice, plan the practice sessions so that a technical skills exercise is always followed by a game or a play. Teaching basic technical skills of ice hockey is essential at this age, but enjoying the activity of movement is even more important.

7. **Teach the ethics and the basic rules of the sport**

Remember that it is important to teach children the ethics of the sport and how to conduct in a practice situation. Make sure that nobody is being picked on or called names and teach the importance of the team. Also teach some basic rules of the game, mainly focusing on playing fair and not committing fouls with the stick or through other aggressive behavior. In this case too, you serve as an example for the group.

Fundamental Movement Skills

The teaching of movement skills has to start before starting with the ice hockey specific skills, because without fundamental movement skills there is no base to build on. The fundamental movement skills are very quickly adapted in this age and this is why it is crucial for young athlete´s development. The best way to practice movement skills is of course off the ice on dry land, because of the more natural environment for humans. This is why participating in other sports besides ice hockey support the overall development. All the basic skills of ice hockey are already far more complex skills compared to the fundamental moving skills. The best way to include movement skills learning in training is to practice them through fun-based activities of games and plays.

The four fundamental skills are often being named as the **ABC´s**, every skill giving its initial letter to the combination:

- Agility
- Balance
- Coordination
- Speed

Developing ABC´s on Ice

This manual being an on ice manual, in this part some examples of developing ABC´s are being presented through fun-based activities. In many of the examples, more than one fundamental movement skill is being practiced and many of the skills overlap.

Agility:
Being agile on skates means the ability to control the body in different positions and by changing positions by using the whole range of motion. For beginners this means for example the ability to stand up, squat and overcome an obstacle. Later on agility is also the ability to change direction rapidly, turning to backwards skating, turning to forwards skating, stop and start(with and without a puck). In all cases the rapidness and speed of the movement defines one´s agility.

Practice examples:

- **Skating courses** consisting of different kinds of movement tasks. With little kids you can even make up a story and the story goes along the movement tasks. Suitable Movements for beginners to practice are squatting, stepping over an obstacle, jumping, kneeling and standing up again, just to mention a few.
  By using skating courses, many players can be active and moving at the same time.

- **Playing catch** with different kinds of rules. The idea in playing catch is that a player being caught has to stay in a position which demands a bit of agility. In order to continue the play, someone has to free this player with an action or a movement according to the rules. Example: After being caught, a player has to stand with the skates far apart from each other. Other players have to crawl through the legs in order to free this player.

- **Puck races** from various starting positions. The idea is that two players are racing for one puck. They have to get up on their skates from a signal and skate for a puck. The one of these, who gets the puck, tries to score. The other player tries to steal the puck away. Starting positions can vary from kneeling position to lying on the back. The element of competition makes the players also try their best.

Balance:

Having a good balance on skates means the ability control one´s own body and posture fluently while moving. It is also the ability to effectively use one´s own body weight in movement, distributing the weight in right proportions between the skates. For beginners it is important to be able to stand and stay on their skates, balance on one skate and to maintain balance while skating. For beginners it is very important that many of the games and competitions are done without a stick in order to develop good balance skills. Basically, balance is being practiced all the time on ice.

Practice Examples:

- Playing **football** or **handball** on ice. Football as a cross-ice game is one of the best ways to develop balance on ice. In order to kick the ball, the other skate has to come off the ice and this way balance is being practiced. The players repeat this numerous

times in one game session while having fun by playing. Playing handball on ice demands balance and coordination. Catching, throwing and picking the ball up off the ice are being repeated throughout the game several times. Different rules can be applied to these games. For example, rules considering moving, passing rules, etc.

- **Skating courses** consisting of balance tasks. One skate glides in different positions.

- **Playing catch** with different rules

Coordination:

A player who possesses good coordination is able to combine different movements and skills. It is also the ability to perform different movement tasks simultaneously with different parts of the body. For beginners this means the ability to perform basic movement tasks in a combination with another basic movement task. For example throwing and catching an object, while maintaining balance.

Practice examples:

- Playing **handball** and **football** on ice

- Playing dodge ball and other small area games using **hands** with different objects of different sizes and shapes. For example a game with tennis balls, where two teams have to keep their own side clean from tennis balls by picking them up with hand and throwing them on the other side.

- Playing small area games with **stick** using different playing objects (balls of different sizes and weights and light pucks meant for beginners).

Speed:

A speedy player is able to create fast movement. Being able to react fast and move quickly is a key factor in almost every sport. With beginners, the willingness to move with a fast speed can be easily created with a competition or a game. Speed and agility training can easily be done at the same time. A competition can always start with an agility part (stand up) and be followed by a speed part (puck race). Each performance should be short (under 10 seconds) but very intensive.

Practice examples:

- **Puck races** are the easiest way to make everybody try hard and move with speed. A Puck race can be a combination of skating skills or just a straight rush for the puck. Different kinds of agility parts can be combined with speed exercises. Standing up from different positions or jumping over an obstacle before racing for the puck are good examples of combined speed and agility exercise. The reaction speed can also be developed with puck races.

- **Playing catch** with different kinds of rules.

- **Relays** with small groups are fun activities and can also be combined with many movement skills. When using relays in practice, the group size has to be small enough in order to keep everybody active.

Basic Technical Skills of Ice Hockey

The number of different skills in ice hockey is numerous. To master this sport in a technical level, an individual has to be able to execute hundreds of singular skills, many of them happening as a combination of skills. There are no shortcuts to being a skillful player; it takes thousands of repetitions to master a skill and for it to become automatic. Therefore it is also crucial to learn the right technique from the very beginning and repeat it the right way. This also means that when basic skills are being practiced the instructions and showing of the skills have to be good. Errors need to be corrected and the right doings positively reinforced. Working with beginners requires knowledge from the instructor in the area of four basic skills. These basic skills are: skating, stickhandling, passing and receiving and shooting.

When progress in basic technical skills training is notified, it is important to challenge the players to add quality into their performances. Speed and control in skating, ease and smoothness in stickhandling, precision and hardness in passing and accuracy and hardness in shooting are the qualities to look for.

After the basic skills have been presented and practiced, they need to start to be combined with each other and overlap. Combining two skills at first (e.g. skating and dribbling), then three (skating, dribbling and passing) and finally all four, (finishing with a shot) is the right and a necessary way to proceed in skills training. As important as progress making in training is to go back to the basic skills and reinforce them. The base created with basic skills training is always the stone base to learn something new. In the end, a player should be able to execute the basic skills with the most amount of speed in a game situation.

Skating

Skating is the first and the most important technical skill of ice hockey. This is why it is extremely important to teach the right techniques in the right order from the very beginning. In this part of the manual, the skating skills are being presented in the correct teaching order with pictures and explanations of the performances. The ground for every technique is the basic stance and it is the first being presented. Practicing and repeating the right basic stance of skating helps to understand where the weight of the body should be and what kind of posture is needed to maintain balance. After basic stance, forwards and backwards skating are presented with pictures and explanations. Both of these are divided into three parts: starting, striding and stopping. In the last part of skating skills, forwards crossover skating is covered.

Basic Stance

Main Points:

- Skates are approximately shoulder width apart, pointing slightly outwards.
- Knees and ankles are flexed, knees reaching over the toe line.
- The angle between the thigh and the shin is approximately 90 degrees.
- The weight of the body is in the middle of the blade of the skate.
- Upper body is relaxed and leaning slightly forward
- Back is straight, head is up
- The stick is in one hand and on ice

Common Mistakes:

- Knees and ankles are not flexed to a sufficient degree
- Back is not straight
- Head is not up
- Stick is being held with both hands and upper body is leaning into it

Note: Special attention should be paid in binding the skates the right way. Kids are many times using laces which are of the same length as senior players. The extra length, which is left over after binding the skates with a single knot is often being bound tightly around the ankle, which hinders the kid´s ability to flex the ankle. This leads into decreased balance and not being able to bend the knees to a sufficient degree.

Forwards Skating

The forwards skating skills of starting, striding and stopping are presented in this part as the basic skills. There are several techniques of starting, the "V" start being the most basic. The techniques of stopping are also many, both with one and two skates. In the striding part, forwards skating stride is explained and shown with pictures. In the part of stopping skills, snowplow stop and two legged stop are being presented.

Starting

Main Points:

- Start with the basic stance
- The heels of the skates are brought together, forming a letter "V"
- The weight of the body on the inside edge of the skate which performs the takeoff
- A Strong, fully extended "kick" by the starting skate (hip, knee, ankle extension)
- Stride direction diagonally behind the body
- Upper body leads the weight transfer onto the gliding leg, keeping the low posture
- The ankle and knee of the gliding leg stay flexed in 90 degrees
- Recovery of the takeoff leg under the body for the next stride

Common Mistakes:

- Basic stance is not being correctly performed; insufficient knee/shin angle limits the powerful takeoff
- The letter "V" formed with the skates is too wide/ too narrow (stride direction)
- The takeoff leg and hip are not fully extended (less power)
- The weight of the body does not transfer onto the gliding leg
- Upper body is straightened too early

Striding

Main Points:

- Every stride starts from under the body
- During the stride, ankle, knee and hip are being fully extended
- "Kick" direction diagonally behind the body
- Weight is transferred on the outside edge of the gliding leg, low posture kept, upper body leaning forward
- Weight is transferred on the inside edge, while the other leg is brought again under the body close to the other skate
- Head stays high
- Back stays straight
- Arms support the movement rhythmically moving back and forth
- Stick is in front of the body and in one hand

Common Mistakes:

- Leg does not recover under the body(Stride length shorter, less power)
- Ankle, knee and hip do not fully extended
- Weight is not transferred on the gliding leg
- Upper body is too much upright and not leaning forward
- Arms are moved from side to side

Stopping

For performing a stop from forwards skating there are techniques for single leg and double leg stops. Performing single leg stops requires somewhat good balance and skating skills. So here the easiest double leg stopping techniques are being presented. The most basic double leg stop is the snowplow stop. This stop doesn´t require so much skating speed so it can be used by the beginners as the first stopping technique. The second one is the classic two legged stop. This technique requires already some skating speed before it can be properly performed.

Snowplow stop´s main points:

- Basic stance (Gliding forwards!)
- Heels are turned outwards
- Weight is on the inside edges of the skates
- Skates are pressed against the ice bringing the movement to a halt

Common Mistakes:

- Legs are too straight
- Skates are not pressed strongly enough against the ice

Classic two legged stop´s main points:

- Skates are shoulder width apart
- Both skates and hip are turned 90 degrees
- Both skates are pressed powerfully against the ice
- The leading skates is stopping with the inside edge
- The following skate is stopping with the outside edge
- Body leans into the direction of the following skate
- Knees stay flexed throughout the performance

Note: Stopping should be practiced equally on both sides and even more on the weaker side. Normally, two legged stop is easier and more natural to perform stronger leg first.

Backwards Skating

This part covers the right basic techniques of backwards skating. The techniques of starting and stopping of backwards skating are many. In the first part, the C-cut start and backwards striding are being presented. In today´s ice hockey every player, despite the position, has to possess good backwards skating skills.

Starting and Striding

Main Points C-cut Start:

- Basic Stance
- Weight is on the middle part of the blade
- Starting leg is brought in front of the body, tip of the skate pointing slightly inwards
- Starting leg makes a strong, C-formed cut with the inside edge of the skate
- Stride direction is diagonally in front of the body
- Weight is transferred onto the gliding leg which is flexed to 90 degrees
- Starting leg is fully extended
- Starting leg recovers back under the body, still so that balance can be maintained
- Head is high and back is straight
- Arms support the movement rhythmically moving back and forth



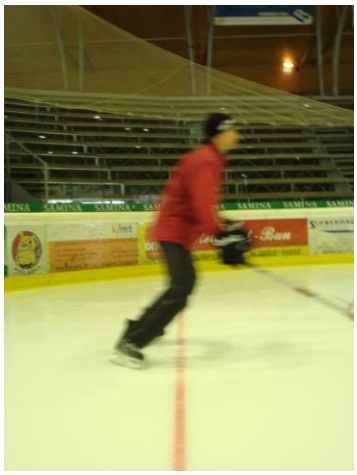
Common Mistakes C-cut Start:

- Knees are not flexed adequately(less balance)
- Head is not high(weight is too much in front)
- Stride direction is too much in front or on the side on the body
- Weight is not fully transferred onto the gliding leg

Stopping

Main points:

- Both skates are turned outwards
- The inside edges are pressed strongly against the ice
- Knees are flexed
- Upper body stays tight and is leaning forward



Common Mistakes:

- Skates are not pressed strongly enough against the ice
- Legs are too straight
- Upper body drops or is not leaning forward

Forwards Crossover Skating

Crossover skating is used in ice hockey to change the direction of movement. A Player with good crossover skating skills is able to increase the skating speed while changing direction instead of losing it.

Stepping Over a Stick

Before being able to do crossovers, a player has to possess pretty good balance and basic forwards skating skills. Following pictures shows how to take the first step towards crossover skating.

Main Points Stepping Over a Stick:

- Place the stick on the ice in front of you
- Basic stance
- Step over the stick with the skate furthest to the stick
- Land the skate on the other side of the stick; legs crossed
- Flex the knee of the front leg and extend the back leg
- Keep back straight and head up
- Bring the legs together again and practice the other side



Forward Crossovers

Main Points:

- Legs are bent, weight in the middle of the skate
- Body is leaning in
- Shoulder line should remain horizontal
- Inner skate stride goes behind the outer skate crossing the legs
- Inner skate makes a full extended kick with outside edge of the skate
- Outer skate makes a kick with the inside edge of the skate
- Outer skate is brought knee first over the inner skate
- The skate is always recovered on the front side of the other skate after a kick
- Weight transfer on to the gliding leg
- Stick is in one hand on backhand side, both hands on forehand side

Common Mistakes:

- Weight is too much in the front
- Legs are straight
- Inner shoulder drops too low
- The leg performing the outside edge kick does not fully extend
- Weight does not transfer on to the gliding leg

Note: When practicing crossover skating with beginners, the size of the circle should be taken into consideration. The faceoff circles are too big for beginners in order for them to have to perform crossovers. Smaller circles can be made using pylons or simply making beginners practice around one pylon.

Stickhandling

The skill of stickhandling is one of the four most important basic skills of ice hockey. Stickhandling skills are needed in order to maintain puck possession and to challenge the opponent´s defense. The basics have to be learned thoroughly in order to create fakes and dekes in the later stages of practicing. Skills being presented are the basic forehand to backhand dribbles, performed narrow and wide. After these, controlling the puck on both sides of the body can be presented in training. Naturally, the combination of movement and stickhandling should be practiced, after the puck can be controlled without movement.

Forehand Backhand Narrow Dribble

Main Points Starting Phase:

- Basic stance
- Grip is approximately shoulder width
- Hands and arms are relaxed and away from the body
- Puck is in the middle of the blade
- Head is high
- Weight of the body is on the skate of the puck side

Common Mistakes Starting Phase:

- Legs are too straight(the whole of the blade is not on the ice)
- Grip is too narrow/too wide
- Upper hand and/or elbow is too close or touching the body
- Hands are squeezing the stick too hard
- Puck is in the tip of the blade
- Head is not high

Main Points Dribble:

- Upper hands pulling movement
- Lower hands pushing movement
- Weight is transferred with the puck on the other skate
- Upper body rotation
- Wrists roll, closing the blade

Common Mistakes Dribble:

- Weight does not transfer with the puck
- Wrists do not close the blade

Forehand Backhand Wide Dribble

Main Points:

- Same as in narrow dribble, except wider range of motion
- Weight transfer is more powerful
- Upper body rotates more

Passing and Receiving

The ability to pass and receive the puck is a very important basic skill of ice hockey. The players playing the game are getting faster all the time, but the puck remains the fastest particle of the game of ice hockey. Being able to pass the puck accurately and fast between teammates is a key factor in creating scoring chances and controlling the events on the ice. There are many different types of passes, but the first one to teach is the forehand sweep pass. This pass is pretty similar to forehand sweep shot, the only big differences being the strength and the height of the shot.
The skill of receiving a pass is as important as the skill of passing. Again, the techniques and styles of receiving are many, but receiving the puck on the forehand side is the first and the easiest.

Forehand Sweep Pass

Main Points Starting Phase:

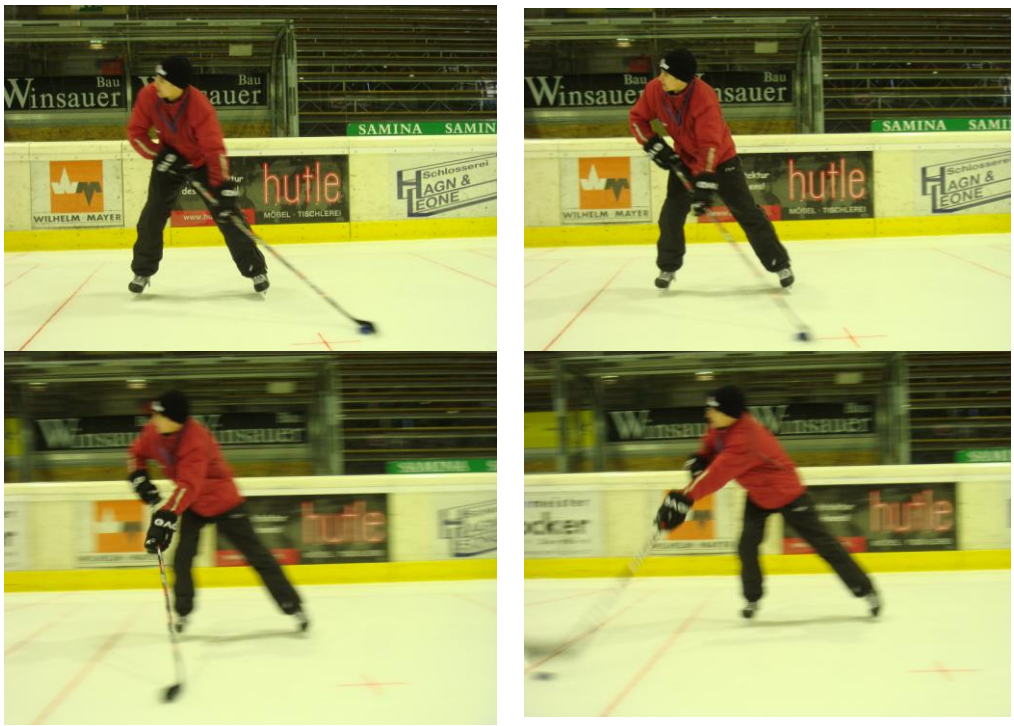
- Puck is in front of the body and taken beyond the back skate
- The weight of the body is transferred onto the back leg
- Arms are relaxed and away from the body, lower arm is extended, upper arm slightly bent
- Hands should not squeeze the stick too hard
- Puck is in the heel of the blade, blade is closed
- Head is high, eyes on the receiver

Common Mistakes Starting Phase:

- Puck is directly in front of the body, not beyond the back skate(less range)
- Puck is in the tip of the blade
- Blade is left open(less control of direction)
- Arms are too close to the upper body
- Hands are squeezing the stick too hard
- Legs are straight
- Head is not up

Main Points Passing Phase:

- Soft pulling movement by the upper hand, elbow first
- Soft Pushing movement by the lower hand
- Weight transfer from back skate to front skate
- Blade stays closed
- In the end of the phase wrists are curled, turning the tip of the blade to the direction of the pass



Common Mistakes Passing Phase:

- Weight is not transferred to the front skate(less range of motion)
- Upper hand is pulled in to the body(blade opens, less accuracy)
- Wrists do not curl for a follow-through(less accuracy)
- Head goes down

Main Points Follow-through:

- Weight is completely on the front skate
- Hands are aligned in front of the chest
- The tip of the blade is pointing at the receiver

Common Mistake Follow-through:

- The Stick does not stop in front of the chest(less readiness to receive again)

Forehand Receive

The technique is almost the same as in passing, but reversed.

Main Points:

- Weight is on the front skate
- Stick is in front of the body and close to ice
- Eyes on the puck, head stays high(ability to see the playing field)
- Arms pull the stick softly back as the puck is received
- The first touch on the puck approximately between the skates
- Wrists roll closing the blade
- Weight is transferred to the back skate

Common Mistakes:

- The first touch is too early/too much in the front
- Wrists and arms are too stiff, first touch too hard
- Blade is left open(puck jumps over the blade)
- Head in completely after receiving

Shooting

Shooting is one of the four main basic skills of ice hockey. Possessing an accurate and a hard shot is a powerful tool in goal scoring. There are many different types of shots in ice hockey executed from both, forehand and backhand side. The first and the most basic one is the forehand sweep shot. This shot creates the basis to learn all the other shots and can already be performed in the early stages of training. Forehand sweep shot does not require much of upper body strength, because most of the force is produced through weight transfer.

Forehand Sweep Shot

Main Points Starting Phase:

- Basic Stance
- Puck is in front of the body and taken beyond the back skate
- The weight of the body is transferred onto the back leg
- Arms and hands are away from the body, lower arm is extended, upper slightly bent
- Puck is in the heel of the blade
- Head is high, eyes on the target

Common Mistakes Starting Phase:

- Puck is not brought far enough beyond back skate(less range of motion)
- Weight is not on the back skate(no weight transfer)
- Upper hand is too close or touching the chest
- Puck is in the tip of the blade(release occurs too early)
- Eyes are not on the target(less accuracy)

Main Points Shooting Phase:

- Pulling movement by the upper hand elbow first
- Pushing movement by the lower hand
- Lower hand presses the stick against the ice(whip)
- Powerful weight transfer from back skate to front skate
- Middle body stays firm and rotates producing more force
- In the end of the movement wrists curl giving the shot more power and direction
- Puck travels from the heel to the tip of the blade during shooting phase
- Eyes stay on the target

Common Mistakes Shooting Phase:

- Weight does not transfer from back to front(less power)
- Upper hand is pulled in to the body(less range of motion)
- Wrists do not curl leaving the blade open(less accuracy)

Main points Follow-through:

- Weight is transferred fully on the front skate
- Upper body is fully rotated
- The tip of the blade points to the direction of the shot
- The height of the follow-through supports the height of the shot(high follow-through=high shot)

Common Mistakes Follow-through:

- Upper body is too upright(less power)
- Wrists are not curled(less accuracy)

Note: The stick has to be of the right stiffness, so that it is able to bend during the shot (See shooting picture). A too stiff stick reduces shot power significantly, while a softer stick gives a wrist shot the last "kick" that is needed.

7 Discussion

One of the main objectives of this project- based thesis was to piece together an instructor´s manual which has important information concerning aspects of instructor´s work on ice, practice guidelines for important movement skills and to present basic skills of ice hockey with pictures and explanations. The part consisting of instructor´s work was to be short and pithy with general knowledge of working with kids and what the responsibilities of an instructor are. The aim of the movement skills part was to make the instructors aware of the importance of development of movement skills and present some guidelines and examples for on-ice training. The major part of the manual is the technical skills presentation with still pictures and explanations of skills. The objective of it was to offer an instructor a visual view of basic sport-specific techniques of ice hockey.

Other main objective of this work was for it to be useful and practical. Easy language and not too many complicated terms. The manual was intended to be a tool from which an instructor can check the main points before an ice session or do a check up after practice.

Some adversities were faced during this project. The original idea was to use children as models for the pictures. After a couple of shooting sessions the problem started to reveal. Children were unable to hold the positions required for a good picture. There was always something too much or something missing. A conclusion was drawn to use myself as a model for the pictures and that solved the problem.

Next problem was to find enough ice time to gather all the pictures needed for the manual. In the surroundings where the work was done, there was only one sheet of ice and it is constantly used. This problem was solved through communicating with other ice users to get a couple minutes of time here and there.

One problem was equipment related. The camera which was used in the beginning of the project was not good enough to capture moving picture. Some phases of a movement were completely missing or the quality was not sufficient enough to distinguish important parts of a movement or a skill. After a better camera was found, the pictures containing movement were better in quality and useful for the work.

There was lots of available research material and literature concerning working with children as an instructor. The knowledge of them was pretty much with the same content and it supported the information presented in the manual. The information provided by the literature has also remained the same to a large degree.

Finding literacy which covers technical skills of ice hockey, except skating, was hard to find and there where some differences of opinion in them. For example Nuori Suomi – Juniorit jäällä book suggested the teaching order of shooting to start from forehand sweep shot, while Zdenek Pavlis in his book Hockey – First Steps for kids suggests to start with a quick forehand wrist shot. It is relatively hard to conclude which of these techniques is the right one to start with because of lack of literature on the subject.

The suggestions for continuation are easily found. Expanding the part of technical skills to more difficult and complex skills is the next step for this kind of a project. In this case the age group would have to be older. Reflecting technical skills to game situations would also be an interesting study. Other suggestions for a continuation could be an off ice manual consisting of the same skills and exercising them in dry land environment.

The objective of gathering information to put together a manual was achieved relatively well. Pictures representing technical skills are clear and easily interpreted, although some pictures have minor weaknesses in quality. The real results of the work can be seen when this manual is distributed to the target group and tested in practice.

Bibliography

Autio, T. 1997. Liiku ja leiki, Motorisia perusharjoitteita lapsille. pp. 19-55. Gummerus Kirjapaino Oy. Jyväskylä.

Autio, T. & Kaski, S. 2005. Ohjaamisen taito. pp. 13-83. Edita Prima Oy. Helsinki.

Bompa, T. & Chambers, D. 1999. Total Hockey Conditioning. pp. 1. Veritas Publishing. Canada.

Blatherwick, J. 1994. Over-speed – Skill Training for Hockey. pp. 22. The Publishing Group Inc. USA.

Cady, S. & Stenlund, V. 1998. High-Performance Skating for Hockey. pp. 1. Human Kinetics. USA.

Forsman, H. & Lampinen, K. 2008. Laatua käytännön valmennukseen. pp. 435. VK-Kustannus Oy. Lahti.

Gendron, D. & Stenlund, V. 2003. Coaching Hockey Successfully. pp. 16. Human Kinetics. Leeds.

Haché, A. 2003. Jääkiekon fysiikka. pp. 60. Hakapaino. Helsinki.

Hakkarainen, H. 2009. Nopeuden harjoittaminen lapsuudessa ja nuoruudessa. In Hakkarainen, H., Jaakkola, T., Kalaja, S., Lämsä, J., Nikander, A. & Riski, J.(eds.). Lasten ja nuorten urheiluvalmennuksen perusteet. pp. 228. Gummerus Kirjapaino Oy. Jyväskylä.

Hakkarainen, H. & Nikander, A. 2009. Pitkäjänteisyys ja tavoitteellisuus lasten ja nuorten valmennuksessa. In Hakkarainen, H., Jaakkola, T., Kalaja, S., Lämsä, J., Nikander, A. & Riski, J.(eds.). Lasten ja nuorten urheiluvalmennuksen perusteet. pp. 141. Gummerus Kirjapaino Oy. Jyväskylä.

Nikander, A. 2009. Lapsen ja nuoren psyykkinen kehitys. In Hakkarainen, H., Jaakkola, T., Kalaja, S., Lämsä, J., Nikander, A. & Riski, J.(eds.). Lasten ja nuorten urheiluvalmennuksen perusteet. pp. 110. Gummerus Kirjapaino Oy. Jyväskylä.

Jaakkola, T. 2009. Lasten ja nuorten taitoharjoittelu. In Hakkarainen, H., Jaakkola, T., Kalaja, S., Lämsä, J., Nikander, A. & Riski, J.(eds.). Lasten ja nuorten urheiluvalmennuksen perusteet. pp. 237-344. Gummerus Kirjapaino Oy. Jyväskylä.

Karvinen, J., Hiltunen, P. & Jääskeläinen, L. 1991. Lapsi ja urheilu. pp 46. Otava. Keuruu.

Karvonen, P. 2000. Hyppää pois! Lapsen motoriikan arviointi ja kehittäminen. pp. 34-35. Tammer-Paino Oy. Tampere.

Kemppinen, P. 1998. Taitava jalkapalloilija-Taitovalmennuksen käsikirja. pp. 53. Printway Oy. Vantaa.

Long- Term Athlete Development. Resource Paper. Canadian Sport for Life. pp. 39-40. Canadian Sport Centres. Canada.

Mero, A. 2004. Fyysisten ominaisuuksien harjoittaminen ja seuranta. In Mero, A., Nummela, A., Keskinen, K. & Häkkinen, K.(eds.). Urheiluvalmennus. pp. 241-245. Gummerus Kirjapaino Oy. Jyväskylä.

Mero, A., Nummela, A., Keskinen, K. & Häkkinen, K. 2004. Valmentaminen käytännössä. In Mero, A., Nummela, A., Keskinen, K. & Häkkinen, K.(eds.). Urheiluvalmennus. pp. 412. Gummerus Kirjapaino Oy. Jyväskylä.

Nuori Suomi. 2006. Juniorit jäällä. pp. 51-97. Oy UNIpress Ab. EU.

Pavlis, Z. 2003. Hockey – The Basics. pp. 9. Meyer & Meyer Sport (UK) ltd. Oxford.

Pavlis, Z. 2004. Hockey - First Steps for Kids. pp. 35-85. Meyer & Meyer Sport (UK) ltd. Oxford.

Stamm, L. 2001. Laura Stamm´s Powerskating. Third Edition. pp. 11-184. Human Kinetics. USA.

Twist, P. 1997. Complete Conditioning for Ice Hockey. pp. xiii. Human Kinetics. USA.

Vasarainen, J. & Hara, A. 2005. Nuorten valmentaminen joukkuelajeissa. pp. 27-86. Edita Prima Oy. Helsinki.