SNOWBOARDING
TEACHING PROGRAMME



FNASI, Finnish National Association of Snowsports Instructors / Vuokatti Sports Institute 2012

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1. INTRODUCTION

Teaching and learning snow sports is rewarding in many ways. The processes of teaching and learning pose new challenges to both instructor and learner, encompassing learning opportunities not only for the learner but for the instructor alike. The Finnish way of teaching snow sports is targeted at realizing joyful learning opportunities and happy moments of successful learning, learning being a collective experience of both parties.

This teaching programme is based on modern conceptions of how physical skills are - and can effectively be - acquired. The focus in the learning process is on the learner, whose starting points and goals are always individual. When teaching snow sports, it is important that the focus is on the learner and on the learning process itself – and not so much on the instructor's practices. A good instructor will have a good understanding not only of learning as a phenomenon but also of the sport to be learned and of the various characteristics of its specific sport culture.

The instructor will also know how to appreciate and use the opportunities offered by the learning environment at hand. Furthermore, the instructor will be aware of and able to shape the factors affecting the learning atmosphere and student motivation. These tools can be employed by the instructor to enable the learner to achieve joy of learning and discovery in the wonderful world of snow sports. One of the leading ideas behind this teaching programme was to create a common basic guideline for teaching all snow sports in a modern Finnish way.

2. What is snowboarding?

From the point of view of Finnish ski instructors (FNASI), snowboarding presents itself as a versatile snow sport, which is primarily based on having fun on the slopes. Snowboarding, the roots of which are in surfing and skateboarding, is a relatively young sport. As early as the 1960s surfers started exploring off-piste powder slopes while seeking for similar sensations as they were used to having in waves. Snowboarding finally found its way to Finland through snowboarding films of the 1980's.

One of the special features of snowboarding is that it initially started to gain a foothold mainly to satisfy the quest for joy and pleasure of the riders. Even though snowboarding has developed in great strides and turned into a mainstream sport, having also been adopted as an Olympic discipline, creativity and the joy of discovery play a major role in snowboarding even today.

For many riders, snowboarding presents itself as a lifestyle, for some even as a profession. A huge business has also evolved around snowboarding, with equipment manufacturers, competitions, magazines and films providing an arena or showroom for riders and products alike. Unlike in numerous other sports, competitions and races constitute just one of the ways of working as a professional. Numerous professional riders opt for staging for snowboarding films, shooting videos and pictures, coaching or working as instructors, for example. These options allow for development not only in sports know-how, but also in various other fields. Any snowboarding enthusiast, likewise, will be able to enjoy moments of personal fulfillment, gather positive experiences, travel to different parts of the world, and get acquainted with new people, mountains and cultures while pursuing this passtime.

What, then, is the meaning of snowboarding to us snowboard trainers? Snowboarding, at its best, is creativity on a gliding board in a challenging environment enjoyed in good company, as is also skateboarding and surfing. On a broader spectrum, snowboarding is also related to skiing, skating and other sports in which one balances on a moving object. For some reason, however, snowboarding is what we have ended up with. The reason may be found in friends that go in for snowboarding, in the creative, versatile and challenging activities connected with riding, in the fact that snowboarding taking place out in the open, in crisp winter scenery, in excelling oneself, breaking one's boundaries or in the positive experiences that we have gathered while snowboarding. Sharing these joyful experiences and emotions with your friends maximises the pleasure of it all, and we are committed to sharing it all with new snowboarding enthusiasts.

What does snowboarding mean to you?

Name some characteristics of a good snowboard instructor.

What kind of picture of snowboarding are you prepared to promote as a snowboard instructor?

3. HOW TO TEACH SNOWBOARDING

3.1 Teaching and learning

Learning can be understood as accumulation of knowledge and experience in such a way that this accumulation causes a change in the individual cognitive and movement patterns. Learning, and especially motor skills learning when we are talking about snowboarding, can happen either consciously as guided by the goals of the instructor or those of the teaching programme (explicit learning), or unconsciously (implicit learning). In the teaching practices guided by the instructor's goals or those of the teaching programme, the instructor's tools such as instructions, demonstrations and feedback are highlighted. However, it is the learning environment itself – different slopes and snow conditions – that help the ski student to learn motor skills in an unconscious way. This kind of learning is called environment-based learning (see chapter 3.2). Let's, for example, think about a young child who is learning motor skills, such as climbing, crawling, jumping and running, in the playground without any assistance from adults. Accordingly, learning is a process that is strongly connected with the environment and the prevailing conditions.

Explicit and implicit learning are not mutually exclusive. The so-called traditional teaching methods – instructor's skiing skills, technical demonstrations, instructions and feedback – still retain their important place in ski instruction. Consequently, we can use all the methods and practices available to us in our daily work with our ski students. Choosing, or creating, a learning environment that allows unconscious learning to take place can be seen as a primary challenge – and a great opportunity – for the snowsports instructor. An appropriate learning environment not only allows learner to learn new skills unconsciously, but it also enables the instructor to make effective use of the traditional teaching tools for guiding the learner along his or her learning path. In practice, this means that the instructor should first choose or arrange a suitable learning environment, and let the students start experimenting in this environment – and that the instructor should only then start giving guidance to the students individually.

The process in which a person learns movement skills is called motor skills learning or motor learning. Motor skills learning relates to the concepts of skill and skillful performance. The learning of skills can be defined as development in the physical performance as a result of training or action. A single successful performance that may happen by accident does not yet mean that a performance is skilful ─ a skilful performance can be repeated in such a way that there are only few or no poor or failed repetitions. In other words, at this stage learning has produced permanent changes in movement patterns and the movement patterns are more uniform. Another key feature of a skilful performance has to do with the ability to adapt the movement pattern to different situations, conditions and environments. A beginner rider may be able to make controlled basic turns on easy slopes but will encounter difficulties in steeper terrain or in moguls. Skilful riders will be able to adapt and fine-tune their technique in versatile conditions and in more difficult environment.

The learning of motor skills can be divided into three phases: in the initial phase, the skier comprehends and forms an internal image of what is going to be learned. A motor skill, or a combination of movements, such as required for a specific turn type or for a trick, can be pieced together by means of autonomous experimentation with movements, by verbal explanation, by means of a technical demonstration or by using metaphors or images.

In the intermediate learning phase the skill to be learned is trained a lot, which is something that will bind the learner's observation capacity. In other words, the learner's focus is almost 100 % on the mechanism to be learned, such as the movements required by the different phases of a turn. In this phase, the learner will find it quite difficult to adapt the turns to the environment or to pay attention to other slope users.

In the automation phase the learned skill has developed into an entity, and the learner's observation capacity is set free. In the automation phase the rider can, for example, focus on the line on a race course, thanks to the turning technique no longer requiring all the concentration. Likewise, when arriving at the kicker the rider can focus on the movements required by the air trick instead of focusing on any specific elements involved in popping off the kicker. For the rider be able to focus on the style of the air, the basics of jumping off a kicker will have to be in the automation phase.

Along with one's skills developing and the learning process progressing the observation capacity is gradually set free to focus also on other things outside the task to be learned. In snowboarding this can be regarded as a distinct goal, for the reason that skiing always takes place in a changing environment. While riding down a slope, a halfpipe or a snow park, the rider will have to pay attention to e.g. upcoming kickers, transition, mogul, gate pole, the next trick, and to other people on the slope. It is important for the instructor to pay attention to this even in the initial phases of learning by directing the learner's attention to factors outside the learner's body, such as to the upcoming turn, a cone marking the turning point, or the edge of the slope, just to mention a few examples.

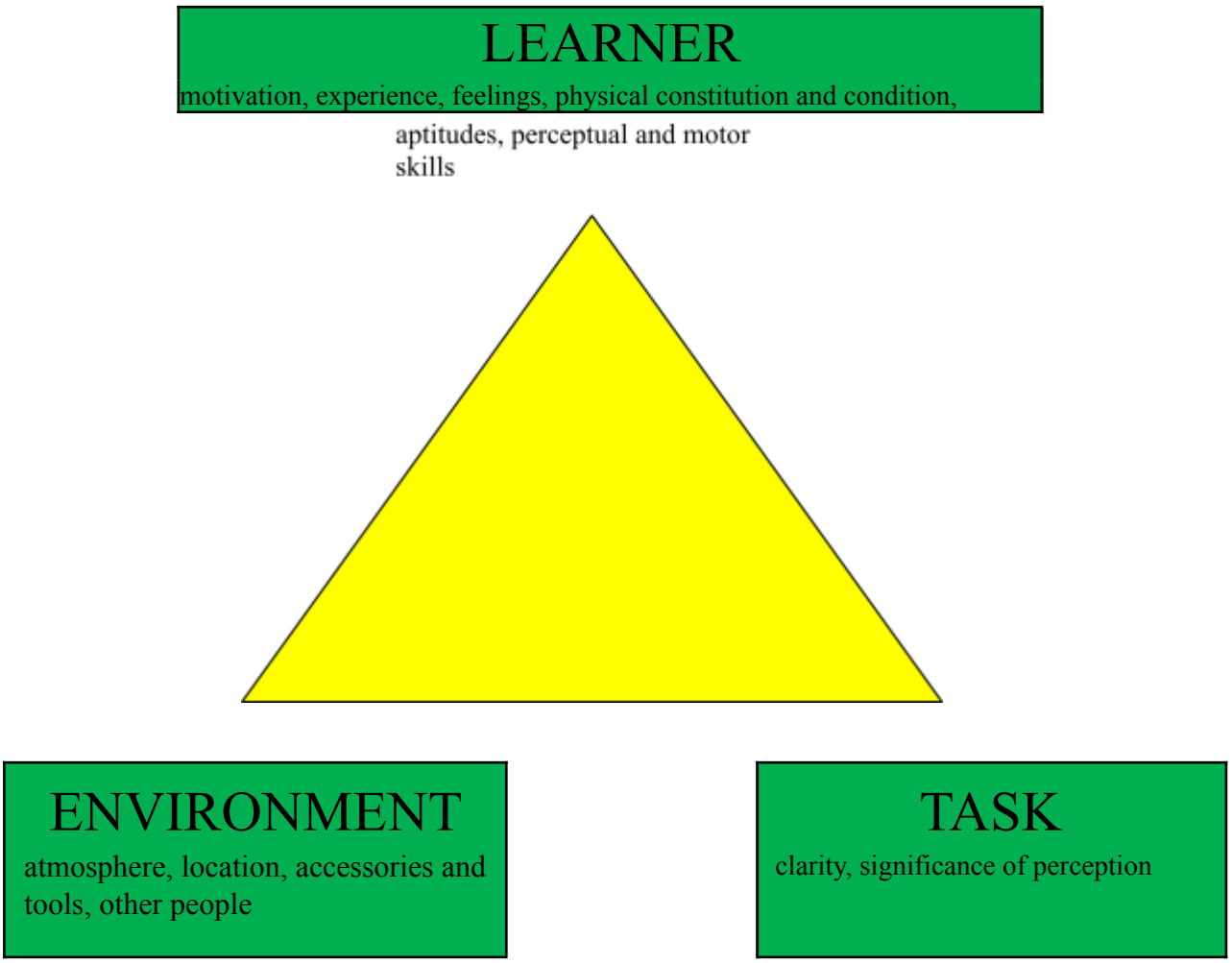


Image: The Modern Skills Learning Model The factors connected with the Learner, the Environment and the Task are in constant interaction with each other. For example, individual physical strength or observation capacity also affect the other two factors of the triangle. A physically strong skier with an advanced ability to assess the slope shapes and snow conditions can rider down even a challenging slope with relatively small power input by making use of slope shapes. Good perception skills help the rider to anticipate and prepare for the following turns, and thanks to physical strength the physical challenges of the run will not disturb the rider's focus on the essential things on his or her way down.

Along with the development and new findings in the research field of how human beings learn, also the role of the instructor in the teaching situation has changed. We have moved from teachercentred teaching methods more and more towards student-centred teaching practices, in which the role of the instructor is primarily that of a learning guide or facilitator. What is essential in this ideology is that the focus is not so much on the instructor or on his or her activities but on the learner and on the learning process itself. In case the instructor is too much focused on matters related to teaching techniques or methods, or on the preconceived lesson plan, there is a risk that the concentration moves away from the student. It is essential to keep in mind that a lot of the learning and also teaching - takes place through experimenting with different things, and also through trial and error. It is essential to keep in mind that a lot of the learning, and also teaching, takes place through experimenting with different things, and also through trial and error.

The instructor should consider the following factors when pursuing his or her activities as a snowsports instructor:
1.) supporting student's motivation, 2.) maximizing the amount of activity, 3.) creating or choosing an appropriate and inspiring learning environment, 4.) progressing in a logical and progressive way 5.) training complete movement patterns.

1. 1. Supporting student's motivation

One of the fundamentals of good modern teaching for the instructor is to arouse the student's attention and to boost their will to learn. Optimally, the instructor will be capable of creating enthusiasm in the student for the learning activities – thus strengthening student's internal motivation. Good internal motivation makes the student to actively participate in the learning activities. This being the case, the student is motivated by the joy and positive experiences created by the learning activities. External motivation, contrarily to the above, derives from reward on desired performance and fear of punishment. External motivation for learning usually ceases to exist when reward is achieved or when punishment cannot any longer be expected.

Internal motivation should be supported in snowsports instruction for the reason that it is the strongest form of motivation. Autonomy refers to the student feeling that they can make choices regarding their learning activities and being involved in the planning the learning session. Autonomy has a key role in the creation of internal motivation, and it is essential for the students to be able to influence the choices that affect them.

The sense of social relatedness or belonging to a social group refers to the students feeling that they are part of the group and that they are accepted as group members. The group or club can thus be regarded as a magnetizing factor making the learner to participate in the learning or training activities repeatedly. The responsibility for the other members in terms of safety is another strong factor bonding the group together and strengthening the sense of social relatedness.

Competence refers to the how much confidence the learner has for their own abilities and capacities. When the students have successful learning experiences and receive positive feedback, their sense of competence is strengthened. Tasks and tricks that fit the student's skill level, the sense of doing well during the training together with encouraging feedback are the keys to enhancing the sense of competence.

Internal motivation can be enhanced through learning arrangements and also by creating a learning ambience, or motivation climate, that supports the students' sensation of autonomy, social relatedness and competence. The term motivation climate refers to the student's experience of the atmosphere, or ambience, during the learning session. The learning atmosphere can be task-oriented

or competition-oriented. In a task-oriented atmosphere the instructor supports, encourages and promotes factors that boost autonomy, social relatedness and competence. This is likely to create a favourable learning atmosphere that will boost the motivation of the students. In contrast, if the teaching tactics and methods fail to support the student's autonomy, social relatedness and competence, the learning atmosphere is likely to be competitive, which in turn makes the motivation more external.

The table below presents the factors affecting task- and competition-driven motivation climate.

Motivation climate		
	Competition-oriented	**Task-oriented**
Task / Resources	Equal to all participants	differentiated according to students' skills and desires
Authority/ Instructor's role	Controlling	Highlighting the responsibility and learning options of each group member
Rewarding	public, normative, based on competitive success	individual, based on individual development and effort
Individualizing, personalizing	competition-oriented tasks	individual / collective tasks
Assessment	Normative and public; focusing on results; Punishment on errors; Mutual competition valued and encouraged	Based on individual progress; Focus on development and learning; Errors are regarded as part of learning process; Cooperation and collective action are valued and encouraged
Use of time	Limited time for specific tasks	Flexible time for learning

2. 2. Maximizing the amount of activity

Motor skill can only be learned by doing things actively and training. Accordingly, the instructor should use as little time as possible or necessary for giving instructions, giving demonstrations, moving the group from one place to another and things like these. Each learner experiences learning in their individual ways, which is why the instructor should place the main emphasis of his or her activities on creating or shaping the learning environment, ad not so much on the technical things related to the sport being learned (see chapters 3.2 and 3.4.3). In other words, it is the environment that enables not only one but a number of different learning opportunities and movement solutions for the learner. It is essential that instead of giving ready-made solutions the instructor should encourage the learner to autonomously resolve movement tasks and to discover things, in addition to giving the student time and opportunities for experimenting with different ideas and solutions.

3. Creating and shaping an efficient learning environment

The instructor can create an effective learning environment by using concrete teaching aids to enhance the learning process. Teaching aids are tools that facilitate learning, such as obstacles, gates, ropes, tracks and courses made from gate poles, ski sticks, cones etc. These tools are used for giving inspiration and guiding the student in a good direction in the process of learning new skills (see chapter 3.4.3 and the drill database, examples of the use of teaching aids). For example, when learning how to pop off a kicker, we can make the student to hop over an obstacle (e.g. a gate pole

placed across the hill), or we can use cones or stubbies to adjust the shape and radius of turns. The teaching aids create images in the student's mind and free the instructor from the traditional instructor role thus allowing more time for guiding the learning process. The use of teaching aids helps create a more efficient learning environment thanks to them making learning easier, inspiring the learner to act and react in a spontaneous way as well bringing variation to training. In addition, teaching tools enable differentiating the learning process, allowing different tasks for different skill levels.

4. Logical progression

All sports and motor skills, such as snowboarding, a specific turn type or trick, contain some elements that are more central for the learning process. It is essential for the instructor to have adequate knowledge of the central elements in the skills being learned. The central elements should be in the focus of the learning process. The position or movements of the hands and arms in a turn can, for example, be considered less important than the interplay of the ankles, knees, hip and the whole body, for example. Likewise, when preparing for a freestyle trick, e.g. for spinning in the air, it is more essential to focus on the timing of take-off and body rotation instead of thinking about knee position. It is important to think about the key elements of the thing to be learned whatever the skill level of the student. A practical implication of this is that a versatile training of basic skills should be continued appropriately through all skill levels. A skilled learner will also quickly perceive and comprehend what is essential in any given task.

5. Training complete movement patterns

In snowboarding it is possible to train complete movement patterns from the very beginning. This can be done simply by moving about on a gliding snowboard in different ways in various settings and in different conditions. At the initial stages of skills learning, it is advisable to train complete movement patterns as simplified and easy versions, so as to adjust them to the student's skill level. This allows for retaining the same basic idea of the movement pattern also in later learning phases. Learning complete movement patterns instead of partial skills can be recommended as it makes the learning goal concrete and easy to understand.

Instructors often face situations where the student is not learning in spite of instructor' demonstrations. To help us to understand and to accept this, we need to be aware of how the human body works when we move about. This will also help the instructor to find effective drills and functional ways of teaching and how to support the student's learning process.

When moving about, the human body (extremities, joints and muscles) get automatically organized to face the tasks and challenges posed by our goals and the environment. We are referring to motor coordination and coordinated movements here. Our extremities, limbs (lever arms) and joints that are involved in our movements represent the so-called degrees of freedom (DOF's). The total of DOF's in a movement is constituted by the number of joints and movement directions involved in it. In snowboarding we actively use all our joints (we also use our shoulders and arm joints when making a pole plant, for example). The directions of movement are up-and-down, fore-aft (pressure control), frontside - backside (edging) and rotary (turning movements), and combinations of these (See chapter 3.3.). One's skill level reveals how efficiently one's body is capable of organizing itself for completing a movement task. A beginner will "freeze" or reduce a number of DOF's by stiffening the musculature in order to have tight control, which can be seen as stiffness in the performance (e.g., stiff ankles or knees). Along with learning and as the task becomes more comfortable, the learner gradually "loosens up" and explores the available DOFs, and from there finds more optimal solutions, which can be seen as improved motor coordination and more fluent

combined movements. Examples of such combined or aggregate movements are, e.g., the coordination of ankle, knee and hip movements in a turn or the timing of the pop-off and body rotation when preparing for a spin at a kicker. A skilled rider is thus capable of making use of the environment to enhance their performance, e.g., through selecting an optimal line to gain more speed in a half-pipe or on a ski cross course.

3.2 Learning environments in snowboarding

In addition to riding down on smooth and even slopes, the rider will face a wide range of different slope shapes and snow conditions. To be able to make use of the environment and different terrain shapes in a versatile and creative way can be seen as an essential skill in snowboarding. Consequently, selecting or creating a learning environment that helps to learn the basic skills (see Chapter 3.3) can be seen as an important element of learning from the very beginning. The learning environment is a combination of the physical, psychic and social factors affecting learning and teaching. Student's skill level and motivation, instructor's competence, communication between student and instructor, weather conditions, slope and snow conditions, traffic on the slopes and student's level of activity are all essential elements of the learning environment, and should be considered also in the choice of the physical learning environment. In a broad sense, the learning environment can thus be described as the reality in which the student and the instructor operate. This chapter primarily deals with the physical learning environment in which the learning takes place, and gives guidance on how to select and shape the learning environment.

At the start of the learning session, a learning path or learning target options are worked out by the student and the instructor together so as to optimally support and develop the student's skills on the basis of the current skill level. The selected options shall include drills and exercises in different learning environments suitable to the student's skill level. The instructor is also advised to pay attention to and to discuss safety-related issues as they naturally present themselves along with the learning process. This is likely to enhance the feelings of safety and competence with the student, thus also boosting the motivation for learning and training.

It has traditionally been thought that the better mastery of the discipline the instructor has, the better instructor he or she is. While it is important to have a sound know-how of the sport, the targets and goals set for instructor's activities do, however, change when we start to consider how the instructor should also be capable of creating and shaping different learning environments specifically for the learner so as to improve and enhance the learner's learning process and skills. Every single turn that we make on any given slope will be different, as our turns are affected not only by the progress in our skills but also by the speed, weather conditions, slope shapes and other variables that are prone to change from turn to turn. In teaching motor skills, such as skiing, it is essential to teach your students how to handle different conditions and situations. The traditional instructor-centred teaching method, which aims at the right or "perfect technique" and is focused on correcting mistakes, is, unfortunately not very well suited to guiding the student to act in a functional way in real or genuine situations. Learning through environmental exposure, in contrast, serves for variation in training and prepares the student for facing the variable challenges posed by the constantly changing environmental factors. While the basic principles of motor performance remain the same, each run and turn will turn out slightly different.

The varying learning environments will enhance the student's conception of their learning styles, skills and capabilities. Problem solving situations deliberately introduced by the instructor play an important role in learning. The learner is thus involved in the problem-solving process, which will enhance the learning process. In other words, one learns through being exposed to various environmental factors. This approach to the learning environment based on modern conceptions of

learning is essential in teaching snowsports due to the fact that the snowboard can be seen as a challenging tool and also for the reason that the environment plays a major role in the learning process.

The beginner will regard the snowboard as a difficult and exciting means of locomotion. This fact highlights the necessity of good planning and functional learning environment. An unsuitable learning environment will create too much stress and tension which will distract the student's attention from the subject to be learnt. A suitable learning environment will also prevent the students from getting scared, which could undermine the learning process. A functional learning environment will also allow for safe learning and efficient use of time for learning. A versatile or new learning environment can offer new challenges also to an advanced student, thus allowing the student to enhance their basic skills in new areas. The tasks of the instructor include encouraging the student to experiment with new things in different situations and conditions. The basic idea is to develop and enhance the basic skills to support the learning process or to reach a given learning target. A key outcome will often be a stronger student motivation to riding and autonomous skills development.



Image: Each ski area encompasses a range of different learning environments.

Finnish ski areas offer versatile opportunities for teaching and learning snowboarding. The instructor can make use of a range of different learning environments to support the student's learning process. Easy, medium and steeps slopes, a fun park, a children's area and even snow fields can be found at most ski areas. It is, however, only the instructor's imagination that sets the limits for creating or selecting functional learning environments. In addition, the instructor can set variable tasks and tasks with different levels of difficulty, use various teaching aids for shaping the

given learning environment, e.g. by using cones, ropes or create different snow shapes with a spade. Even the smallest changes to the learning environment may have a decisive influence on student's and instructor's activity. The shaping of the learning environment can also be used as teaching aid (see Chapter 3.), e.g., in teaching heterogeneous groups. The instructor can create different levels of difficulty in the teaching environment, which allows students of different levels to proceed in a safe way and highly motivated as they can select their tasks autonomously and according to their own skill level.

The physical learning environment can thus be seen above all as a tool for creating challenge, possibilities and variation for learning. Used in a functional way and adapted to the student's needs the learning environment can be a powerful motivator, and it's possibilities are only limited by the instructor's creativity and imagination. The choice of learning environment will optimally be made jointly by the student and the instructor. It is of utmost importance for the student to cope well with the given tasks and to feel competent in the learning process. A student that is faring well and feels competent and accepted will also experience a strong desire to learn more.

How to select an appropriate learning environment?

Who makes the choice of the learning environment?

How can you shape the learning environment to adapt it to activity and skill level of the student?

3.3 Basic skills in snowboarding

As a theoretical basis for this teaching programme, snowboarding can be broken down into five basic skills: balance, turning movements, edging, pressure control and timing. A skillful rider is capable of maintaining balance by combining the skills of turning, edging and pressure control in a well-timed way. This will make riding look fluent, effortless and stylish. How much the different basic skills are emphasized and how important they are in the different snowboarding disciplines varies greatly. Versatile training in varying conditions, environments and and with different kinds of equipment will create a sound basis for developing the basic skills and the the rider’s adeptness in different conditions. Depending on the learner’s experiences and sports background, he or she may possess good balancing skills, while the other basic skills may be less developed due to lacking snowboarding experience.

All the sub-disciplines of snowboarding from snowboard racing to freestyle snowboarding involve and enhance basic skills development. A narrow-focus training approach will, in contrast, undermine the development potential, and especially in case the rider sticks to familiar and safe drills and environments. Accordingly, the instructor can be advised to guide, challenge and encourage the student to experiment with different learning paths, learning environments and drills.

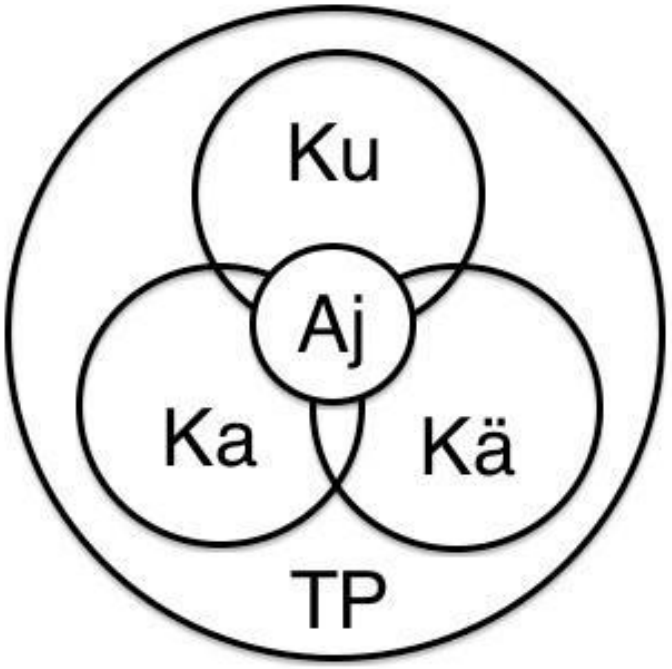


Image: Basic skills in snowboarding
TP = Balance, Kä = Rotary, Ka = Edging, Ku = Pressure, Aj = Timing

Balance

Balance forms the basis for all kinds of skiing and makes it possible to train the other basic skills in a versatile way.

Balance can be divided into static and dynamic balance. Static balance refers to the ability of the rider to maintain balance on a stationary area of support and by using minimal movements, e.g., when standing on one's snowboard on a flat place. Dynamic balance, for its part, refers to one's capacity of performing movements on an unstable area of support and in varying conditions. Dynamic balance can thus be regarded as continuous movements adapted to the flow of the turns in skiing. Maintaining balance and reacting to the constantly changing conditions is made possible through adopting a stable ready-to-move position.



Image: The ready position in snowboarding

In a functional ready-to-move basic position the rider will be standing on their skis in a relaxed way and so that the main joints of the legs are slightly flexed. The hands and arms should be kept on the sides of the body, where they help in maintaining balance. In the basic position the weight is evenly distributed on both feet and the eyes are focused on where you want to go, forward or down the hill. The basic position serves as a ready position, which enables the rider to make movements in all directions. As the rider's skills develop, the basic position will be adapted appropriately as required by the situation and conditions in different environments. In higher speed freeriding, you can turn you upper body slightly into the direction of travel, while in freestyle it is advisable to keep the shoulder line more or less parallel with the board, which will facilitate riding switch, for example.

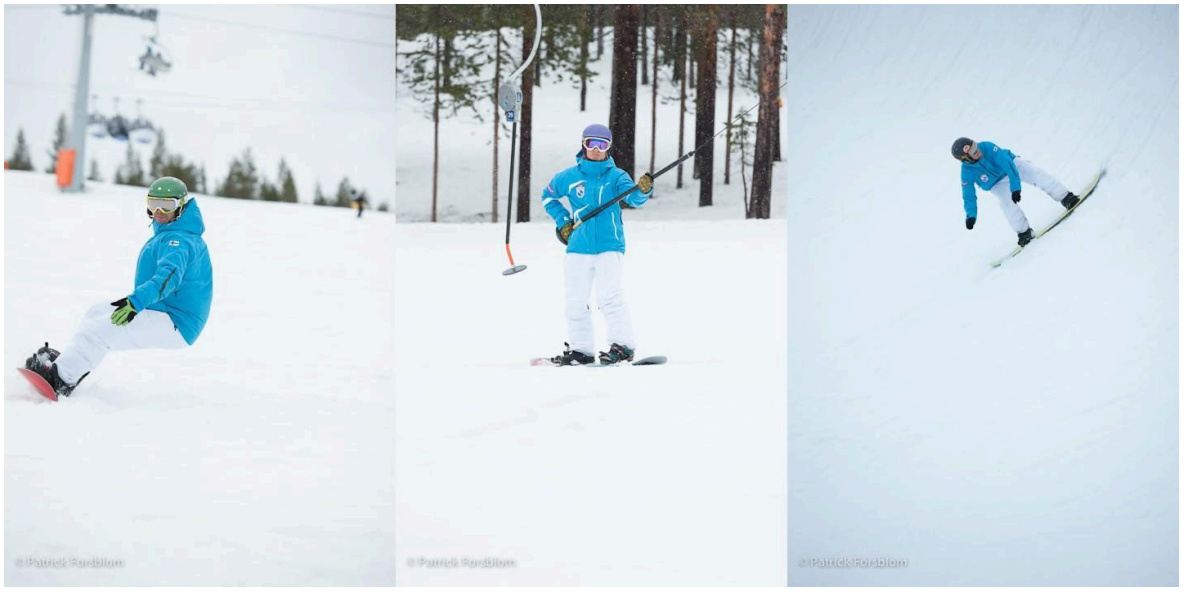


Image: The basic position does not mean that one should retain a fixed position all the time. The ready position should feel natural and allows the rider to make movements in all the necessary directions, and it constitutes an ergonomic and efficient starting point for reacting to any challenges faced in different conditions and environments. The basic position is affected not only by the rider's physical characteristics but also by the boots and the adjustments of the bindings.



Image: The basic position is continuously adapted according to the flow of movement, which makes it possible for the rider to react to changing situations. A ready-to-move basic position enables a functional take-off for any tricks on snowboard.

Edging

The goal of edging movements is to form an angle between the board and the snow surface. Edging enables the rider to control the edge grip on the snow and thus also the line that the board is travelling. You can regulate edging by means of your ankles, knees and the hip and by inclining the whole body. Ankle and knee movements can be made quickly but these cannot resist any greater forces, which is why they are primarily used in slower speeds. In higher speeds the rider needs to incline the entire body more into the turn and use the hip more efficiently.



Image: The goal of edging movements is to form an angle between the snowboard and the snow surface. As soon as the edge of the board is pressed against the snow, the board will turn thanks to its sidecut and shape.

Pressure control

Pressure control refers to the movements and actions of the rider to regulate the pressure between the board and the snow. These actions also include making use of terrain shapes. Pressure control movements can be divided into vertical and fore-aft movements in relation to the board. The rider can regulate the pressure by making up-and-down movements and by shifting weight between front and back foot. These movements are used for weighting or unweighting the board, and turn shape, for example, can be adjusted by regulating the pressure effected on the board. If the rider increases the pressure during a turn, the board will flex more, which results in a tighter turn radius. The foreaft pressure control can be used for adjusting edge grip during a turn, for example. By adding pressure to the nose part of the board the rider can make the start of the turn more effective, and the shifting of weight onto the rear foot will improve edge grip towards the end of the turn.



Image: Ollie An example of pronounced vertical and fore-aft pressure control movements The weight shift from front to back foot and a strong extension movement enable the rider to hop over an obstacle.



Image: Nose manual. An example of pronounced fore-aft pressure control movements

Rotary skills

When the board is moving and tilted onto its edge, the sidecut of the board will make it turn. In addition, the rider can enhance the turning of the board by rotating their upper body. Rotation refers to both upper and lower body turning in the same direction (direction of turn), whereas counterrotation refers to the upper and lower body twisting in opposite directions. Shoulder rotation is used as a driving force in a number of tricks. Spinning is initiated mainly by turning the shoulders, and the board will then follow the movement of the shoulders.

In some situations, the upper body can also remain stable while the feet and legs do most of the work. This happens mostly when the rider is making short turns or when the surface is uneven or bumpy.



Image: Rotation used to enhance turning. The shoulder line is maintained relatively parallel to the board.



Image: An example of counter-rotation. Turning the upper and lower body in opposite directions on a press box allows the board to be turned across the box while maintaining balance.

Timing

Timing binds together the different phases or parts of a turn or a trick. Timing refers to how the different phases of a turn or an air or trick follow each other and how the different movements are combined in time scale. A turn, for example, can be divided into the following phases: unweighting, edge change and weighting. An air usually shows the following phases: preparation, pop, air and landing.

The timing of the things happening within one turn will affect how the riding generally looks and how the turns are connected with each other. The rhythm of turns can be variable (e.g. riding between trees) or steady (e.g. Riding through gates set at equal distances and offset).

The rhythm of turns is thus influenced by external factors such as slope shapes, trees, gates and other piste users. External factors affect the timing of motor actions as a means of adapting the riding to the situation at hand.



Image: Example of timing Appropriate timing of push-off and upper body rotation enables the rider to do a 180-degree spin.



Image: Example of timing of turn. In a turn with up-unweighting an up-movement through leg extension will reduce pressure on the edge, thus making it easier to make an edge change. After the edge change, pressure can be increased again through a slow and steady down-movement. The timing of pressure also enables the rider to control the turn radius and the rhythm of turns as related to each other and to adapt the flow of turns to the environment.

3.4 Teaching and learning paths

A teaching path can be seen as a logical progression of learning and developing the basic skills, which constitute the core of snowboarding. The basic skills are applied in all riding, equally well in sliding on rails and making big airs, as also in half-pipe skiing, racing and freeriding on prepared slopes and in big mountains. Student's interest in the different fields of snowboarding along with their skill level, physical condition and other background will have to be considered when selecting an appropriate learning path for the student. A good choice of learning path and learning environment will have a decisive influence on student's motivation, either boosting or undermining it. If the slope is too steep for a beginner, for example, the student will be just too frightened to be able to learn, which is likely to weaken the motivation, or even kill it in the end. Then again, braving oneself to face thrilling challenges or endeavouring into new areas and exciting environments, such as riding down a steep slope, performing a new trick or taking air off a kicker, may very well be the best thing that snowboarding has to offer.

A learning path can thus be regarded as a way of learning and teaching, or as an initial plan or framework for progressing in learning and carrying out the instruction task. The main focus of instruction will have to be directed, not on teaching, but on the learning process itself. Essentially, the instructor will have to be capable of assessing the skill level and performance of the student and be able to adopt teaching methods and tactics to the student or group at hand and to do this while paying attention also to the prevailing conditions and the situation at hand. A full involvement in the teaching situation is required from the instructor. Genuine listening and fluent communication are also essential in enabling the instructor to find out about the student's background, interests and personal goals. As the main responsibility for the health of the student and for the execution of teaching process lie with the instructor. The guiding of the learning process will require a high degree of professionalism. The choice of the learning path for a teaching session is optimally made by student and instructor together.

The learning capacity and interests of the student vary widely, depending on age, courage, physical characteristics and earlier experiences with snowboarding and other sports. A skilled instructor will be able to find out about these factors, assess student's performance and adopt the learning path accordingly and proceed along it at a convenient pace. There is no single "patent solution" that would suit all learners equally, but rather the teaching process and the teaching path will optimally be individually suited to each student, to the situation at hand and to prevailing conditions separately. Accumulating teaching experience will improve the instructor's capacity of finding working solutions to different situations. An open and unbiased mind and the will to try out new tools is essential also for the more experienced instructor. While it can be recommended for the instructor to make use of a set of proven teaching tools, it is equally important not to get overly fixed to using these, and also to keep looking around for new ideas, drills and teaching aids to complement one’s tool set.

Each instructor will have their own special interests within snowboarding. While someone will prefer the backcountry, others may find it thrilling to shred rails in urban environments. These interests will also most often be our strong teaching areas. However, one should also keep in mind that our interests do not necessarily match those of our students. The interests of the student should form the starting point for setting the targets for the teaching session as well as for the choice of learning environments and drills.

The teaching paths presented in the following are to be considered just as examples of how the teaching can be carried out. While these learning paths may be used effectively as such in some cases, it is more essential for the instructor to remember that the starting point for the planning of teaching should always be the student, and to pay attention to their individual needs, targets, background and capabilities. In practise this means that the teaching sessions will always turn out different due to the fact that a successful session will always be a combination of different learning paths and teaching methods. In addition, new drills and ways of motivating students are often invented or experimented with during teaching sessions.

A fresh instructor will find lots of challenge in any teaching situation, and each teaching sessions will also provide the instructor with new things to learn. For this reason, proven teaching paths or methods will support the instructor at the beginning of their teaching career and help the newcomer instructor to gather experience in teaching in a safe way. The teaching paths presented in the teaching programme can be thought of as a starting point for gathering experiences, on the basis of which the instructor will learn to adapt the teaching programme in a appropriate way and to select functional tools for different kinds of learners and situations.

When planning a teaching session, the instructor should consider the different factors affecting student's motivation:

- the student feels being able to cope with the tasks given and feels competent in view of their level or starting point
- the student experiences being accepted as a member of the group and gets a feeling of bonding with the group — or with the instructor
- the student feels that they can influence on the content or progression of the session or on how learning or practising is carried out for their part

A motivating and inspiring teaching session will most often not be restricted to only one of the teaching paths, but rather includes elements from the different teaching paths. Efficient teaching often has to do with combining different teaching paths and methods in a way suitable to the situation and conditions. The focus of the instructor should be on the student when making these choices. In view of student's motivation, it is important that the student feels competent, accepted by other group members and being able to participate in the planning and process of the session.

In a nutshell, the teaching paths can be viewed as frameworks including different elements that can be used for creating an individual teaching path for the student. A teaching path can thus be used as an initial plan setting the guidelines for the teaching session, and the path can be adapted according to the interests and motivation of the student, the progress they make, and also depending on the prevailing conditions.

3.4.1. Traditional path

The traditional teaching path is based on teaching basic skills in a progressive way from easy to more challenging slope conditions. The traditional path is focused on making turns on normal prepared slopes, which can be regarded as traditional snowboarding. The process of developing basic skills is first focused on enhancing individual basic skills and then combining them in slowspeed skiing and finally in faster turns and more challenging conditions. The normal prepared slopes within a ski area will serve as the learning environment for the traditional teaching path. The choice of the learning environment will optimally be made by student and instructor together according to the skill level and learning targets.

3.4.2. Freestyle path

The freestyle path is focused on training and enhancing the basic skills by making use of different tricks and elements from freestyle snowboarding. These can be adapted to the student's skill level in different environments such as on normal slopes, in fun parks, in half-pipes and on press boxes. Different turns and riding switch (backwards) are also included in this path. The same basic skills are used in all kinds of snowboarding, which is why also performing different tricks will also enhance the skills needed in making turns, and vice versa.

Today, freestyle can be seen as an integral part of snowboarding, which makes it all the more important for the instructor to integrate freestyle elements in teaching. The freestyle path underlines the image of snowboarding as a free and creative sport, which makes it interesting especially for younger people.

3.4.3. The teaching aids path

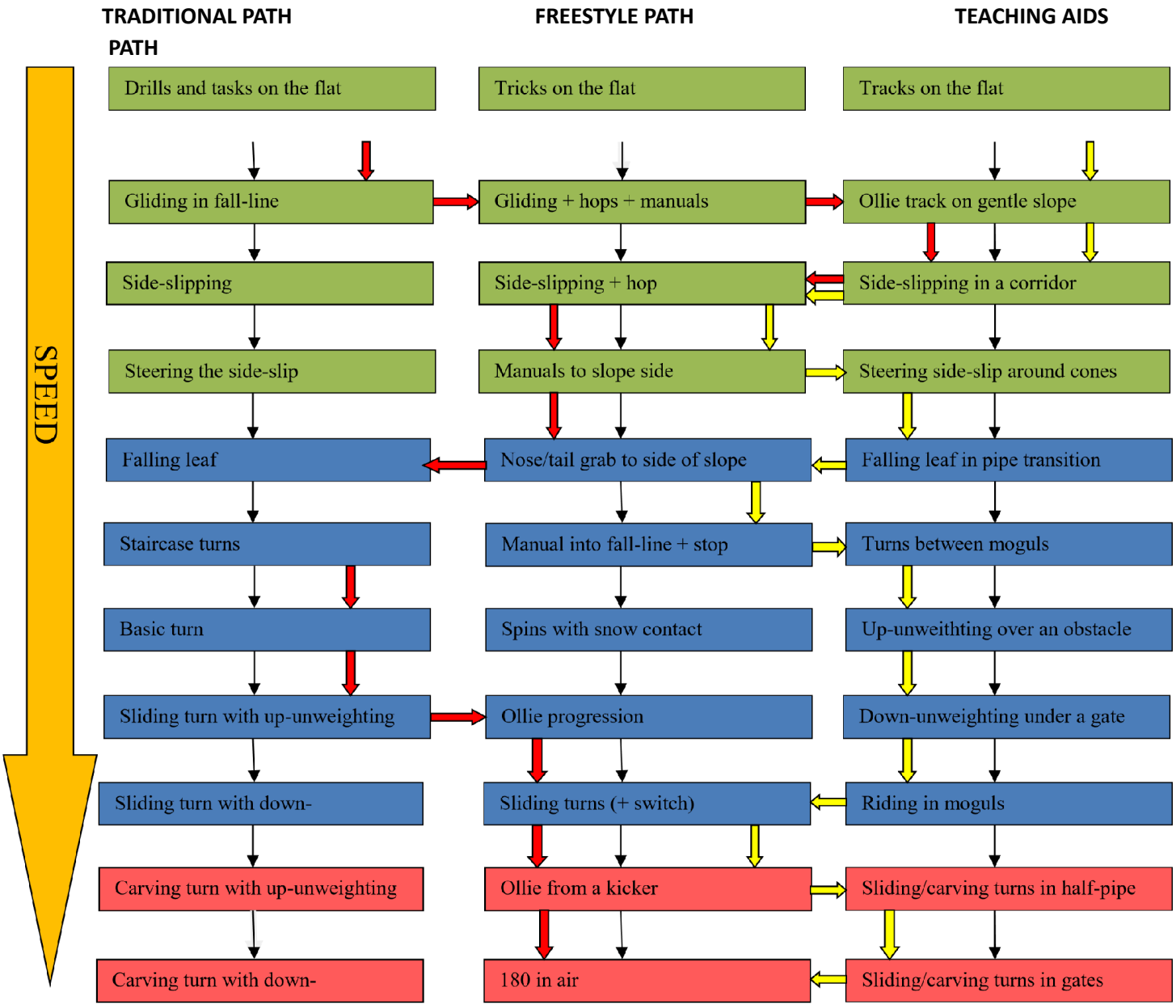
The teaching aids path is based on learning skills through the use of different learning tools and through exposure to environmental elements. A central element of this path relies on the instructor's skill to select and shape the learning environment by using different teaching aids or learning tools, such as cones, in guiding the student towards their learning target. A factor or tool used for shaping and guiding the learning process is called a teaching aid. Tracks made of ski sticks, cones or stubbies, obstacles, gates, and different shapes made of snow can be made use of as teaching aids.

(see Drills and exercises for examples for teaching aids)

Different slope and terrain shapes found at the ski area can also be used as teaching aids, as well as slopes with different gradients, knolls, kickers, half-pipes and press boxes, for example. While the different learning environments will help the student to learn new things just by the student exploring these environments and teaching aids and experimenting with different things, the learning process will be enhanced when the student is guided by the instructor in selecting suitable learning environments on the basis of the individual skill level and according to student's desires and learning targets. In addition to enabling the maximising the amount of physical activity, teaching aids can be used for differentiating and individualizing the learning process, thus enhancing the efficiency of the learning environment.

Traditional motor skills training has been more or less targeted at a "perfect technique". However, as soon as one can accept the fact that each situation, realization of skill and performance will be different, one will also realize that the is no such thing as "perfect technique". Every single turn that we make on any given slope will be different, as our turns are affected not only by the progress in our skills but also by speed, weather conditions, slope shapes and other variables that are prone to change from turn to turn. In teaching motor skills, such as skiing, it is essential to teach your students how to handle different conditions and situations. The traditional instructor-centred teaching method, which aims at the right or "perfect technique" and is focused on correcting mistakes, is, in the end, not very well suited to guiding the student to act in a functional way in real or genuine situations due to the fact that the learning process is highly dependent on the circumstances and conditions of the learning environment. Learning through environmental exposure, in contrast, serves for variation in training and prepares the student for facing the variable challenges posed by the constantly changing environmental factors. While the basic principles of the performance remain constant, each performance or practical realization of technique will be different.

3.4.4 Examples of teaching and learning paths



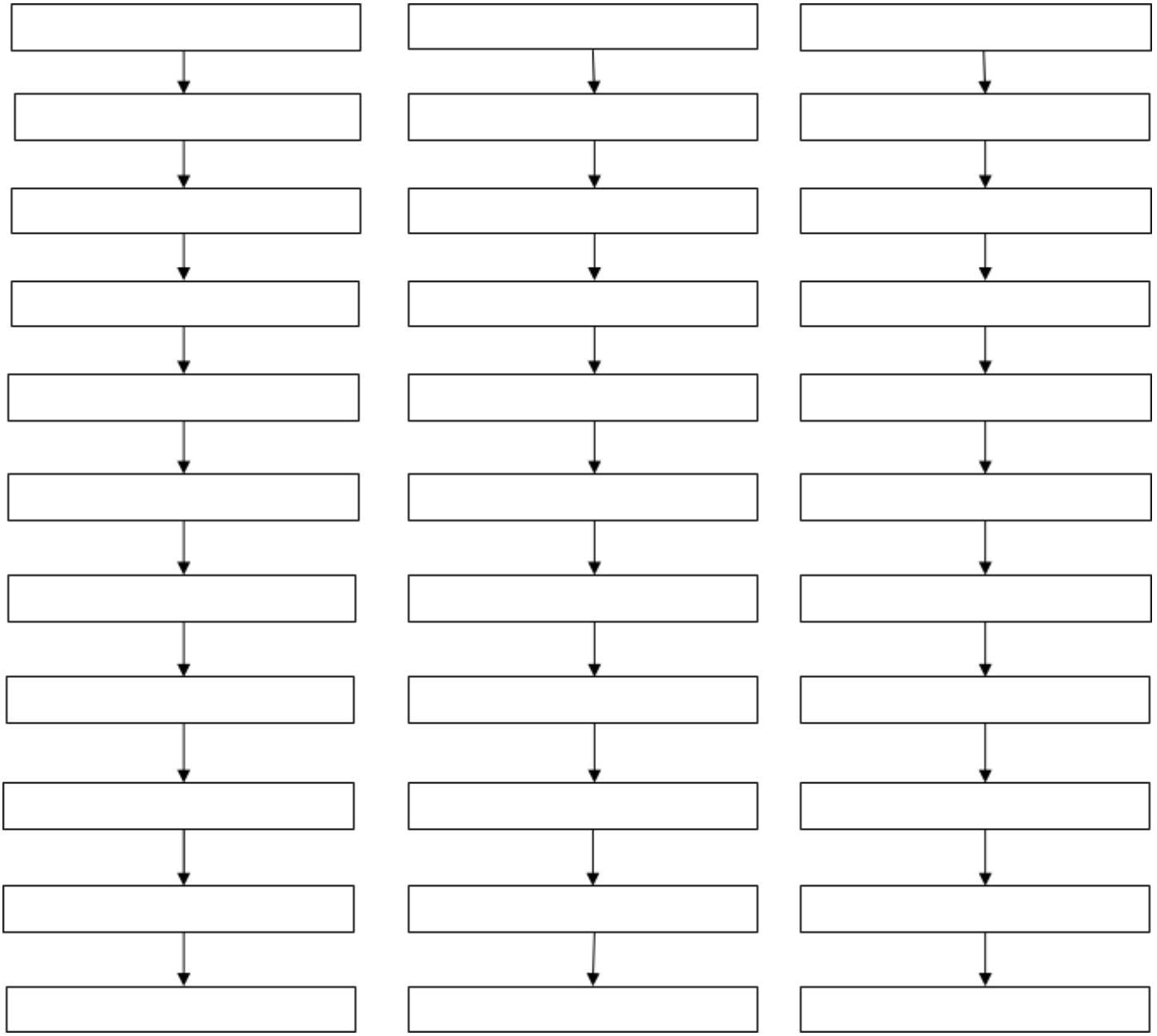
= easy environment = student X's learning path

= medium environment = stundent Y's learning path

= challenging environment

The learning paths presented in the image are examples of logical and progressive teaching processes. It will not be advisable to restrict the learning to one of the theoretical learning paths only, but rather the teaching should be individually adopted to the characteristics and skills of the student. In other words, each student should be guided along own individual learning paths. The instructor can, for example, use the traditional learning path as a starting point, and then use elements of the freestyle path and teaching aids path to enrich the learning process (red arrow). Whichever path you choose to start with, the learning should always start in an easy environment on the flat. As the student's skills start to improve you can gradually move to more challenging environments and conditions paying attention to student's goals and prevailing conditions. When starting to learn challenging techniques or skills, you can always return to easy environments (e.g., to experiment with the first carving drills on a gentle wide open slope). Moving

3.4.5 Instructor's own teaching paths



Enter your own individual teaching paths here

Essential elements in snowsports instruction
- Supporting student's motivation
- Maximizing the amount of activity
- selecting and shaping an effective learning environment
- logic of progression
- training of complete movement patterns

3.5 Equipment

Sound knowledge of different kinds of equipment, their influence on riding and how to choose appropriate equipment is an integral part of the know-how of a snowsports instructor. The instructor is constantly dealing with beginners who are hiring or acquiring their first set of equipment. The instructor's help and counsel can be of great importance.

In addition to being able to give advice on the choice of equipment, it is also up to them to control that the adjustment of the epuipment suit the student. Even minor changes can have a significant effect on student's performance.

There are three things that are essential as regards the choice of equipment: the purpose of use, the skill level and physical characteristics of the rider. Manufacturers generally divide snowboards into three or four categories. While most of the snowboards on the market are freestyle and freeride boards, also alpine and racing snowboards are offered.

The suitability and fit of the boots is the single most important factor when selecting one’s equipment. The boots should offer a snug fit in riding position; closed tight, the boots should not allow the heel to move up from its cup. The compatibility between boot and binding is also vital. The size of the binding should fit that of the boot, so as to allow efficient transfer of forces onto the snowboard.

The thumb rule for the length of the board is that when holding the the board vertically in front with its tail on the ground its nose should be about level with the rider’s chin. The width of the board is mostly determined by the rider’s boot size. The toe and heel of the boots should be about level with the edges or no more than about one centimetre over the edge.

The last development in snowboards can be seen in the boards camber characteristics. In addition to tranditional camber, a wide range of different rocker board (reverse camber) are now available. Rocker boards are generally more forgiving and softer in flex, thus lending themselves to jibbing and soft snow conditions. On steep slopes and icy conditions, the boards with traditional camber will provide better grip and stability.

Equipment adjustment

The handling and characteristics of the board can be influenced substantially by adjusting the place and position of the bindings. While some of the adjustments can be considered essentials, others can be made according to personal preference. The so-called essential adjustments are the length adjustment of the straps and the lateral position of the bindings as related to the the width of the board. When it comes to binding position along the board length, their distance from each other and their respective angles, these are more or less subject to personal preference.

The lateral position of the bindings is adjusted so that the boots are centered in the middle of the board. The distance between the toes and heels from the edges should be equal. The length of the straps should allow easy fixing of the boots while also enabling adequate tightening.

The distance between the bindings, i.e. stance width, will be determined by the length and riding style of the rider. The rule of thumb for stance width is that the stance should be slightly wider than that of the rider's shoulders. A standard setup stance has generally been marked on the board, which will help to adjust the position of the bindings along the length of the board. For symmetrical

freestyle boards, the standard stance will be centered in the middle of the board, while the binding are set slightly more towards the tail for freeride boards. To suit one's preference, you can move the stance to a more centered one (for easier handling when riding switch) or further back (for more stability in higher speeds).

Appropriate binding angles will be 12 to 21 in front and 0 to - 12 degrees at the back. It is recommended to make just small changes from the standard setup at a time to find the optimal settings for one's riding style. The forward lean angle of the highbacks can also be adjusted. The forward lean allows for better support for edging in backside turns. An excessive forward lean of the highbacks will make it difficult to ride on the base of the board and it will also make riding rails more difficult.

4. DRILLS AND EXCERCICES

The teacher's job is to ensure the suitability of the learning environment and exercises for the students and, on the other hand, to lend versatility andv logic to learning processes. In addition, the student should also experience that they can influence on the way training is carried out. Learning will always be situation-oriented and conditions-dependent, and this is why variation should be paid attention to in the learning process. In fact, variation is vital in motor skills learning!

Variation in learning input is likely to boost the learning process. Variation can be included in training from the very beginning of the skills learning process. In addition, it is essential to focus on learning complete movement patterns. Varying learning situations help the student to adapt their movements appropriately. In addition, the variation in training is likely to boost student's motivation and it gives the instructor important feedback on the state of the learning process.

The volume of training is as important to learning as the amount of its variation. Mindless repetition of movements is not a very efficient way of motor skills learning as the movements will not be retained very well. However, if one has to adapt a movement or a set of movements to different variables all the time, the acquisition and retaining of the movement pattern will be more efficient. Basic skills should be trained in a versatile way in different environments, which enables using different variables to strengthen the transfer or learning of a motor skill. In other words, the learner will acquire different models of adapting motor skills to varying conditions. The student will thus be able to transfer the learnt patterns to other similar situations and to apply the acquired skill in different situations and conditions.

The basic skills are skills that typically have to be adapted to suit the requirements of different tasks and situations. It is, therefore, advisable to train the basic skills in a versatile way in different conditions. For example, you can first practise the basic turn in slow speed on a gentle slope, after which you can do it on different slopes and in different snow conditions. You can then apply the basic turn on a track of cones and, finally, also do simultaneous coordinated basic turns in pairs or small groups. Other means of creating variation in learning are increasing speed, changing the turn radius or rhythm of turns or making the task more complicated, for example.

You can also perform a drill in different directions: forward, backwards, to the right, left, and in traverse. The level of movement can be high, low or middle. The space for a drill or turns can be defined as a narrow corridor, or wide, encompassing the whole width of the slope. Turns can be made with a steady or variable rhythm, or the rhythm can be given by the instructor or by gate poles or cones. Tricks can also be made in different slope and snow conditions, on kickers of different sizes and shapes; you can do similar tricks on press rails and on normal rails.

Drills on flat terrain

- terminology: weight shift to the front, to the back, onto one's toes and onto one's heels, front sideedge, back side edge, back leg, front leg etc.

Balance drills with one foot attached to the board:

- Move free leg from one side to the other (edge change and weight shift onto the foot on the board)
- Turning in both directions with the free leg as the point of support
- Familiarizing with the basic stance

Balance drills with both feet attached to the board:
Weight shift training

- Do hops in place
- Go down by flexing your leg joints
- Hop around in both directions
- Rock onto the nose, onto the tail
- Train edging movements on your own and supported by your parther
- Train falling without board and then with board
- Train gettin up on both sides

After stationary drills move over to getting used to gliding, while still on flat terrain.

- Kick sled drills (train kicking off on both sides)
- gliding drills (start off kick sledding and step your free leg onto the board for gliding)

Straight running (Gliding straight down the hill)

On a gentle slope / foot of slope, lift your free foot onto the board and glide straight down in basic stance until you come to a standstill. You can do up-and-down movements or even small hops while gliding. Pick a safe and gentle place for the basic gliding drills, so as to avoid the student getting scared of moving too fast. The easiest way of slowing down or controlling speed will be to let you free foor toes or heel drag on snow while keeping the free foot still on the board. Make a light weight shift onto your toes or heels to make a shallow turn.

Side slipping

Side slipping helps the student to get accustomed to edging and sliding on the edge. The optimal gradient for side slipping is steeper than that for the first gliding trials. Stand in basic position with the board on its edge and the weight evenly distributed over the two feet. Start sliding by lowering the downhill edge gradually, i.e. by diminishing the edge angle. Keep the uphill edge weighted all the time. You can snow down the sliding by increasing the edge angle of the board. Do the drill on both sides. Keep your upper body upright with good muscle tension in the core. Look uphill when sliding on the frontside edge, and down the hill when sliding on the backside edge. Fixing your eyes on an object will help to maintain balance. To get started, the first slides can be assisted by the instructor.

Steering the side slipping, traverse slipping

Side slipping can be changed into traverse slipping by shifting weight onto the end of the board on the side where you want to steer and by reducing the edge angle on the side where you want to go. Looking into the desired direction of travel will also help to steer the sliding into that direction. The instructor may also help at the beginning if required.

From traverse slipping to straight running

As soon as the student has gained some experience with edging, it is time to start training how to turn the board into fall line. This can be optimally trained on a gentle hill with a flat run-out. You can let the board turn into fall line as the speed starts to slow down on the flat. Start with sliding on

the backside edge, then reduce edging and let the board turn into fall line. Let the board run on its base when in fall line. As the board starts to turn towards the fall line you can also tilt the backleg toes closer to snow. It is easier to do this drill from traverse sliding than from side-slipping – first, let your board start sliding, and then let it turn into fall line. Do the same drill starting from traverse sliding on the frontside edge. Just a look over your shoulder will start to turn the board into fall line.

Uphill turn

Before making the first full turns, you can train the steering of turns through weight shift and upper body rotation: make turns uphill from traverse slipping by looking uphill and rotating your upper body in the same direction. Continue by letting the board first turn more towards fall line before turning it uphill. Partial turns like this are called single turns or uphill turns. Uphill turns are started just like traverse slipping: by standing across the slope. Then shift more weight onto the front foot and reduce edge angle. The board will start sliding and the nose will turn towards fall line. Until this point, everything has been done the same way as in traverse slipping. Now look uphill, rotate your upper body uphill and increase edging to turn the board uphill. Weight both feet equally again. As you get more experience with this, you can let the board turn more towards fall line. When you finally let your board turn all the way into fall line, you will be ready to make a full basic turn. All you need to complete a full basic turn is edge change.

Basic turn

Stand in basic position in place, facing downhill, with the board across the slope. Your weight will be slightly more on the heels, and the board on its backside edge. To start moving and turning towards fall line, shift weight towards the nose and reduce edging. When in the fall line, the board will be gliding on its base. Shift weight onto the frontside edge and tilt the board slightly onto the frontside edge by means of your ankles and knees. Look into the direction of the turn and rotate your upper body slightly into the turn to help the board to start
turning. The rotation of the upper body will cause the hip and the legs and feet to follow the rotation, which makes the board
turn. Finish up the turn in basic position balancing on the frontside edge. Do the turn also to the other direction, finishing on the backside edge. To start a backside turn, stand on your toes, then shift your weight forward and let the board turn into fall line. In fall line, move the board onto its base and shift weight onto your heels. Look where you want to go and rotate your upper body into the turn. Return to basic position at the end of the turn. The instructor can also assist the student during the first turns by riding next to the student if needed.

Basic turn with extension technique

The basic turn, which uses rotation as a driving force, can also be done using extension. To start the turn, stand in basic position on you board, facing downhill, with the board across the slope, your weight slightly more on the heels and the board on its backside edge. Shift your weight forward and down the hill and reduce edging, and the board will start moving and turning towards the fall line. In fall line, the rider maintains a low forward position, with the board running on its base. Then shift your weight onto your toes and edge the board slightly with your ankles and knees. Do a strong extension move with your legs to start sliding the board around. The extension and the board sidecut will make the board turn. Finish up the turn in basic position balancing on the frontside edge.

Sliding turn with up-unweighting

Up-unweighing can be used to make it easier to initiate the turn and to make an edge change. Start off with a sliding traverse, go into a slightly lower than normal position and do an up-movement to decrease pressure on the board and to make the board start sliding. At the same time, shift your weight forward, and the board will turn into fall line. Let the board turn onto its base. Now shift your weight onto the new inside edge and make a slow and steady down-movement to finish the

turn. Weight your front foot more at the beginning of the steering phase, and both feet equally to finish the turn.

Sliding turn with down-unweighting
Start off in a sliding traverse, make a down-movement to make the board start sliding. Shift weight onto the front foot. Let the board turn onto its base. Roll the board first onto its base and then over onto its other edge and turn your eyes and upper body into the new turn. Extend your legs towards the end of the turn. Weight your front foot more at the beginning of the steering phase, and weight both feet equally to finish the turn. Your body position will be at its lowest at the moment of edge change.

Carving turn with up-unweighting
The mechanics of the carving turn with up-unweighting are the same as those of the sliding turn with up-unweighting: You decrease pressure on the edge to facilitate edge change. Make a steady down-movement from your legs during the steering phase of the turn. You can regulate edging with your ankles, knees and hips, and also by inclining the whole body. Rotate your upper body slightly into the turn.

Carving turn with down-unweighting
To initiate the turn, make a quick down-movement. At the same time, make an edge change onto the new inside edge.
Apply pressure onto the edge by extending your legs and steer the board around along its edge. You can
You can regulate edging with your ankles, knees and hips, and also by inclining the whole body. Rotate your upper body slightly into the turn.

Hi-5 with the instructor
Instructor and student slide face to face, like in assisting, and clap their hands together, e.g. Clap on your thighs – hands together – thighs – hands. The aim is to train balance while sliding with the instructor close for assistance.

Looking for snowy owls
Slide across the slope to slope side to look for snowy owls. As you reach the slope side, call out the snowy owls signal call. If you cannot find any snowy owls, slide to the other slope edge and call out again.

”**Staying alive**” **traverse slip**
As you start off sliding in traverse, extend your front arm out on the side and place your back hand on your hip. With the front hand point at the direction where you want to slide while keeping your back hand in place, so as to avoid making unnecessary rotary movements.

“**Picking berries"**
Do basic turns with extension, while exaggerating the front and down movements. Image: Reach out your front arm towards the nose to pick a berry, and pass it over to your back hand (or into a basket that you carry with your back hand) as you finish your turn…
Avoid excessive bending at your waist in demonstrating, i.e. maintain a functional basic position and do a good forward-down movement with your legs. Focus on the movement of your front knee to do a clear demonstration.

“**Shot-putting**”
When starting a frontside turn from backside edge, place an imaginary shot on your front shoulder, and begin pushing it slowly over the nose and then uphill during the steering phase. When starting a backside turn from frontside edge, place an imaginary shot on your shoulder, and begin pushing it

into the new turn and down the hill during the steering phase (avoid excessively fast rotation towards downhill!).
This image may work well with student who have some experience with shot-putting.

”**Staying alive turns**”
Do turns with your front arm extended out on the side while holding your back hand on your hip. This helps you to gain insight into upper body rotation and orientation of shoulder line.

“**Basket ball**”
Start each turn by throwing an imaginary ball into the basket with both hands, i.e. by doing an upmovement. During the steering phase, bounce the ball **with your front hand** while also going into a lower position towards the end of the turn. Then, throw the ball again... This will give you insight into timing and pressure control.

“**Giant and dwarf**”
Start each turn as a great “Giant”, which you may also underline by lifting your hands up and roaring. During the turn, you gradually become a dwarf by going into a low position and maybe also by making dwarf sounds... Until you become a giant again at the turn change! This will give you insight into timing of movements.

“Funnel”
Start by making big turns and gradually make them smaller. Finish by making turns as small as possible.

Timing 1,2,3,4
Count slowly and steadily from 1 to 4 during the turn, going down (or making a down-unweighting) at 1, and reaching the your tallest (or lowest) position at 4, depending on the turn type. You will be training the internal rhythm of the turns by doing this.

A.S.S.
In pairs or in a group. One of you will do a trick, and the others will have to do the same. You will get a letter if you do not succeed. The first person to collect all the three letters (A, S, S) will be the ASS.

Follow the leader
Ride down following a leader, who will do different kinds of turns, tricks, jumps. Use your imagination, and keep it safe. The aim is to try to imitate the leader as precisely as possible.
Note: As too long a line will not work very well, it can be recommended to split a big group into smaller groups to do this.

”**HEAD – SHOULDER – BUTT – KNEES – TOES**”
Sing the song while doing related movements. The idea is to have fun and to activate the up-anddown movements (timing is not so important here) in turns

”Pää, olkapää, peppu, polvet, varpaat, polvet, varpaat. Pää, olkapää, peppu, polvet, varpaat, polvet varpaat. Silmät, korvat ja vatsaa taputa. Pää, olkapää, peppu, polvet, varpaat, polvet, varpaat”

In English either:
” Head, shoulders, knees and toes, knees and toes. Head, shoulders, knees and toes, knees and toes. Ears and eyes and nose and mouth. Head, shoulders, knees and toes, knees and toes.

...or:

” Head and shoulders, bum, knees and toes, knees and toes. Head and shoulders, bum, knees and toes, knees and toes. Ears and eyes and clap your tummy. Head and shoulders, bum, knees and toes, knees and toes.

Hook turn

The aim of this drill is to gain insight into letting the board carve and run along its edge. Like the normal turn with up- or down-unweighting, but you continue turning uphill till standstill

“Snow snake”
The aim is to train a rolling edge change from carving to carving. Roll your ankles and knees to make fast edge changes close to fall line. Optimal terrain for this can be found on a gentle slope ending with a very gentle or flat run-out.
By gradually making the steering phases longer you end up doing carving turns with downunweighting.

Turns with varying radiuses following the instructor
Turns with a pre-set rhythm will improve your overall control, timing of movements and precision of steering

Riding with your hands behind your back/ head, hands on trouser side seams
Aim: to stabilise upper body; rotary movements

Waving uphill with front hand at the end of frontside turns.
Aim: to increase rotation in frontside turns

“Stick figure”
Aim: to train edging through inclination, and to gain insight into carving and riding along the edge. Keep the whole of your body tall and stiff; aim at doing turns just by inclining the whole body without too much rotation

Jetting
The aim of this drill is to shift your weight onto the tail at the end of each turn while simultaneously releasing pressure, resulting in the board rebounding out of the turn into the air or its nose coming up from the snow. Start the next turn normally after edge change.

“Dog Town”
Do carving turns and do an indy grab in backside turns and melancolie in frontside turns. You can also skip the grab in frontside turns as in these your body would have to come to an unnatural position for the grab and looking in the direction of travel would also be cumbersome. The aim: to activate / mobilize static legs, to increase pressure.

Variations of different turn techniques: e.g., three sliding turns - three carving turns etc. The aim: to gain insight into the differences between the different techniques and to learn how to adapt one’s technique in an appropriate way in different conditions.

Rhythm changes
Change the external rhythm of turns between long and short radiuses and also between upunweighted and down-unweighted turns. The aim: to lend versatility to your riding

“Cat and mouse”
Ride in pairs, one playing the mouse in front, making changes to turn radius and technique, and the other playing the cat, following the mouse and his/her track at a distance of a few metres, imitating

the movements and techniques. The mouse should try to ride out of the cat's reach. Pay attention to safety issues! Optimally, the pair should be of approximately equal size and skill level.

Grabs:

Indy = backhand grabs the frontside edge between the legs
Mute = front hand grabs the frontside edge between the legs
Nose grab = front hand grabs the nose of board
Tail grab = back hand grabs the tail of board
Stalefish = back hand grabs the backside edge between the legs
Mellakka = front hand grabs the backside edge between the legs

50-50

Gliding straight over a press rail or rail

Boardslide

Sliding sideways over a press rail or rail

180, 360, 540,720

Degrees of rotation in spins. Can be done with snow contact, in air, on a press rail etc.

Switching

Ride carving frontside turns, between turns do a 180 turn in air by pushing off from the frontside edge and land again on frontside edge.

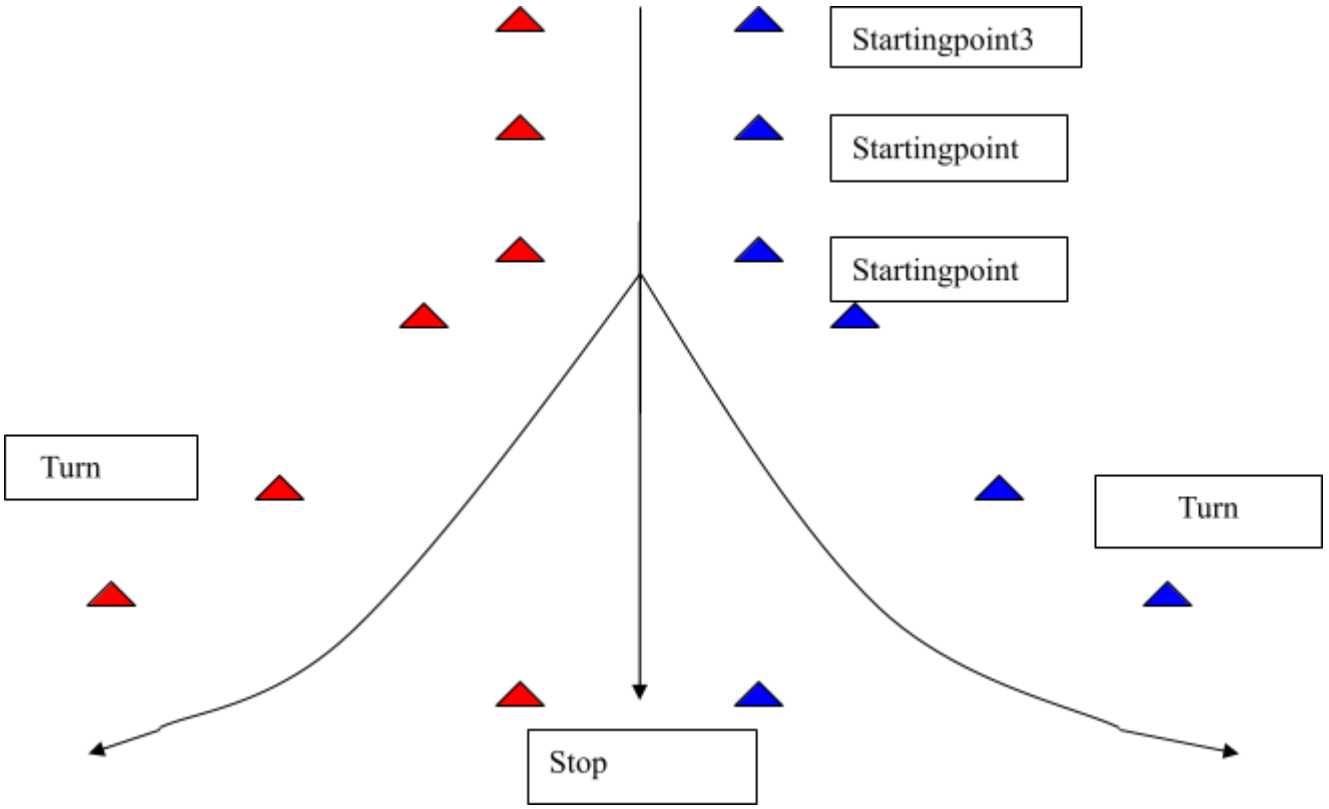
Blinding

Ride carving backside turns, between turns do a 180 turn in air by pushing off from the backside edge and land again on backside edge.

Examples of teaching aids

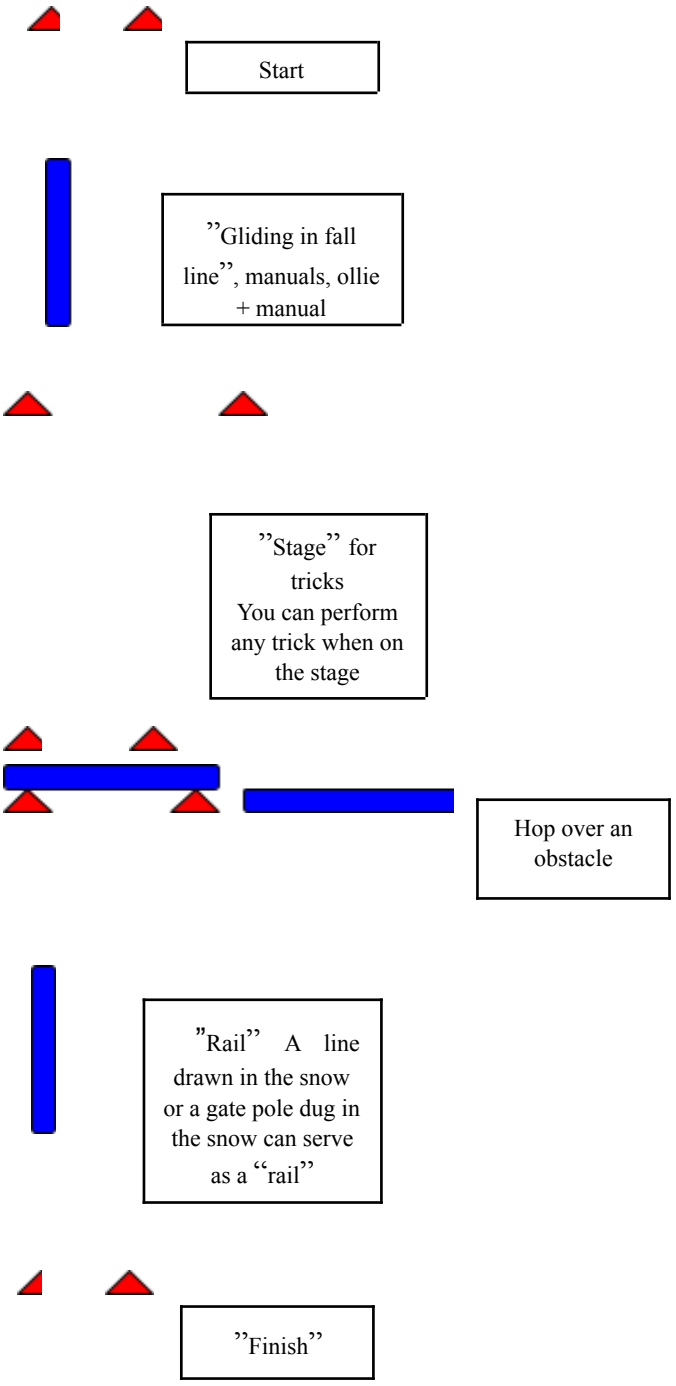
Basic level training track

A basic level track can be used with a beginner to learn speed control and steering of the board. The track includes a number of options, e.g. Tge starting point can be freely chosen by the student between different options. The instructor can provide assistance if needed. The set-up allows differentiating and individualizing the learning process according the to the different needs and skill levels of the students. Obstacles can also be built within the track, such as rollers, kickers and the like. Optimally the set-up allows for easy variation.



Slopestyle track

It can be recommended to make use of any suitable terrain shapes that are available. The track can also include several sections of similar kind. Optimally, the track will offer the student different options: a “stage” area can be set up with cones and used for doing an trick of one's free choice; different air heights can be used, the track can be ridden switch, you can jump 180 degrees, etc. Only your imagination will set the limits for what can be done there, as long as it is safe.



6. List of references

Eloranta, V. 2003a. Ydinkeskeinen motorinen oppiminen. In: Heikinaro-Johansson, P., Huovinen, T. & Kytökorpi, L. (edit.) Näkökulmia liikuntapedagogiikkaan. Helsinki: WSOY, 85–100.

Engeström, Y. 1996. Perustietoa opetuksesta. Kymmenes painos. Helsinki: Oy Edita Ab.

Fitts, P & Posner, M. 1967. Human Performance. Belmont, CA: Cole Pub. Co.

Flemmen, A. 1992. Leikiten suksilla. Helsinki: Suomen Latu ry.

Hakala, L. 1999. Liikunta ja oppiminen. Jyväskylä: Gummerus kirjapaino.

Immonen, T & Hynninen J. 2007. ”Mä oon ennen menny silleen niinku suoraan.” Näkökulmia lumilautailun opettamiseen. Pro Gradu –tutkielma. Jyväskylän yliopisto.

Jaakkola, T. 2010. Liikuntataitojen oppiminen ja taitoharjoittelu. Jyväskylä: PS-kustannus.

Kuusinen, M & Korkiakangas, M. 1995. Oppiminen. Teoksessa Kuusinen, J. (toim.) Kasvatuspsykologia. Helsinki: WSOY. 24–69.

Lehtinen, E, Kuusinen, J & Vauras, M. 2007. Kasvatuspsykologia. Helsinki. WSOY.

Newell, K.M. 1986. Constraints on the development of coordination. In Wade M, Whiting HTA (editors): Motor Development in Children: Aspects of Coordination and Control (pages 341-360). Dordrecht, Germany: Martinus Nijhoff.

Rauste-von Wright, M., von Wright, J. & Soini, T. 2003. Oppiminen ja koulutus. Helsinki: WSOY

Ruohotie, P. 1998. Motivaatio, tahto ja oppiminen. Helsinki. Oy Edita Ab.

Räsänen, J. 2005. Lumilautailun opettaminen ydinoppimisen näkökulmasta. Pro Gradu –tutkielma. Jyväskylän yliopisto.

Schmidt, R, A. 1991. Motor learning and performance. From principles to practice. Champaign; Human Kinetics.

Schmidt, R.A & Lee, T, D 1999. Motor Control And Learning. A Behavioral Emphasis. 3rd Edition. Human Kinetics.

Schmidt, R.A & Wrisberg, C.A. 2000. Motor learning & performance. 2nd edition, Champaign, IL: Human Kinetics.

Snowboard Demoteam Finland. 2006. Lumilautailun opetusohjelma. Suomen Hiihdonopettajat ry.

Soini, M. 2003. Laskettelu. Teoksessa Heikinaro-Johansson, P. Huovinen, T & Kytökorpi, L. (toim.). Näkökulmia liikuntapedagogiikkaan. s. 323–332. Helsinki: WSOY.

Soini, M. 2006. Motivaatioilmaston vaikutus yhdeksäsluokkalaisten fyysiseen aktiivisuuteen ja viihtyvyyteen koulun liikuntatunnilla. Jyväskylä: Jyväskylä University Printing House.
Tynjälä, P. 1999. Oppiminen tiedon rakentamisena. Tampere: Tammer-paino Oy

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