

## COMPARATIVE ASPECTS OF THE MAIN SKI SCHOOLS IN THE WORLD

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**ABSTRACT.** Alpine skiing is one of the most practiced winter sports due to accessibility and attractiveness of which enjoys these sports nowadays. This situation has helped the development of tourism services, aligned ski areas, ski equipment and materials industry, and current guidelines and methodical sequence learning pedagogy of skiing, all putting in the spotlight client, the individual and his personal issues. We speak of an orientation towards the individual needs of each of us, in order to give us a greater psychological comfort, a general feeling of well (well-being). In this idea, both methodology and pedagogy of teaching and learning of skiing (because of this discipline sports talk here) was centered on the learner, existing, internationally, a tendency to uniformity of content learning skiing to the detriment of divergent opinions that were promoted by some ski schools in the world. For a better understanding of the phenomenon of learning ski, we present in a comparative manner, the conception of the main ski schools in the world. The main points of comparison are the teaching progression in ski, and the motor skills.

**Key words:** *ski, skiing pedagogy, skiing methodology, skiing skills, wedge, wedge turn*

**REZUMAT.** *Aspecte comparative ale principalelor școli de schi din lume.* Schiul alpin este unul dintre cele mai practicate sporturi de iarnă, datorită accesibilității și atractivității de care se bucură aceste discipline sportive în zilele noastre. La această situație a contribuit evoluția serviciilor din turism, arondate domeniilor schiabile, industria materialelor și echipamentelor de schi, dar și orientările actuale ale succesiunii metodice și pedagogiei învățării schiului, toate plasând în centrul atenției clientul, individul și aspectele sale personale. Vorbim de o orientare spre nevoile individuale a fiecăruia dintre noi, cu scopul de a ne

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oferii un confort psihologic sporit, o stare generală de bine (well being). În această idee, atât metodică cât și pedagogia predării-învățării schiului (pentru că de această disciplină sportivă vorbim aici) a fost centrată asupra celui care învață, existând, la nivel internațional, o tendință generală de uniformizare a conținutului învățării schiului, în detrimentul opiniilor divergente care erau promovate de anumite școli de schi din lume. Pentru o mai bună înțelegere a fenomenului învățării schiului, prezentăm, într-o manieră comparativă, concepția principalelor școli de schi din lume. Principalele elemente de comparație sunt: succesiunea metodică a elementelor și procedeele specifice schiului alpin, deprinderile motrice din schiul alpin etc.

*Cuvinte cheie: Schi, pedagogia schiului, metodică schiului, deprinderi motrice, plug*

## **Introduction**

Contemporary society's tendency is to turn more and more towards the individual's personal needs and to streamline its business, all safer. Basically the key word today is "safe". These issues are highlighted by examples that manifest in our daily lives: the increased role they have insurance (of any mandatory or not), increasing the frequency of calls to the consumer protection service, the development of protective equipment manufacturing industry for sports activities, transportation etc..

Winter sports, being an area of high population spread, attracting still a growing number of practitioners, the diversity of forms, on skis or snowboard, follow this trend. Theme of accidents encountered on the ski slopes is of great interest and attention of industry specialists in producing ski equipment, sports science, in order not only to avoid injury, but to create a practitioner of mind. Notably, safer helmets, bindings who release ski boots faster, skis adapted to physical fitness and technical development level of skier, and clothing that provides higher waterproofing and breathability etc.

In terms of ski equipment evolution, is necessary and updating for the learning lesson management of ski, talking about methodological, psycho-pedagogical and lesson organization aspects. The objective of these measures should be the focus of the entire training process on the learner, organizing learning content according to their needs, providing reliable, but fast, progression, in a quiet environment, and psychological comfort in the ski lesson. To fulfill these requirements, the literature recommends the adoption of guided discovery teaching style, which is also called cognitive learning. This supports the idea that

learning is not coincidental, or simply the result of repetition. Learning is the result of adaptation to life experiences. The student sees the whole task and the overall situation, adapt to new experiences, thus making progress. Therefore it recommends a holistic approach to learning ski.

From cognitive perspectives, learning could be described more as an extended model on many levels, than a linear one. I mean an execution; an exercise leads to a discovery that causes another discovery, which ultimately translates into learning

A student-centered lesson will mold to the needs of the child, not the student will try to adapt to the conditions of the lesson. Student-centered learning requires the teacher's attention to emerging situations. In this lesson, child skills development of sliding ski is achieved through a variety of demonstrations, alternating the exercises and the sliding surface form; children are always subject to new situations.

Current pedagogy of skiing try to shorten learning period, promoting the idea that, depending on individual characteristics and level of knowledge, the child will use the snow plough, plough to parallel etc. only as means to reach the final goal (parallel turning), and not as intermediate targets (Bogdan Tudor, 2011).

In terms of methodology skiing, internationally, there is a common trend line, whereby early levels will use wedge turn and as the purpose of learning, parallel turn. For those who wish to pursue higher stages of learning, it can offer several options, including: carved turns on groomed slopes, turns on steep slopes, turn off-piste, or ski in the park & pipe.

### **Objectives of the paper**

This paper comes to highlight similarities and differences between the main ski schools in the world, focusing on the following aspects:

1. The progression of learning ski, trends in internationally ski learning
2. Skiing skills,
3. Way of achieving plough turns.

**1. The methodological progression of learning alpine ski** - we will refer only to basic technique, starting with accommodation with the equipment, parallel turns, considering this stage of learning, determinant for the future direction in which the skier want to develop. We want to present learning concepts in countries with tradition in learning skiing because the general trend is to simplify the methodical line, or even more, the current design allows the instructor to skip certain procedures, if considers that successful learning will not be affected.

**Table 1.** Methodical progression of the main ski school from the world

Nr. crt.		BASI 2011	CSIA 2011	DSV 2004	DSV 2012	Interski De. 2011	DSLIV 2012	Österreich 2011	SWISS 2010	PSIA 2007
1	Equipment accommodation Stand, walk, turn, climb	X	X	X	X	X	X	X	X	X
2	Snow plough simulation									X
3	Walking on 1 or 2 skis									X
5	Walking on flat and uphill					X				
6	Sliding, Straight run	X	X	X	X	X	X	X	X	X
7	Straight run and wedge stop					X			X	
8	Wedge or Snow plough	X		X	X		X	X		X
9	Stopping		X							
10	Isolated wedge turn	X	X	X	X	X				X
11	Linking wedge turn		X		X	X	X	X	X	X
12	Traversing	X					X	X	X	
13	Skidding	X					X	X	X	
14	Carving - fundamentals							X		
15	Plough to parallel	X			X	X	X		X	
16	Stem Christie			X					X	
17	Parallel turn	X		X	X	X		X	X	
18	Braking									
19	Short turns								X	
20	Carve turn Carve turn – long - short			X		X		X	X	
21	<b>Freeride</b> Off-piste Steep Moguls	X				X		X	X	
22	<b>Slopestyle – Park &amp; Pipe</b>	X				X		X	X	
23	<b>Introducing to competition</b>					X		X	X	

Table 1 present the central concept of learning to ski in six countries: Canada, USA, UK, Germany, Austria and Switzerland, covering the main literature sources, of existing on the data of developing this paper. The general trend that emerges is the snow plough (wedge) used for breaking and turning. However PSIA (2007) presents, the ski progression with parallel ski, called direct method, or DSV (2004) mentions the turning technique with successive steps as preparatory element helps in learning turning.

Referring to an early stage of learning ski, we can say with certainty that all representative skiing schools around the world, teach following technical elements, respecting the following chain:

1. Accommodating with the equipment,
2. Straight run,
3. Snow plough or wedge,
4. Wedge turn,
5. Traversing and sides lipping,
6. Plough to parallel,
7. Parallel turns.

However there are differences in the approach of ski learning process, between countries from Americas and Europe. The PSIA provides methods oriented very much towards the learner, providing to ski instructor several didactic routes which can be followed, depending on the specific customer, but also the knowledge that he has. This approach is very much oriented towards the learner, will mold perfectly to its specificity, but requires the instructor a very large base of knowledge, enabling it to modify the content of the training, the chosen route, if occurs problems in achieving goals.

An aspect that can generate a trend is the conception of the Austrian Ski Association (OSV 2011), which proposes to teach carving turns starting with beginner's level, even before parallel turns.

Methodical procedures contained in the sequence shown above, are taught in the lessons for beginners (BASI 2011, Interski Deutschland 2011), or during the first two stages of learning: beginners and advanced (CSIA 2011 DSV 2012 PSIA 2007 OSV 2011). In higher stages of learning are provided more opportunities for development as follows:

- ✓ Moguls
- ✓ Off-piste – deep snow
- ✓ Steep
- ✓ Park & pipe
- ✓ Competition technique

Together they appear more well-defined ski learning concept especially for children, youth, seniors, or people with special needs, as particular pedagogical approaches of the same lines explained above.

## 2. Alpine skiing skills

Concrete action skier on the ski slopes is determined by the mutual influence of factors that make "SKI system" man - ski - environment. We talk about how the body and the environment influence each other, with the medium interaction ski equipment, ski bindings and ski boots. Keeping the system in a state of homeostasis results in concrete, control speed and direction of movement of the skier, the performance of specific motor actions as form and content, called motor skills. In fact, skiing is a simple formula (PSIA 2007:11):

- ✓ Keep balance while slipping,
- ✓ Bend body parts to put the skis on edge,
- ✓ Rotate feet, hips and / or trunk to help the skis to turn,
- ✓ Control the pressure along the ski to turn trace on snow, and manage the constantly changing terrain and snow.

Learning skiing skills is at the core of what we do on snow, and is manifested precisely in the area of interaction of the two subsystems: human (ski) - snow. Understanding, identifying and influencing motor skills by the ski instructor is the key to success in learning skiing. Motor skills are actions that are manifested in the snow, exactly at the ski snow interaction from this perspective it is important that ski instructor to assess how the skills are executed. We believe that to influence the proper execution of techniques, ski instructor must give methodological guidance to address the exact underlying mechanism, mechanism that generates braking or turning movements. Thus, every move we make has four major skills (Fellow C. 2011:42-43, PSIA 2007:12):

- ✓ **Balance** - plays a key role in the effective implementation of techniques. In alpine skiing, the most balance on skis is manifested in motion, under the name of "dynamic balance". For this reason only after we have a balanced position on skis we can add new elements in the learning process.
- ✓ **Edging** - Putting skis on edge and the ability to control the angle formed between ski and snow, in order to ensure a steady, balanced position, or to make a carved turn without braking, without skidding.
- ✓ **Rotation** - involve aspects of the movement of the body, resulting in rotation of the ski action. Once sliding techniques improves,

rotations are reduced to parts of the body, especially the lower body. The most effective rotation involves edging movements and pressure control on edges, movements which determine steering the ski during the turn.

- ✓ **Pressure** - or pressure control on the edge - is the ability to control and manipulate skier variations in pressure between ski and snow. This is accomplished by muscular effort or forces involved in the turn.

Together with the four skills, CSIA (2011:4.11) adds coordination and rhythm skill that BASI manual (2011:15) is found in the term "flow", referring to the fluidity of movement.

Viewed from an integrative perspective the 4 skills listed above are closely interrelated in that, depending on the type of skier and ski practice, proportion of skills may differ. So if in any case the balance is the environment where it manifests edging, rotation and pressure control, in the beginners cases it is worse than if advanced learners, or edging and pressure control are more pronounced if practiced skiing on steep slopes than in the deep snow.

The techniques performed on the snow, for example, plough brake, travers run, plough to parallel etc., are composed of skills listed above, only in different proportions, depending on the specific technique. Basically technical processes are performing at a higher level, specific motor skills or, from another perspective, motor skills compose the technical procedure.

We should mention here quite similar concepts presented Interski Deutschland (2011:16) and Swiss Snowsports Association (2010:41) that without mentioning the idea of motor skills, says the following motions as determined Ski: movement scales, rotation, loading / unloading ski equipment load, and moves the center of gravity of the body - which is the balance (center of gravity position of the body generates steady body).

### 3. Way of achieving wedge turn

Wedge turn is the first turning action used in methodical progression of learning ski by all ski schools presented in this paper. Although in current pedagogy, this way of turn is not an objective of learning. By correctness and reliability of this method depends largely on the success and quickness of learning following procedures, especially parallel turn. For this reason we consider very important conducting a review of current trends to achieve this procedure.

**Table 2.** Comparative presentation of the way of achieving the wedge turn

<b>Association</b>	<b>Description</b>	<b>Indication</b>
<b>CSIA 2011:3.16</b>	From straight run, or traverse, in wedge, turning the skis to the new desired direction	For indication we can use turning the toes or the ski tips, to the new direction.
<b>BASI 2011:44</b>	Rotate both legs and feet to the desired direction	The outside ski be set on a natural way on the wedge, to get the grip and to generate the turn
<b>PSIA 2007:63</b>	From straight run, drive actively both skis to the desired direction	Use the rotation movement and pressure control.
<b>ÖSV 2011:47</b>	From the wedge position, rise the pressure from one of the skis, and soil reaction will result in steering the turn	A movement like flexion-extension, which generate an action of loading-unloading effect of skis, can help. It can be used the advantage of the terrain, working in half-pipe.
<b>DSL 2012:72</b>	1. From straight run in wedge, rise the pressure from one ski 2. From straight run in wedge, by rotary movement of skis, try to steer the skis out from the fall line	
<b>DSV 2012:139</b>	For changing the direction in wedge, rotate the skis out from the fall line	
<b>Interski Deutschland 2011:52</b>	Anything is possible	It'll be done short turn to fall line, than bigger
<b>SSSA 2010:140</b>	Rotate the body to the desired direction	

Wedge is a basic element in the ski progression, because it assures the security of the learner, making their first turns, keeping them in control of speed, and from now, the direction too. Also, emotionally, the success of the first turn is overwhelming, maybe even determinant for the future executions, because for the first time in life when the skier draws curves trajectory. That's the reason why the ski instructor has to identify the most secure, comfortable, but the easiest too, way to teach the turn.

Respecting the actual pedagogical trends, the North American ski school PSIA and CSIA, the Great Britain BASI, the Swiss SSSA, and even the German Ski Federation DSV, gives as indication for the first turn, simply to steer the skis to the desired direction. Mechanism that will trigger this process will be the rotary movement of the legs. For the success of this movement, is important to combine the skiing skills in different proportion. All these recommendations are for the beginners who want to learn skiing, by anchoring the daily reality, proposing

motor activities similar to those from our daily life, attempting connection to life skills which man has made. In everyday life, if a man wants to turn to right, just turn to the right and continue on its way.

Austrian Ski Federation (OSV) use guidelines, and trigger mechanism still slightly different, namely emphasized edging the outside ski marked as trigger of wedge turn.

Interesting, and very free is the concept of German associations, which ultimately, states that wedge turn is correct by any mechanism as long as satisfy the conditions of security of the skier, only given the next stage - parallel turn - it is recommended to perform certain movements (Interski Deutschland 2011:52-53).

### **Conclusions**

After analyzing the literature, namely textbook for learning and teaching ski of representative ski schools around the world, according to the three directions of development of the present study, we can point out the following trends in teaching alpine skiing and more.

1. The progression of learning alpine ski follows the following route:
  - ✓ Accommodating with the equipment,
  - ✓ Straight run,
  - ✓ Snow plough or wedge,
  - ✓ Wedge turn,
  - ✓ Plough to parallel,
  - ✓ Parallel turns.

These learning moments can be joined other exercises that help to achieve the ultimate objective - avoiding parallel turns, such as preparatory exercises without skis, or single ski, successive steps turns, plough to parallel, traverse, side-slipping etc.

Also at this level can be drawn following areas of development: carved turns on groomed terrain, turns in deep snow, turn on the moguls, competitions turn, notion of park and pipe.

2. Importance of motor skills in alpine skiing comes from the fact that manifests itself, and directly influences the interaction between the ski and snow, which are the motor acts that determine the form and content of our behavior on skis. The main skiing skills are: balance, edging, rotations, pressure control edges.

3. Primary trigger mechanism of wedge turn is rotation, and indications are most commonly used is turn your skis, or legs to the desired direction of sliding. Other mechanisms and exercises will be used in the consolidation phase of wedge turn.

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