

EFFECTIVENESS OF TWO METHODS IN LEARNING BASIC ELEMENTS OF SKI TECHNIQUE

UDC: 796.92.012.
(Preliminary communication)

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Abstract

The aim of this research was to research which method is better in learning and development of certain elements of ski technique. Fourty male students of Faculty of sport and physical education were subject (21.7±2.1 years) of this research, divided into two groups Participants of one group (GPT) were taught by parallel technique, while the second group (GPSPT) were taught alpine skiing through parallel and snow-plough techniques. Before the start of 6-day ski program, examinees of the two groups didn't differ in motor abilities and morphological characteristics. Higher grades obtained by participants in group taught by parallel and snow-plough techniques (GPSPT) after 6-day ski program. These results are probably because in snow-plough techniques beginners better learn basic ski movements. In snow-plough techniques there are semicircular leg movements, which helped in better demonstration of short and parallel turns.

Keywords: *students, motor abilities, morphological characteristics, training methods, parallel technique, snow-plough technique, ski beginners*

INTRODUCTION

Non-competitive leisure/recreational alpine skiing are often described as social and pleasurable forms of physical activity in attractive outdoor scenery. More than 100.000 people in Serbia and 100 million around the world participate in alpine skiing. The better method of teaching beginners how to ski on modern skies is a subject of many debates (Hirano & Tada, 1996; (Muller, Schiefmuller, Kroll, & Schwameder, (2005); Roder, Vater, H., Vater, K., Riehle, & Haag, (2005). Roder et al. 2005; Federolf, 2005; LeMaster, 2009). Some works has been focused upon comparing the carving and parallel turns Muller et al, (2005) Among experienced practitioners, skiing technique is referred to in a variety of ways. To a certain extent, different skiing communities use different terms and concepts. In LeMaster's A Skier's Edge (1999) to introductory material such as that of

Loland & Haugen (2000), hypotheses are proposed in terms of the basic principles or technical elements of alpine skiing. In Joubert's (1978) terminology, technical elements are the building blocks of technique. A technical element is operationalized in terms of a series of subelements or movement patterns that, if put together in the right way, make up good skiing.

A first and primary element in Joubert's scheme is that of balance. The starting point of good balance is the so-called neutral position: hip wide distance between the skis to secure a stable supporting base, a slight bending of the knees to be able to absorb disturbances from an uneven surface, a slightly forward bent upper body and arms stretched outwards and forwards for fine tuning. In the neutral position, the skier is considered to be at the center of agency in skiing with short distances to all extreme positions whether this implies forward,

backwards, sidewise, upwards or downwards movement.

Alpine skiing is about the efficient control of speed and direction. Such control is achieved in several ways. In the practice communities, references are made to “skidding” (which in most contexts is considered an expression of problematic or bad technique), to “cutting” or “carving” turns, “getting a grip” on the snow (LeMaster, 1999), or as Joubert (1978) expresses it, to finding support on the surface.

In learning situations with novice skiers, finding support can be explored with a series of practical exercises. A skier skids down an icy slope, hits a mogul and stops. The support from the surface is direct and concrete, the control over speed is immediate. Alternatively, skiers skid down a slope with the skis turned across the fall line and are challenged to find support from the surface by using ski edges. Usually, the result is skidding (Loland, 2009).

To the unskilled skier, moments of instability are experienced as threats of falling. To the expert, moving in and out of balance is done in controlled, playful manners.

The carving turn, in which the front and the back of the ski follow the same line on the surface with a minimum of skidding, is the technical ideal. The ski moves only forward, and not sideways and with a minimum of energy dissipation. A completely clean carving turn is an ideal. Stable carving requires a constant adaptation and variation of movement (Loland, 2009).

Thus, the aim of this research was to research which method is better in learning and development of certain elements of ski technique.

METHODS

Fourty male students of Faculty of sport and physical education were subject (21.7 ± 2.1 years) of this research, divided into two groups. There were no differences between groups in morphological characteristics and motor abilities. Subjects were of the beginners level. Participants of one group (GPT) were taught by parallel technique, while the second group (GPSPT) were taught alpine skiing through parallel and snow-plough techniques. Ski knowledge was tested by demonstration of three ski technique elements (uphill turn, short turn and parallel turn) by three independent judges, who did not know from which

learning group the subject comes. The research was performed during a 6-day program during the practical classis on skiing at mountain Kopaonik, Serbia. Ski time was about 3 hours total time at the ski tracks „Krst“, „Karamen-greben“ and „Malo jezero“. These tracks are classified as an beginner and intermediate tracks. Subjects skied on groomed ski terrain. Skies were standardized according to body size and consisted of 150 cm or 160 cm recreational slalom skis.

RESULTS AND DISCUSION

Before the start of 6-day ski program, examinees of the two groups didn't differ in motor abilities and morphological characteristics. On their achievement in learning alpine ski technique were influenced by only one of two methods of teaching certain elements of ski technique.

Examinees of the two groups differed significantly in the grades (Table 4.) obtained for the two of three elements: Short turn 4.10 vs. 3.50 0.0241 ; Parallel turn 3.95 vs. 3.20 $p = 0.011305$; Uphill turn 3.35 vs. 3.30 $p=0.873118$. Higher grades were achieved by examinees whose method of learning is included elements of parallel and snow-plough techniques.

This basic turn can be done with or without poles at the start. By leaning over on to one ski while moving in the snow plough position, the weighted ski will turn. The weight is then transferred to the other ski to turn in the opposite direction. It should be emphasized that the weight remains on the outside ski until the next turn; the skier gets a feel of continually weighting the downhill ski. Different instructors use different verbs to describe the snow plough steering action, but the instruction and demonstration must be as simple as possible .

Higher grades obtained by participants in group taught by parallel and snow-plough techniques (GPSPT) after 6-day ski program. These results are probably because in snow-plough techniques beginners better learn basic ski movements. In snow-plough techniques there are semicircular leg movements, which helped in better demonstration of short and parallel turns. The desire to more quickly convey the knowledge of alpine skiing by ommiting the snow plough technique in the end only deprives beginning alpine skiers of experience needed during more advanced phases of learning (Cigrovski et al, 2010). This information can help

Table & figure 1. Group taught by parallel technique after 6-day ski program - (GPT)

	N	Mean	Min	Max	SD
Short turn	20	3.50	2.00	5.00	0.83
Parallel turn	20	3.20	2.00	5.00	1.06
Uphill turn	20	3.30	2.00	5.00	1.03

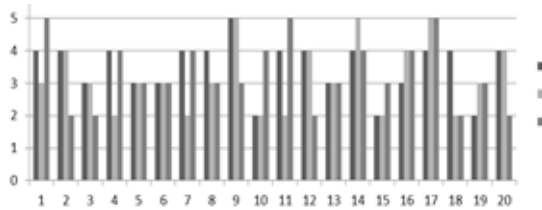


Table & figure 2. Group taught by parallel and snow-plough techniques after 6-day ski program - (GPSPT)

	N	Mean	Min	Max	SD
Short turn	20	4.10	3.00	5.00	0.79
Parallel turn	20	3.95	3.00	5.00	0.69
Uphill turn	20	3.35	2.00	5.00	0.93

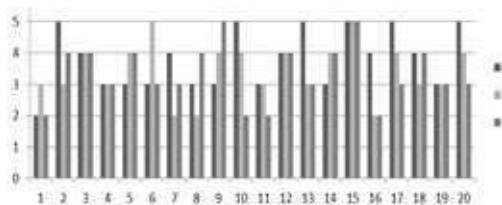


Table 3. Multivariate differences between two groups in knowledge after 6-day ski program

Wilks	F	Effect	Error	P
0.811949	2.7792	3	36	0.055

Table 4. Univariate differences between two groups in knowledge after 6-day ski program

	GPT		GPSPT		F	p
	Mean	SD	Mean	SD		
Short turn	3.50	0.83	4.10	0.79	5.516	0.024
Parallel turn	3.20	1.06	3.95	0.69	7.089	0.011
Uphill turn	3.30	1.03	3.35	0.93	0.025	0.873

the ski instructor and give direction that it is more efficient to initially use both parallel and snow plough technique in the process of teaching alpine ski beginners how to ski.

CONCLUSIONS

Before the start of 6-day ski program, examinees of the two groups didn't differ in motor abilities and morphological characteristics

Examinees of the two groups differed significantly in the grades obtained for the two of three elements

Higher grades obtained by participants in group taught by parallel and snow-plough techniques (GPSPT) after 6-day ski program.

This information can help the ski instructor and give direction that it is more efficient to initially use both parallel and snow plough technique in the process of teaching alpine ski beginners how to ski.

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ЕФЕКТИВНОСТА НА ДВЕ МЕТОДИ ЗА УЧЕЊЕ НА ОСНОВНИТЕ ЕЛЕМЕНТИ НА СКИЈАЧКАТА ТЕХНИКА

УДК: 796.92.012.

(Прелиминарно соопштение)

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Апстракт

Целта на истражувањето е да се утврди која метода е поефективна во усвојувањето на одредени елементи на скијачката техника. Во истражувањето се опфатени 40 студенти од Факултетот за спорти и физичко воспитување. Тие се со возрастни параметри (21 ± 2.1 година). Студентите се поделени во две групи. Првата група (ГП) усвојуваше паралелна техника, а другата скијање низ паралелна и снежно-лужна техника. Пред реализацијата на шест-дневната скијачка програма, двете групи испитаници не се разликуваа според моторните способности и морфолошките карактеристики. Повисоки оценки добија испитаниците во групата која ја усвојуваше паралелната и снежно-лужната скијачка техника. До вакви резултати, веројатно се дошло, затоа што при снежно-лужната техника почивниците подобро ги усвојувале основните скијачки движења. Во снежно-лужната техника постојат полукружни движења на нозете кои помагаат за подобра демонстрација на куси и паралелни завршувања.

Клучни зборови: студенти, моторни способности, морфолошки карактеристики, методи за обучување, паралелна техника, снежно-лужна техника, скијачки почивници, МАНОВА