

## SKI LEARNING DIFFICULTIES OF DIFFERENT SPORT ATHLETES

SZABÓ-CSIFÓ BARNA<sup>1,\*</sup>, POP ALEXANDRA CRISTINA<sup>2</sup>

**ABSTRACT.** Skiing is one of the difficult winter sports, which requires a lot of motoric skills as strength of the lower limbs, good balance, determination and courage as well. In this study we aim to observe the learning skills differences between students or adults who competed in different sports, or practiced them just as leisure activities. We are interested that in case of them it is easier or more difficult to learn the skiing skills. As method we established a pointing system from 0 to 2 to make the difference between the subjects, 0 means that they have learning difficulties and they don't succeed to have any skiing skill, 1 is for medium skills and 2 is for those whom realized a good skiing technique, considered that they are beginners. In this study take part a number of 60 subjects, between 20 – 26 ages, and 50 of them practiced in their life sport in competition.

**Keywords:** *Skiing, learning skills, other sports, difficulty*

**REZUMAT.** *Dificultățile de învățare a schiului la diferiți sportivi.* Schiul este un sport de iarnă dificil, ce necesită o serie de calități motrice cum ar fi forța trenului inferior, un bun echilibru, determinare și nu în ultimul rând, curaj. În acest studiu dorim să observăm diferența dificultății de învățare la studenți și adulți, care în viața lor au practicat sport de performanță sau doar de hobby. Am fost interesați să observăm dacă le este mai ușor sau mai greu să însușească taina schiatului. Ca metodă am stabilit un sistem de punctaj de la 0 la 2 pentru a evidenția diferența dintre subiecți, 0 însemnând că nu au reușit să însușească tehnica elementară a schiului, 1 am acordat pentru cunoștințe medii, iar 2 pentru cei care au reușit să execute cerințele tehnice corecte la nivel de începător. În acest studiu au fost analizați 60 de subiecți, cu vârste cuprinse între 20 – 26 de ani și 50 dintre ei au practicat sport de performanță.

**Cuvinte cheie:** *schi, învățarea schiului, alte sporturi, dificultate*

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<sup>1</sup> University of Medicine „George Emil Palade”, Pharmacy Science and Technology of Tîrgu Mureș, Romania

<sup>2</sup> Babeș-Bolyai University, Faculty of Physical Education and Sport, Cluj-Napoca, Romania

\* Corresponding Author: barneas76@yahoo.com

## **Introduction**

The basics of the skiing technique, means a huge amount of acknowledgment of technical proceedings, learned step by step allows to approach descending the ski slopes as a recreational activity, or sport activity (Bădău A., Bădău D. 2020).

In his work, Dosek Ágoston submit, that the wintersport don't need a long learning process, and after the accommodation with the snow, they offer a delight for the practicans. But exist a possibility for those who try to learn the skills without a qualifeied technician to lear that skills in a wrong way, and those mistakes will be harder to fix them, that lear them correctly. In the same work, Dosek A. reflect, that the aim of ski coaching is, to consciously acquires a proper skiing technique in available time (Dosek, 2016).

An advantage to learn skiing with a ski specialist is to give personal safety, follow some rules in the teaching process and in a short time the accumulate knowledge is significant superior (Dubecz, 2009). In the same time, they can learn the ethic on the skiing slopes the 10 rules to follow, pronounced by Sandor I. in his work, "Skisport for everyone" (Sandor, 2013).

The biomechanics of the skiing technique is a very important factor in the learning process. In this case, we have to understand a couples of elements from physics. During the descent, the skier is affected by inside and outside forces. The inside forces are generated by the skier during the tehcnical elements what he use, and the external forces are determinated by the steepness of rhe sloap, the quality of the snow (it is soft or icy), this facts are important in competition but in the learning process also. The inside forces are created by the body position during the descent, the balance changing from one leg to the other (changing the edges of the ski) (Barton, 1984).

## **Objectives**

In our study we wish to find if the sports what the subjects practiced before strating to learn skiing, influenced the agility of the skiing skills.

## **Hypotheses**

The hypothesis what we draw up, is that the learning process is influenced by the sports what the subjets practiced before to strat to learn skiing, and it will be influenced also by the tipe of athlete they are.

## **Methods**

In our research we analized 60 persons, between age of 17 – 26 with a mean of 20.42, and 51 from them practiced some sport activity on competition

level. We calculate the standard deviation of the group age and the  $\sigma=1.778$  show us the signficancy of the group. As genders, we have 37 male (61.66%) and 23 female (38.33%) subjects. They take part at different ski camps organized by the University of Babeş-Bolyai Cluj Napoca. A small number of them did not practiced any sport, before our activity. To analyze their improvement we generate a pointing system, from 0 to 2. That pointing system we applied to the targeting skills what we try to learn them. This skill are:

- Body position
- Snow plow
- Snow plow arch
- Thwart downhill
- Mountain can't
- Bouncing
- Closing the skies



**Fig. 1.** Snow plow



**Fig. 2.** Snow plow arch



**Fig. 3.** Correct body position



**Fig. 4.** Stiff body position

## Results

**Table 1.** The main results of the group

<b>Practiced sports</b>	<b>Level of the learned skills</b>
<b>No sports</b>	<b>1.7</b>
<b>Handball</b>	<b>1.43</b>
<b>Football</b>	<b>1.31</b>
<b>Swimming</b>	<b>1.71</b>
<b>Ice hockey</b>	<b>1.6</b>
<b>Basketball</b>	<b>1.33</b>
<b>Judo</b>	<b>1.21</b>
<b>Wrestling</b>	<b>1.48</b>
<b>Athletics</b>	<b>1</b>
<b>Weigth lifting</b>	<b>1.29</b>
<b>Fitness</b>	<b>0.57</b>
<b>Table tennis</b>	<b>1.29</b>
<b>Sport dance</b>	<b>1.86</b>
<b>Triathlon</b>	<b>1.71</b>

### Interpretation of results

The statistical analysis conducted allowed us to outline the following aspects:

The main target that to realize a comparative study between learning potentials of different athletes of the skiing skills, our subjects are practiced the following sports: 13 football players, 12 handball players, 2 swimmers, 5 ice hokey players, 7 basketball players, 2 judo wrestlers, 3 wrestlers, 1 athlete, triathlete, weight lifter, table tennis player, fitness practcicant, sport dancer, and 9 subjecys who does not practice any sport in competitions.

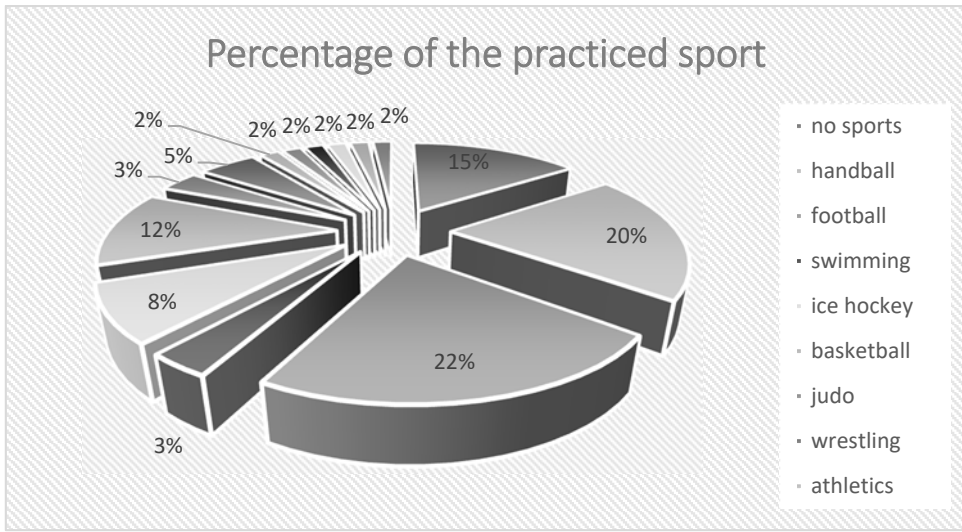
The following presentation illustrated the fact of sport practicers in percentage.

During the learning process we observed the most important skills that the subjects must possess at the and of the courses. The scale what we created, show the level, and the success of the skiing improvement.

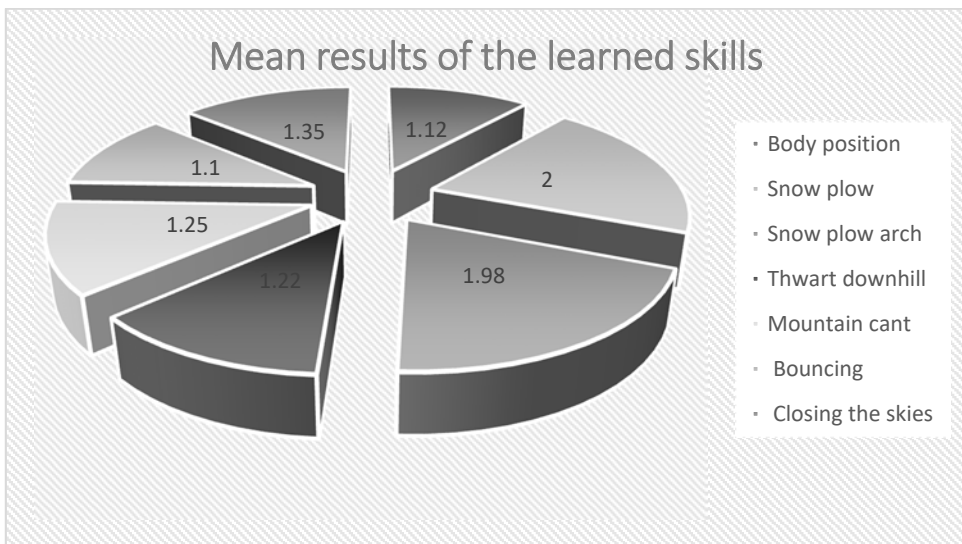
In this graphical presentation, we can see that the most succesfull element during the learning process was the snow plow, that's because we used in a long time to give the feeling of security for the beginners, this element give the possibility to stop at the and of the slope. Interesting to observe is that the second successful element with a value of 1,98, is the snow

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plow arch, that lead us, that the learning process is very well built up, this represents the base elements of the skiing skills. The values 1.1 and 1.12 of the body position and bouncing, lead us to declare, that the insecurity on the skis and because of this an exaggerated stiffness produced this poor result.

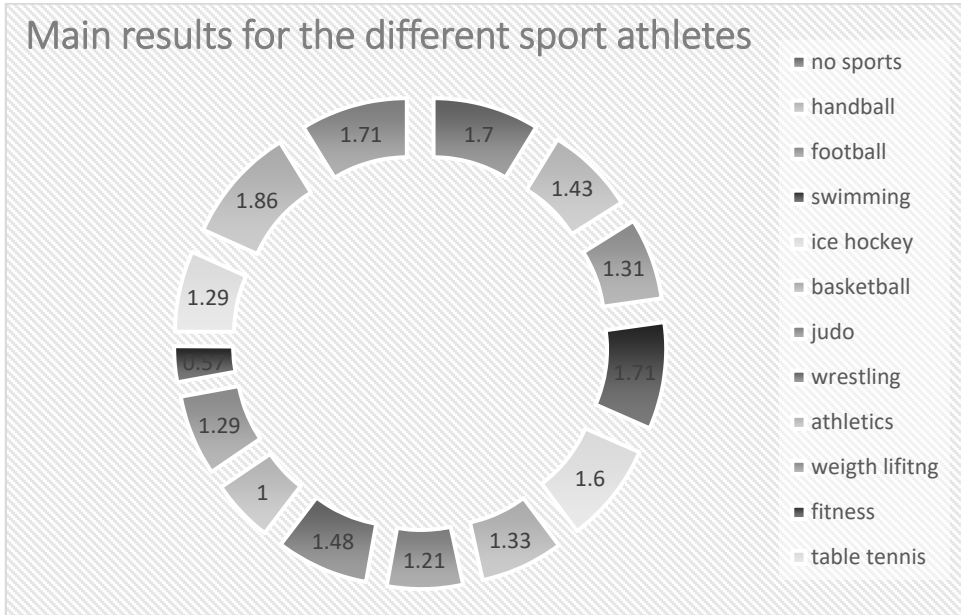


**Fig. 5.** The percentage of the practiced sports by the subjects



**Fig. 6.** Graphical presentation of the level of the learned skills

Next we realized a comparative study between the learning potential of the different sport athletes, and we obtained the following results.



**Fig. 7.** The main results obtained by the athletes of the study

Analyzing this diagram, we can observe, that from 13 different athletes, 7 realized a better result than the average, that means 1.425 points, in this case the standard deviation of the group is  $\sigma=0.371$ , that means that the group is significant unitary.

Best perform the sport dance with 1.85 point, because the balance skills and the ability to transference the body weight from one leg to other (one of the main skill in dance too). The others with a good performance are the handball (1.42), swimming (1.71), ice hockey (1.62), wrestling (1.47), triathlon (1.71) and not in the end the subjects who did not practice any sport activities with 1.69 point. In their case we think that the good result is given by the lack of the "bypass" between the other sport skills and ski.

Under the average value are situated the following sport athletes, football (1.30), basketball (1.32), judo (1.21), weight lifting and table tennis (1.28), athletics (1.00) and fitness (0.58). These results are explained with the interference between the sports, couples of them as weight lifting or judo requires a stiff body posture or the other athletes as basketball players they have the center of body weight in a high position and it is disadvantage in their cases.

## Conclusions

In our research the presumptions have been proven, because athletes, which did similar sports before, performed similar, got almost similar point in our test, meaning there were little differences between their results, compared to students with different sport past. This is because all the athletes doing one sport have got similar physical conditions, with similar motor skills and promptitudes.

As example we would like to mention the hockey players results on their posture, from the 5 sportsmen 4 scored one point, and only one of them got 2 points for that. In this case we recognized a general mistake, as all of them applied the stance used in hockey, which means big fork, circled legs and their bias was very low. All of the students used this in ski as well, and this was the reason they didn't get the highest score. Apart from that, in the beginning teaching them was the easiest from all of the students, because they were not afraid of the fact that the ski is slipping on the snow, their sense of balance was excellent, the only thing we couldn't manage was their posture.

Regarding the football player, our opinion is, that in the begging for all of them was very hard to learn how to ski, because they were not used to the fact that the snow is slippery. On the other hand, due the fact that in football running is the general motion, their bias was too high for skiing. Because of that, the subjects would not descend, lost their sense of balance and fall. It follows, that in springs their result were mixt, but most of the students got 1 point for that, because they found really hard the perfect position for balance, and if it was too high they couldn't spring in the perfect way.

Due their pysical abilities the students with basketball background performed really bad on the snow, their average result is 1.32. Their low score is in consequence of their height, as we are talking about really high sportsmen, their bias is too high. Because of that they were very instable, and they were afraid of skiing, which led to their arrear in learning the technical elements. Their points reflect this statement as well, as except of one student, all of the basketball players got 0 or 1 point for the last three technical element.

The student with combat sport background (judo, boxing) got similar results. Teaching them was very similar, almost identical, because they used a very safe posture, which was stable, but very combative as well. On the other hand, it was a very positive experience, that they were not afraid of doing the exercises. Their motion was very convulsive, and bitty, due their muscular body composition: with big muscle mass it is harder to perform fine movements.

We can classify in the same category the student with weightlifting background, because of his muscles he couldn't learn the technical elements.

The student with sports background, where the endurance and the concordance between the leg and arm is very important, like triathlon, swimming, dance, performed the best during our test. The triathlete and swimmer got identical point, 1.71 in average, the dancer got 1.85 points in average. In our opinion, the dancer performed the best in our test, because its leg-arm coordination was the best, and that is a very important element in skiing. Working with these sportsmen was the easiest for us, because they had a sense for this sport, they learned very fast, it seemed like they skied before.

The students with athletic sports and fitness background got the lowest scores: the student who did athletic sports got one point in average, and the student with fitness background got 0.57. The athlete's problem was, that she had no staying power, she couldn't stand the classes, and couldn't develop very fast. The fitness girl was too rigid, inflexible, which led to the fact, that she learned every element very hard.

And last, but not least let's talk about the students with no sport background. To work with these students was very easy, because they had no learned motions, movements, they did everything as we said. Their development was constant, they were brave and loose. Their results are above average, their average score is 1.69. We thought they will not get such high scores, but they performance overpassed my expectations.

Finally, the standard deviation of the results what the subjects obtained at the end of the parctises, with the statistic data,  $\sigma=0.371$  let us to the conclusion, that the learning process was successful, and the most of the participants learned the skills of skiing in a proper limit, just a view cases wich is not significant realised weak achievements.

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