

THE MOTRICAL PARTICULARITIES REGARDING THE STUDENTS' INITIATION INTO BASIC ALPINE SKIING TECHNIQUE

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Abstract: Skiing is the object of research regarding both the technicians and the specialists in this field, due to its diverse implications into sports, economy, industry and social life.

During the instruction the skiers behave differently and the instructor has to face each event that may occur. Sports practice revealed the fact that on the general intelligence background could be observed a particular intelligence which include the specific component of skiing.

The permanent researches of specialists, as the theory and skiing method are directed in order to find the most efficient way of learning. The most efficient ways and procedures are being searched in order to contribute on pedagogical and methodical plan so as any beginner may rapidly and directly learn the modern technique, without any unnecessary tricks.

Keywords: *skiing, techniques, methods*

Introduction

The Alpine skiing method has found different modalities for the learning of technical procedures by anyone willing to slide on skis. The best skiers showed great power of attraction, breaking the barriers of current and traditional schools, more or less dogmatic in certain stages, and have put their mark, forcing a greater receptivity to new, this new being in permanent evolution and being verified in practice by efficiency.

Skiing is a sport of discipline whose expansion, development and methodical and scientific research participate in the general development of this sport and contributes to the classification of sport in general as a science[1].

In the process of learning the techniques, properly organized and directed, should be followed the formation of dynamic stereotypes with a high degree of stability under various conditions, with superior execution and yield indices.

Learning the technique of Alpine skiing is a difficult process, this requires a series of measures for the organization of attractive learning lessons that should focus on the attraction of beginners to skiing and on the removing all negative aspects that could lead to the sensation of fear[2].

The first difficulty in forming and acquiring the skills of movement on skis is that it is conducted under unusual circumstances, not only due to the environment but also to slipping, to the body postures during sliding over different snowy landforms, to the impulses received by the skier at contact level with the slope and not at least, due to the weight and the length of the ski.

For beginners, the first contact with the skis and the slope may influence further developments, they

should be advised to focus their attention on the sensations they perceive at the level of legs, to learn using chopsticks, to learn using support by pushing skis on snow and to react quickly and safely to all shocks in order to avoid losing balance.

The objectives of research

We have established the following research objectives:

- the investigation of certain metrical parameters and the level of controlling the basic techniques of alpine skiing at the beginning and ending of the experiment;
- the experimental application during a training cycle of nonspecific means chosen in a supplementary program to groups of experiment;

The research hypothesis:

The students realize the skiing instruction during a trip organized on continuing preparation periods that last between 8-10 days. Because the period of time for learning is a short, we consider that for a better training there could be embedded some unspecific methods; the working hypothesis can be detached from here.

- if we introduce some means from other sportive branches during the preparation of the beginners, those may help improving the specific skiing driving qualities indicators and may also help to improve the instruction process.

Working methods and the research organization:

- the study of specialty bibliography;
- the method of observation;
- the mathematical and statistical method;
- the pedagogical observation;

The subjects are students in the first year at the University of Sports and Physical Education from Craiova, that are on skiing trip. We have organized two groups each of 10 students, one as experiment and the other as witness, both at the same level of

skiing knowledge and at the same level of driving evolution capacity.

In order to support the working hypothesis we established 4 control samples for verifying students' possibilities. We had the samples with the experiment group and with the witness group as well, both in the beginning of the experiment and in the ending, when we compared the results.

There are the applied samples:

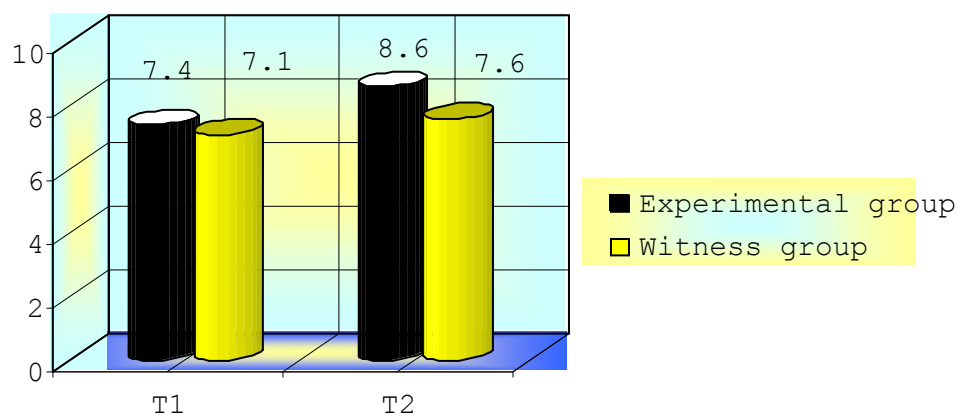
Results

Table 1. Results (grades) **test I**

| Experimental group | | | | | Witness group | | | | |
|--------------------|----------|----------------|----------------|------------------|---------------|----------|----------------|----------------|-------------------|
| Nr. crt. | Subjects | T ₁ | T ₂ | D _{exp} | Nr. crt. | Subjects | T ₁ | T ₂ | D _{witn} |
| 1. | A.S. | 6 | 8 | 2 | 1. | B.D. | 7 | 8 | 1 |
| 2. | D.B. | 7 | 9 | 2 | 2. | M.D. | 7 | 7 | 0 |
| 3. | F.I. | 8 | 9 | 1 | 3. | F.C. | 6 | 7 | 1 |
| 4. | I.I. | 8 | 8 | 0 | 4. | C.G. | 7 | 7 | 0 |
| 5. | P.L. | 7 | 9 | 2 | 5. | S.E. | 8 | 8 | 0 |
| 6. | D.M. | 8 | 9 | 1 | 6. | C.D. | 7 | 8 | 1 |
| 7. | P.C. | 7 | 8 | 1 | 7. | C.M. | 7 | 7 | 0 |
| 8. | C.S. | 7 | 8 | 1 | 8. | Z.V. | 7 | 8 | 1 |
| 9. | B.C. | 8 | 9 | 1 | 9. | R.G. | 7 | 7 | 0 |
| 10. | C.L. | 8 | 9 | 1 | 10. | T.L. | 8 | 9 | 1 |

Table 2. Arithmetical average **test I**

| group \ test | T ₁ | T ₂ |
|--------------------|----------------|----------------|
| EXPERIMENTAL GROUP | 7,4 | 8,6 |
| WITNESS GROUP | 7,1 | 7,6 |



Img. 1. Graphic of arithmetical **test I**

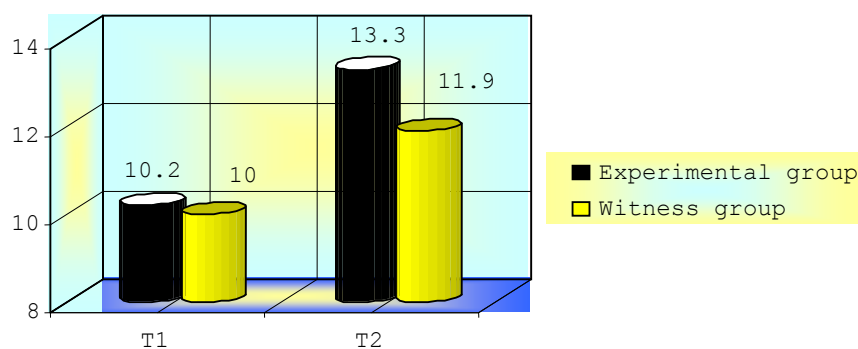
Table 3. Results **test II**

| Experimental group | | | | | Witness group | | | | |
|--------------------|----------|----------------|----------------|------------------|---------------|----------|----------------|----------------|-------------------|
| Nr. crt. | Subjects | T ₁ | T ₂ | D _{exp} | Nr. crt. | Subjects | T ₁ | T ₂ | D _{witn} |
| 1. | A.S. | 9 | 12 | 3 | 1. | B.D. | 10 | 12 | 2 |
| 2. | D.B. | 11 | 15 | 4 | 2. | M.D. | 9 | 11 | 2 |
| 3. | F.I. | 9 | 12 | 3 | 3. | F.C. | 11 | 12 | 1 |
| 4. | I.I. | 10 | 12 | 2 | 4. | C.G. | 9 | 10 | 1 |

| | | | | | | | | | |
|-----|------|----|----|---|-----|------|----|----|---|
| 5. | P.L. | 10 | 13 | 3 | 5. | S.E. | 10 | 12 | 2 |
| 6. | D.M. | 12 | 14 | 2 | 6. | C.D. | 10 | 12 | 2 |
| 7. | P.C. | 10 | 13 | 3 | 7. | C.M. | 10 | 13 | 3 |
| 8. | C.S. | 11 | 15 | 4 | 8. | Z.V. | 12 | 14 | 2 |
| 9. | B.C. | 10 | 14 | 4 | 9. | R.G. | 10 | 12 | 2 |
| 10. | C.L. | 10 | 13 | 3 | 10. | T.L. | 9 | 11 | 2 |

Table 4. Arithmetic average **test II**

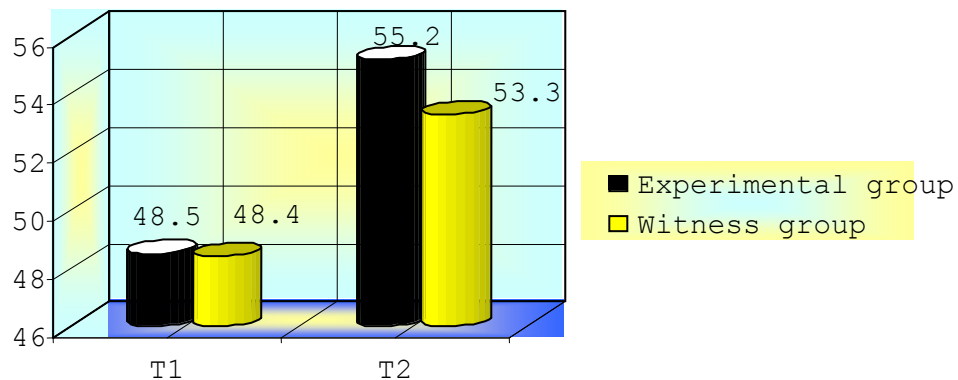
| Group \ Test | T ₁ | T ₂ |
|--------------------|----------------|----------------|
| EXPERIMENTAL GROUP | 10,2 | 13,3 |
| WITNESS GROUP | 10 | 11,9 |

Img. 2. Graphic of arithmetic average **test II**Table 5. Results **test III**

| Experimental group | | | | | Witness group | | | | |
|--------------------|----------|----------------|----------------|------------------|---------------|----------|----------------|----------------|----------------------|
| Nr. crt. | Subjects | T ₁ | T ₂ | D _{exp} | Nr. crt. | Subjects | T ₁ | T ₂ | D _{witness} |
| 1. | A.S. | 48 | 53 | 5 | 1. | B.D. | 47 | 50 | 3 |
| 2. | D.B. | 49 | 54 | 5 | 2. | M.D. | 49 | 53 | 4 |
| 3. | F.I. | 47 | 56 | 9 | 3. | F.C. | 49 | 54 | 5 |
| 4. | I.I. | 50 | 58 | 8 | 4. | C.G. | 51 | 54 | 3 |
| 5. | P.L. | 51 | 56 | 5 | 5. | S.E. | 48 | 53 | 5 |
| 6. | D.M. | 48 | 55 | 7 | 6. | C.D. | 48 | 53 | 5 |
| 7. | P.C. | 48 | 54 | 6 | 7. | C.M. | 47 | 54 | 7 |
| 8. | C.S. | 47 | 55 | 8 | 8. | Z.V. | 48 | 53 | 5 |
| 9. | B.C. | 49 | 56 | 7 | 9. | R.G. | 49 | 55 | 6 |
| 10. | C.L. | 48 | 55 | 7 | 10. | T.L. | 48 | 54 | 6 |

Table 6. Arithmetic average **test III**

| Group \ Test | T ₁ | T ₂ |
|--------------------|----------------|----------------|
| EXPERIMENTAL GROUP | 48,5 | 55,2 |
| WITNESS GROUP | 48,4 | 53,3 |



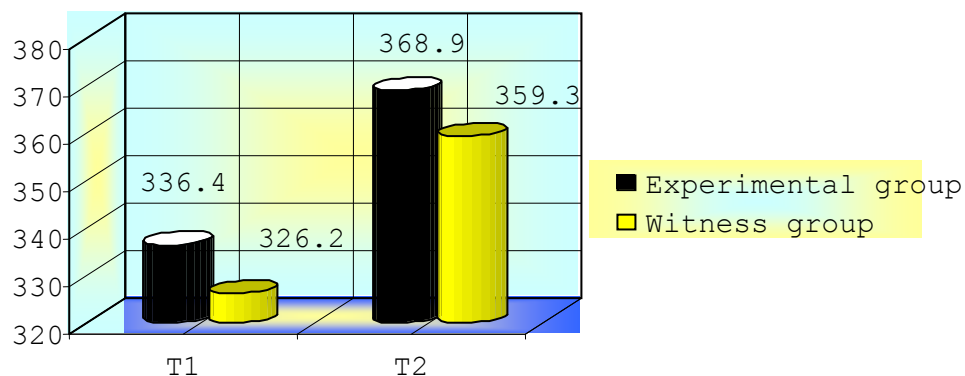
Img. 3. Graphic of arithmetic *test III* - jumping on two legs over a high bar at 20 cm for 30 seconds

Table 7. Results *test IV*

| Experimental group | | | | | Witness group | | | | |
|--------------------|----------|----------------|----------------|------------------|---------------|----------|----------------|----------------|----------------------|
| Nr. crt. | Subjects | T ₁ | T ₂ | D _{exp} | Nr. crt. | Subjects | T ₁ | T ₂ | D _{witness} |
| 1. | A.S. | 330 | 365 | 35 | 1. | B.D. | 350 | 375 | 25 |
| 2. | D.B. | 320 | 360 | 40 | 2. | M.D. | 320 | 355 | 35 |
| 3. | F.I. | 335 | 370 | 35 | 3. | F.C. | 307 | 340 | 33 |
| 4. | I.I. | 339 | 376 | 37 | 4. | C.G. | 320 | 355 | 35 |
| 5. | P.L. | 345 | 378 | 33 | 5. | S.E. | 335 | 373 | 38 |
| 6. | D.M. | 350 | 380 | 30 | 6. | C.D. | 315 | 350 | 35 |
| 7. | P.C. | 350 | 375 | 25 | 7. | C.M. | 320 | 365 | 45 |
| 8. | C.S. | 320 | 355 | 35 | 8. | Z.V. | 325 | 360 | 35 |
| 9. | B.C. | 350 | 375 | 25 | 9. | R.G. | 330 | 355 | 25 |
| 10. | C.L. | 325 | 355 | 30 | 10. | T.L. | 340 | 365 | 25 |

Table 8. Arithmetic average *test IV*

| Group | Test | T ₁ (degrees) | T ₂ (degrees) |
|--------------------|------|-----------------------------|-----------------------------|
| | | | |
| EXPERIMENTAL GROUP | | 336,4 | 368,9 |
| WITNESS GROUP | | 326,2 | 359,3 |



Img. 4. Graphic of arithmetic average *test IV*- "Matorin" sample

Discussions

1. Slalom among obstacles

The experimental group presents, at the final test, an average with 1 point over the witness group (13, 15%).

The "Student" test which was applied at the final test at the average of the two groups led us to the following result: $t=3,68$; $t_{table}=2,101$.

Because $t > t_{table}$, the difference between the two averages is significantly different in a percentage of 95%. Random works only in a percentage of 5%. This led us to the conclusion that the experiment realized through this sample has given the expected results, having only a small percentage of random and error compared to the percentage of credibility.

1. Squats on the left leg for 30 seconds

The experimental group presents at the final test an average with 1,4 better than the witness group (11,76%).

The "Student" test applied on the average of the two groups led us to the following result: $t=2,782$; $t_{table}=2,101$.

Because $t > t_{table}$ the difference between the two averages is significantly different in a percentage of 95%. Random works only in a percentage of 5%. This led us to the conclusion that the experiment realized through this sample has given the expected results, having only a small percentage of random and error compared to the percentage of credibility.

2. Jumping on two legs over a high bar at 20 cm for 30 seconds

The experimental group presents, at the final test, test an average with 1,9 (3,56%) better than the witness group.

The "Student" test applied on the average of the two groups led us to the following result: $t=3,123$; $t_{table}=2,101$.

Because $t > t_{table}$ the difference between the two averages is significantly different in a percentage of 95%. Random works only in a percentage of 5%. This led us to the conclusion that the experiment realized through this sample has given the expected results, having only a small percentage of random and error compared to the percentage of credibility.

3. "Matorin" sample

References

- [1]. Arnaud, A., (2000) - Schi alpin – Noțiuni practice, Ed. Chiron, Paris.
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- [3]. Brabiescu Călinescu L., (2008) - Optimizarea metodologiei de predare și instruire a tehnicii specifice schiului alpin – Teză de doctorat, Pitesti, p. 15

The experimental group presents, at the final test, test an average with 10,2 grade (3,12%) better than the witness group.

The "Student" test applied on the average of the two groups led us to the following result: $t=2,123$; $t_{table}=2,101$.

Because $t > t_{table}$ the difference between the two averages is significantly different in a percentage of 95%. Random works only in a percentage of 5%. This led us to the conclusion that the experiment realized through this sample has given the expected results, having only a small percentage of random and error compared to the percentage of credibility.

Conclusions

The battery of means used at the experimental groups have proven their effectiveness, in the same time contributing to the removal of the training unification, trying to realize a great step ahead on the line of linking the requirements to the international skiing.

By interpreting the obtained results of the experiment we can say that the advanced hypothesis has acquired foundation, and the proposed tasks for the research's development have been totally accomplished.

Observing the results of the applied tests we can see a great level of certainty and a small percentage of random. The certainty, tested by statistical-mathematical calculations, we attribute it to the additional training introduced in the daily routine.

For sustaining of what we say the subjects from witness groups, to which the insignificant qualitative growth we attribute to the other means, to the previous training and to the individual willingness for success. Any used mean, being specific or nonspecific, it must lead to the main purpose that is the learning of skiing. Still, we cannot disregard the rapidity we reach to this purpose.

The first sample, which is considered to be the most important, regarding the learning discipline, revealed a substantial increase of the main procedures' execution in the alpine skiing, but especially of the obstacles. The other samples also prove a high percentage of credibility and a minimum percentage due to random.

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