

ANALYSIS OF THE MOTOR PERFORMANCE OF STUDENTS OF KINESIOLOGY STUDY PROGRAM AND SPECIAL MOTION IN TEACHING / LEARNING / ASSESSMENT OF ALPINE SKIING

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Abstract: *The process of teaching-learning-evaluation in Kinesiology study programme and the motor ability of the Faculty of physical education and sports, Brasov has as main objective the training of specialists, able to satisfy body workers, the needs of the citizens of certain social and economic areas of the country with various disorders of the body. Implementation of the objectives of the formation of specific driving skills of Alpine skiing in the struck the student program has been strongly hit by the weak capacity of the subjects of establishing the first year, due primarily to the selection exam for admission. From this point of view, teaching training in alpine skiing-basic course KMS-had the expected outcome, notes obtained by the trainees being much smaller in comparison with the groups of the SPM and EFS specializations.*

Keywords: *physiotherapy and special teaching process motion, Alpine skiing skills, assessment, results.*

1. Introduction

The training of specialists in any field of activity involves the hard work of both partners in the process, both the specialist teacher and student's specifically. Through the mission, the therapist must acquire a set of information about the human body, but also has to learn to high standards, techniques and methods for the recovery of the affected psychomotor abilities by various agents of internal or external stress. To this end, teaching is conducted by the education plan, which includes

disciplines folded and adjusted by the informative-formative requirements planned at some point to job market's needs, the quality and quantity of information required for the acquisition of skills.

Going on the idea, the more activities with both the wealth of knowledge and skills, the students of specialization Kinesiology and special motion were provided in the shared curricula a number of sport disciplines, including Alpine skiing-initiation course. By going through the technical content and some tactical notions of alpine skiing accumulates

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knowledge, skills and abilities, to educate both basic motor skills, combined, mental, as well as those related to the personality - courage, perseverance, decision, judgment, character, etc. The ultimate objective of the teaching course sought to evaluate technical and tactical skills acquired by the student, necessary for the approach and the attending of a slalom track with a medium difficulty level. In achieving the proposed desideratum, the teaching process carried aimed to build stable, dynamic stereotypes applicable in various conditions with higher indices of execution and efficiency that ensures a quickly and precisely managing of specific movements. The learning process of motor skills involves three steps, each of which is conditioned by subjective and objective factors. The new environment, the complexity of the specific technical procedures used in skiing, the psychomotor ability level of the subject and motor experience, the quality of the motivational as well as the volitive side, the quality of the teaching - learning process are a few factors that can make a difference in the acquisition of motor abilities in alpine skiing. They determine and condition the active involvement in the teaching - learning of the two poles of training - the trainer and the student. [1]

The first stage consists of the ideomotor representation of the motor actions that are to be learned, their explanation and demonstration as well as the actual execution. The difficulties encountered in achieving technical performances focus on many unnecessary movements, uncoordinated, rough, body rigidity, consumption and waste of energy, explainable events of irradiation of nervous excitation that determine the inclusion in the effort of several muscle groups than required and which one with increasing the number of repetitions is diminishing. The used exercises aim the habit to the weight of the ski, consideration

of the sensations of the ski to snow contact to avoid loss of balance, education for the sense of balance used in skiing on gentle and uneven slopes.

Phase II consists of the formation of specific skills, establishing / strengthening / fixing temporary basic links, binding of new elements and inhibition of unnecessary movements. At this stage the exercises are performed with a greater degree of success, safety, stability on skis improved balance capacity and the fear of falling is diminishing.

Stage III has as desideratum the improvement of technical procedures, establishing the dynamic stereotype of the movements relative to the external disturbing factors, varied slope, higher speed, snow quality, etc. [1].

2. Materials and methods

We must mention from the start that students from KMS supported at the admission exam only the biology test (and the average of the baccalaureate exam), and those who have chosen the study programs EFS + SPM were admitted based on motor skills revealed at the sports tests – applicative trail / sports mastery – by choice (and the average of the baccalaureate exam). It is interesting to observe and compare how this experimental research subjects (KMS) have mastered the technical and tactical behavior of alpine skiing compared to the control group (EFS + SPM).

It will also be relevant and certainly adjusted the way for admission exam - for the future - KMS specialization candidates (to endorse the need to impose as admission to the program of study should be based on motor tests and biology test).

The two groups involved in the study were composed of a total of 69 subjects in the experimental group (KMS) and 80 in the control group (EFS + SPM). Both

samples have completed the same content of teaching - learning - evaluation, equal duration of working hours and training period respectively 20 to 31 January 2014, between 8,30-13.30, with a break from 11.00-11.30 . The venue the teaching process was Poiana Brasov, ski slopes "Bradul" Red Road, Sulinar, Lupului, Ruia and Kantzel in the Massif Postăvarul [5], [6], [7].

The content of the didactic process included elements and technical procedures consisting of running downhill position, traverse position, turns, stops, snow plough turns, stem Christie turns pivoting turns, Christie with the uphill ski, slope crossing pipe connections, parallel skiing, chaining / using them depending on the inclination of the slopes and on which the applications have been made [2], [3]. (Table 1).

The trainers of groups responsible for conducting the learning content are part of the winter sports department of the faculty, all of them having certified skills and competences with coach cards in alpine skiing. Were registered daily climbing and gliding distances covered, number of repetitions and the techniques covered / lesson. Scientific research was carried out using the following methods:

- Pedagogical observation held for roll-up of information about the phenomenon studied;
- Pedagogical observation held for cumulating information on the phenomenon of study;
- Pedagogic experiment needed in finding answers for some unknown questions, through their research.
- Analysis of the educational process, the relationship between the planning content and realization.
- Test method that reveals their efficiency on the instructional process.

- statistical processing of data: arithmetic average, dispersion, standard deviation and coefficient of variation. [4]

3. Results and Discussions

In the research carried out for the study we chose two aspects:

- Quantitative side of work submitted by students
- The quality of the technical and tactical acquisitions specific to Alpine skiing.

Regarding the first objective, we recorded daily distance traveled by students, the amount of effort in each training session based on a recording sheets and using pedometers, as presented in Table 2.

To note objectively the ability to apply technical and tactical behavior in the slalom trail we split the procedure of turning into phases and set the specific contents of each phase. Thus, to achieve the swing turn I provided performance descriptors regarding the preparation, initiation, direction and completion of the turn. (Table 3)

Based on this descriptors was achieved the noting for all students by the committee made up of six teachers who participated in the training process and the grades given were the basis for obtaining the final average results. (Table 4)

The second grade had given the objective of testing the technical acquisition - specific tactical of Alpine skiing but also psycho-behavioral capacity under various conditions of the slope, snow consistency and weather.

There have been targeted the following aspects: courage in approaching the slopes with different degrees of difficulty ("Sulinar", "Ruia", "Lupului"), selection of procedures relating the slope inclinations, controlled glide of the ski to ensure proper lowering speed control technique level and adopting behavior

necessary for a safe skiing without injury. (Table 4, graphs 1, 2, 3)

In the performed research we took into account the qualitative evaluation of two aspects:

- The ability of establishing learning and reproduction of a model, in alpine skiing, the students who had a different content from the college entrance exam

(theoretical test KMS and General motility EFS + SPM) (Figure 2);

- The ability of adapting technical behavior, appropriate selecting and applying in terms of the suitable motor actions from a content learned within a period of time and eloquently for any experimentally lot. (Figure 3)

The content of training and work period

Table 1

The experimental group/ control group first year /EFSM										
Technical processes/data	20.01	21.01	22.01	23.01	24.01	27.01	28.01	29.01	30.01	31.01
Accommodation with the skis and snow equipment	Putting and removing the skis, lifting and balancing the legs, lunges, jumping, walking and running. Games for the preparation of the body for the effort, daily ritual 10-15 minutes									
Falling and getting up from the fall	10 repetitions, in first and second class and the occasional applications made									
Walking on flat and walking uphill	200-600 m for educating the sense of balance and skiing 20-40 repetitions × 50-70 m (daily)									
Turns	20-30 repetitions, daily									
Running downhill	25 × 30m	20 × 35m	10 × 25m	6 × 35m	8 × 20m	Used on slopes with low and average inclination				
Stops	25 ×	20 ×	10 ×	6 ×	8 ×					
Snow plough turn	30, 25, 20, 20 repetitions/lesson									
Chains of snow plough turns	Route 3 × 30 m, 5 turns × 50 m, 7 turns × 150 m, turns 10 × 200 m									
Traverse position	20-30 repetitions on 25-40 m, with the various specific movements: front-back balance, vertical balance, weight transfer, etc.									
Side Slipping	Inclined slopes encountered in applications									
Christie with the opening of skies						20 × made singular or stream in a school route				
Christie with the remoteness of the skies						20 × made singular or stream in a school route				
Parallel turn						25-40 single and multiple iterations in the route offered				
Applications	Daily 3-6 miles of sliding									
Control samples										

Table 2

Number of miles travelled /student during initiation period

Group	Walking/pedestrian traversing	Descent/gliding school routes	Sliding applications
Exp.	21km	13,4 km	42 km
Total	76,4 km		

Table 3

Performance descriptors used for the execution of tactical and technical notation of the students in the slalom track (e.g. scoring)

Bypassing phases	The actions tracked	Note									
		10	9	8	7	6	5	4	3	2	1
Preparation of turn	Slow squatting of the body with knee flexion										
	Preparing the arm for scoring										
Triggering the turn	Energetic lifting of the body and forward diving deep										
	The rotation of the knees, pushing the uphill ski in front of the downhill one										
	Transfer the weight on the outside ski										
Conducting the turn	Squat slow and progressive orientation of the knees inside the turn										
	Accentuated uploading the downhill ski with the gradually passing of the body weight in the middle of the skis										
Ending the turn	Return to the average position of the descent of the slope										
Note		5,75									

Table 4

Average marks obtained from samples

Group	Technical level	Applications level
Experimental group	5,97	6,7
Control group	7,33	8,9

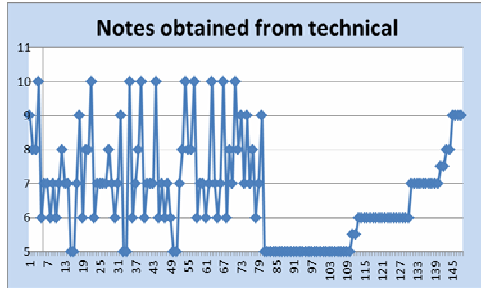


Fig.1. Notes to test technique

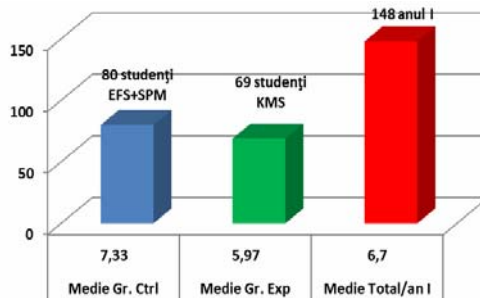


Fig. 2. Comparative Reporting environments from sample technique

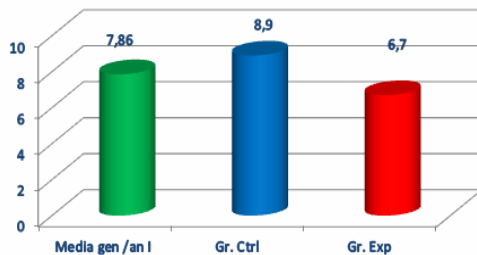


Fig. 3. Comparative reporting environments obtained from applications

After ordering it and mathematically processing the results recorded by the subjects, we obtained an answer more or less relevant. The fact is that, of the total enrolled in the first year of study - 180,

148 participants of the course have passed the examination with notes contained in the 5-10. General Media/year is 6.7 for technical and track applications from 7,87 might be considered average good results if we make reference to the status of snow and ice on the slope in the first three days of the course, unsuitable conditions for initiation in skiing, but all subjects encountered the same conditions.

Analyzing the results processed mathematically we can conclude that students of the Experimental Group recorded a small average technically speaking 5,97, a dispersion value of 0.72, the standard deviation of the mean of 0,84, a coefficient of variability of 14,07% signifying a homogeneous group in terms of level and with a small motric spreader referring to notes obtained by them. These statistical values denote that the subjects from the group had a low level of training and motivating experience previously acquired in college admission, which was shown in getting mediocre results at the course of Alpine Ski tests.

In the control group - where we know from the data from the admission exam - the subjects held - previously acquired of student status - sports activity performance with modest results or good. These facts helped them more in learning motor skills in skiing. Therefore, the average of the group was 7.33 at the technical test with a dispersion of 1.99, standard deviation of 0.84 and the coefficient of variation of 19.28% which statistically defines the group as homogeneous, with a moderate degree of spreading (Table 5).

Table 5

The results of statistical calculations for sample technique

N	M	S ²	S	CV
Exp Group	5,97	0,72	0,84	14,07%
				relatively homogeneous small Scattering
Ctrl Group	7,33	1,99	1,41	19,28%
				Relatively uniform Scattering moderate
Total /an I	6,7	2,15	1,46	21,91%
				Non-uniform Scattering moderate

4. Conclusions

Based on the experimental research and pedagogical considerations regarding specific motor skills of Alpine skiing you can detach the conclusions of that with their purchase:

- Improves balance needed to walk on skis;
- Decreases the number of falls;
- Increase the quality of execution of technical procedures used for displacement;
- Develops precise coordination of the movements, of the musculoskeletal system, creates complex structures and uniform movements;
- Appears safety and convenience motion;
- Helps educate confidence in the ability to execute, courage, perseverance, spirit of adventure, etc.

Concerning the results statistically we conclude that it is imperative that admission to this program of study must also have evidence of motility which ensures the future student with average level of motor skills training, thus facilitating the insertion of motor acquisition carried out the years as a student with a high qualitative grade. There is an obvious difference between the

experimental group with an average of - 5.97 at track and 6.7 at applications, which shows the weakness of their motor capacity compared with the control group the obtained an average of 7.33 at track and 8.9 to applications.

Observing the things through the experimental results, we conclude that the future therapist must himself be at first a well-educated psychometric person to be a viable model for the other people, has to have a good knowledge on how to build robust a healthy people and has to know procedures for recovering the health state.

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