

EFFICIENCY OF THE PROFESSIONAL TRAINING BY WRITTEN AND VERBAL EVALUATION

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Abstract: *Learning is a complex psycho-physical-motor process which is done in a directed manner and at random in order to form a kind of behaviour to cope with social existence. The aim of this study is to highlight the efficiency of teaching that aims both at the theoretical accumulation of information and the formation of practical and applied skills in the field of Physical Education and Sport. For this purpose, we organized a study which comprised 24 students, 20-27-year-olds, divided into two samples: an experimental group and a control group. As an applicative intervention method, we used a text to assess the memory capacity and the implementation of the accumulated information, applied within 6 hours of laboratory seminar, every two weeks, to all students. The findings of the study highlight the fact that conducting written test evaluation contributes more to memorizing information and developing applicative capacity than verbal evaluation and that the use of written and verbal tests in seminars (laboratory works), develops the capacity of students' creativity. The good results are also a consequence of a process of training based on sustained activity, verbal and written practice.*

Key words: *teaching; learning, practicing; evaluation, efficiency.*

1. Introduction

Professional training depends on the ability to retain information, understand and operate with it. The training of specialists is an original act, originality which is specific to each trainer, who individually understands the fulfilment of the task of shaping people, of creating behaviours, of constructing personalities that are responsible for the education of the young generation. According to the Romanian pedagogue [4 p. 423], the shaping of personalities is the one

endowed with “the will of perfection, the understanding of the young in favour of their evolution, morality, intelligence (suppleness in adaptation) enthusiasm, and optimism - cheerfulness” characteristics to be transmitted to and acquired by young mentors. In physical education, professional training involves both the accumulation of information and its transformation into practical ways of working. It is considered a training strategy the idea according to which the immediate practical application of what we have learnt through the practice of

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making / creating an application. The emphasis of the teaching process, as Nicola I emphasized in 1996, "causes selective, permanent and targeted changes in a particular direction, and these can be considered manifestations of learning." A verification by current written papers at the end of a course debate and at the end of a seminar allows for the certification of the activity performance in a relatively short time, but it also gives the possibility of independent knowledge display and the development of the applicative capacity.

Using these papers has the advantage of placing students in a position to apply the information presented and stored in exercises or working methods. The setting up of tests is important in the formulation of topics. The objectives to be achieved must be formulated so as to oblige students to operate with the assimilated knowledge in both verbal communication and written expression. Teaching means the transmission of information, which must be clear, concise, precise, and to address the issue at stake, but its efficiency depends on "the effectiveness of listening which increases when objectives are identified and specified" [7 p. 144]. It is important to make students aware that listening has to ensure understanding, memorizing, analyzing and evaluating the content, as well as applying the information into practice."

"A personality's harmony and perfection depend on the intellectual capacities and, above all, on the exercise of their use" [1 p. 190], an exercise to be initiated and often used in the practical activity for the professional training. "The complexity of the activity of physical education and sport obliges the teacher to know and to observe the general, didactic principles, ... to apply with tact and professionalism the methods, procedures and instructive-

educational means" and know the movement techniques [2, p. 362]. The professional training process, the so-called profession diagram of a teacher, must include "sensory-perceptive qualities, locomotor qualities, physiological qualities, intellectual, emotional and volitional qualities, general and specific skills, personality qualities" [3, p. 39], and this is the hardest and most difficult to achieve, but also the most beautiful. A good teacher is the one who "offers something from the physical and spiritual beauty" [9, p. 109] to those who are preparing for the teaching career, and a good teacher is the one who "manages to use practice in all its forms (verbal, practical, written)" [8, p.72].

2. Materials and Methods

The aim of this study is to highlight the efficiency of teaching that aims both at the theoretical accumulation of information and at the formation of practical and applied skills. In conducting the research, we proceeded from the hypotheses that the evaluation by written tests contributes to a greater extent to the memorization of information and to the formation of the applicative capacity than the verbal evaluation, but also to the idea that the use in the seminars (laboratory works) of written and verbal tests, develops students' creativity and thus helps with the professional training.

The study comprised 24 students, 20-27 years old, divided into two groups: an experimental group and a control group (male and female), participants in the Physical Education and Sports Methodology Course, 2nd year of study, at the Bachelor's Degree level.

As an applicative interventional method, we used a text to assess the memory capacity and the ability to construct /

create exercises (a test assessed with grades, and permanently changed by topic), applied every two weeks, to all students. The research was carried out at FMSHS, in Bacau, between 1st October 2017 and 20th January 2018. For the assessment of the memorizing capacity and the application capacity, we used 6 tests aiming to develop exercises structures for: adherence to the principle of accessibility / intuition, acquisition of the basic running / catching motor skills, acquisition of the utilitarian applicative motor skills, acquiring balance / climbing motor skills, mastery of specific motor skills, speed / coordination learning, strength / endurance development. In the experimental group, we used the written test and the oral test in the control group. The results represented by the grades, recorded in the experimental group, in the written paper, were specified at the next seminar. The results represented by the grades recorded in the control group, in assessing the verbal responses were announced in the seminar. After hearing the answers the common mistakes and the mistakes requiring additional explanations were discussed. As research methods we used the following: bibliographic study, experiment, statistical-mathematical processing, and analysis. It is necessary to improve the quality of the graduates entering the educational system, and the realization of this research highlights the efficiency of using tests that aim at the applicative and creative capacity of the accumulated information.

3. Results and Discussions

The results obtained by the students from the two groups, to be analysed, were statistically processed. The calculated

indicators, according to which we analysed the results, were as follows: arithmetic mean, standard deviation, maximum value and minimum value, the Student Test.

As far as the results of the experimental group are concerned, found in table no. 1, their analysis highlights the following aspects:

- in test number 1 (applied on 19th October 2017), in which students had the task of creating in writing four exercises for learning walking skills, respecting the principle of accessibility or intuition (the students had the choice of one of the two principles), the average had a value of 5.583 points, the maximum value was 8 points and the minimum value of 4 points. The standard deviation had a value of 1.311, which shows a small homogeneity of the team;
- in test number 2 (conducted on 2nd November 2017), in which students had the task to create in writing 4 exercises to assure basic running or catching skills, the mean had a value of 6.417 points, a maximum of 9 points and a minimum of 5 points. The standard deviation had a value of 1.379, which shows a small homogeneity of the team;
- in test number 3 (conducted on 16th November 2017), in which the students had the task to create in writing 4 exercises to ensure the utilitarian balance or climbing motor skills, the mean had a value of 7.250 points, a maximum of 9 points and a minimum of 6 points. The standard deviation recorded an average of 0.965, which highlights a good homogeneity of the team;

Table 1

The results of the experimental group in the written evaluation

Initials	Value of the entrance exam	Value of the written tests							Values of the significance threshold		
		T1	T2	T3	T4	T5	T6	Mean	T.St.	VS	S
1. I.D.T.	7.947	4	6	6	7	7	8	6.33	-1.548	0.900	S
2. I.V.C.	8.612	5	7	6	7	8	8	6.83	-2.063	0.975	S
3. L.M.-P.	9.624	6	6	7	8	9	9	7.50	-1.694	0.900	S
4. M.M.-A.	8.080	7	7	8	8	9	9	8.00	4.901	0.999	S
5. M.V.B.I.	7.935	6	6	7	6	8	8	6.83	-10.335	0.999	S
6. P.D.A.-I.	9.888	8	9	9	9	9	10	9.00	8.147	0.999	S
7. P.V.C.-M.	5.642	4	4	6	7	8	8	6.16	-5.614	0.999	S
8. P.V.M.	5.404	7	8	8	8	9	9	8.16	0.459	N	N
9. S.G-R.	8.940	5	7	8	9	9	10	8.00	0	N	N
10. T.A-F.	8.718	6	7	8	9	9	9	8.00	2.098	0.975	S
11.M.V. A-BI	8.516	5	5	7	8	9	9	7.16	1.097	N	N
12. T.V.D.-I.	5.462	4	5	7	8	8	8	6.66	-2.307	0.975	S
M	7.897	5.583	6.417	7.250	7.833	8.500	8.750	7.386			
D.st.	1.563	1.311	1.379	0.965	0.937	0.674	0.754	0.861			
V. Max.	9.888	8	9	9	9	9	10	9			
V.min	5.404	4	5	6	7	8	8	6.16			
T.st.	28.113	-2.438	-2.756	-2.413	-3.214	-1.376	6.635	47.737			
V.S	0.999	0.975	0.99	0.975	0.99	0.9	0.999	0.999			
S	0.900	S	S	S	S	S	S	S			

Legend: M = mean value; T1 = test 1; T2 = test 2; T3 = test 3; T4= test 4; T5 = test 5; T6 = test 6; D.st. = Standard deviation; T.st. = Student Test; V.S = significance value; S = significance.

- in test number 5 (conducted on 14th December 2017), in which students had the task to create 4 exercises to provide speed or coordination learning, the mean had a value of 8.500 points with a maximum of 9 points and a minimum 8 points. The standard deviation recorded an average of 0.674, which highlights a good homogeneity of the team;
- in test number 6 (performed on 11th January 2018), in which students had the task of creating 4 exercises to ensure the development of strength or endurance the mean had a value of 8.750 points with a maximum of 10 points and a minimum of 8 points. The standard deviation recorded an

average of 0.774, which highlights a good homogeneity of the team;

- the arithmetic mean recorded for the first test was 5.583, for the second of 6.417, for the third 7.250, for the fourth 7.833, for the fifth of 8.500, and for the sixth 8.750.

The Student Test (Table 1) shows a significant evolution concerning the average value for the entrance exam and the group averages of the six tests in 9 students, but also a significant evolution between the entrance exam means and the individual mean values recorded at the end of the study.

As it can also be seen in figure no. 1, the arithmetic mean value of the group increases from one test to the other,

which emphasizes the improvement of the physical exercise creation capacity, an essential goal pursued throughout the semester.

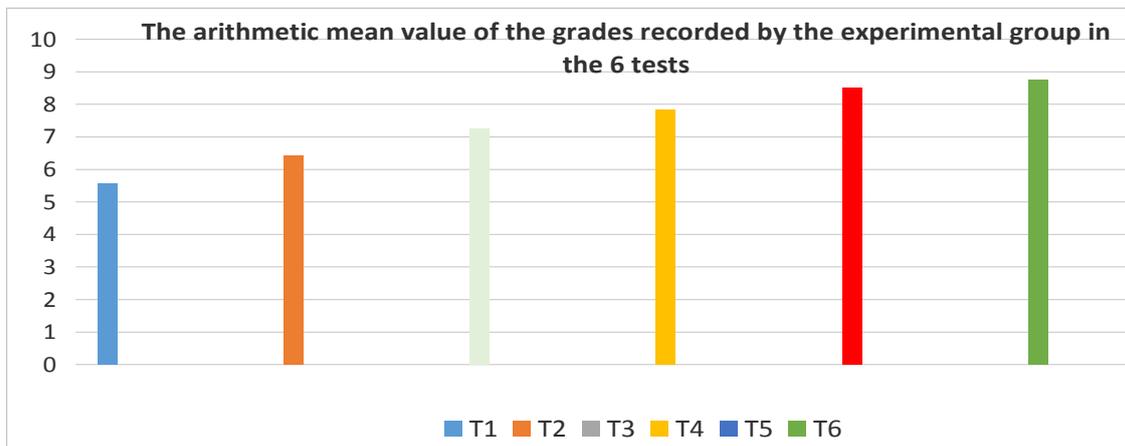


Fig. 1. Graphical representation of the arithmetic mean results in the experimental group, in the 6 tests, in the written evaluation

The results of written test evaluation, as it can be observed, contributes to a great extent to the memorization of information, which is reflected in the written answers formulated, and thus contributes to the formation of applicative capacity and creativity.

Regarding the results of the control group, which can be found in the table no. 2, their analysis highlights the following aspects:

- in test number 1 (19th October 2017), in which students were given the task of verbally creating four exercises to observe the principle of accessibility or intuition in learning walking, having the possibility to choose one of the two, an average of 5.250 points was recorded, a maximum of 8 points and a minimum of 4 points. The standard deviation recorded an average of 1.215, which suggests a small homogeneity of the team;
- in test number 2 (conducted on 2nd November 2017), in which students had the task of verbally creating 4 exercises to ensure the basic running or catching skills, the mean value was 6.083 points, a maximum value of 9 points and a minimum of 5 points. The standard deviation had an average of 1,165, which suggests a small homogeneity of the team;
- in test no. 3 (conducted on 16th November 2017), in which the students had the task of verbally creating 4 exercises to ensure the applicative utilitarian balance or climbing motor skills, the mean value was 6.583 points, the maximum value of 9 points and a minimum of 5 points. The standard deviation had a value of 1.379 which points to a good homogeneity of the team;
- in test no. 4 (conducted on 30th November 2017), in which the students had the task of verbally creating 4 exercises to ensure the acquisition of specific motor skills (a skill at choice in gymnastics or sports games), the mean value was 7.250 points, a maximum of 9 points and a

minimum of 6 points. The standard deviation had a value of 0.925 which

highlights a good homogeneity of the team;

Table 2

The results of the control group in the written evaluation

Initials	Value of the entrance exam	Value of the written tests							Values of the significance threshold		
		T1	T2	T3	T4	T5	T6	Media	T. S	VS	S
1. C.G-V	8.752	4	5	6	8	8	9	6.66	-2.248	0.975	S
2. C.G.C	8.082	6	7	9	6	9	9	7.66	3.164	0.99	S
3. C. V-V	6.673	4	6	7	7	8	7	6.50	-2.170	0.975	S
4. D.A-G	8.286	6	6	7	8	8	8	7.16	1.037	N	N
5. D.A-M	8.388	5	6	6	7	8	9	6.83	4.097	0.999	S
6. D.A-G	5.742	4	5	5	6	6	7	5.50	-0.556	N	N
7. D.G-S	6.096	4	5	5	6	7	7	5.66	-5.583	0.999	S
8. D.I-A	8.098	6	6	7	8	9	9	7.50	2.548	0.99	S
9. D.S.-F.	7.316	5	6	6	7	8	8	6.66	-3.250	0.99	S
10. G.A.	9.231	6	7	7	8	9	9	7.66	5.659	0.999	S
11. G.C-C.	6.192	5	5	5	7	7	7	6.00	-13.205	0.999	S
12. L.M-C.	8.810	8	9	9	9	9	10	9.00	18.494	0.999	S
M	7.639	5.250	6.083	6.583	7.250	8.000	8.250	6.899			
D.st.	1.192	1.215	1.165	1.379	0.965	0.953	1.055	0.981			
V. Max.	9.231	8	9	9	9	9	10	9			
V.min	5.742	4	5	5	6	6	6	5.66			
T.st.	35.642	-2.756	-1.542	-2.205	-3.077	-0.978	5.220	39.167			
V.S	0.999	0.99	0.9	0.975	0.99	N	0.999	0.999			
S	S	S	S	S	S	N	S	S			

Legend: M = mean value; T1 = test 1; T2 = test 2; T3 = test 3; T4 = test 4; T5 = test 5; T6 = test 6; D.st. = Standard deviation; T.st. = Student Test; V.S = significance value; S = significance.

- in test no.5 (14th December 2017), in which the students had the task of verbally creating 4 exercises to provide speed training or coordination, the mean value was 8.000 points, a maximum of 9 points, and the minimum of 6 points. The standard deviation has a value of 0.953 which highlights a good homogeneity of the team;
- in test number 6 (conducted on 11.01. 2018), in which students had the task of verbally creating 4 exercises to ensure the development of strength or endurance, the mean

value was 8.250 points, a maximum of 10 points and a minimum of 6 points. The standard deviation had a value of 1.055, which highlights a good homogeneity of the team;

- the arithmetic mean of the first 5.250 points, the second 6.083 points, the third 6.583 points, the fourth of the 7.250 points, the fifth 8.000 points and the 8.250 points the sixth test. As can be seen in the Chart no. 2, the arithmetic mean value increases from one test to another, which emphasizes the improvement of the physical exercise creation capacity.

The Student Test (Table 2) shows significant evolution in the entrance exam mean and the group mean of the six tests in 11 students but also a significant evolution between the entrance exam means and the individual mean values recorded at the end of the study.

As it can also be seen in figure no. 2, the arithmetic mean value increases from one test to another, which emphasizes the improvement of the physical exercise creation capacity, which is essentially a matter of course throughout the semester.

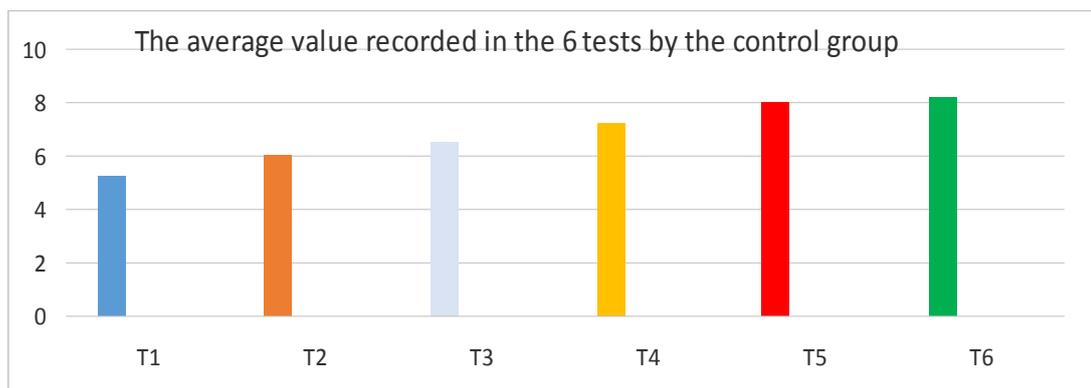


Fig. 2. Graphic representation of the arithmetic mean results in the control group, in the 6 tests, in the written evaluation.

The results of the verbal evaluation also contribute to the memorization of information, which is reflected in the students' verbal responses, and from this analysis underlining the evolution, we can

notice the contribution to the formation of the applicative capacity and creativity.

Regarding **the results of the arithmetic mean of the two groups (experimental and control)** found in table no. 3, their analysis highlights the following aspects:

Table 3

Average results of the experimental group in the written evaluation and of the control group in the verbal evaluation

Initials	Value of the entrance exam	Value of the grades in the written tests						Mean
		T1	T2	T3	T4	T5	T6	
M. Gr. exp.	7.897	5.583	6.417	7.250	7.833	8.500	8.750	7.386
M. Gr. con	7.639	5.250	6.083	6.583	7.250	8.000	8.250	6.899
Difference	0.258	0.333	0.334	0.667	0.573	0.500	0.500	0.487

- the value of the experimental group means increases from the first test to the last test as well as in the control group, which highlights the effectiveness of the two approaches to the professional competence training;
- the increase differences in the arithmetic mean in the six tests is higher for the experimental group than for the control group, with 0.333 points for the first test, 0.334 for the second test, 0.667 for the third test, 0.573 for the fourth and 0.500 points

for the fifth and sixth test, which emphasizes the fact that the learning process is a complex process and can be achieved by different strategies but with different results.

4. Conclusion

Starting from the concept that “a continuous assessment consists in verifying the results of pupils / students / athletes during the instructional-educational process, on smaller, systematic sequences” [6, p. 18] and, by analyzing the recorded results, it is easy to see from the two groups that this evaluation stimulated the process of memorizing the theoretical information, but also the formation of the applicative capacity, represented by the grades received in the written and oral answers in the six tests.

The result analysis of the two groups highlighted the following conclusions:

- the hypothesis according to which conducting the evaluation by written tests contributes to a greater extent to the memorization of information and to the formation of the applicative capacity than the verbal evaluation has been achieved;
- the hypothesis according to which the use of written and verbal tests in the seminars (laboratory works), develops the students’ creativity, has also been confirmed, a point supported by the increase in the value of grades from one test to another, but also of the means in the two groups;
- The good results were also a consequence of a verbal and written practice-based training;
- The written evaluation is more effective than the oral evaluation, a point highlighted by the difference in

value of points between the two assessments, throughout the tests.

The instructive-educational training process is a complex, creative and adaptable process according to the characteristics of each discipline, depending on the capacity and dedication of each trainer / model.

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