

Science, Movement and Health, Vol. XIII, ISSUE 2, 2013
June 2013, 13 (2), 84-89

Original Article

A NEW APPROACH FOR STIMULATING LEARNING IN THE FIELD OF PHYSICAL EDUCATION AND SPORTS

RAȚĂ GLORIA¹, RAȚĂ BOGDAN CONSTANTIN¹, RAȚĂ MARINELA¹, MAREȘ GABRIEL¹

Abstract

The aim of this research is to highlight the efficiency of a new approach for stimulating learning for Physical Education and Sports specialties.

Material and methods. This paper is a study ascertained and performed on 30 students of the Faculty of Sports Movement and Health Sciences during the seminar hours. This study was carried out from February to April 2013 and was based on an item-based protocol regarding the application practices of the theoretical knowledge. The intervention protocol involved during the 14 seminar hours, which are divided into a 30-minute theoretical part and a 60-minute practical part, regarded aspects related to an initial and final evaluation of 8 items. Among the 8 items to be followed during lessons it was aimed to form the students' competences regarding the analysis and argumentation capacity for using methods and means at a certain moment during the educational teaching process. The protocol for monitoring the teaching capacity of the seminar activity for the university discipline Specialty Didactics – Physical Education and Sports comprises 8 items with 2-3 answers each. The protocol, as an assessment instrument, was applied at the beginning of the activity during the 2nd seminar and at the end of the 13th seminar, and as a work instrument, it was used during all the seminars. Every item was granted 3 points for a correct answer, 2 points for a partially correct answer and 0 points for an incorrect answer, the student being allowed to choose only one variant.

Results. The results, gathered according to the application of the protocol both during the initial and final evaluation, were analyzed and processed. The indicators are represented by: arithmetic mean, maximum and minimum value, standard deviation and progression. The arithmetic progression was between 2.40 points and 0.30 points for each item and 7 points in general.

Conclusions. The conclusions highlighted the fact that the means of the score recorded in the final evaluation of the 8 items are higher than the initial means, that the score of the maximum values in the final evaluations are equal to or higher than those in the initial evaluation, and that the score of the minimum values in the final evaluation are equal to or higher than those in the initial evaluation, but also the fact that the value of the progression for the 8 items is between 2.40 and 0.30 points. It was confirmed the hypothesis, according to which if, on a sample of 20 students, we intervene with an approach for stimulating the participation in the formation of professional competences, they will manage to better learn the technique to use methods, means and action strategies. It also underlines the efficiency of the protocol-based intervention. The recorded progress also emphasizes the formation of a critical process of reflection in the activity of students' formation.

Key words: approach, stimulation, learning, physical education, sport .

Introduction

The purpose of this paper is to highlight some simple and efficient possibilities to shape personalities in the teaching process and to emphasize on the importance of thought and imagination in order to develop a creative teaching educational process. "The imagination capacity can be educated" (Becea, 2003, p. 72), but the development of thought and creation of a future teacher depends on the number of strategies and work manners employed and acquired during studies.

Starting from the idea suggested in the paper entitled "Innovative Methods in Adult Education" (Ezechil coord. and Coman, Langa, Soare, Neacșu; Petruța,), we developed a protocol by means of which to "determine a critical reflection process" in students regarding the use of methods and means specific to the teaching-learning-assessment process in Physical

Education. This demarche takes into account the fact that, in the process of professional development, a teacher intends to make his/her students acquire solid knowledge, multiple skills, correct attitudes and competences to use information, personal or group skills and abilities. Since the chosen method or strategy "belongs to the executive side of the action, to the pedagogical praxis, an essential aspect of the educational system, praxiology comes to enlighten many aspects of the theory of the pedagogical act" (Cerghit, 1980), completes and establishes the habit to work, create and adapt the means and methodological procedures to the particularities of the persons involved in the educational system.

The argumentation of our demarche to realise a formative, thorough, applicative and efficient process is based on inserting some paradigms of pedagogy performed in terms of interrelationing, namely

¹"Vasile Alecsandri" University Of Bacău, ROMANIA

Email: Gloria_Rata50@Hotmail.Comgloria_Rata50@Hotmail.Com

Received 16.01.2013 / Accepted 17.05.2012

stimulating teacher's cognition to perform an attractive teaching act and also an accumulative, stable, thorough and creative act. Confidence and conscience of the possibilities of which every student is becoming aware little by little have a beneficial effect on the character's development, on the cultivation and education of attention in professional training. "Nowadays, all the explanatory approaches ... include arguments represented by contemporary sciences such as biophysics, biochemistry, physics, biology" (Neacșu, C-tin., Mamulaș, I., 2012), but also those represented and stipulated by psychology, pedagogy, physiology and methodology. Or forming professional competences, as priority objective of the university system "means the constitutive substratum of a capacity, preexisting this which will depend on the natural development of an ability, on the educational orientation, possibly on the practices" (Tudor, 2001) used in the teaching process within the respective subject areas. The process of professional training is a complex process which is based on "constructing and fundamenting a theory and human development in a relatively-determined scientific, historical, socio-cultural, psychological and pedagogical context" (Neacșu, 2010), but influenced by the evolution of the educational system and society and even by people's education. Humans are characterized by their capacity to be educated, and "they exist within the world's general movement" (Vințanu, 2008), so they are subjected to a continuous training and transformation process. The professional training process as a complex and continuous one is based on the immediate and long-term reaction of the person who is subjected to a directed training and education. "A reaction is that response action when the performer knows the movement or action to be done" (Epuran, Stănescu, 2010) and shapes it according to the situations occurred, given requirements and response capacity.

Students' professional training mostly depends on the manner in which they are stimulated during the face-to-face encounters according to the requirements stipulated and the assessment for meeting the requirements.

Material And Methods

During this research we used the following methods: documentation, observation, ascertained experiment, testing, statistical-mathematical processing (Excel 2003), graphical method, data analysis and interpretation.

This paper aims to perform an ascertained experiment by means of which we will underline the possibility to develop an approach for stimulating learning in the field of Physical Education and Sports, based on choosing answer choices and arguing them during the seminar activities and practical courses.

The research tried to verify a hypothesis on a 20-student sample. Our hypothesis was to check *if we intervene in the students' professional training*

process with an approach for stimulating learning and participation in forming competences by asking to choose and elaborate their answers, according to concrete situations, students manage to improve the technique to choose methods, means and action strategies.

In order to demonstrate the hypothesis, we developed an intervention protocol used during the 14 seminar hours, which are divided into a 30-minute theoretical part and a 60-minute practical part, regarding aspects related to an initial and final evaluation of 8 items. The protocol was employed as a work instrument during the 12 seminars, but also as an assessment instrument in the initial and final evaluation. It comprised 8 items by means of which we followed the formation of students' competences related to their analysis and argumentation capacities to use certain methods and means at different times of the performed activity during the educational teaching process.

The 8 items of the protocol for monitoring the teaching capacity of the seminar activity for the university discipline Specialty Didactics – Physical Education and Sports had a question format with 2-3 answer choices. Choosing one of the answers, choice which was given a certain score required from the students both knowledge and thought. The protocol was completed at the beginning of the 2nd seminar and at the end of the 14th seminar. Every item was granted 3 points for a correct answer, 2 points for a partially correct answer and 0 points for an incorrect answer, the student being allowed to choose only one variant and received the corresponding score.

The 8 items and the score values of their answers were the following:

1. *Would it be possible to choose a teaching method and adapt it to students of different ages?* (Answer: yes = 3 points / no = 0 points for the 1st part of the question and no = 0 points / yes = 3 points, for the second part of the question);
2. *What method is the most efficient in forming perception and understanding of a movement performance?* (Answer: demonstration = 3 points / description = 2 points / explanation = 2 points);
3. *What method can you use more efficiently for understanding information?* (Answer: yes – explanation = 3 points / narration = 2 points / lecture = 0 points);
4. *What method has a higher accumulative value?* (Answer: demonstration = 2 points / practice = 3 points / observation = 0 points);
5. *Do teachers use familiar methods or would you prefer new ones?* (Answer: yes = 2 points / no, we prefer new methods too = 3 points);
6. *How can you choose the best exercise for learning a skill?* (Answer: according to what we learnt during sports disciplines = 2 points / analyzing the group's possibilities = 3 points);
7. *How can you choose the most effective exercise for acquiring a motor skill?* (Answer:

following the methodological sequence = 2 points / by analyzing efficiency = 3 points);

8. *Can you use a random exercise in the initiation stage for a motor skill?* (Answer: yes = 2 points /no = 3 points).

Results

The results recorded according to the protocol both in the initial and final evaluation are gathered and processed in table no. 1. Moreover, over the 12 lessons, different protocols were used on different topics, so that students could get accustomed to the exciting way of using the information received. The indicators which were calculated and analyzed are represented by: the arithmetic mean, maximum value, minimum value, standard deviation and progression.

The result analysis was made according to the score recorded by the group for every item and its

general score and also by every participant individually for the general score. We mainly focused on changing and developing students' conception of a process as a way of action in their professional training.

Group result analysis

For the item *Would it be possible to choose a teaching method and adapt it to students of different ages?* the answers highlighted that the mean recorded in the initial evaluation 2.55 points and in the final evaluation, 4.95 points. The maximum value recorded 6 points in the initial and final evaluation, and the minimum value recorded 0 points in the initial evaluation and 3 points in the final evaluation. The progress between the two evaluations, the initial and the final was 2.40 points, a progress which is close to the score recorded in the initial stage.

Table no. 1 – Results of the Protocol for stimulating teaching capacity

Crt. no.	I.	1		2		3		4		5		6		7		8		Total points	
		I	F	I	F	I	F	I	F	I	F	I	F	I	F	I	F	I	F
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6	B. S	3	3	0	2	3	3	0	3	2	3	2	2	3	3	3	3	16	22
9	P. M	3	3	0	2	0	2	2	3	2	3	2	3	2	3	2	3	13	22
12	V. A	3	3	0	2	3	3	3	3	2	3	2	2	3	3	3	3	19	22
17	S.E	3	3	2	3	0	2	2	2	3	3	2	3	2	3	2	3	16	22
3	N. J	0	3	0	2	2	3	0	3	2	3	2	3	2	3	2	3	10	23
14	B.A	0	3	2	3	3	3	0	3	3	3	3	3	2	2	2	3	14	23
20	D.O	3	3	3	3	2	3	2	3	2	2	3	3	2	3	3	3	20	23
2	P.E	0	6	2	3	3	3	3	3	2	3	2	2	2	2	2	2	16	24
8	L. A	0	6	2	3	0	3	3	3	2	2	3	3	2	2	2	2	14	24
19	P.D	0	6	2	3	0	2	3	3	2	2	2	3	2	2	3	3	14	24
16	Z.I	6	6	3	3	0	3	3	3	3	3	2	2	3	3	2	2	22	25
4	L. G	3	6	0	3	3	3	3	3	2	3	3	3	3	3	3	3	21	26
5	Z. G	6	6	2	3	0	3	3	3	2	2	3	3	2	3	2	3	20	26
7	C. T	3	6	3	3	3	3	0	2	3	3	2	3	3	3	3	3	20	26
13	A.E	0	6	0	3	0	3	3	3	2	3	2	3	3	3	2	2	12	26
15	M.A	3	6	3	3	3	3	0	2	2	3	3	3	2	3	3	3	19	26
18	R.A	3	6	0	2	3	3	3	3	3	3	3	3	3	3	3	3	21	26
1	P. B	3	6	3	3	3	3	2	3	3	3	3	3	3	3	3	3	23	27
10	M. V	3	6	2	3	3	3	3	3	3	3	3	3	3	3	3	3	21	27
11	J. DI	6	6	2	3	2	3	0	3	3	3	3	3	2	3	2	3	20	27
X		2.55	4.95	1.55	2.75	1.8	2.85	1.90	2.85	2.4	2.8	2.5	2.90	2.45	2.80	2.50	2.80	17.55	24.55
Progression		2.40		1.20		1.05		0.95		0.40		0.30		0.35		0.30		7.00	
S		2.01	1.47	1.23	0.44	1.40	0.37	1.40	0.37	0.50	0.41	0.51	0.41	0.51	0.41	0.51	0.41	3.75	1.85
V. max		6	6	3	3	3	3	3	3	3	3	3	3	3	3	3	3	23	27
V. min		0	3	0	2	0	2	0	2	2	2	2	2	2	2	2	2	10	22

*Legend: I= Subjects' Initials 1. *Would it be possible to choose a teaching method and adapt it to students of different ages?*; 2. *What method is the most efficient in forming perception and understanding of a movement performance?*; 3. *What method can you use more efficiently for understanding information?*; 4. *What method has a higher accumulative value?*; 5. *Do teachers use familiar methods or would you prefer new ones?*; 6. *How can you choose the best exercise for learning a skill?*; 7. *How can you choose the most effective exercise for acquiring a motor skill?*; 8. *Can you use a random exercise in the initiation stage for a motor skill?*

For the item *What method is the most efficient in forming perception and understanding of a movement performance?* the average mean of the answers was 1.55 points in the initial evaluation and 2.75 points in the final evaluation. The maximum value recorded 3 points in the initial and final evaluation, but the minimum value recorded 0 points in the initial evaluation and 2 points in the final evaluation. The progression between the initial and final evaluation was 1.20 points, therefore a good and obvious progress.

For the item *What method can you use more efficiently for understanding information?* the average mean of the answers was 1.80 points in the initial evaluation and 2.85 points in the final evaluation. The maximum value recorded 3 points in the initial and final evaluation, and the minimum value recorded 0 points in the initial evaluation and 2 points in the final evaluation. The progression between the initial and final evaluation was 1.05 points, a good progress as well.

For the item *What method has a higher accumulative value?*, the average mean of the answers was 1.90 points in the initial evaluation and 2.85 points in the final evaluation. The maximum value recorded 3 points in the initial and final evaluation, and the minimum value recorded 0 points in the initial evaluation and 2 points in the final evaluation. The progression between the initial and final evaluation was 0.95 points.

For the item *Do teachers use familiar methods or would you prefer new ones?*, the average mean of the answers was 2.40 points in the initial evaluation and 2.80 points in the final evaluation. The maximum value recorded 3 points in the initial and final evaluation, and the minimum value recorded 2 points in the initial and final evaluation. The progression between the initial and final evaluation was 0.40 points.

For the item *How can you choose the best exercise for learning a skill?*, the average mean of the answers was 2.50 points in the initial evaluation and 2.80 points in the final evaluation. The maximum value recorded 3 points in the initial and final evaluation, but the minimum value recorded 2 points in the initial and final evaluation. The progression between the initial and final evaluation was 0.30 points, a small increase as well.

For the item *How can you choose the most effective exercise for acquiring a motor skill*, the average mean of the answers was 2.45 points in the initial evaluation and 2.80 points in the final evaluation. The maximum value recorded 3 points in the initial and final evaluation, but the minimum value recorded 2 points in the initial and final evaluation. The progression between the initial and final evaluation was 0.35 points.

For the item *Can you use a random exercise in the initiation stage for a motor skill?* the average mean of the answers was 2.50 points in the initial evaluation and 2.80 points in the final evaluation. The maximum value recorded 3 points in the initial and final evaluation, but the minimum value recorded 2 points in the initial and final evaluation. The progression between the initial and final evaluation was 0.30 points.

Individual result analysis

In table no. 1, in columns 19 and 20, we present the total scores recorded by the students in the two evaluations (initial and final).

The data analysis represented in graphic no. 1, highlights the following aspects:

- In the initial evaluation, the general scores accumulated by every student have values between 10 and 23 de points. Four students are in the first half of the general score with values between 10 and 14 points, and 16 students are the superior half with scores between 16 and 23 points;

- In the final evaluation the general scores accumulated by every student have values between 22 and 23 points. All 20 students are in the superior half, which underlines the changes in their initial concepts as a result of the teaching educational act.;
- In the final evaluation 6 students recorded 26 points each and 3 of them, 27 points;
- 15 students had a progress from the initial evaluation to the final evaluation with scores between 3 and 9 points;
- 5 students progressed from the initial to the evaluation, with scores between 10 and 14 points;
- The group's average value was 17.55 points in the initial evaluation, a little over the half of the possible minimum value, and in the the final evaluation, 24.55 points a little under the possible maximum mean.

Discussions

Regarding the teaching and instructional process, Gréhaigne, Godbout, Bouthier 2001) emphasize that "the elements on which perception is based are discussed in the interpretation, anticipation and decision making". The authors, in an analysis of the educational and instructive process for a team present a pedagogical approach called the "dynamic pattern" comprising, (a) "setting action, (b) observing settings and debating them", (c) in order to achieve „the ultimate aim of acquiring strategic and tactical knowledge", necessary in any teaching approach in team sports.

After an intervention structured for a determined period, following the strategy described, the progress (as it is also observed in the graphic no.2) is not great, between 2.40 and 0.30 points, but demonstrates the efficiency of the activity of the professional training process by observing how to stimulate the learning process.

The total score mean of the 20 students had a value of 17.55 points in the initial evaluation and 24.55 points in the final evaluation. The maximum value recorded 23 points in the initial evaluation and 27 points in the final evaluation, and the minimum value recorded 10 points in the initial evaluation and 22 points in the final evaluation, and it shows a real progress imposed and influenced by directing and formulating teaching-educational tasks.

As Kokaj, Hein, (2003), stress, teachers need, in order to create a learning environment, several stimulating strategies, which could lead students to perception and comprehension. "They should seek to provide a positive general feedback feedback" which is directed towards the acquisition of skills, in order to create a learning environment". In our case, the progress mean, recorded at the group level was 7 points, which underlines the efficiency of the question-

based strategy for stimulating thought at the moment of choosing the work method or the action plan.

The permanent analysis of students' activity regarding their professional development as well as the stimulation of their curiosity and reactivity by different means constitute the main and necessary directions in the evolutionary teaching act, an aspect which is also underlined by Hassandra and Goudas (2003,) who state that "a wide variety of social factors influence the students' intrinsic motivation in physical education. These must also be taken into account when planning the physical education lessons".

Conclusions

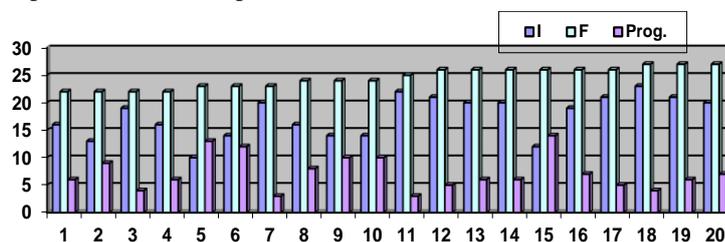
This study allowed us to present a series of aspects regarding the results of the students studying at Physical Education and Sports Specialty and attending the courses from the Teacher Training Department. The results analysis and discussion enable us to draw the following conclusions:

- The means of the scores recorded at the final evaluation, for the 8 items are higher than the initial means;
- The maximum values in the final evaluation are equal to or higher than those in the initial evaluation;
- The scores of the minimum values are equal to or higher than those in the initial evaluation
- For the 8 items the values of the standard deviation are between 2.01 and 0.51 in the initial evaluation and between 1.47 and 0.30 in the final evaluation;
- The progression value is 2.40 points according to the choice of the teaching

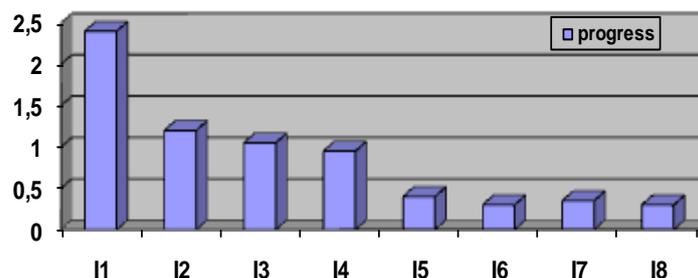
method and its adaptation to students' age;

- Students progressed by 1.20 points according to the most efficient method in forming the perception and understanding of a movement;
- a progression of 1.05 points was recorded for using a method to understand information;
- students progressed by 0.95 points according to the higher accumulative value of a method;
- we recorded a progression of 0.40 points for the tendency to use a softer method;
- the progression value of 0.30 points was recorded for choosing an exercise to learn a new skill according to the group possibilities;
- students progressed by 0.35 points at choosing an exercise according to its efficiency;
- the progression value is 0.30 points for not using a random exercise in the initiation stage;
- the hypothesis according to which if, on a sample of 20 students, we intervene with an approach for stimulating learning and stimulating participation in the formation of professional competences, they will manage to better learn the technique to use methods, means and action strategies, was confirmed;
- the new approach for stimulating learning in the field of Physical Education and Sports, based on the 8-item protocol constitutes a highly efficient work instrument.

Graphic no. 1 – Representation of the points accumulated in the initial and final evaluation and the recorded progression



Graphic no. 2- Representation of the progression recorded from the initial evaluation to the final evaluation



References

- Becea, L., 2003, Schi alpin – Soluții complementare de instruire Edit. Printech, București, România. pag. 72.
- Cerghit, I., 1980, Metode de învățământ, Edit Didactică și Pedagogică, București, România, p.16.
- Epuran, M., Stănescu, M., 2010, Învățarea motrică aplicații în activități corporale, Edit. Discobolul, București, România.
- Ezechil, L., Coord. Coman, P, Langa C, Soare E., Neacșu M., Petruța G., 2011, Metode inovative în educația adulților, Edit. Paralela , Pitești, România.
- GRÉHAIGNE, JF., GODBOUT, P., BOUTHIER, D., 2001, The Teaching and Learning of Decision Making in Team Sports, Quest, Vol 53: 1, 2001, 59-76
- Hassandra, M., Goudas, M., 2003, Examining factors associated with intrinsic motivation in physical education: a qualitative approach¹, Psychology, of Sport and Exercise, Volume 4, (3), iuly, 2003, 211-223
- Kokaj A., Hein, V., 2003, Perceptions of teacher's feedback and learning environment as predictors of intrinsic motivation in physical education, Psychology, of Sport and Exercise, Volume 4,(3), oct, 2003, 33-346
- Neacșu, C-Tin., Mamulaș, I., 2012, Compendiu de psihotronică, Edit. BREN, București, România, p.11
- Neacșu, I., 2010, Introducere în psihologia educației și a dezvoltării, Colecția – Științele educației, Edit. Collegium Polirom, București, România, p. 79
- Tudor, V., 2001, Evaluarea în educația fizică școlară, pag. 53, Edit. Printech, București, România.
- Vințanu, N., 2008, Educația, Edit. ZERANA FLORES, București, România, p. 35.