

## The Students' Mentality from the Petroleum-Gas University – Faculty of Mechanical Engineering and Electronics Regarding the Status and the Importance of Physical Activities in the Education for a Healthy Life

LUPU ELENA

Physical Education and Sport Department  
Petroleum-Gas University of Ploiesti  
Bucharest Bvd., no. 39, 100520  
ROMANIA

[lupu\\_1ln@yahoo.com](mailto:lupu_1ln@yahoo.com) <http://www.upg-ploiesti.ro>

SUDITU MIHAELA

Department for Teachers Training  
Petroleum-Gas University of Ploiesti  
Bucharest Bvd., no. 39, 100520  
ROMANIA

[msuditu@yahoo.com](mailto:msuditu@yahoo.com) <http://www.upg-ploiesti.ro>

SAFTA CRISTINA

Department for Teachers Training  
Petroleum-Gas University of Ploiesti  
Bucharest Bvd., no. 39, 100520  
ROMANIA

[crystyne\\_s@yahoo.com](mailto:crystyne_s@yahoo.com) <http://www.upg-ploiesti.ro>

**Abstract:** In the process of mental education for a healthy life, a particularly important role is played by body activities and the extent to which we are able to implement these activities in the academic programme of students in order to raise their interest. It is widely acknowledged that body activities go beyond P.E. domain, but they are connected with it because P.E. is a component of general education and it has as a main purpose the development of physical, psychological, sociocultural qualities of a person. Therefore, P.E. represents an important part of general education, being an act of culture over years and an emancipation method with a pedagogical content.

**Purpose.** From the instructive-educative point of view, P.E. is a bilateral process in which, under the specialists' management, the students are systematically under influences that are permanently in agreement with educational objectives, especially with those of physical, psychomotor and psychological improvement. This is why in the present research we have oriented towards a methodology design which will be the basis of teaching in the P.E. lesson and it will help students to understand the educational benefits given by exercising.

**Methods.** The respondents are students of the Petroleum-Gas University of Ploiesti, in number of 200 subjects, distributed in the research as following: we had an Experiment Group (G.E. – 100 subjects) and a Control Group (G.C. – 100 subjects) to demonstrate the importance of the chosen topic, but also the hypothesis. We prepared a special program, different from the classical approach, and we started to teach the students on these basis, watching the impact of the independent variable.

**Results.** The students' mentality regarding physical activities as a mirror to education, may be changed through the introduction of sports activities which can induce a state of pleasure, and not a psychological and physical discomfort, triggered by competition and marks. Physical activities, thus becoming a necessity, a piece of education for motion taught in school which may be transmitted to future generation as well.

**Conclusions.** The scientific research regarding the problem „The students' mentality from the Petroleum-Gas University of Ploiesti – Faculty of Mechanical Engineering and Electronics regarding the role and importance of physical activities in the process of education for a healthy life. The Students' Mentality from the Petroleum-Gas University – Faculty of Mechanical Engineering and Electronics Regarding the Status and the Importance of Physical Activities in the Education

for a Healthy Life has been studied little in our country and that is why I have chosen this theme, like a necessity, having as the main purpose refreshing the domain with new information and launching new discussions regarding this theme.

**Keywords:** Mentality , Student, Higher education, Mechanical Engineering and Electronics, Body activities, Education, Games, Healthy life, Competition, Psychomotor activities, Engineers.

## 1. Introduction

The domain that studies body activities, the practice of sports exercises,,... in its great diversity, has been in the past decades the object of reflection for many specialists .... who considered mandatory to submit their analyses to the conceptual and methodological requirements of scientific research. Pedagogical concerns can not replace a theory of the field, and this can not be conceived outside a science of physical actions "(A. Dragnea, A. Bota, 1999 p.32). To accept motion and to change their mentality, students need experiences that they can acquire during a lesson, in the gym, and above this they need the education to be done through ,, the individual's participation ... at his social consciousness" (J. Dewey, 1992 p. 46), thus education being ,,... the manner of transmitting culture (culture of motion here) and of the progress

of civilization, allowing the renewal of the social group ... as a function of the first class "(J. Dewey, 1992 p. 34) The behaviour is relevant and it shows the properties of the human being to interact with the surrounding environment through external (psychomotor) and internal (psychical) activities. The human being, who, is detached and separated from the other living beings in speaking and thinking, will use the physical and psychical activity to evolve for his own education. That is why, at the age when the growing and developing processes are present, the concept of education through Physical Education can not be absent from the curricula to be (including the first years spent at the University).

## 2. Hypothesis

This research started from the assumption that through the explicit introduction in the university syllabus of sports competitions in each lesson, in parallel with the imposed curriculum and sustaining the required control exercises under the

form of a competition, will produce positive changes in students' thinking regarding the importance of body activities in education for a healthy life, which will trigger the frequency in classes and an increased efficiency of training.

## 3. Subjects

The research was made at the Petroleum-Gas University of Ploiesti on an Experiment Group and a Control Group in order to show the importance of the chosen theme, but to confirm the hypothesis. In the research were included 200 students. P.E. lessons are obligatory for students in the I and II year and they are included in the syllabus. The

subjects have been chosen from the Faculty of Mechanical Engineering and Electronics, as I have taken into consideration the following aspects: that I was a professor for these groups, the specific of their job that requires a good physical condition and a high endurance to effort, as compared for example with the students Letters and Sciences, and a natural opening to motion of the first, perhaps due to the fact that there are more boys enrolled in the faculty.

## 4. Research Methods

At the basis of the research laid the following methods: Bibliographic Study Method;

Observation Method; The Investigation Method (conversation, questionnaire etc.); Teaching Experiment Method; Performance-Measurement of the Subjects; Statistical Method; Graphic Method.

## 5. Research objectives

- Completing specialized information regarding the importance of education for a healthy life through psychomotor activities;
- Designing a psychomotor program which will stay at the basis of instruction in P.E. lesson and of changing the students' opinion regarding P.E.

## 6. Problem Solution

As a result of the research, we have seen that students are coming from the secondary education to the higher education with a wrong mentality regarding the implication in P.E. activity, preferring a medical exemption instead of exercising.

We believe that their opinion regarding psychomotor activity can be changed with the introduction of some sports activities that will produce a pleasant mood and not a psycho-physical discomfort. Conceiving a university program made of sports games like competitions; playing with control events and constructive discussions as dialogues not monologues at the end of each lesson represent an alternative in changing the students' opinion.

activity, showing in this way the educational and socializer role of psychomotor activities;

- Removing the negative attitudes towards P.E. through the proposed programs;
- Registering the students' positive opinion through the feedback education-movement-education, having a role in achieving the instruction.

To demonstrate the efficiency of the program and to confirm the hypothesis, we organized the next measure in **3 steps**:

**1.** We studied the participative implication (for example the frequency and participation of students in lessons, the number of the people who are medical exempt), making an initial test and a final one for both Experiment and Control Groups through 2 years. In the II year the number of medical exemptions in Experiment Group has decreased, and increases the students' frequency in classes. In the Control Group the modifications are not important.

### Participative Implication (attendance in lesson and medical exemptions )

Table 1

Characteristic indicators	G.E.(T.I.)	G.C.(T.I.)	G.E.(T.F.)	G.C.(T.F.)
Total	100	100	100	100
Medical Exempts	25	20	15	27
Total number in noting	75	80	85	73

**2.** Psychomotor conduct through psychomotor testing (for example 50m run, standing broad jump – bilateral game with theme) and evaluating through control events. I have to mention that P.E. lessons of the Control Group were taught by

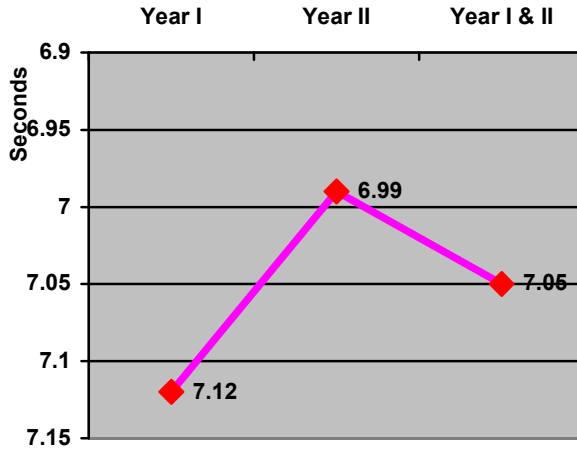
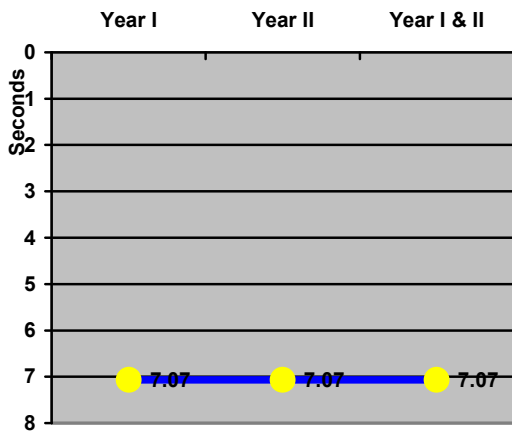
another teacher in the same conditions, but the psychomotor activity and the control events were made after the current program and the group did not have the same program as the Experiment Group. The results and modifications can be seen in Graphic no.1.

**Graphic Representation of Static Indicators for the Psychomotor Events (Students)  
Mechanics Engineering and Electronics Faculty 2007-2008; 2008-2009**

**Graphic no.1**

**Group Control**

**Group Experiment**

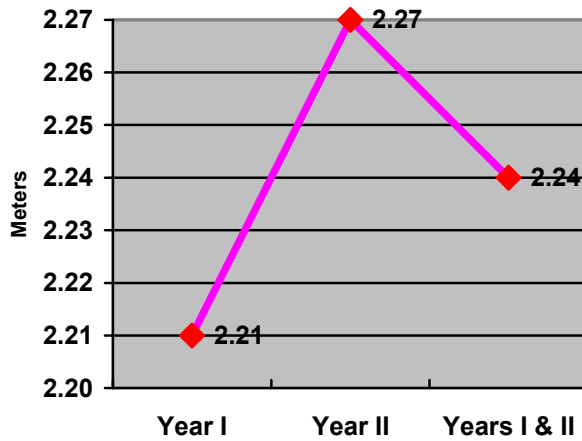
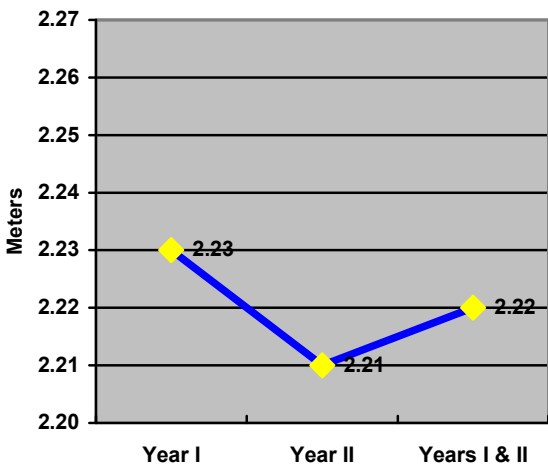


**a) 50m Run**

**c) 50m Run**

**Group Control**

**Group Experiment**



**b) Standing broad jump**

**d) Standing broad jump**

**Legend: I.M.E. = Mechanics Engineering and Electronics**

3. To verify the students' opinion we have applied a questionnaire having the theme „Education for a healthy life through psychomotor activities in the opinion of students of Engineering Faculties”. It was structured on the basis of 10 items and we followed

the students' point of view when they first came at the University and their opinion when they finished the 2 years, regarding the idea of practicing physical exercises in lessons and in their leisure time, the behavior during the lessons, the conduct

manifestations, opinions and suggestions regarding the activity development. We analysed starting the explicative step with Question no.2, because Question no.1 is a question with free answer: „What are the reasons that determine you to accept or reject the psychomotor activities from the university program?” Students answered that the main reason is that the gym is overloaded. Neither teachers nor the university program are guilty of this. Before

#### A .Centralizing Table with the Subjects' Answers at the Questionnaire

1990 the number of students was smaller than in the present day, the place being enough. After 1990 the Petroleum-Gas University suffered a diversification of the types of school, the number of students doubled and the space for P.E. became insufficient. The results obtained after applying the questionnaire will be presented in percentage in the table, symbolically noted (A) and in a graph symbolically noted (B), as following:

**Table 2**

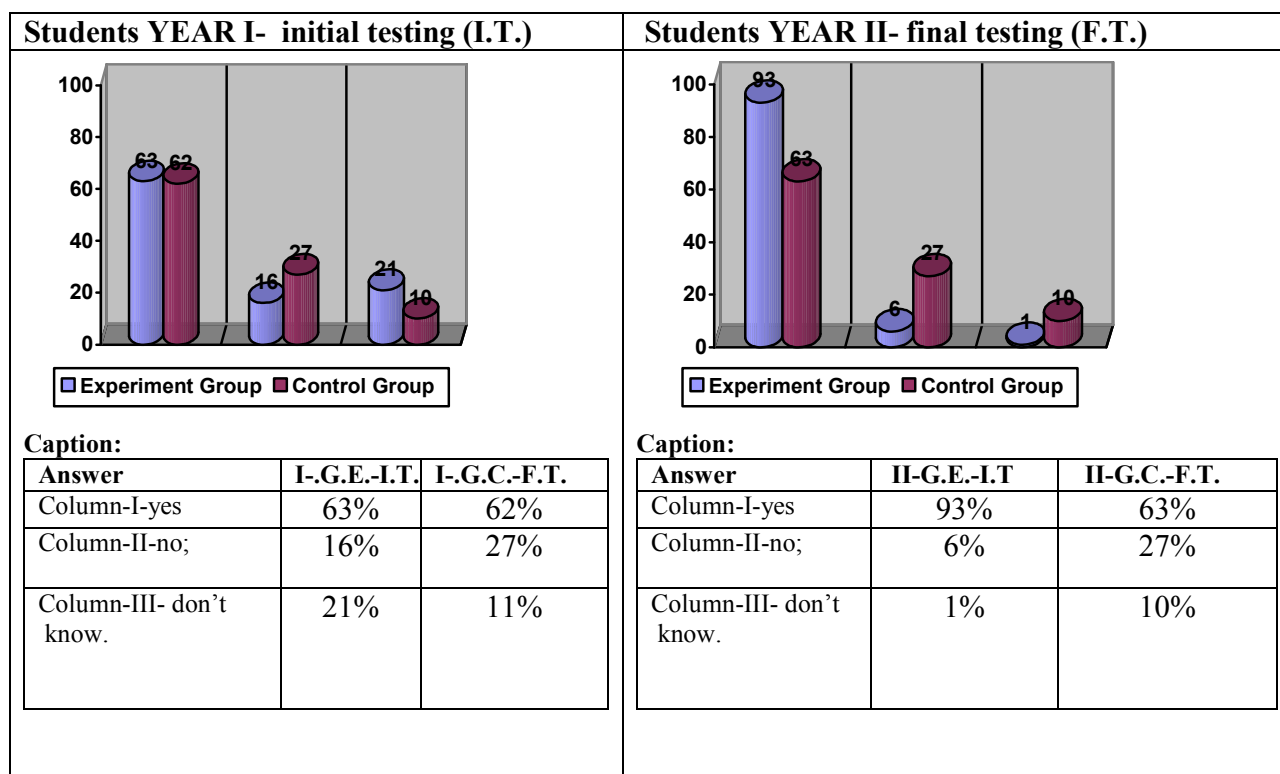
Question no.	Answer	Y I G.E. -T.I.	Year I G.C.- T.I	Y II G.E.- T.F.	Y II G.C.- T.F.
2. Is P.E. and education for a healthy life?	Yes	63%	62%	93%	63%
	No	16%	27%	6%	27%
	Don't know	21%	11%	1%	10%
3. Do you practice any type of sports in an organized way in your leisure time?	Yes	53%	62%	73%	63%
	No	47%	38%	27%	37%
	Don't know	-	-	-	-
4. Do you think you can make a compensatory activity of psychic recovery through physical exercises?	Yes	53%	52%	91%	58%
	No	26%	27%	6%	30%
	Don't know	21%	21%	3%	12%
5. Do P.E. lessons have a sanogenic effect upon your body?	Yes	69%	63%	96%	66%
	No	10%	17%	3%	11%
	Don't know	21%	20%	1%	23%
6. Is the introduction of sports games as competition a method of education for life?	Yes	70%	68%	93%	53%
	No	10%	22%	6%	5%
	Don't know	20%	10%	1%	42%
7. Do sustaining the sports tests under the form of a competition and sports games of the competitive type induce a feeling of well being and eliminate the stress of competition	Yes	21%	22%	93%	-
	No	16%	18%	6%	38%
	Don't know	63%	60%	1%	62%
8. Do you have reasons not to make P.E. and to want medical exemptions?	Yes	15%	8%	8%	12%
	No	10%	12%	3%	25%
	Don't have exemption	75%	80%	89%	63%
9. If yes, please give the reasons in the blank space.	The full program; comfort; fear of ridicule; the fact that the mark influences the scholarships; the lack of money for the sports equipment etc.				
10. Would you like to attend the lessons if P.E. weren't compulsory?	Yes	63%	62%	95%	63%
	No	16%	27%	4%	17%
	Don't know	21%	11%	1%	20%

**B. Graphic representation of the statistical indicators recorded at the given questionnaire:**

We will start the graphic representation with question No. 2, Question No. 1 being an open response question, and we have described it at the effectiveness of the programme, point 3 (see the paragraph). We will not return the questions from the questionnaire, as they can be found in Table No.

2, which had been described before. One should keep in mind that for each question in the questionnaire there is a corresponding graph representing the changes of the two groups, Experiment and Control, during the research.

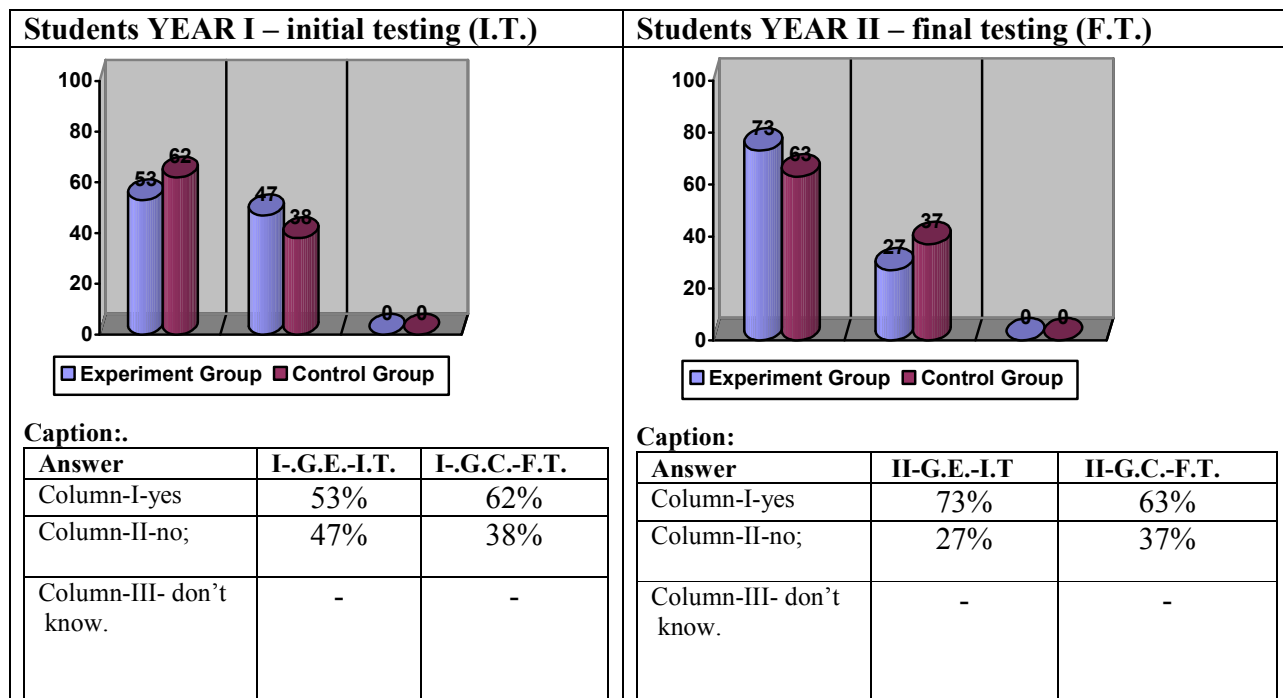
**Graphic representation of the statistical indicators recorded – question No. 2 – Graph No. 2**



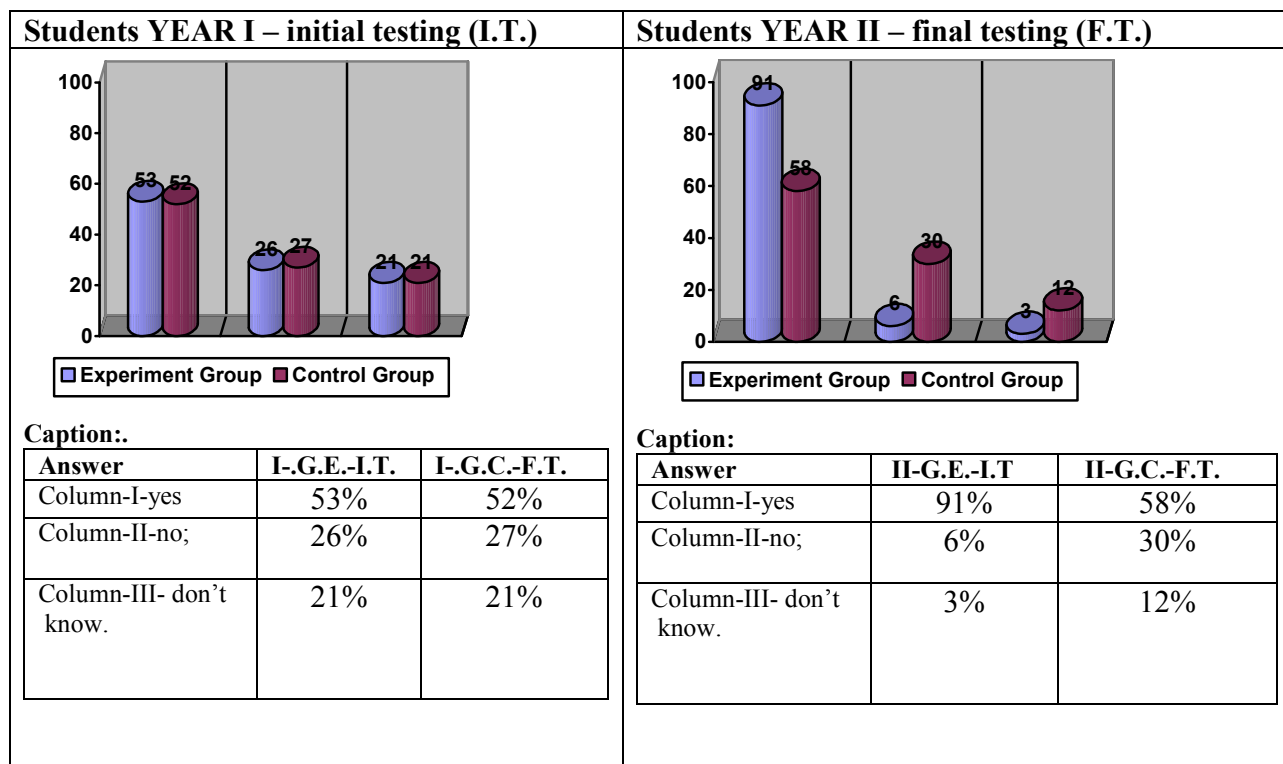
With the help of question No.2.'Is P.E. and education for a healthy life?' I wanted to know the mentality from the beginning of the students, already coming in the university life, presumably, with some knowledge of body activities and use it to enhance or improve during college. If at the beginning, in the I year, the two groups had very similar responses in percentage, 63% responding **Yes** from Group Experiment, and 62% responded **Yes** from the Control Group. The situation will

suffer a change for the Experiment Group as a consequence of the introduction of the educational-physical programme, composed of: sports games of a competitive type in the fair-play spirit, sustaining the tests in a playful manner, constructive discussions about the importance of body motion as a dialogue, and not a monologue. In year II, at the final testing, students have responded **Yes**: 93% of the Experiment Group, and only a percentage of 63%of the Control Group.

Graphic representation of the statistical indicators recorded – question No. 3 – Graph No. 3



Graphic representation of the statistical indicators recorded – question No. 4 – Graph No.4

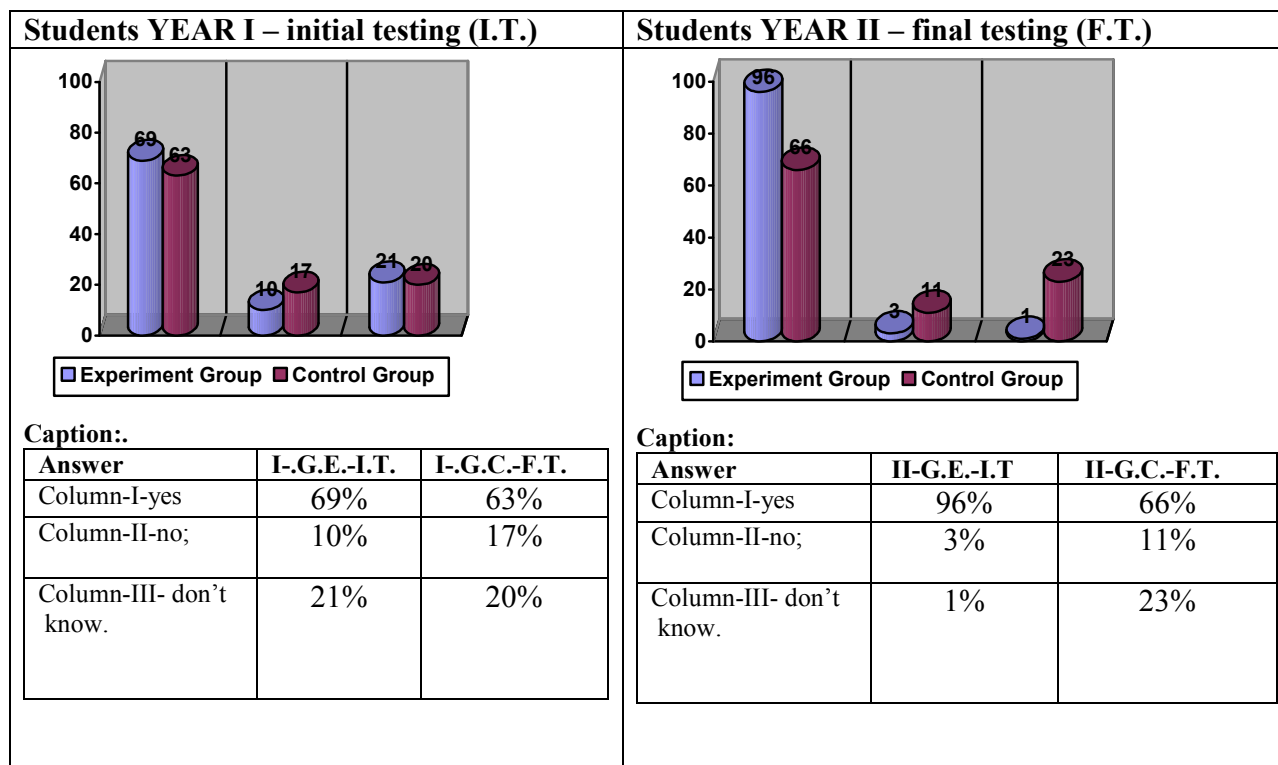


Questions No. 3 and 4 of the questionnaire are questions that accurately describe the education of body motion for young students of the new generation. It reveals the I year students' mentality at the beginning of the university life regarding the P.E. lesson and the importance they give it in daily schedule and leisure time. Note that the percentages are appropriate in values from the initial testing, respectively graphs No. 3 and 4 that answer the questions: Do you practice any type of sports in an organized way in your leisure time? (Graph No 3.) and Do you think you can make a compensatory activity of psychic recovery through physical exercises? (Graph No. 4). The percentages (53% for the Experiment Group and 62% for the Control Group) to demonstrate exactly the level of: physical and intellectual training and degree of satisfaction

through motion of the young students because it implies that they are a mass selected with a high intellectual level as compared with the youngsters of the same age who were not admitted to higher education.

At question No. 4 – final testing, year II, 91% responded **Yes** in the Experiment Group who believe they can achieve a compensatory activity of psychic rehabilitation and instructive-educational through physical exercise, the Control Group recorded a rate of 58% at the final testing, a percentage close enough to that of the initial testing. The results recorded at the final test for the two groups lead us to assume that through constructive activities, incentives, similar to the physical education program, we can intervene to change the mentality of students in education and motion.

**Graphic representation of the statistical indicators recorded – question No. 5 – Graph No.5**

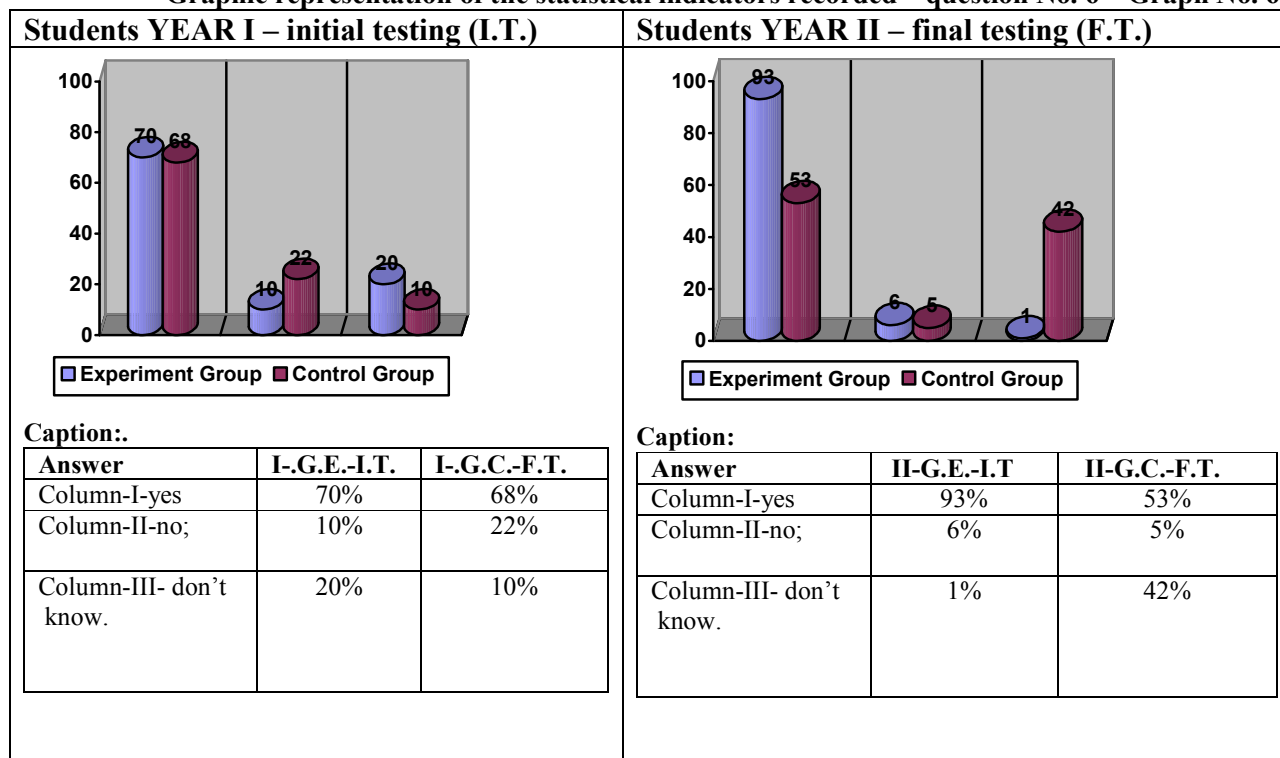


At this question only the students from the Experiment Group, 96% of them, at the final test in their second year have come to understand the sanogenetic effect of the Physical Education lessons because they were educated in this regard, while for

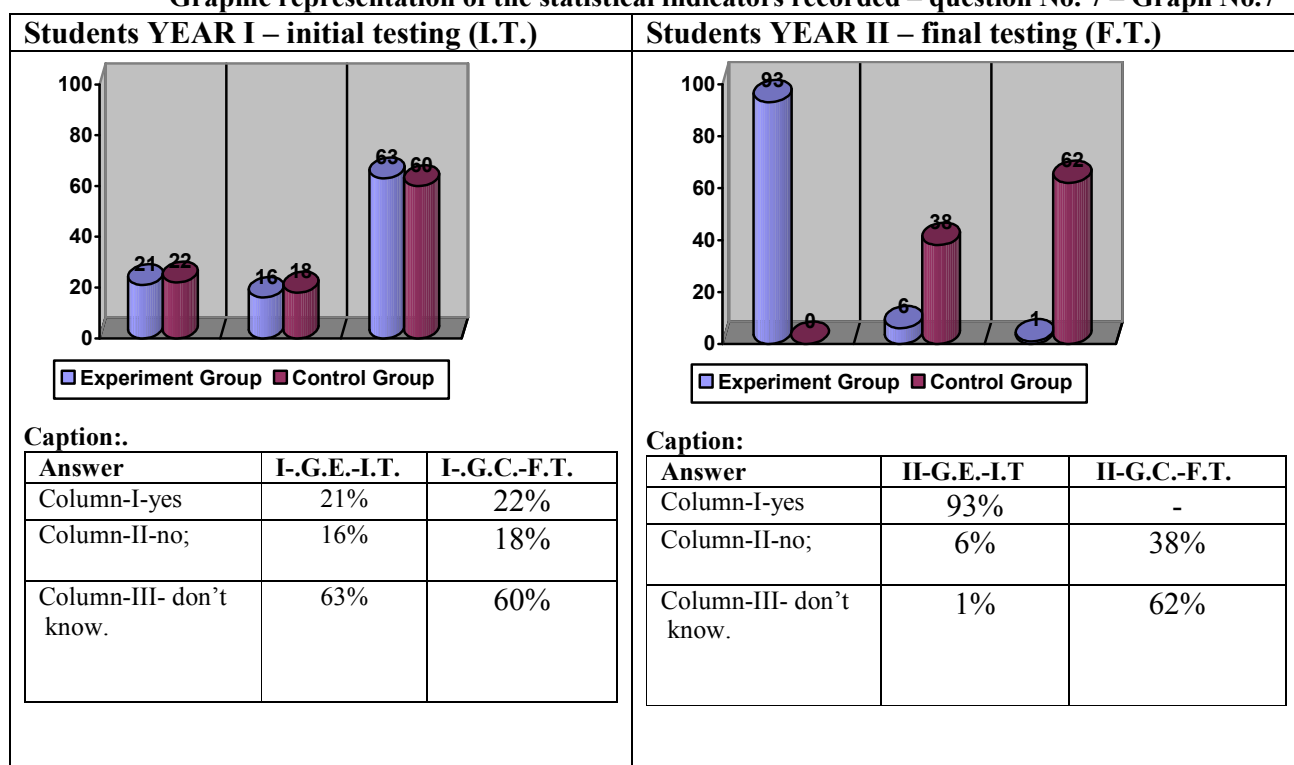
the Control Group, without being informed the percentages at the final testing are close to the values recorded in the initial testing (63%, I.T.; 66%, F.T.).



Graphic representation of the statistical indicators recorded – question No. 6 – Graph No. 6



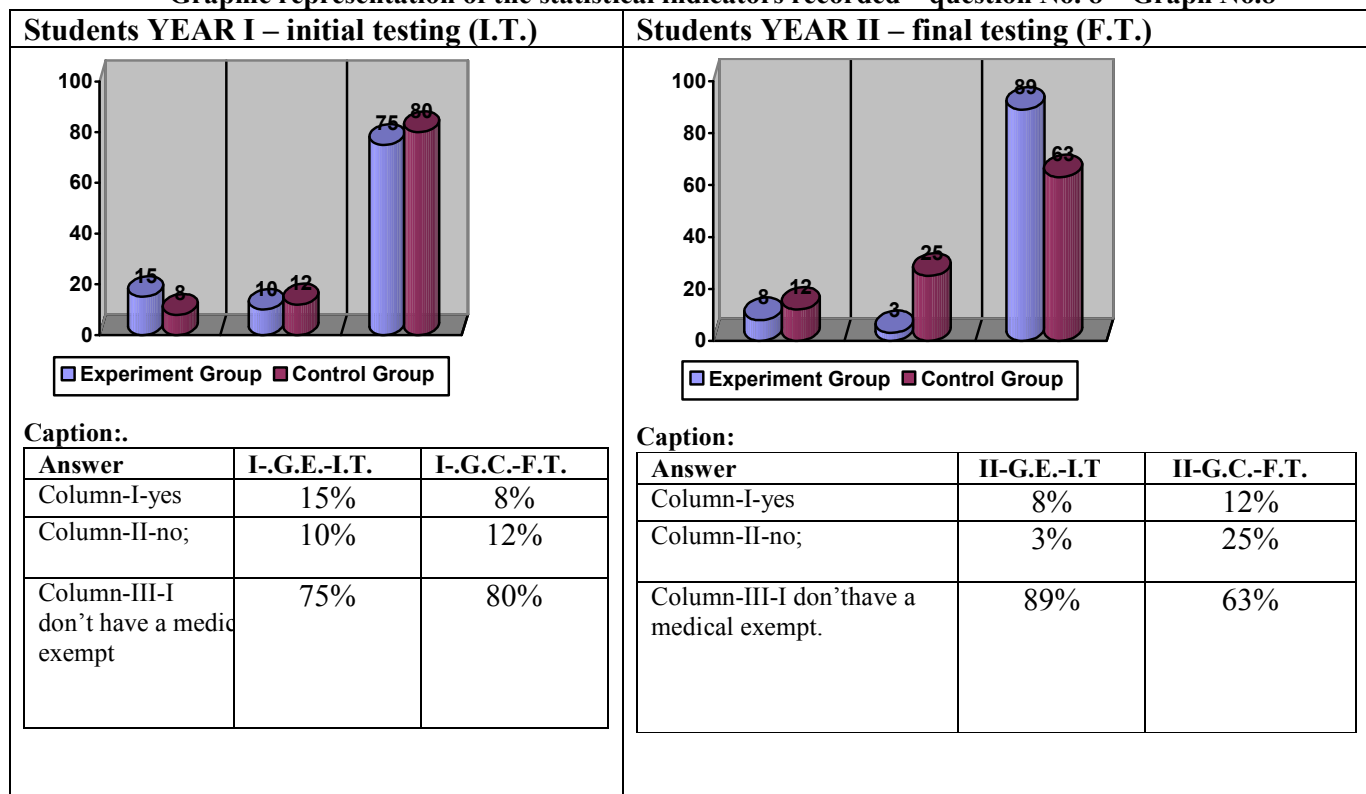
Graphic representation of the statistical indicators recorded – question No. 7 – Graph No.7



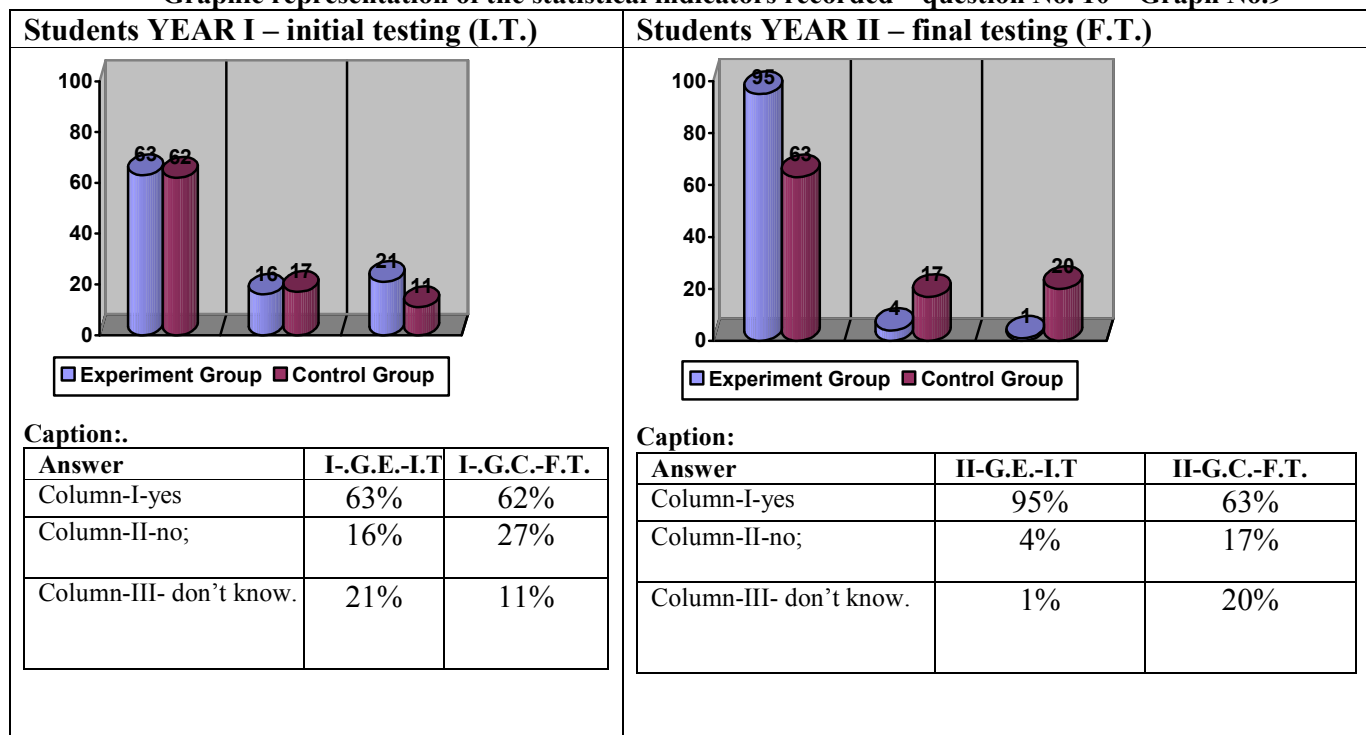
Through questions No. 6 and 7 I wished to prove the fiability of the proposed programme, the differences that occur

between I.T. and F.T. at the two groups, thus confirming the positive aspects in the mentality of the students surveyed.

**Graphic representation of the statistical indicators recorded – question No. 8 – Graph No.8**



**Graphic representation of the statistical indicators recorded – question No. 10 – Graph No.9**



The situation of the medical exempts, and here we refer to real cases, according to the data recorded in graph No. 8 at the students from the Experiment Group there will be less (3%), as compared to the students from the Control Group, who have recorded at the final testing a value of 25% of the students capable to sustained effort.

Question No. 9 If yes, please give the reasons in the blank space. Answers were: The full program; comfort; fear of ridicule; the fact that the mark influences the scholarships; the lack of money for the sports equipment etc. It misses from the graphical context because it has no percentage and is structurally linked from question No. 8. The indicators represented for questions No. 10. Would you like to attend the lessons if P.E. weren't

## 7. Conclusions

- ❖ The understanding of the advantages made by a healthy body, harmoniously developed had reflected in the acceptance of the collaboration, in the implication in the initial research and in the solicitation to discuss more.
- ❖ To accept motion and to modify their mentality, students need experiences that they can acquire during the lesson, in the gym, and for all these they need education.
- ❖ The results registered at the final testing for the two groups determine us to admit that through constructive activities, incentives, similar to the physical education program, we can intervene to change and educate the mentality of students in and for body motion.
- ❖ The intervention that we had on the students by giving them reasons to practice physical exercises, convinced us more that, in spite of the difficulties (of time, space, discomfort), some positive effects can be produced and they are demonstrated through the registered results on control events and the desire to have extra courses.

compulsory? Confirms the efficiency of the programme (see data from graph No. 9) The data registered as a consequence of the application of the questionnaire on the 200 subjects (100 –Experiment Group, 100 Control Group) changes for the Experiment Group according to the statistical indicators from: Tabel No. 1 (see the centraliser) and Graphs No. 2,3,4,5,6,7,8,10 – without any significant changes for the Control Group, because the latter did not benefit from the same training and informing similiar to the first.

Through these aspects we have attempted to prove that the students' mentality can be influenced and modified through education in the benefit of motion, thus confirming the hypothesis.

- ❖ The harmonious behavior of students at the end of the instruction proves the attitude modification and the good influence of P.E. not only in psychomotor level, but also in the educational one.
- ❖ The introduction of sports competitions in each lesson, taking control events as contests are increasing the participation in lesson, they modify students' opinion, confirming the hypothesis.
- ❖ We can appreciate that P.E. confirms its position as compulsory discipline in the education plan, being involved in all the levels (instructive, educative and formative).
- ❖ The data registered as a consequence of the application of the questionnaire on the 200 subjects (100 –Experiment Group, 100 Control Group) changes for the Experiment Group according to the statistical indicators from: Tabel No. 1 (see the centraliser) and Graphs No. 2,3,4,5,6,7,8,10 – without any significant changes for the Control Group, because the latter did not benefit from the same training and informing similiar to the first. Through these aspects we have attempted to prove that the students' mentality can be influenced and modified through education in the benefit of motion, thus confirming the hypothesis

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