

## STUDY ON THE MANIFESTATION OF CREATIVE ATTITUDES IN PHYSICAL EDUCATION STUDENTS

Rață Gloria, Rață Bogdan Constantin, Rață Marinela, Mareș Gabriel

„Vasile Alecsandri” University Of Bacău, Faculty Of Movement, Sport And Health Sciences, ROMANIA

Email: gloria\_rata50@hotmail.com / 27.02.2010 / 05.03.2010

### Abstract

**Objective:** I. Cerghit (2006, p.343) highlights that the fundamental acquisitions in the pedagogical process lead to „easiness of thinking, dexterity and practical skills; attitude and interest” and that the “behavior patterns are achieved through practice and exercise”; therefore we initiated a study on the creative attitudes of students in order to perform a formative education activity. Subscribing to the idea that “the approach of the compulsory contents and the appropriate assessment system... can lead to increased interest and motivation for the practice of physical exercises” (G. Rață and Gh. Rață, 2008 p. 142), and that physical education is a creative activity, we start from the hypothesis that students in physical education have a score above half of the reference value in all sixteen creative attitudes.

**Method:** The study involved *twenty subjects* (male and female students) and the *method* consists of administration of the *questionnaire of creative attitudes* adapted by M. Roco (2001, pp.211-214). The survey is made up of fifty assertions which measure sixteen creative attitudes: Energy (En), Concentration (Cn), Orientation toward novelty (On), Argumentation of ideas (Ai), Independence (I), Nonconformity (N), Self-confidence (Sc), Moral values (Vm), Orientation toward the distant future (Of), Finalization (F), Risk (R), Preference and attraction to difficult problems (P), Diversity of interests (Di), Spiritual values (Vs), Practical Values (Vp), Lie scale (L).

**Discussions and Conclusion:** *The results* underline that four out of twenty students get a percentage under 50 percent, whereas the other sixteen have a percentage over 60 percent for all sixteen creative attitudes, a fact which certifies that they present the attitudes required for their professional training. The lowest average is registered for the spiritual values (9.40), and the highest average value for the lie scale (16.55). *The conclusions* point out that students in physical education get scores above the average reference value (7.50) in all sixteen creative attitudes, thus the hypothesis is confirmed and it is certified that the attitude background for the professional training exists. The maximum value ranges from 12 to 15 points, close to the maximum value of the reference value, and this fact demonstrates that some of these students have a good potential to become creative educators.

Key words: attitude, creativity, training, professional.

### Introduction

Taking into account the current situation, the physical education and sports (an activity of national interest) must be approached so that to offer children’s participation in attractive activities other than those promoted by the consuming society: *drugs, smoking, commercial sex, violence, alcohol, sedentary life, excessive TV-watching and internet navigation*, etc. To consider the physical education class as the compulsory class attended by a child only for performing movements but without taking into account the acquisition of certain operational objectives and without using various and attractive methods and techniques can determine the children to ignore the physical exercises or the participation in sports activities and consequently the truancy and the fictitious medical certificate are indirectly encouraged.

The assimilation of knowledge and of motor skills, the training of verbal and motor skills are achieved through practice and are based on TRAINER’s indications, and the creative ability is expressed in the way in which an individual acts under conditions of permanent changing of the subject-object relationships. Nowadays, the creative ability of the teaching staff is one of the conditions for an attractive and effective education process. The instructive-educative activities in the primary and secondary education are carried out by the teaching staff trained

in the higher education system. This staff must be trained so that the classes/lessons to be focused not only on reaching the pedagogic objectives in a mechanical manner but rather on stimulating children’s interest in sports activities that bring joy and health.

I. Cerghit (2006, p. 243) emphasizes the importance of practice, of applying the acquired knowledge and of professional training, as well. He considers that the essential acquisitions within the teaching process lead to:

- ✓ “ easiness of thinking which is developed through repeated exercise of solving problems;
- ✓ dexterity and practical skills which are achieved through exercise/practice;
- ✓ attitude which is trained by approaching a phenomenon from different points of view;
- ✓ interest which can be cultivated through the successful cognitive experiences with an incentive effect, etc. In all these situations, the behavior patterns are acquired exclusively through practice and exercise”.

As far as the creative attitude is concerned, M. Roco has adapted a questionnaire of J.M. Jaspard, University of Louvain-la-Neuve, Belgium. The Questionnaire of Creative Attitudes (published in *Creativitate și inteligență emoțională*, 2001, pp.211-214) consist of 50 assertions that assess sixteen specific attitudes toward creativity. This questionnaire helps the teaching staff to understand their students and by

means of well chosen modalities to educate their creative attitudes, developing students' new modality of thinking and creative management of situations.

In order to perform an effective didactic process, the major condition is to know the human resources available for the training activity but "combining the acquisition of compulsory contents with an appropriate assessment system... can lead to an increased interest and motivation for physical exercise practice" (G. Rață and Gh. Rață, 2008, p.142). The student must be both the object and the subject of the training and education process and of his own person, but the student must be equipped with the appropriate means and methods for both training and assessment and research.

**Materials and methods**

The professional training is a complex process which involves the assessment of the abilities of individuals involved within the education process. This knowledge of the potential skills and attitude is achieved through test administration which assesses the various skills and attitudes that can influence the human personality development.

The hypothesis of this observational study states that the students in physical education have a score above the average reference value for all sixteen creative skills.

In order to establish a good assessment of students' attitudes, the research used the Questionnaire of Creative Attitudes adapted by Mihaela Roco after J.M. Jaspard (University Louvain-la-Neuve, Belgium). The answer rating scale is as follows: "completely false" = 1 point; "false" = 2 points; "relatively false" = 3 points; "true" = 4 points; "very true" = 5 points. The items of the lie scale can totalize 25 points while the other 15 assertions cannot exceed 15 points.

Comparing to a maximum value of 15 points, the reference value of 7.5 points can be considered the average value, and can be the starting basis in the professional training process of the future teacher.

The present study involved 20 subjects, all of them 2<sup>nd</sup> year students (bachelor's degree level) at the specializations: Physical and Sports Education and Sport and Motor Performance at the Faculty of Movement, Sports and Health Sciences of Bacau.

The period of research: 5-15 December 2009.

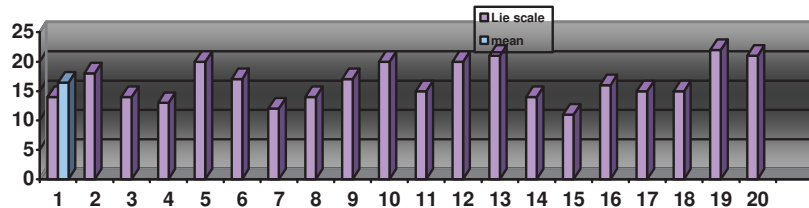
The following methods were used in carrying out the research: bibliographical study, survey method, statistical-mathematical method and graph method.

**Results of research**

In order to establish the value of creative attitudes in physical education and sports students, there were analyzed the results included in Table no.1 and depicted in Graphs no.1-15 following the analysis of the questionnaire of creative attitudes.

The creative attitudes influence the professional training of the future teachers therefore we tried to analyze students' answers. The study pointed out some individual aspects that concern the skills and attitudes, and some general aspects related to the arithmetic mean, maximum value, minimum value, standard deviation and percentage.

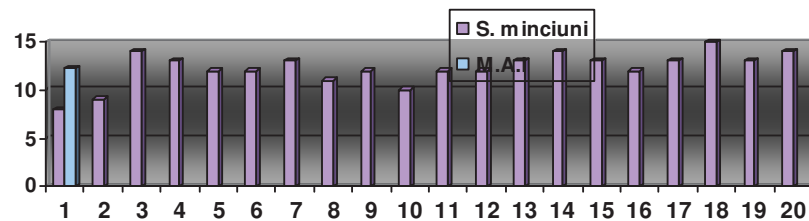
Lie scale (L), graph no.1, shows an average value of 16.45 out of maximum 25 points; the other values ranged from 11 to 21. This fact underlines that students aged 19-21 are not enough mature, they often try to give rather conventional answers, or answers in correlation with the social desirability but in discrepancy with the elements related to the declarative component of their answers.



Graph no.1. Results for lie scale

Argumentation of ideas (Ai) and the finalization (F) have both an average value of 12.25 out of maximum 15 points, with individual values ranged from 15 to 8; this emphasizes students' ability to argue,

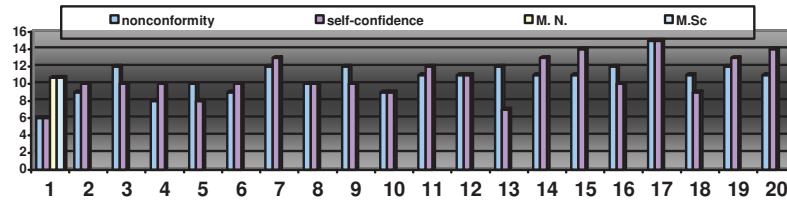
their interest in giving a coherent argumentation of opinions and to finalize activities, a fact that underlines responsibility.



Graph no.2. Results for argumentation of ideas and finalization

*Nonconformity* (N) and *self-confidence* (Sc) have an average of 10.70, with individual values ranged from 15 to 6 points. These values show a

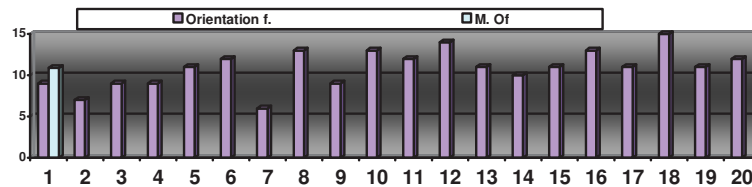
predisposition toward discontent, but toward affirmation and work as well.



Graph no. 3. Results for nonconformity and self-confidence

*Orientation toward the distant future* (Of) has an average of 10.90 points and individual values between 15 and 6 points. There are six values under 10

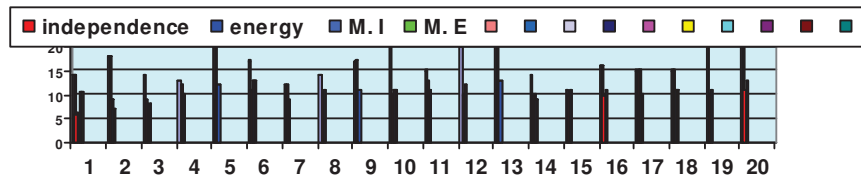
points and fourteen above 10 points, a fact which demonstrate students' concern for the future.



Graph no.4. Results for Orientation toward the distant future

*Independence* (I) and *energy* (En) have averages of 10.55 points and 10.50 points respectively, with individual values between 15 and 6 points and 13

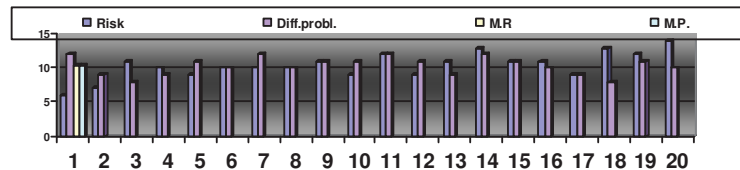
and 6 points respectively. These values show that the group has both energy and independence. Only 5 students have results less than 10 points.



Graph no.5. Results for independence and energy

*Risk* (R) and *preference and attraction to difficult problems* (P) have averages of 10.40 and 10.30 points, individuals values ranged from 14 to 6

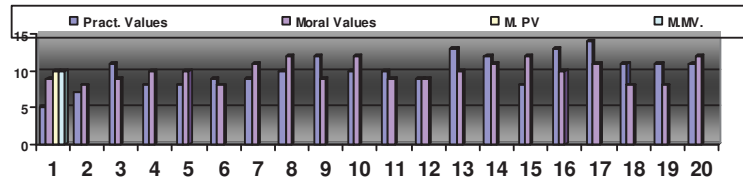
and from 12 to 8, respectively. This means that students have the tendency to risk and prefer to deal with difficult problems, an aspect which is a good one.



Graph no. 6. Results for risk and preference and attraction to difficult problems

*Practical values* (Vp) and *moral values* (Vm) have averages of 10.05 and 9.90, respectively, and individual values between 14 and 5 points and

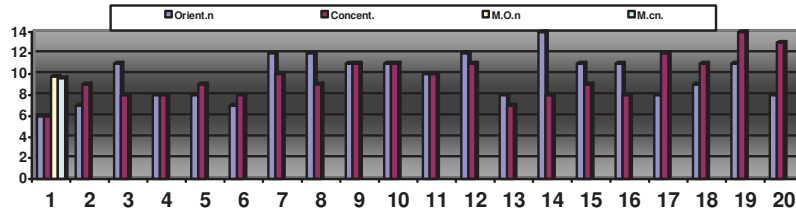
between 12 and 8 points respectively. The student group has a tendency toward practice and morality.



Graph no. 7. Results for practical values and moral values

*Orientation toward novelty* (On) and *concentration* (Cn) have average values of 9.75 and 9.6 points, respectively, with individual values ranged from 14 to 6 points. Even if there are no values above

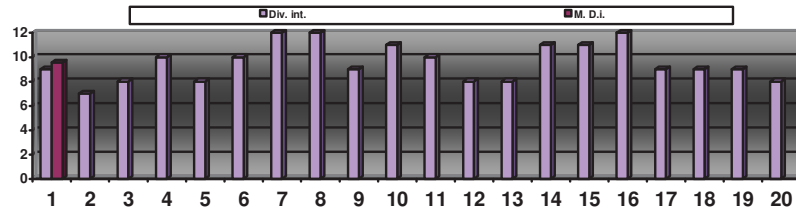
10 points which can prove the orientation toward novelty and concentration, there are no clues for the contrary.



Graph no.8. Results for orientation toward novelty and concentration

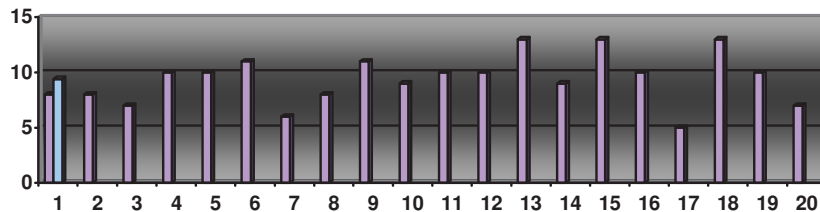
*Diversity of interests* (Di) has an average of 9.55 points and individual values between 12 and 7

points, which demonstrates poor concern for various interests.



Graph no. 9. Results for diversity of interests

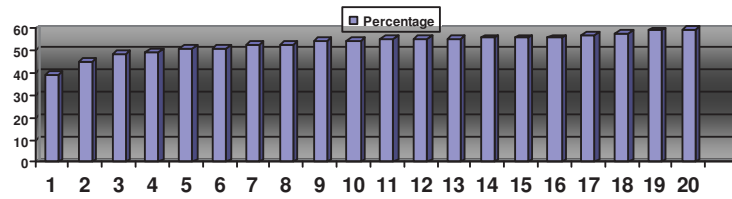
*Spiritual values* (Vs) present the lowest average value 9.40 points out of maximum 15 points, with individual values ranged from 5 to 13 points. This result emphasizes some lacks in education at the secondary school level, lacks that can be observed during the didactic process as well.



Graph no.10. Results for spiritual values

The *percentage* was computed in order to evaluate to what extent (%) the maximum of creative attitudes is present in each subject included within this research. Four out of twenty students have a percentage

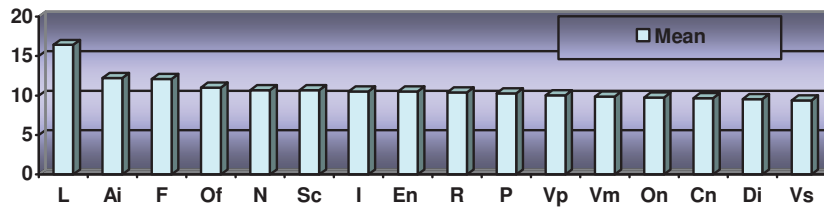
under 50 percent of the maximum percentage, the other sixteen having percentages over 60 percent; therefore they have the requested attitudes for their professional training.



Graph no.11. Results for the total percentage in creative attitudes

Analyzing the data of Table no.1 and Graph no.12, the arithmetic means of the creative attitudes are decreasingly ordered: lie scale (L) 16.45, argumentation of ideas (Ai) and finalization (F) 12.25, orientation toward the distant future (Of) 10.90, nonconformity (N) and self-confidence 10.7, independence (I) 10.55, energy (En) 10.50, risk (R) 10.4, preference and attraction to difficult problems (P)

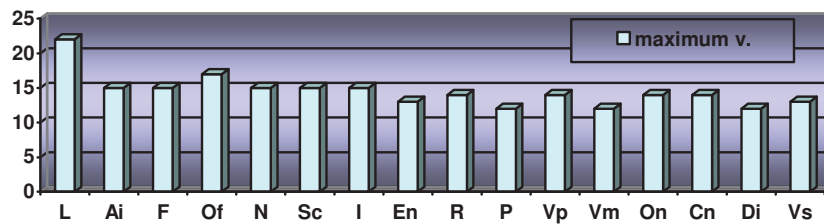
10.3, practical values (Vp) 10.05, moral values (Vm) 9.9, orientation toward novelty (On) 9.75, concentration (Cn) 9.60, and spiritual values (Vs) 9.4 points. There are 17 results out of 320 results under the reference value, a fact that indicates that, at the moment, some students do not have the attitudes which can help them in the professional training and these attitudes must be stimulated and encouraged.



Graph no.12. Arithmetic means of creative attitudes

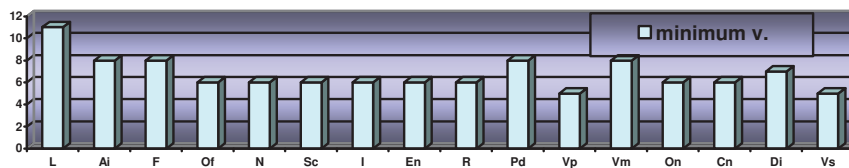
As far as the *maximum value* (graph no.13) is concerned, the results of all twenty students ranged from 22 to 12 which demonstrate that some of them

have creative attitudes that may help them throughout the professional training process.



Graph no.13. Maximum results in creative attitudes

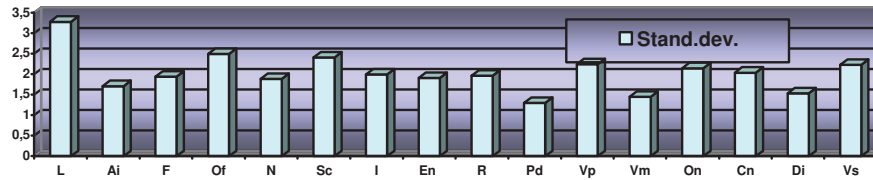
The *minimum value* (graph no.14) has results between 11 and 5; 11 out of 16 creative attitudes have results under the half of the reference value.



Graph no.14. Minimum results in creative attitudes

The *standard deviation* (graph no.15), according to the data of Table no.1, has values between 3.28 and 1.45,

values considered to be high, and indicating a low level in group homogeneity, a normal aspect.



**Graph no.15. Results for standard deviation**

### Conclusions:

The results presented in Table 1 and Graphs 1-15 point out the following aspects related to the creative attitudes of the students in physical education:

- ✓ the hypothesis which states that students in physical education have a score within the upper half of the reference value in all sixteen attitudes has been confirmed;
- ✓ all the creative attitudes have an average value which ranges from 16.45 to 9.40 points, above the half of the reference value (7.50), a fact that demonstrates that the attitudinal background for the professional training exists;
- ✓ the maximum value is ranged from 12 to 15 points, close to the maximum of the reference value, a fact which demonstrates that some of the students have real potential to become creative teachers;
- ✓ the minimum value has results between 11 and 5 points; 17 results out of 320 results in all sixteen attitudes are under half of the reference value (a small percentage);
- ✓ there is a problem concerning the results of the lie scale (L) which has a very high arithmetic mean (16.45) compared to the maximum value (25 points);
- ✓ the highest average values are related to the argumentation of ideas and to the finalization of activities which both are representative for a successful teaching career.

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**Table no.1 – Results of the questionnaire of creative attitudes (adapted by M. Roco, 2001) in physical education students**

Identification notation			The 16 creative attitudes															Total points	Percentage %	
No.	Initial	ge	En	Cn	On	Ai	I	N	Sc	Vm	Of	F	R	P	Di	Vs	Vp	L		
1	B. M.	20	6	6	6	8	6	6	6	9	9	11	6	12	9	8	5	14	127	39,07
2	C.V.	19	7	9	7	9	9	9	10	8	7	15	7	9	7	8	7	18	146	44,92
3	M.A.	20	8	8	11	14	9	12	10	9	9	8	11	8	8	7	11	14	157	48,30
4	A.A.	20	10	8	8	13	12	8	10	10	9	13	10	9	10	10	8	13	161	49,53
5	N.M	21	12	9	8	12	9	10	8	10	11	12	9	11	8	10	8	20	167	51,38
6	R.V.	20	13	8	7	12	11	9	10	8	12	10	10	10	10	11	9	17	167	51,38
7	C.A.	20	9	10	12	13	12	12	13	11	6	12	10	12	12	6	9	12	171	52,61
8	R.R	20	11	9	12	11	10	10	10	12	13	10	10	10	12	8	10	14	172	52,92
9	M.I.	20	11	11	11	12	9	12	10	9	9	13	11	11	9	11	12	17	178	54,76
10	M.O	20	11	11	11	10	10	9	9	12	13	12	9	11	11	9	10	20	178	54,76
11	ZC	21	11	10	10	12	13	11	12	9	12	11	12	12	10	10	10	15	180	55,38
12	U.I.	20	12	11	12	12	10	11	11	9	14	11	9	11	8	10	9	20	180	55,38
13	R.A.	21	13	7	8	13	11	12	7	10	11	13	11	9	8	13	13	21	180	55,38
14	I.S.	20	9	8	14	14	10	11	13	11	10	10	13	12	11	9	12	14	181	55,69
15	C.A.	20	11	9	11	13	10	11	14	12	11	14	11	11	11	13	8	11	181	55,69
16	E.A	20	11	8	11	12	10	12	10	10	13	12	11	10	12	10	13	16	181	55,69
17	P.B.	20	10	12	8	13	15	15	15	11	11	14	9	9	9	5	14	15	185	56,92
18	P.D.	21	11	11	9	15	14	11	9	8	15	15	13	8	9	13	11	15	189	58,16
19	P.I.	20	11	14	11	13	10	12	13	8	11	14	12	11	9	10	11	22	192	59,07
20	B.V.	21	13	13	8	14	11	11	14	12	12	15	14	10	8	7	11	21	194	59,69
Arithmetic mean			10,5	9,6	9,75	2,25	1,55	10,7	10,7	9,9	10,9	12,2	10,4	10,3	9,55	9,4	0,05	16,4		
Standard deviation			1,9	2,0	2,1	1,7	1,9	1,8	2,4	1,4	2,2	1,9	1,9	1,3	1,5	2,2	2,2	3,2		
Maximum value			13	14	14	15	15	15	15	12	15	15	14	12	12	13	14	22		
Minimum value			6	6	6	8	6	6	6	8	6	8	6	8	7	5	5	11		

**Legend:** Energy (En), Concentration (Cn), Orientation toward novelty (On), Argumentation of ideas (Ai), Independence (I), Nonconformity (N), Self-confidence (Sc), Moral values (Vm), Orientation toward the distant future (Of), Finalization (F), Risk (R), Preference and attraction to difficult problems (P), Diversity of interests (Di), Spiritual values (Vs), Practical Values (Vp), Lie scale (L).

## THE INVESTIGATION SOMATOTYPE PROFILES OF UNIVERSITY STUDENTS

Nazmi Saritas<sup>1</sup> Irfan Özkarafaki<sup>2</sup> Osman Pepe<sup>1</sup> Serdar Büyükepekçi<sup>1</sup> Bekir Çoksevim<sup>1</sup>

<sup>1</sup>Physical Education and Sports College of Erciyes University/ Kayseri, TURKEY

<sup>2</sup>Kızılırmak Anatolian High School Physical Education Teacher/ Kırşehir, TURKEY

Email: nsaritas@erciyes.edu.tr / 08.03.2010 / 19.03.2010

### Abstract

**Objective.** In this study, it was aimed to investigate somatotypes of Erciyes University students which were studying in different colleges and faculties.

**Method.** At this study, 405 men and 282 women students of Erciyes University, aged between 20-25 were joined voluntarily. Volunteers' height, body weight, thickness of skin which are necessary for determining somatotypes, the environment and diameter parameters were measured. After all data was collected, all values were compared according to gender and their higher education. One Way ANOVA test was performed for determining the differences between students. Heath-Carter method was performed for determining somatotype profiles of Study grouped. Significance level was accepted as 0.05.

**Result.** In the study, while, body mass index parameter wasn't found significant between male students, it was found significant between female students according to faculties ( $p < 0.01$ ). Endomorph, mesomorph and ectomorph values were found significant between female students of Physical Education and Sport School and the other faculties