

R O M A N I A
UNIVERSITY „BABEȘ BOLYAI” CLUJ-NAPOCA
FACULTY OF PSYCHOLOGY AND SCIENCES EDUCATION

SUMMARY

DOCTORAL THESIS

**STRATEGIES TO IMPROVE THE
PSIHOMOTRIC POTENTIAL OF THE
SCHOOLS AND STUDENTS**

Doctorand: LAURENȚIU IULIAN LEUCEA ILICA

Scientific Coordinator: Prof. univ. dr. MIRON IONESCU

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Introductory word

I was metaphorically asserting at the beginning of my PhD thesis that: “*a healthy body is not only a temple for correct thinking but also a citadel for chosen feelings, for accomplishing an emotional physique, so necessary in a society dominated by the spell of the athlete, who became the embodiment of the virtuous VIP and role model for the younger generation*”

My PhD thesis has a title suggested and motivated by a relatively long teaching experience that places physical education amongst the disciplines in the category of dexterities, of those who lack sufficient authority in a coherent shaping and development of the personality. Considering the well known ancient quotation according to which a sane mind requires and develops only inside a healthy body, so far, physical education was meant to only assure the physical fundament for sane reasoning as well as for an emotional and volitional equilibrium. The mind required and still requires a healthy body for functioning between expected parameters, and the healthy body was often equated with bodily beauty, a corporal plasticity capable of hosting the functionality of a coherent, logical and pragmatic thinking.

On the other hand a ***new vision*** on certain concepts instrumented by the relatively few specialists in physical education is required, methods that permitted a too ample detachment from the didactic or pedagogic problems. It is strange that teachers talk with such respect about physical education, an essential component of the qualities pedestal required by a complete personality, and in the same time epistemologists and methodologists, even those from inside the field, are ignoring the developments regarding education sciences, considering themselves satisfied by what sports are accomplishing in the process of shaping human personality. The isolation of these specialists in an ivory tower puts the aforementioned component of education inside a marginal zone, now when the integrality of composing the individual is both certain and a necessary.

Our temptation of assuring congruence between physical and sportive education as a component and object of education sciences and physical and sportive education as a study subject and zeal for maintaining the body, have found their embodiment in this PhD thesis. The thesis explains derivate concepts and notions, as for example motricity vis-à-vis psiho-motricity, sports pursued as academic curricula vis-à-vis performance sports, individually tailored strategies for developing certain motric qualities vis-à-vis team sports etc. *I intended to envisage the general problematic of physical education and sports through a pedagogical position, considering that through a scientific and interdisciplinary attitude positive ideas can be constructed, ideas that should ensure the dynamics of such a visible domain, insufficiently analyzed scientifically at an epistemic and didactical level.* Motricity is considered to be the main “product” resulted from activities specific to physical education. We shall argue that it is psychomotricity, a most fortunate union between motric qualities and emotional qualities. The professional athlete’s feelings have a different dimension compared to general affectivity. An emotionally well balanced athlete will remain a role model for a long time, due to his character.

Physical education contributes to the personality’s development on three aspects: physical development, emotional maturing and improvement of thinking. Taking into account this I came to consider the aforementioned idea from the perspective of teaching activities, the area where the main elements of adolescents’ stabile personality are formed.

Structure of the Thesis

The thesis presents two types of discourses, which coincide with its two components: a theoretical one about the semantics of motricity and its didactic aspect and one about the contribution pf physical education on the actual development of young individuals’ personalities. I have taken into account the relevant academic literature but mainly I have reinterpreted it from a changed perspective concerning the role and place of physical education in the interests and preoccupations of the present generation.

The other type of discourse is *a pragmatic* one inferred from the necessity of validating an idea, namely that the creation of psychomotricity is more valuable for the young generation's personality for configuring it under the three integrated dimensions: body, mind and spirit. *The experimental research* is concerned with the congruence between motric qualities and positive mind frames which can (or might) be realized through the didactical usage of team sports in the detriment of individualized sport activities. I used samples, which I argued to be representative for the last year high school students and first year university students category. I applied the most adequate, in my opinion, variables so that the pedagogical, psychological and sociological interpretation of the data confirmed the general hypothesis. The methodical strategies improvement project regarding the implementation of psychomotricity suggests a new mentality in the pedagogic development of physical education teachers as well as new expectancies from the beneficiaries: students and pupils. Not in the least way the status of physical education activities is integrated in the general project of complex youth personality forming-development, in a way that allows sports and physical education to become a permanence in their daily activities, to provide individuals health without medics, to give them desirable behavior and personality features but mainly to allow a harmonious managing of emotional states.

For elaborating the *275 pages, theoretical and experimental*, (using an observation-improving method) I have used a relevant academic bibliography from the domains of physical education and psychology (the *bibliography and sources used are marked down in 128 titles to which 11 web sources were added.*) and I have correlated it with aspects deduced from the didactical side of physical education and sports, establishing a connection between the fields of knowledge which have the following common goal: the healthy and multilateral training of men, as well as the perpetuance of motricity for one's entire life. Permanent education can not refer only to the maintenance of the mind, character, professional development or esthetic culture; it must encompass the education of the body and through this the improvement of certain aptitudes and emotional attitudes, keeping of friendships, and of the competitiveness and cooperation spirit. Transforming these beneficiaries not only into sport events consumers watching

the screen from a static armchair but also into practitioners of muscle and emotional maintenance sports.

The thesis consists of five chapters. In the *first chapter* I determined the place and role of physical education in the shaping of human character. We referred to education in general, to the human shaping-development process, to the complexity of educational composition with the intention of showing the essential contribution played by physical education in this global process. Physical education, we argue, has an essential contribution and in the same way as the other educational branches (cognitive, esthetic, moral etc) opinion supported by various teachers (M. Ionescu, C. Cucos, M. Bocos, Ioan Negret-Dobridor, E. Joita, E. Macavei, I.Comanescu etc) as well as psychologists (AL. Rosca, I. Radu, M.Zlate, A. Cosmovici) The same opinion is shared by didactically oriented physical education experts like M.Epuran, I.holdevici, M.Dragnea, A.Bota, G.Chirita etc.

In *the second chapter* we address the analysis of some field specific concepts, especially motricity, an essential capacity of personality, which exists since birth and improves during our life time. We highlighted the importance of motricity in personality shaping, its structure, basic motric abilities, describing how these develop and manifest themselves during different periods in life (from birth to old age)

In order to justify our preference towards psychomotricity, *in the third chapter*, we identified the psychological aspects implied by this human ability. In order to improve psychomotricity we observed, using professional advice from psychologists, the psychological processes involved in this complex process like thinking, affectivity, willpower, emotional intelligence. I found that sports are the best suited procedures for maintaining and improving psychomotricity, that these develop complex personality features, play a large role in developing the “emotional” aspects of inter-human and fair competitive relationships.

In the fourth chapter entitled “the pedagogy of psychomotricity” I analyzed the didactic modalities of developing-improving motric and psychomotricity habits and skills. We could say that we deal with a new scientific discipline or an interdisciplinary branch of knowledge. Psychomotricity is, in our opinion, relatively similar with the concept Mihai Epuran defined as: “the psychology of corporal activities” (which the

same author defines as *“a study in the moving man’s subjectivity, of the man that plays and competes with others and him self, and the prospective study of ways to improve behavior, the individual’s personality and ways to raise his social integration level”*). The consequence of interest shown towards the correlation of general motricity with behavioral psychology is that there is to be observed a more pronounced lack of psychologists in schools, sport teams, and in the proper preparation of sporting events. More to the point, there is a requirement not only for a personal physical culture effort but also for control of emotions and will of “consuming physical power in a voluntary way” through leisure activities.

This is what **psychomotricity** means, and its main skills are acquired in a systematic way in educational institutions. Our project is concerned with a certain strategy of managing physical education specific educational objectives towards accomplishing psychomotricity, as an essential physical and psychological culture capacity. Curricular documents, normative and auxiliary, can contain several elements specific to physical education and sports, which are to assure the congruence between basic psychomotric qualities and psychological processes engaged in general motric activities. Psychomotricity can become a separate chapter of didactic exercise, having the goal of giving “physical education” as a discipline an increased authority by assuring an interdisciplinary bond with a socio-human field, such as psychology.

Chapter five is dedicated to experimental research, which was assigned a title derived from theoretical reasons: **“Stimulating psychomotricity through didactic sports”**. If the present conclusions were intended to justify, in the first part, the option for an experimental research with this topic, in this chapter we considered aspect of novelty, of arguments towards promoting psychomotricity through improved didactic strategies or adapting to special situations such as the **specialty’s didactic**. We inferred the objective and the hypothesis of the research from practical, theoretical and methodological findings: academic curricula in educational institutions is filled with individualized exercises, training sessions that develop individual motric abilities such as strength, speed, resilience etc. This fact created a certain discomfort amongst students followed by the finding of subterfuges (such as medical exemptions) in order to avoid participating in these classes. The reviews of diagnostic questionnaires regarding the reasons behind a

school goers' refusal to participate in classes show that a stressful environment and the rigor of exercises used in order to achieve the indicators imposed by the school curriculums are the main motives. The same questioners revealed the solution to improve satisfaction amongst students and determine them to participate in classes. It is about assuring the basic motric qualities through games, which are to be predominantly used throughout classes and in school curriculums. In this direction we have performed some correction to the normative school curriculum at a methodological level and the physical education classes consisted mainly of competitive sports. The results were obvious, besides the (more moderate) training of certain motric qualities a diverse and complex set of psychic additions is assured, of sentimental, emotional and cognitive nature.

For this reason I have organized the **experimental research** part starting from an original statement, one to include current issues regarding the improvement of the physical education curriculum. Research and determining the tools for this endeavor was the specific stage which allowed thematic delimitation, our initiation in the research specific issues (the study of the pedagogical bibliography, of the psychological one, of the bibliography dedicated to motricity and psychology of physical education). An important stage of organizing the experimental research was the one regarding the development of tools necessary for a qualitative research. It is about preparing initial tests, forms required to verify the relevance of samples, didactic programmes and activity projects for the experiment, in addition to graphics, diagrams, tables and questionnaires.

The designing of the research project covered the formulation of the general hypothesis (*"If we utilize sports as main constituents of physical education activities, transversal psihomotric competences are formed"*) of the secondary and partial hypothesis and of the educational objectives correlated with the hypothesis, establishment of work strategy especially under a methodological aspect. An important role was played by the establishing and the assignment of subjects who were selected from a group consisting of more than one thousand students. The examination of the experimental and witness group's validity and representability, the possibility of relating the two benefited from a special interest. The point is to verify the possibility of achieving congruence between the configuration of the selected groups and the experimental research in a way that makes our efforts credible.

The **development of the experimental research** meant the compliance with the various stages of the process, as well as the appliance of the development project on the group selected for experience. In the pre-experimental stage preliminary tests were submitted to both groups –experimental and witness- in order to obtain clear starting point clues on the two groups, for a successful post-experimental comparison. The aim of the test was to establish the level from which we started before applying the independent variables. Analyzing the results led us to believe that the two groups are comparable because their incipient levels are similar, both in the motric department as well as in their psychic values. It was a first step that allowed us to move towards the experimental stage only with the experimental group of independent variables. This stage consisted in using certain didactic materials belonging to the academic curriculum, like changed and improved school and pre-university curriculums, mainly in their methodological aspects. From this perspective instead of suggesting alterations to the motric contents, capacities and competences, team played sports were promoted.

Shaping basic motric qualities like strength, skill, speed and endurance were traditionally formed through individual physical exercises and not through team and competitive sports. We took into consideration competitiveness as well, in order to determine the emotional and psychic vestment during physical education classes that were organized under the method of team sports. The experimental group benefited from this curricular project organized throughout schools while the control group (witness) participated in traditional classes coordinated by teachers who did not have access to our curricular project. Applied throughout an entire academic year the experiment was meant to determine as precisely as possible the level of acquired endowments on a motric and psychic level.

The final testing as the last sequence of applying the project contained both groups, experimental and witness, and offered a clear conclusion, one that confirms the general hypothesis: the experimental group developed a higher level of psychomotricity especially on emotional level, while the control group showed improvements only under their motric abilities, not so much on an psychical level.

The **main conclusion** is that using team sports in teaching activity yields a far higher level of psychomotricity that is more noticeable and valuable compared to using

traditional methods, focusing on basic strength building exercises, speed or endurance running or sequential skills.

The **finalizing of the research** was built around two aspects: the analysis, interpretation and systemization of the experimental data and the development of this PhD thesis constituted in a synthetic evaluation form. The resulted portfolio allowed us to move on towards a complex analysis of the data resulted from utilizing specific research tools. In order to achieve this statistic and mathematical methods were used as well as graphic representations. The plethora of tables, calculating the common average, the frequency, the analysis of special cases (case studies), comparing the results of the two distinct groups allowed us to verify both the general and the derived hypothesis. The research results were confronted with the desired objectives, as they result from the hypothesis.

Details of Contents

I entitled the first chapter “**Aspects of physical education and sport involvement in the formation of personality**” chapter that detailed the problems of shaping human personality through education, an important (and essential) part of which is played by physical education and its role in configuring conduct, physical features, dignity, correctness, a competitive spirit and a psychological balance within the individual. At one point I assert: *“man is born to live socially, in other words to become a social and socialized being; the sense of his existence is to adapt to a social behavior, to a conception specific to a community. The social potential of a human being coincides with his chance to get an education. The individual is the one who builds (Faber) participates in the life of the city, goes through metamorphosis, exercises political beliefs, cultivates his personality, lives in awareness of his “ludic” side, uses circumstances for obtaining happiness, who beliefs and identifies with supernatural values, transcends, strives for knowledge, morality and beauty, in other words is capable of abstract thoughts. Man becomes, having micro and macro perspectives, because he interacts with real and virtual objectives, being aware of himself through his attachment for culture and civilization”*.

Pleading for the importance of shaping the youth through some basic motric qualities, as well as some behavior patterns with a great psychical investment, affective, cognitive and emotional; I consider that physical education represents a basic component of general and pragmatic education, integral to the human personality. More to the point, a new type of education is required, one that I have called psychomotricity and which refers to three aspects: education of the body, of the will, of personal hygiene.

Maintaining physical health is in correlation with the development of new psychical abilities, the ensuring of motricity and the assumption of hygiene. Numerous ironical remarks are launched towards those who nurture only their muscles ignoring the importance of the mind the same being valid for those who possess a supple mind, however carried by a frail body. “Because the body is necessary in all human pursuits and it counts to have a well proportioned body with all the body’s services. Because even there where you might think that you have less need of the body, in the mind’s workings, everyone knows that many great men often fail when they lack a healthy body” (Socrates) To be healthy (body and mind) means to benefit from the entire physical comfort (physical and psychical, bodily and affective) a man can have by leading a balanced, pondered and stress free life.

Cultivating the individual’s psychical aspects. the intellect, willpower, intelligence and all psychical processes benefit from an enhanced performance if they are not “deranged” by physical or emotional maladies. There is congruence and interdependence between mental and physical health, between motricity and psychological development. For this reason I have entitled this educational chapter as psychomotricity, considering the fact that only a balance between the two parts of a personality can provide an optimum development of it. For example a team is a place where a series of psychological qualities like willpower, determination, tolerance, competitiveness, discipline, tactical thinking, friendship, ambition, and desolation for loosing are developed. Physical and affective satisfactions are interlinked, virility and effervescence mix together with wit, and the mind’s hygiene (order, rigor, moderation) is doubled by the body’s hygiene and esthetic.

Included in the psychical objectives category we find the **development of imagination, of tactical thinking, of cooperation and fair-play, bravery,**

perseverance, self-control as well as physical and esthetic maintenance through the ongoing practice of exercises, care manifested towards appearance, and realizing the importance of a dietary education. The motivation of socio-affectivity starts the moment we learn how to walk, to climb, balance, throw, catch all specific to the first years of life. These are continued in a spontaneous way through kids games, in schools, in an organized environment and through some planned activities. In the first years the objective is to ensure a natural development of the body through a careful oversight of health, muscle development, bone and joints strength, the development of a healthy respiratory system, an elegant posture. These objectives are doubled by the stimulation of speed, strength, endurance, sustained effort capabilities, later are encoded in games, in exercises in discipline and order, obeying to the rules, as a foundation in assimilating certain psycho-volitional behaviors.

The **second chapter** bears an intriguing name “**The semantics of Motricity**” in which I start my analysis with the determining factors that play a role in determining physical education’s position in developing a personality, in conformity with the educational ideal of the contemporary society, and derived from educational policies.

The Project for methodical personality development reveals a lack of equilibrium amongst the three variable components, fact illustrated by the following situation (see table 1.1)

Table 1.I. Comparison of the composition of the Romanian curriculum hours of undergraduate and PhD

Level school	Average hours curriculum	Total hours for intellectual development		Total hours for the development of affectivity		Total hours for the body and health development	
		Nr.	%	Nr.	%	Nr.	%
Primary School	23	18	78,26	3	13,04	2	8,69
Secondary School	29	25	86,20	2	6,89	2	6,89
High School	33	29	87,87	2	6,06	2	6,06
University	22	19	86,36	1	4,54	2	9,09

education							
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Intellectual development is treated in a preferential and disproportional way, there is not much done about character building and less than that for strengthening the body. In the case of physical education, actions are often undertaken with reluctance as if there is regret that time must be allocated towards exercises that are considered valueless.

These factors determined me to conceive the next chapter more closely related to the academic issues, appropriately entitled “**Pedagogic Psychomotricity**”. It refers to human learning, in general, but mainly to motric learning, having certain particularities. I am referring to:

- **Sensorial motric learning** (or perceptive-motric in M. Epuran) consists in modifying the behavioral pattern as a result of adapting an answer to new conditions that demand an increased precision or finesse in relation to the pre given answer (drawing on a mirror, hitting a mobile target)
- **Motric learning** is a specialized type of learning that consists in structuring a series behavior patterns in which the stabilized reactions are dependent on sensorial components. It’s characteristic is a high level of automatism (typing without visual aids, exercises in gymnastics etc)

In the same time I insisted on the **creation and development of motric habits and skills**: *“Motric habits represent qualitative characteristics of learned motric actions and acts. The forming of motric habits (in some cases re-shaping or reconstruction) represent the fundamental objective of physical education and sporting practice or kinetotherapy. The motric habit resulted from the learning experience is an integral part of the motric structure (patterns) that correspond to specific situations. Learned movements (motric habits) are defined by precision, efficiency and fluency, every well appropriated movement (gesture, act) transforms itself into a habit”*

The conclusions regarding the theoretical background were oriented towards explaining the experiment’s topic choice. Justifying the somehow partial conclusions whether they refer to the theoretical part of the thesis or are derived from a certain conceptualization of motricity, would be sufficient in motivating a pragmatic choice, an ameliorative pedagogic research. In schools physical education does not convey too much

attention in comparison with other subjects. Why is that? Often it is, incorrectly, considered that physical education is a pure sporting activity, engaging only muscles, involving only games and relaxation. A vital fact is ignored, one that is derived from the results of a lifelong engagement with sports namely the way it influences the general configuration of the personality including the ones referring to the development of the reasoning abilities (tactical, special, critical, analytical, synthetic) , feelings, willpower etc. The conclusions resulted from theoretical options and conceptual syntheses are the following:

- motricity is a necessity for every young individual, one that contributes to the maintenance of the corporal esthetics, health and to the development of a dynamic conduct.

- the motric act is a necessary acquisition for raising efficiency in other activities with conceptual virtues (writing, practical activities, accomplishment of certain experiences, participating in extra curricular activities)

- physical education and sports constitute a component of general education in the forming of personalities along cognitive, esthetic, moral education etc.

- in the following part we will clarify and dare to outline, on an experimental basis, the concept of psychomotricity as an interlacing of basic motric values with affective psychological features.

- the idea of experimental research can be found in scholarly practice considering that curricular documents as well as the training of teachers puts too much emphasis, if not an absolute one, on the shaping of motric qualities, muscle mass, strength, speed, abilities, ignoring almost completely the affective side and the inclusion of physical education in the florilegium that contributes to the shaping of the personality.

- the experimental research will try to ensure congruence between motricity and affectivity, between the development of motric qualities and affective-emotional education.

The **experimental research** was entitled the *Stimulation of psychomotricity through didactic sports* containing a number of 151 pages from the total of 260 which translates into 58.07%. We have followed the known algorithm of an experimental research considered here to be part of the establish-improve typology. After motivating

the research (the *strategic modality of improving the scholarly discourse of curricular activities (as well as extracurricular) for shaping transversal psychomotric competences*) we established the objectives (the *improving of the instructive didactic process of physical education at an undergraduate and graduate level in order to achieve polyvalent psychomotricity*), the subject, scope, scientific novelty (*identifying the strategies, methods and ways to act in order to develop the psychomotric potential enlisting the help of sports, in an educational programme dedicated to students*) the thematic (*as a consequence the source stimulating us to determine , for research, this topic that we have found in schools but mainly in the faulty way (and style) physical education curriculum is organized*), type of research (*systematic, longitudinal and establishing-improving research*). All arguments were focalized towards identifying a potentiality illustrated in **the general hypothesis:** *if we will utilize sports as didactic strategies (basketball and soccer) we will succeed in improving the psychomotricity in students* and as a backup hypothesis: using sports in accomplishing the educational objectives presented in the curriculum we will be able to configure the psychomotric dimension in students.

The research was carried out in Aurel Vlaicu University, Arad (where I hold a teaching position) the research being conclusive enough, in our opinion, as well as in four high schools from Arad county, focalizing on twelve graders, close in age and psychomotric potential to first year university students. These kinds of pre-test activities allow a prior documentation in order to establish an exact diagnostic on the differences between students who perform physical exercises and those who do not. The experimental design was as follows:

1. Location: Aurel Vlaicu University for undergraduate students on one hand and Vasile Goldis and Adam Muller high schools on the other.

2. Time frame: 1st march 2007-15th June 2009

3. Stages and sub-stages:

a. Pretest stage: second semester (march-June 2007), at this stage our objective was to diagnose the relation between experimental groups and control groups, to obtain pieces of information regarding the performance, the homogeneity of the collectives, domains of interest, preferences towards sports, opening dialogues with teachers, specific details of particular classes/students (a portfolio will be prepared).

b. The experimental intervention stage 2008/2009 academic year , stage in which independent variables were presented to the experimental groups, in conformity with the research specific methodology.

1st October- 10th November 2008: administering diagnostic tests.

10th November -1st May 2009: direct application of the intervention regarding the development of psychomotric potential.

c. post-test stage:

- Second semester (1st may-1st June 2009) having as objective the difference testing between the two groups (experimental and control) and the comparative monitoring of the evolution observed with students.

- 1st May -31st May: handing out a series of tests in order to determine the evolution of the groups.

d. Re-testing stage:

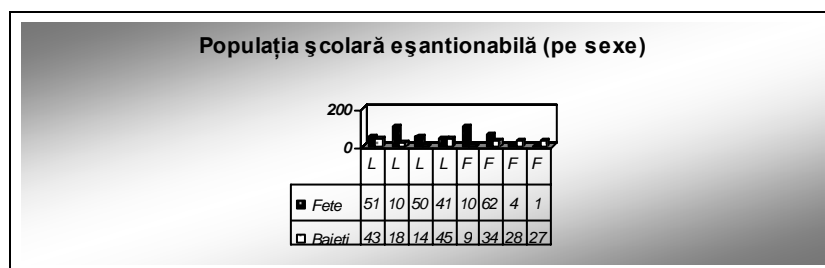
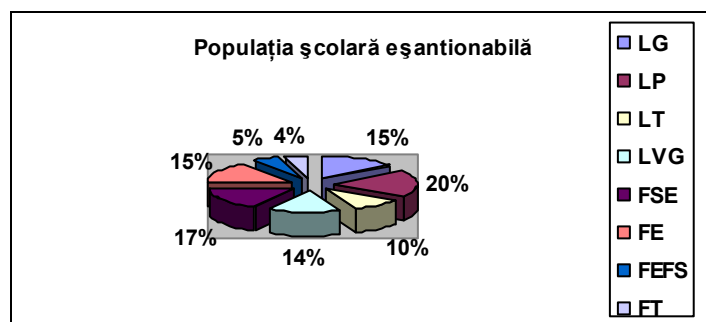
- 1st September-1st October 2009: after test.

- After the 1st of October 2009: capitalization on the research by publishing the PhD thesis, intervention inside academic mediums (pedagogic meetings, communication sessions etc) as well as by publishing the volume, possibly, or public presentations of the conclusions resulted from the experimental research.

Regarding the **sampling of the contents**, the entire experiment targets the part of the national education curriculum that has direct relevance to the methodology of organizing and conducting learning activities through sports. On the other hand we have selected those sports that have a certain amount of attractiveness given by the presence of a ball (basketball, soccer) that are competitive by nature, that result in adrenaline release resulted from the players direct interaction (sports in which compensatory qualities insure the spirit of the game and inside the team each player has carefully selected roles) and finally these sports require movement, physical and emotional involvement.

As for **determining the sample subjects, diagnosis questioners** were used for teachers and students alike, hoping to identify the representative qualities of control and experimental groups.

Given bellow is a table representing the structure of the groups based on classes/categories.



Thus we have accomplished sampling, as follows:

Categories schools		Class / group of experiment (GE)	Class / group control (GC)
High School	Lic. Teoretic „V. Goldiș”	XI A (25 elevi)	XI B (22 elevi)
		XII A (25 elevi)	XII B (24 elevi)
	Lic. „A. M. Guttembrun”	XI A (22 elevi)	XI B (20 elevi)
		XII A (22 elevi)	XII B (20 elevi)
University		An I, (102 studenți)	An I, (112 studenți)
TOTAL		196	198

As a conclusion we have determined a stratified and correlated sample:

Learning cycle	Total	Group experiment (GE)	Group control (GC)
High	180	94	86
University	214	102	112
Total	394	196	198

After analyzing the answers as well as the attendance records of those who were given medical exemptions (rather irrelevant all in all) we have concluded that establishing the experimental group is possible: for **high schools: Vasile Goldis and Adam Muller** high schools both from Arad and for **university students: Aurel Vlaicu University Arad**, where participants were enrolled in Primary school Pedagogy, Special Psychopedagogy and Social Assistance modules. The structure of the groups is the following:

The **experimental group** included Adam Muller and Primary school Pedagogy students and the **witness group** included Vasile Goldis and Special Psychopedagogy and Social Assistance students.

After selecting the two experimental groups- witness and experimental, we concentrated on analyzing them in order to highlight each group's characteristics and to verify the existence of a comparative congruence. In order for it to be relevant we have considered it compulsory to account for other factors found inside the groups, factors that eventually would maintain our scientific convictions and would allow a minimum error margin. My intention was to revalidate and reconfirm the representative quality of the chosen groups for a valid and faithful experimental research.

Independent variables were applied only to the experimental group and the consequences visible only in the dependent variables, identified at a subject level. I used the independent variable made up from the pedagogic promotion of sports (basketball and soccer) in order to stimulate willpower, ambition, competitive spirit, empathic elements and acknowledgment of defeat as dependent variables together with factors regarding motricity, the dynamic act, muscle mass development, speed, technique and team tactics.

The expected effects of the aforementioned elements are expressed through **dependent variables** discernible inside the same experimental group as a consequence of manipulated physical education learning situations and experiences, visible in the psychomotricity level. In this direction, as expected independent variables we are listing: improvement of psychomotricity, of emotional control, better performances due to combining motric activities while performing sports.

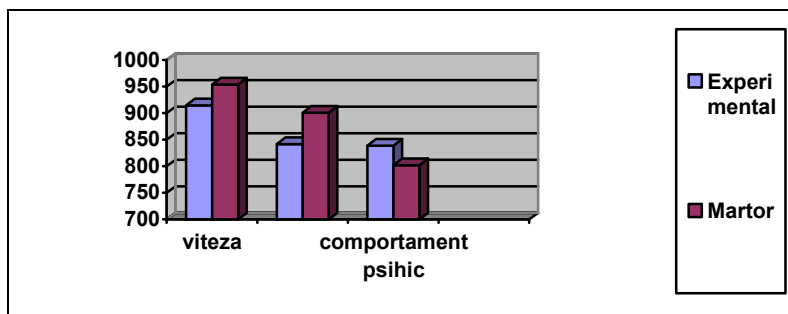
The experimental research took place in stages. We started the experiment under the usual procedures. The witness group, pedagogic activities took place under the usual methodological strategies, particular to teachers or student groups. The witness group members were not informed about being compared to their colleagues.

With the experimental group independent variables were used in the pedagogic processes of learning, focalizing on the preponderant usage of sports in achieving secondary capacities sprung from the educational objectives. I considered the fact that motricity is highly involved and team sports presuppose the involvement of physical and emotional features as well as character and behavioral conduct, i.e. an increased psihomotric potential.

Observing the resulted statistical data and analyzing the consequences of the entire test in grades, relying on an established method, the following averages resulted:

Tabel nr. 33.V. Formative test results mean

Group	Media notes at speed	Media notes at rezistance	Media notes on emotional behavior
Experimental	9, 15	8, 42	8, 39
Martor	9, 54	9,01	8, 02



Grafic nr. 38.V. Formative test results mean

If we analyze solely the averages comparatively (table 38) the result is an apparently strange situation: the experimental group has a diminished situation in comparison with the two basic motric qualities (speed and endurance) and the witness group presents lesser emotional conduct and psychological behavior compared to the other group. This fact indicates with certitude that team sports facilitate higher relational and behavioral development as opposed to individualized exercises (gymnastics, complex exercises) facilitate a better development of motricity.

At the end of the experimental stage we entered the post experimental faze through the application of a **final evaluation test**, identical for both groups. I took under consideration, from the incipient stages of this test, the importance of considering both the relevance of the sample groups as well as “*inter-subject relation*” (wording used by Musata Bocos): if the difference between the two groups is significant: $Ree^{***}-Rec^{***}=0$ (case in which my research hypothesis is confirmed) or if the difference $Ree^{***}-Ree^{*}=0$ and $Rec^{***}-Rec^{*} \neq 0$ where *Ree* refers to “the results obtained by the experimental group” and *Rec* to “the result obtained by the control group”.

The final control test universally applicable to all subjects involved in the experimental research held from 1-15 July 2009 has the following contents:

1. Evaluating basic and combined motric qualities: speed, endurance, skill, strength and their forms of expression (through specific procedures, meaning the timing of standard distances, level of skill in handling the ball and specific exercises designed to establish the strength of the arms, torso, legs) as well as preparing a post test evaluation of the primary variables that were determined during the first test.

2. Statements regarding emotional status, under the following aspects: expression of restlessness, ability to control anger, ability to be independent, the denial of involvement, lack of understanding for the weak, individualism and desire to win under any circumstances, accepting defeat, motivation in sport related activities, sacrificing for the team, interaction with team players and “adversaries”.

The analysis, interpretation and synthesizing of the gathered data was preceded by the brief processing of the data portfolio, meaning grades were given in accordance with performance, a critical analysis of answers was performed as well as the pinpointing of subjective and objective effects, confidence level, the grouping, classification and

systematization of data gathered and recorded in the data portfolio. Considering the sheer number of subjects a systematization of data is required, the determining of percents, statistic indicators (with central tendencies as well as variances). After a basic analysis I started an in depth review of the data, using correlations, associations, relying on the so called “statistic- mathematic apparatus”. The same amount of consideration was given to the didactic interpretation of the data, interpretation that allows a wider margin for error than the comparable psychological and statistic-mathematic interpretations. The consequences of this analysis concern the validation of our starting hypothesis as well as the perspectives on shaping personalities.

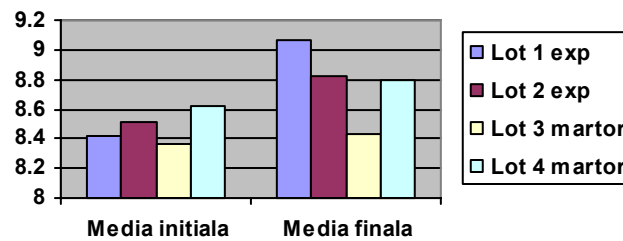
The analysis and objective evaluation of the gathered data was started by a quantified measurement of aspects related to subject behavior of members belonging to the two groups. We started with the process by **counting** the grades received by the subjects, their marginal results (performance or sub standard), the identification of some specific occurrences (exemptions and reasons behind them, the relation between general behavior and behavior during a physical education class, the number of subjects involved professionally in sports).

Tabel nr. 36.V. Differences between the experimental group and control group:

<i>diferences</i>	Speed	Rezistance	Skills	Power	Observation
Ree	7,91	7,80	8,22	7,97	
Rec	7,61	7,40	7,82	7,77	
+ sau -	0,30	0,40	0,40	0,20	

A comparison behind the two situations, measuring and quantifying the experiment’s consequences through grades, and applying independent variables to the experimental group is not necessary unless for showing that $Ree^{***}-Ree^*=0$, which would validate the research hypothesis. Even in such a situation, for the one experimenting, the primary validation of the research hypothesis would be reason enough to continue with the data analysis and interpretation. On the other hand, the second stage, the one that identifies the psychical involvement in psychomotricity, individually tailored for each participant, showed relevant data as suggested by table 37, 38 and 39.

Converting the results in grades and then in mathematical averages, the four groups (1, 2 –experimental and 3, 4 -witness) show the following results:



A first conclusion reflected by a primary analysis of the data illustrate the fact that the subjects from the experimental group present identical or lesser motric abilities than the ones from the control group, and the ones from the control group display behavioral patterns inferior or identical to those from the experimental group. This fact partially confirms the main hypothesis: the way physical education specific educational activities promoted through team sports are organized directly contributes to the building of the character and relational behavior, on the other hand the systemic education of motric qualities as suggested by the present educational curricula puts more emphasis on basic motric development. In this direction we started the analysis of motric qualities through methods of categorization and ordination such as **serializing** and **grouped classification**.

Graphic comparison (see graphic 40.V) identifies the following situation: subjects belonging to the experimental group perform better value wise in the second part of the diagram compared to those in the control group that are locatable inside a more moderate performance space (in this case by performance we understand a progress related accomplishment and not an exceptional performance in an athletic way). By comparison to the total sample subject group and to the data expressed in percentages, the synthetic comparative table looks like this:

Tabelul nr.41.V: Benchmarking on the difference between results

Group	Subjects	Rezult				
		Very weak	Weak	Mediocre	Good	Very Good
Ree	181	2 (01%)	23 (12,70%)	50 (27,62%)	73 (40,33%)	33 (18,23%)

Rec	165	1 (006%)	35 (21,21%)	61 (36,96%)	57 (34,54%)	21 (12,72%)
Diference	-	Irrelevant	- 8,51%	- 9,34%	+5,79%	+5,51%

Percentage wise, adding the weak and mediocre results of the control group to the percentage of good and excellent results of the experimental group we can conclude that the results are a consequence of promoting the teaching staff's cooperative and empathic attitude, attitude that translates more into the way games are organized, tasks and curricular objectives are managed though team sports. Such an attitude on behalf of the teaching staff, beyond arrogance, the exigency of the curriculum, is meant to transform physical exercises into a pleasant experience, offering students a relaxing and satisfying personal and group experience.

We consider that a tolerant didactic behavior, that the effects of building an emphatic liaison with students are of utmost importance. We could say, even though the result are not entirely confirming its relevance, that the secondary hypothesis (*if an emphatic attitude is expressed by the teaching staff vis-à-vis physical culture- as a fundamental component of the personality, then the care towards corporality becomes a life long concern*) is valid, at least in the first part of the statement.

After the initial data processing, we moved on to organizing, presenting and to the statistic-mathematic analysis of relevant numbers collected throughout the experimental research. The analysis and interpretation of experimental data was stuck in a point exactly because of the hardships of globally summing up the qualities of motricity and psychological features, inside the concept of psychomotricity. In order to overcome this obstacle I considered necessary to accomplish a reinterpretation of the available data by joining the two aspects on an individual level, even though hundreds of variables are involved and mathematic and statistic effort is considerable. To do this I correlated the resulted numbers from all of the 185 members of the research group and all 165 members of the control group. The formula used was the following: I extracted the averages from the motric quality tests (speed, strength, endurance), added the results of the statements (as a synthesis of the emotional and physical involvement) and finally established the level of psychomotricity at an individual level, taking into account both experimental

groups. Dealing with entire pages of numbers I systematized them in synthetic tables that show absolute frequency in the most efficient way allowing for a better comparison of the two groups (Ree and Rec) considering the **starting initial parameters**.

The cumulated frequencies as they result from an identifying analysis inside primary tables are as follows:

Tabel nr.46.V. Cumulative frequencies for Ree:

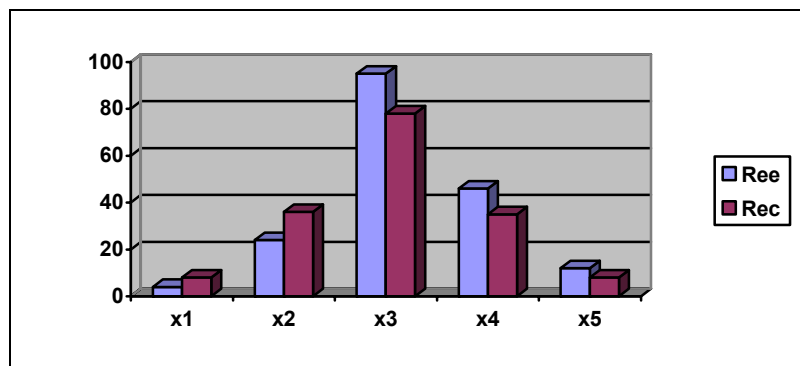
x	Xk	Determination of the absolute frequency f	f	$fi (%)$	fc
2-4	3	IIII	4	2,20	1, 23
5-6	5,5	IIII IIII IIII IIII IIII	24	13,29	18,21
7-8	7,5	IIII IIII	95	52,48	56,49
9- 9,99	9,50	IIII IIII IIII IIII IIII IIII IIII IIII IIII I	46	25,41	95,43
10	10	IIII IIII II	12	6,62	100
			N=181	Total 100	-

where: XK - core values, f - frequency, be-relative frequency, fc - frecvețe cumulative.

Tabel. nr. 47. V. Cumulative frequencies for Rec:

x	Xk	Determination of the absolute frequency f	f	$fi (%)$	fc
2-4	3	IIII III	8	4,84	2, 34
5-6	5,5	IIII IIII IIII IIII IIII IIII IIII I	36	21,81	18,21
7-8	7,5	IIII IIII IIII IIII IIII IIII IIII IIII IIII IIII IIII IIII IIII IIII IIII III	78	47,27	86,21
9- 9,99	9,50	IIII IIII IIII IIII IIII IIII IIII	35	21,21	98,24
10	10	IIII III	8	4,84	100
			N=165	Total 100	-

The data presented in tables, complicated in their own right, will be shown in graphic images, in order to better identify the shape of distribution, the relationship between the two groups, comparison, frequency or frequency curves.



Grafic nr. 42.V. Frequency curve for experimental and control groups.

Depending on the conversion of the motric and psychic qualities evaluation percentages through their enhancement during didactic sporting activities, having dependent variables as a reference point, we will identify the main results on personality shaping for students from a psihomotric perspective. Included in the developed values department we add psychic elements like “dynamic suppleness”, “general equilibrium”, and “coordination” that have no pure physical values, including in their structure an important quantity of will, motivation, personal ambition, motivation, and attachment towards an idea, competitiveness, as well as other elements that constitute what we call: *“emotional involvement in sporting activities”* as resulting from table 48.V *The main consequences on the personality shaping from a psihomotric perspective.*

Results were centralized and graphically represented in table 43

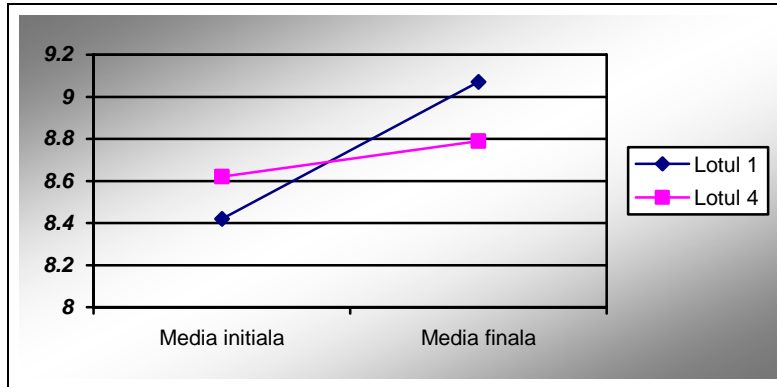


Chart. 43.V. Comparison between initial and final averages for lots 1 and 4

Taking into account the above graphic, from the perspective of subject evolution and by the arithmetical average (which is the general average of the group in the same time) we can observe: the noticeable evolution of group 1 from the average of 8.42 to the average of 9.07 (as an experimental subgroup) meaning an increase of 0.65 in general psychomotricity, in the same time in the fourth group (a witness subgroup) there is an increase of 0.17 (from 8.62 to 8.79). Another relevant fact is grade distribution, grades obtained from the conversion of results relevant to motric and psychic qualities:

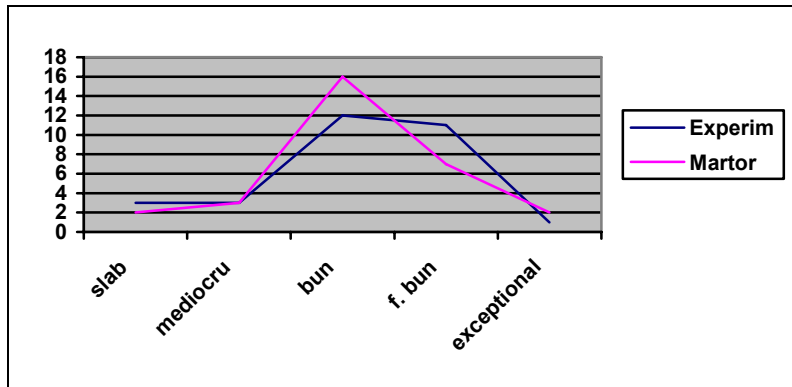


Chart. 44.V. Distribution notes for subgroups 1 and 4

The totaling used to determine dispersion and standard deviation within the experimental subgroup are highlighted in the following table:

Tabel nr. 49.V. Determination of dispersion and standard deviation for the experimental subgroup

Valoarea	x_k	f	$f.(x_k)$	$f.(x_k.x_k)$
----------	-------	---	-----------	---------------

-	3	1	3	9
-	4	1	4	16
-+	5	3	15	75
-+	6	3	18	108
-+	7	6	42	294
+	8	7	56	448
+	9	6	54	486
+	10	3	30	300
		$\Sigma = 30$	$\Sigma = 222$	$\Sigma = 1728$

The facts identified through the above table together with the way we realized the multistage randomization represent a sufficient argument for extending the results on the entire group. The results obtained by the experimental subgroup can be translated on the entire experimental subject group and the analysis of the results obtained by the control subgroup can be translated entirely to the entire control group. The results confirm the fact that psychomotricity is a personality acquisition, responsible for creating a positive self image.

At the same time psychomotricity is development prone inside an academic learning process through complex exercises (for motric qualities) and sports for perfecting some personality features, the ethical conduct and self control.

The statistic-mathematic analysis of the correlations between the variables obtained with the two subgroups confirms the above statements. I consider both motric and emotional variables. It should be mentioned that the analyzed phenomenon is part of the larger social sphere, having as a consequence a probabilistic character but mainly presenting fluctuations in time, visible in group or individual behaviors.

Re-testing took place two months after finalizing the experimental research. We considered the correlation between motric and emotional qualities, i.e. the results obtained within the performance test, in comparison with the predictive test, identifiable in the starting parameters. I am determined to go through with this analysis in order to determine the coherence of the two realities expressed in the general behavior of the test

subjects and taking into consideration that which we call psychomotricity as a relation of the psychic and the physic, of motricity and self control, between groups and individuals. The retesting, performed one month after the performance test shows real improvement regarding psychomotricity and the way this became a behavioral component in the life of the subjects.

The test which determines the behavioral “establishing” and the “achieved” psychomotricity was administered in the in the following circumstances: for the first group (high school) belonging to the experimental group we have capitalized on the results obtained by high school graduates, where 71 out of 94 students opted for physical education as the 5th subject of the exam, which translates into 75.33%, fact that is relevant however not sufficient considering that the majority of graduates opt for this subject, erroneously considered to be easier. For the subjects belonging to the second experimental group (102 out of which 8 defaulted, thus remaining 96) the final exam had a content expressed in the results obtained in that pre-test, constructed on purpose in a similar way to the requirements of the final exam. 64 graduates (out of the 86 total i.e. 74.44%) belonging to group 3 (witness group high school students) opted for the physical education exam, and witness group 4 had 84 PIPP students (out of the total 112) the rest opted for not taking the exam. Combined the numbers show that 71+96=167 experimental group subjects and 64+84+148 witness group subjects took part in the reexamination. From the predictive test “the losses” amounted to 29 members of the experimental group and 50 from the witness group. This fact proves the verisimilitude of the results and the initial comparison’s usefulness.

Table nr.50.V. Results of re-test experimental and control groups

Group	Subjects	Rezultate				
		Very Week	Week	Mediocre	Good	Very Good
Ree	167	-	19 (11,37%)	31 (18,56%)	73 (43,71%)	44 (26,34%)
Rec	148	-	24 (16,21%)	29 (19,59%)	63 (42,56%)	32 (21,62%)
Difernces	15	-	- 5,16%	- 1,03%	+1,15%	+4,72%

The official exam setting determined the exemplary preparation of students belonging to both backgrounds (high school and university). The consequence of this was seen in the improved results much better balanced throughout sample groups compared to the probabilistic and performance test.

We will proceed with a comparison between the three tests in order to identify the psihomotric improvement of the subjects, as it results from the table bellow:

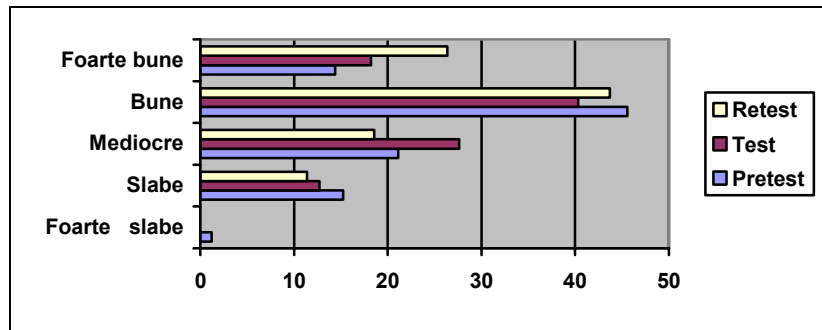


Chart nr.45.V: Comparison made on subjects for Ree:

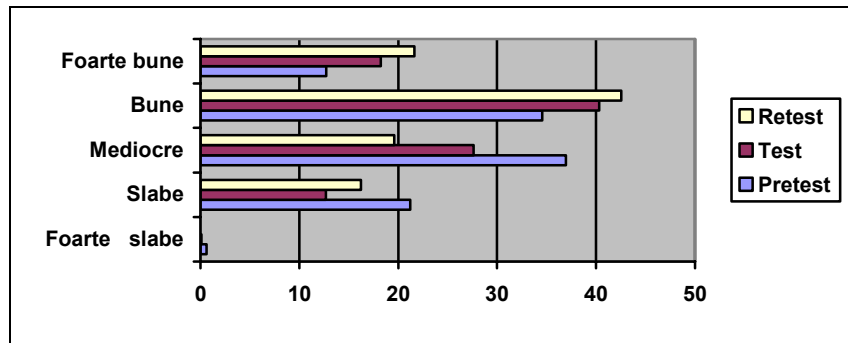


Chart nr.46.V. Comparison made on subjects for Ree:

“Reading” the comparative graphic, it is noticeable that in time there is an increase in performance level, and that the results from the preferential test and the retesting improved compared to the initial predictive test. We argue based on our teaching experience that a percentage at least equal with the determinable one from the control group, is in direct consequence of maturation, to the determination of scoring high in the exams. However the high percentage of the experimental group compared to the control one is a consequence of applying independent experimental variables, variables determinant in our initial hypothesis. In the end what we anticipated through the

hypothesis had a subjective motivation as a subsidiary: development of attachment and love towards improving psychomotoric qualities, as a foundation for a harmonious figure capable of keeping a similar soul.

Our problem, postponed in its experimental answer, depends on the correlation built up in each individual and inside the experimental group between emotional and motoric qualities. I ask myself if the diminishing of motoric qualities in favor of the intellectual one is justifiable. If inside the control group motoric qualities are improved in relation towards psychological ones within the experimental group the relation is the exact opposite: motoric qualities are less developed but to compensate their psychological qualities are better developed. In general it is difficult to determine the psyche's implications in the realm of personality rounding. Human behavior is one of the most unpredictable behaviors and determinant causes are to be found in their complexity. Physical traits can be observed in the size of the muscles, corporality, posture, while psychic features are most of the times contextual, visible only in human interaction, environment-human interaction, and inside social and even public deeds. As a consequence I consider that psychomotoricity as a congruence of physical attributes and psychological and emotional features, becomes a fundamental component of human personality. The fact that psychomotoricity, with the above meaning, is a component of the general educational process and of each experimental group member's behavior became a conviction generated by our research. For this reason we will determine the correlation coefficient of dependent variables under two hypothetical dimensions. First of all, the resulted statistical percentage introduces the notion of "associative variables" meaning that there is a relationship between the increase of physical attributes and the decrease of emotional ones. "The emotional muscle" diminishes the physical one because is constructed on various, general games that are not focused on a specific set of exercises like weight lifting, progressive pushups and rhythmic running. Sporting games develop team spirit and its main component focalized on compensatory attributes with the aim of developing a social response.

We know that establishing a **correlation coefficient** targets the assessment of the degree (and quality) results are interlinked (expressed in dependent variables) and the expression of this coefficient in numbers. In our case the congruence happens between

the motric qualities and emotional attributes gathered by the sample subjects during the process of the experimental research. We consider it to be of common sense (and sufficient as much as such an adjective can denote objectivity) to establish a simple correlation (usually marked as “r”) which can take up values between -1 and +1. It is to be noted that if $r=0$ then there is no correlation between basic motric qualities and psychic attributes at the general level of the experimental group. When $r=+1$ we have a positive correlation between the two variables and if $r=-1$ the variables are coexisting inside a negative relationship to each other (one increases the other one decreases). We will determine the correlation coefficient between the variables that configure “basic motric qualities” and variables that configure the emotional level. In each case the correlation is established at a subject level; subjects that are selected through a certain kind of randomization in order for them to be representative for the entire group.

Choosing randomly 25 subjects from each of the experimental and witness groups however respecting the criterions regarding age and sex we will consider that these subjects can be representative (taking into consideration a certain error margin that can not be greater than 4%) In such a social and flexible reality error is tolerable especially because human behavior can not be encompassed in numbers or grades. Given bellow is the subject table used to support the establishing of the correlation coefficient.

Table nr.51.V. Selected batch of experimental group:

Subjects	Media quality basic motive (x)	Media in emotional behavior (y)	x^2	y^2	Xy
A. A.	8,40	8,50	70,56	72,25	71,40
A. L.	7,45	7,50	41,50	56,25	55,87
B. E.	9,25	9,00	85,56	81,00	83,25
B. R.	7,20	7,50	54,84	56,25	54,00
B. L.	8,85	9,00	78,54	81,00	79,65
C. T.	7,45	7,75	55,50	60,06	57,73
D. I.	8,50	8,00	70,25	64,00	68,00
D. T.-L.	7,15	8,75	51,12	76,56	62,56
D. A.	9,00	9,00	81,00	81,00	81,00

E. M.	8,80	8,85	77,44	70,25	77,88
G. S.	7,55	8,00	57,00	90,25	58,40
G. L.	8,45	8,50	71,40	88,36	71,82
I. A.	9,25	9,50	85,56	80,10	79,65
J. I.-N.	9,15	9,40	83,72	57,76	56,24
L. M.	8,90	8,95	79,21	80,10	79,65
L. G.	7,40	7,60	54,76	57,76	56,24
M. S.	8,80	8,90	77,44	79,21	78,32
O. C.	9,45	9,55	89,30	91,20	90,24
O. M.-L.	7,75	7,50	60,06	56,25	58,12
P. I.	7,90	8,10	61,71	65,61	53,99
P. H.-M.	9,45	9,60	89,30	92,16	90,72
R. I.	9,30	9,25	86,49	85,56	86,02
S. D.	8,95	9,15	80,10	83,72	81,89
T. A.	6,95	7,25	48,50	52,56	50,38
U. I.-C.	9,50	9,65	90,25	93,12	91,67
N = 25	T = 8,35	T1 = 8,59	$\Sigma x^2 =$ 1881,07	$\Sigma y^2 =$ 1849,73	$\Sigma xy =$ 1822,66

Applying the formula used for establishing of the correlation coefficient we find:

$$r = \frac{\sum xy - T T'}{\sqrt{\left(\sum x'' - \frac{T''}{N}\right)\left(\sum y'' - \frac{T'1''}{N}\right)}}$$

That using the numbers from the table above we have a correlation coefficient $r=+0.61$ which confirms that there is a positive congruence between motricity and behavior's emotional aspects, so that we can talk about the establishing of psihomotric behavior within the experimental subject group. The unpredictability of the human being in regards of psychical reactions and general attitude constitutes a risk factor that could

be triggered in various environments, capable of stimulating and motivating shocking reactions.

Table nr.52.V. Lot selected in the control group:

Subjects	Media quality basic motive (x)	Media in emotional behavior (y)	x^2	y^2	Xy
A. P.	8,90	7,60	79,21	57,76	82,84
A. V.	8,70	7,90	75,69	61,71	68,73
B. P.	8,55	7,20	73,10	54,84	61,56
C. A.	9,50	7,90	90,25	61,71	67,15
C. I.	9,45	8,75	89,30	76,56	82,68
C. M.	8,90	8,10	79,21	65,61	72,19
D. D.	8,70	7,90	75,69	61,71	68,73
D. E.	9,50	8,30	90,25	68,89	70,57
D. R.	8,60	7,50	73,96	56,25	64,50
E. T.	9,20	8,00	84,64	64,00	73,60
G. I.	7,90	6,70	61,71	44,89	52,93
G. N.	8,50	7,45	70,25	41,50	63,32
I. F.	9,60	8,55	92,16	73,10	81,78
J. A.	8,90	8,20	79,21	67,24	72,98
L. E.	9,65	8,70	93,12	75,59	83,95
L. R.	8,95	8,35	80,10	69,72	74,73
M. I.	9,35	8,90	87,42	79,21	83,21
N. C.	8,75	7,60	76,56	57,76	66,50
O. R.	9,45	8,70	89,30	75,69	82,21
P. A.	8,90	7,65	79,21	58,52	84,08
R. T.	9,55	8,60	91,20	73,96	82,13
R. S.	8,95	7,90	80,10	61,71	70,70
S. O.	9,40	8,25	88,36	68,06	77,55

T. L.	9,75	8,50	95,06	70,25	82,87
U. Gh.	8,95	7,90	80,10	61,71	70,70
N = 25	T = 9,06	T1 = 8,04	$\Sigma x^2 =$ 2135,16	$\Sigma y^2 =$ 1607,05	$\Sigma xy =$ 1642,19

Within this group the correlation coefficient is $r=-0.32$ indicating a more ample divide between motric qualities and emotional aspects, the difference between the two sub groups (that we considered to be representative) is relevant enough, representing 0.93. This fact confirms the general hypothesis of the experimental research, namely that through educational sports psychomotricity is developed.

The problem of the one conducting the experiment from the point of view of managing the correlation is to establish whether it is possible to assert an idea derived from the fact that these correlation coefficients define the entire group and secondly if the sample group represents the collectivity. A different question reflects on whether this correlation can be considered real or not. For answering this last question we rely on the table containing the absolute values of critical correlation coefficients, table which states the values given to “r”. For example if $r=+0.61$, where N is 25, then the grade of liberty is $n=N-2=25-2=23$. P has a value of 0.10 and the value of 0.32 translated into numbers it means that the error margin is only 10%. Further down with the analysis we have $n=23$ and $P=0.10$ the value being 1.71 showing the fact that the error margin is insignificant enough to be considered inside the safety parameters. When $P=0.05$ (significance level) the safety level is bound between $m-1.96 E$ and $m+1.96E$ where the error margin has a value of 0.01 giving the following equation $n=N-1=24$. Inside the student’s table the value of “t” equals 2.80, meaning that the average is $8.72-2.80 \times 0.84=4.97$ and $8.72+2.80 \times 0.84=5.19$ indicates the fact that the group’s real average sits somewhere between 4.97 and 5.19 with a 2% risk margin.

Of course, there are of number of different ways to analyze the data. For our research pedagogic analysis and interpretation plays a crucial role. These take into consideration two distinct aspects: the possibility of improving psihomotric abilities through pedagogic activity 1 and determining a basic correlation between the development pf basic motricity and emotional behavior through promoting team sports as

parts of the subject specific curriculum. Our experimental conclusions, determined throughout the experiment itself and through the data gathered, concentrate on the fact that our starting hypothesis is correctly formulated and its assumption real. Relying on the pedagogic aspect of physical education and sports pursued in schools and universities it can be concluded that the requirements for general motric development are unattractive for a large number of students. Pursuing the improvement of physical education related objectives by promoting sports as essential learning methods a largely unnoticed phenomenon occurs. It's about the development of a much more complex type of behavior compared to general motricity. The resulted new type of behavior is psihomotric, contributing not only towards the increase of strength, speed etc. but towards the development of fair-play, friendship, competitiveness etc. On the other hand some specific human weaknesses are overcome (anger, hatred, ambition, aggression), weaknesses that are sourced inside solitary exercises meant to improve basic motric abilities. Due to the involvement of team sports in the physical education curriculum, a larger number of participants attended the classes and team spirit improved though the subjects are at an age where they socialize in small groups or are reclusive. It is worth to include the sociological commentary as well. Through the methodological structuring of physical education classes and the involvement of team sports 18.2% of participants gained "satisfaction" out of practicing sports like: soccer, basketball, volleyball. It is a form of cultivating physical education beyond its didactic side and a way of including it inside the permanent education concept.

The retesting confirmed that due to the results obtained, fact proven by the complex value of the subjects, both at motric and psychological level, **procedure inference** is possible. The experiment confirmed that it is possible to improve psychomotricity, the spread of methods inside the academia being desirable, and to acknowledge its important role in personality shaping, health maintenance, and a positive way of thinking meant to offer satisfaction and existential optimism.

Experiment conclusions

The statement referring to the hypothesis validation in the case of the experimental research i.e. through team sports psychomotricity is improved, is relevant, however it is not sufficient for such a conclusive process. Our experimental research had some moments of doubt, hesitation, mainly because of the rather large sample groups, the division of the research/witness groups, and because of the heterogeneous age factor of the second and fourth sample groups. However, determining the value and representative correlation of the sample groups as well as of the starting parameters afford the possibility of considering them representative. The value and age unity of last year high school students can not be doubted and the same is valid for their desire for movement, for “burning” the energy that is so easily “wasted” in educating corporality and developing physical and psychical health. On the other hand we can not challenge the heterogeneous buildup of the university students; group consisting of fresh high school graduates and older students who failed to attend a university at the optimum age and now have families or even children who are undergraduates. This fact, in reference to the validity of the sample groups, was argued in a previous chapter.

The novelty of the experimental research consists in determining a reciprocal relationship between two variables that define psychomotricity: motricity bias and emotional pedagogy. We would have wished to find a more suitable word for determining, as per our intentions and reality, the congruence between motricity and emotional features. All in all we do think that the term psychomotricity is a concept capable of expressing this relationship. I have stated that psychical virtues obtained through educational sports belong in the family of emotional pedagogy and the relationship between the emotionality derived from cultivating muscular mass and general, permanent and complex personality education is a positive one. The more we focus on raising motricity by individualized exercises the less output psychical education will have. The reverse of the situation is that by educating motricity through team sports we will have fewer outcomes on individual physical qualities but these are compensated through positive emotional education acquisitions.

Suggestions, alternatives, propositions, methodological indicators derive from this conclusion, all regarding the improvement of physical education activities in schools. Our opening statement regarding the satisfaction students have with physical education activities indicate a single fact: the motivation to provide fake medical exemptions in order to avoid participating in these classes is partially due to the rigid curriculum of the pedagogical activity. Considering all of the above there are not enough chances that students will come to consider physical education as a component in their general personality development. Physical education has become a chore instead of an organic necessity. The increasing percentage of obese and sedentary people is a sign of the failure to integrate physical education curricula, in a satisfactory way, in the general human personality building system. The human being is permanent project, project that is being accomplished throughout one's entire lifespan by accumulating experience. The lack of health, of an esthetic physique and the indetermination of the emotional culture may create tribulations and late regrets.

Hence my reason for suggesting the re-organization of physical education's educational curriculum in a different manner. The multilateral development of teenager's personality through exercises in conformity with some extremely exigent indicators do not benefit from any kind of pedagogic or social support. Physical education activities can be relaxing, pleasure full per the personal or collective satisfaction that arises from the completion of some more student oriented educational objectives. Competitive spirit develops so many qualities that it deserves to ignite a change throughout the entire school sports movement by favoring the general health of individuals and the engagement of as many as possible in sports, regardless of age and fitness level. Physical and esthetic health, represent a basis for a balanced lifestyle.

An alternative to demarcating physical education as an educational discipline is to integrate it in what we usually refer to as permanent education. Physical education is meant to prepare psihomotric factors in order to provide each citizen with the chance of becoming a sportsman, of possessing basic dynamic motric qualities, and awarding the possibility of transforming physical education into a support for professional, social and civic integration without the inhibitions and handicaps often implied by the lack of a systematic physical culture. Sports and physical education (considered to be an exclusive

entitlement of the schooling system as opposed to sports usually considered to belong to post academic interests) remain general components of permanent education as well as of the pedagogic shaping of personality. Amongst the components of human personality we find that all other forms of education have as a basis physical health and together they offer the requirements for self accomplishment and a full life.

In other words, and as resulting from my theoretical and experimental arguments, sports and physical education face a severe crisis that reflects the general situation in education. Why is education facing a crisis? We answer: because education faces an ample and long difficulty. Specialized departments responsible for the curriculum are slow to adapt and face a centralized type of bureaucracy. On the other hand, schools, lacking precise pedagogic attributes, polarize the pedagogic discourse towards teaching by instructing. The academic environment is perceived as a traumatic one by students, even though it should be theirs, “the student’s learning home”, a enjoyment causing stetting where they are learning, well...education, i.e. what is useful to them and provides a certain amount of existential comfort, assimilating useful life lessons through enjoyable activities, both inspiring and internalized.

As a rule opinions hide solutions. When we assert that something is not right with the way physical education is organized the solution lies in solving the anomaly. We can identify a crisis in sports and physical education not because there is a strong generational gap but because generations are barely able to withhold their aggression towards classic values. A few changes are in order vis-à-vis physical education’s place in personality shaping:

- initial training means the agglutination of home received education with behavioral traits resulted from pragmatic and functional learning.

- physical education continues to include permanent learning among its features, as a inherently motivated attitude.

- polarizing the interest of the entire society towards educating its members in the spirit of the classic values (beauty, truth, good) lyrical ones (belief, hope, devotion, love) and social ones (liberty, democracy, cooperation), i.e. the inclination to build “the educational city” as well as including inside these values the devotement for the body, motric and emotional qualities.

- an incisive dynamic of the relationship between the academic community and socio-economic environment, meaning that physical education contributes to the forming a personality capable of professional effort, to the will of improving ones professional performances.

- assimilating the ethical codes of a decent cohabitation, protecting their stability and learning how to survive in extreme situations can be consequences of a systematic physical culture.

Physical education has its own particularities, but it manifests tolerance only up to the point where it is affecting other particularities. In a new postmodern society, the younger generation's mentality offers the possibility of "I am" in the entire dimension belonging to "to be". Learning is valuable only if it constructs education, and educational culture demands learning. Inside this paradigm physical education occupies a preferential place, because it offers a basis for physical and mental health as well as for proper emotional management.

General conclusions

Reaching the closing part of my PhD thesis, a few general final conclusions need to be made, conclusions that are determined by the coinage of a new vision on the role played by physical education in the forming of a personality that is in accordance with the educational ideal of present times. These considerations will refer to my personal contribution regarding the clearing up of some theoretical and thematic aspects but will refer mainly to some curriculum improvement strategies.

- The first aspect restates our belief in giving physical education a higher importance in the personality shaping and improvement process. Physical education, considering theoretical and experimental arguments, is more than a culture of corporality. Man is a paradigmatic reality, a being in need of complex development, without the need of isolating a specific part in his educational becoming. Simply by talking about **psychomotricity** is argument enough for the derived effects of emotional and sentimental education. The fact that physical education provides physical health conceived as a cradle for mental health is another argument in favor of the congruence between different

educational branches. We can not ignore the esthetic benefits of physical education, not only from the perspective of an elegant corporality but from the perspective of civic behavior as well.

- On the other hand this aforementioned process of congruence begins in a systematic way in schools. Physical education occupies an important place in the educational curriculum and in the development of a personality. Two weekly hours, is a rather substantial amount of time allowing the assessment of the place physical education is given by educational policies. This fact requires teachers to develop a coherent strategy in order to accomplish their objectives and to give this discipline a new type of status. A change in mentality requires a change in the initial development of pedagogic competences and to reconstruct the educational curriculum in a way that allows for physical education to occupy its rightful place in the complex process of personality shaping.

- Another aspect refers to giving physical education not necessarily status but to allow it to become a lifelong effective development activity. In the same way Romanian language classes are more than just academic subjects, representing a means for human interaction, physical education can become a resource for a harmonious personality development.

- Experimental research offers a solution for arranging all these arguments in an equation with positive results. It is about overcoming a mentality and allowing physical education to become a pleasurable endeavor by the prevalent usage of sporting games.

Through such team sports we cultivate psychomotricity, team spirit, game rules and the importance of keeping them. Permanent education will include physical education, considered to be a basis for overcoming social dissatisfactions, depressions and interpersonal conflicts. Students will start to participate in classes no longer afraid by the effort required and frustrations offered by class chores. In the same time they will get a basis for psihomotric activities, an important ally in the maintenance of mental and physical health.

- From a structural perspective the thesis is divided in two parts: theoretical and experimental. In the theoretical part we conceptualized the main aspects arguing for an inclusion of psychomotricity in the human personality shaping-development paradigm.

Additionally we clarified the relationship between the physical aspects of sport education and its psychical elements. This is why we don't address solely the problem of motricity like the vast majority of academics, but refer to psychomotricity in the same vein as Mihai Epuran addressed the "psychology of physical education".

- Our experimental research is of an applicative nature with the intention of establishing a pedagogic reality that can be improved upon. We tried to depict a situation that was not allowing students to feel satisfaction and fulfillment during physical education classes, with the intention of finding solutions and to propose a theoretical model for stimulating interest in physical education. It is necessary to improve scholarly practice based on the results offered by the representative experimental samples.

- The processing of the experimental data led to suggesting some improvements of the instructive-educational process particular to physical education. The motric capabilities assimilated through methods specific to formal education are considered to be permanent personality traits necessary for a balanced and healthy life.

- As a whole the applied research project confirms our (hypothetical) presupposition, namely that the *achievement of physical education's pedagogic activity through a competitive and team sports inclusive methodology leads to the development of psychomotricity, a complex capability in personality development.*

- In this way **physical education classes produce substantially more satisfaction**, realizing that this educational discipline plays a role in global education and in the general health (physical, psychical, mental) improvement process. Following the same reasoning line we have to mention that the retesting of the two (ex) experimental groups offered a surprising conclusion: 56 students developed a newfound liking in sports, pursuing diverse competitive sports such as tennis, soccer and basketball in their spare time with some opting for joining professional sporting clubs.

- A different conclusion is referring to the fact that **physical education became a form of permanent education** and a basis for those who benefit from the effects of sports are more active, stronger, more confident but most importantly more healthy from a physical and psychical point of view. Our research results will be popularized inside the academia, conferences and physical education model activities.

- The experimental research generated a conclusion that has the ability of becoming, through inference, an essential idea for the improvement of the role played by physical education in the development of human personality. Physical education is an essential component of general education, being recognized as such, at least theoretically, by pedagogy teachers.

- The conclusions reached by such a research open a new set of perspectives on improving the personality shaping process in the younger generations. They have a different mentality compared to those from previous generations in the same way future generations will differ from the present ones. Keeping an open minded attitude towards the changes inherent in society will ensure the ability to anticipate curriculum improving dynamic strategies, to increase physical education's status level in schools, but mainly in the eyes of the students.

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