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**DEVELOPMENT OF COMMUNICATION SKILLS IN HIGH SCHOOL
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“PHYSICAL EDUCATION”**

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**THE SUMMARY
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CONCEPTUAL MARKINGS OF THE RESEARCH

Timeliness and importance of the topic

Communication has always defined the human being, in the specific conditions of formation, development and preservation of society. Even if we identify elements related to the communication process in other species as well, human communication has a particularity, a structure and a series of results that differentiate it from similar phenomena and give it a special character, especially through its purposes.

One of these purposes is education. As a presence in society, a contribution of quality and capitalization of skills, education is the most important process of training future adults, and this process cannot exist outside of communication competence, well founded and implemented. The formation of this competence starts from the first days of a person's life, but education is a lifelong process, which makes the individual evolve and become efficient, competitive and ready to face all challenges.

Education is based on capitalizing on the communication skills of teachers and students, but often the parties involved in the process do not have this skill or do not have it at the level required for an optimal transfer of information.

More and more, specialists draw attention to the deficiencies in communication, which are manifested in society, many studies show that nowadays communication is marked by deficiencies, individuals have an attitude devoid of involvement in this process, they withdraw into the online environment, where there are no challenges and where the environment can be shaped at will, technology bringing advantages and life improvements, but also significant disadvantages, as shown in several studies [31; 27; 30; 24; 25].

We must also mention here the conclusions of the Pisa tests, the results of Romanian students being quite poor; at the same time, today there is a very serious problem of alienation under the influence of digital communication technologies, which isolates the individual from the real world, whose challenges he must face and overcome, offering him a virtual refuge, in which he can shape the environment and relationships according to own desire [16].

Several studies, including the one carried out in 2015 by the Educational Evaluation and Analysis Center [1], also mentioning the OECD statistics published in 2015 based on the PISA tests, show that 42% of 15-year-olds (Romania) experience difficulties major in selecting and differentiating information according to certain criteria, lacking the ability to perform elementary reasoning. Such a rate of functional illiteracy is very high.

The consequences of this high rate of functional illiteracy are extremely visible in Romania's chances of economic development, the OECD estimating that if this type of illiteracy were eradicated by 2030, the estimated economic impact (optimistic scenario) would be 296% of GDP, and in the conservative scenario it would be 211% of GDP. We believe that the argument made, in a world focused on benefits that can be converted into economic indicators, is extremely convincing, and the development of students' communication skills should be part of the proposed target for the year 2030.

Continuing the description of the specifics of the education system in Romania, it should be emphasized that the national assessment allows the enrollment of any student in high school, regardless of grade, the percentage of students who got grades above "5" varying between 79.3% in 2015 and 66.12% in 2012. After 2015, the passing rate decreased, the lowest value from the period 2016-2020 being 73.12%, in 2019.

The year 2020 did not register a value close to 2015 either, the passing rate being of 76.12%, three percent lower than the value of almost 80% from 2015. However, these data show the average at the country level, there are counties where the average passing rate was around 56%, so almost half of the students did not they managed to get a passing grade "5" in the exam subjects, respectively, in Romanian language and literature and in mathematics. Under these conditions, it must be accepted that at the national level the percentage of 8th grade students who do not have the minimum communication skills in Romanian and mathematics is high.

Physical education is a powerful educational tool that can help young people develop their social skills and the ability to integrate into professional life, with long-term beneficial effects. The development of communication skills is a desire that has appeared in recent years, given that the educational requirements, on the labor market, have changed a lot, the demand for highly qualified labor force is increasing, which leads us to the conclusion that pre-university education must to reconsider its strategies and policies, with a view to the real reformation of the educational system, the updating of the legislation and the reformulation of the educational ideal, in accordance with the contemporary realities of life and society. The identification of the communication specifics of adolescents and the search for effective intervention tools, which act firmly in the direction of the development of the communication competence they possess, can certainly be a generous starting point in the approach initiated by this work.

Identification of research problems. Investigating the available theoretical sources regarding the human communication process and its complexity [4; 13; 14; 15], didactic communication [7; 8; 9; 19; 21; 22], those who study the complexity of the communication competence of students in the last years of study at the gymnasium and high school levels [7; 8; 9], along with over 20 years of teaching experience, led us to the conclusion that nowadays we are facing a real decline in communication competence among pre-university adolescents. With the evolution of digital communication technologies, young people have predominantly withdrawn into the online environment [26; 28; 29], where the challenges are of a different nature; here, they can create personalities and mold masks to be like characters, and this deprives them of the tools necessary to confront reality.

Communication competence is useful in absolutely any situation, whether we are talking about education, professional, personal, or social life. Without having this competence, recognized by EU documents as a key competence necessary throughout life, the individual cannot cope with any situation, cannot evolve and cannot enter the job market and adapt to it.

Development of communication competence in the classroom, specifically in physical education classes, can be a positive influencing factor on students' performance, both in the mentioned discipline and in other subjects in the curriculum. Good communication in the classroom is difficult to achieve because several factors need to be considered, including:

- *the teacher's ability to be open and approachable to students;*
- *the sense of well-being and psychological comfort that students have in the subjects they study;*
- *the extent to which adolescents in the social group of the class know each other;*
- *the teacher's openness to breaking away from classic behavioral patterns in class and creating new learning situations;*
- *he specificity of the study discipline and the number of hours in the curriculum;*
- *the constant flow in/out of teachers in the education system, which impedes the formation of strong and high-quality teacher-student relationships.*

However, even under these conditions, which hinder good predictability of results, a responsible and involved teacher must be concerned not only with what happens at the present moment, but also with projecting their activities taking into account long-term results. For better results in the classroom, it is evident that improving students communication skills is necessary.

This leads to the **research problem**: actively promoting the need to train and develop students communication skills as a factor in modernizing the educational process, in line with the demands of knowledge society and the insufficient level of providing this process with valid tools in other school subjects, in this case, physical education, apart from those in the Language and Communication curriculum area.

The aim of the research is to determine the theoretical basis of educational communication, to develop and validate the applicative benchmarks for the development of communication skills in the form of an *educational pattern*.

The objectives of the research are

1. to study the conceptual benchmarks related to models of human communication (schools, functions, types, elements, essential notions), verbal communication, didactic communication and their specificity;

2. to essentialize communication in physical education lessons, as well as to highlight how the communication skills of students entering the high school cycle of studies influence their level of relationships throughout their studies

3. to specify the elements that describe communication in adolescent groups and correlate them with the requirements of effective didactic communication

4. to identify the educational significance of the process of developing students' communication skills in physical education;

5. to develop the Model for the development of communication skills for high school students within the discipline of physical education, as a theoretical and practical basis for the valorization of students' communication skills;

6. to implement the CC Activity Set in the educational process and validate the results obtained.

The research hypothesis postulates that if the directions of action within the analytical framework of communication are adequately determined, then the communication competence of students can be developed in the noematic correlation of communication-physical education.

The scientific research methodology takes into account, on the one hand, the connection between the theory that explains human communication processes, correlated with the specificity of didactic communication, as well as with the specificity of communication at the adolescent age, and on the other hand, the pedagogical practice, which shows us that there is currently a acute lack of concern for investigating communication competence in high school students and its correlation with the level of performance achieved in national and international tests.

Thus, the theoretical basis of the research consisted of the following theories, concepts, visions, and ideas:

- communication theories (J. Fiske; M. Dinu; D. McQuail; D. Pavel; O. Pânișoara);
- the concepts regarding the psychology of education and the psychology of communication I. Holdevici and F. Tonița);
- methodology/didactics of physical education and sport (G. Rață; A. Dragnea);
- views on communication competence (I.-O. Pânișoara; S. Cristea; C. Cucuș; V. Goraș-Postică; T. Callo; T. Cartaleanu; O. Cosovan; A. Ghicov);

- ideas regarding the characteristics of adolescents (V. Goraş-Postică; A. Cosmovici; L. Iacob; T. Creţu);
- ideas regarding the notion of "development" (Gh. Dumitriu; M. Palicica; A. Miron; A. Ghicov);
- ideas related to activities to improve/develop communication and group collaboration (S. Derlogea and G. Bota; L. Cozolino; C. Cucos; A. Cury; A. Ghicov).

The research methods used are: scientific documentation, analytical-synthetic method, epistemological/methodological reflection, theoretical modeling, pedagogical observation, questionnaire, practical tests, pedagogical experiment, sampling, graphical representation, and statistical analysis.

The scientific novelty and originality lie in the essentialization of the noematic correlation between communication and physical education, in its applicative grounding in the educational process at the high school level (9th - 10th grades) and in structuring the set of CC activities as a reference point in developing students communication skills.

The results obtained, which contributed to solving an important scientific problem, are reflected in the development of the Pedagogical Model for developing communication skills in high school students within the discipline of physical education and the Educational Pattern PE2CE, as a component part of the model, which led to illustrating its effects on high school students, guiding its use for a wider range of students and subjects through subsequent remodeling.

The theoretical significance lies in the pedagogical identification and essentialization of the following concepts: message encoding - message decoding, message negotiation, message meaning, educational pattern, noematic correlation, which allowed for a broader reflection of the phenomena recorded in the research topic.

The practical value of the work is reflected in the applicative value of the set of CC activities not only in physical education but also in any other school subject since it does not require a special infrastructure, using methods and techniques available to every teacher. Also, the Educational Pattern (PE2CE) can be applied in outdoor lessons, which are currently considered an alternative solution in education.

Keywords: communication, communication model, communication competence, functionality, development, physical education, adolescent, significance, educational pattern, noematic correlation.

THE THESIS CONTENT

Chapter 1. The theoretical aspects of human communication show that, there is an absolute correlation between the concepts of communication, verbal communication, and didactic communication from a theoretical point of view. The synthetic analysis of communication models illustrates that we can generally highlight the typology of models, the functions of communication, the essence of communication, and the basis for its success.

Communication is a dynamic phenomenon that poses a serious epistemological problem for the theory and methodology of education, and this axiom will underlie the approach of this thesis.

Highlighting the importance of these views, a series of communication theories were conceived, offering models based on different approaches to the idea of the message, the mode

of transfer, and the results of communication. A model allows us to interpret a set of phenomena through a structure that highlights the main elements and relationships that exist between these elements. The functions that the model has to fulfill are heuristic (to explain), organizational (to orient), and predictive (to formulate hypotheses). It is considered that models are only valuable in terms of their probability: they remain valid as long as they are not refuted by experience. They represent only a way of describing reality, and not reality itself, as it is possible that multiple models take into account the same set of phenomena.

The disclosure of the specificity of these communication models provides an overview of the communication process, essential for establishing the educational pattern for developing students' communication competence, constituting a fact of reintegrating communication into the learning activity.

In this case, the adequacy between the communication components is analyzed in relation to the necessary coordination with the verbal-communicative needs of the students in the educational process.

A semiotic analysis of communication is carried out, where the sign is "something that stands for something else for someone", in some respects or by virtue of certain characteristics. It addresses someone, creating in their mind an equivalent sign, or perhaps a more developed sign. The equivalent sign it creates is the interpretant of the first sign, the reaction determined in the consciousness of the sign's recipient. Therefore, one of the favorite concerns in the approach to exploiting communication in the educational process, aimed at achieving success, is to take into account a dialectical construct that would sum up elements that revolve around a communicative convention of success or achievement: perceiving the effect of the message on the recipient, maintaining symmetry in the communication between the parties, quantifying communication, perceiving the contextual message, ordering the variability of meaning in communication, recreating, interpreting, negotiating the message, dynamizing networks of relationships, etc.

It is asserted that verbal communication uses the "verb" as a transmission vector for information, i.e., it transmits information by using written or spoken words. Feelings, thoughts, and emotions are encoded in language, in groups of sounds in oral communication, and in graphic signs in written communication.

The human group (in our case, the class of students) is defined as a number of people who communicate with each other frequently in a period and are few enough for everyone to be able to communicate directly with everyone else, not through other people.

The disclosure of the specificity of communication models has offered an overview of the communication process, which we find essential for the idea of establishing **PE2CE** for developing students communication competence, constituting an act of reintegrating communication into the learning process. Thus, the heuristic character of the initiated approach can manifest itself both through the specific characteristics of communication components in general, and through the consistent training of verbal structures.

In this case, the adequacy between the communication components is analyzed in relation to the imperative coordination with the verbal-communicative needs of the students in the educational process.

We observe that, basically, a communication is successful when "what" was meant to be said is correctly decoded by the recipient. Thus, communication appears as a set of heterogeneous aspects, being nevertheless grounded as a genuine technique, based on rules, to be able to obtain the

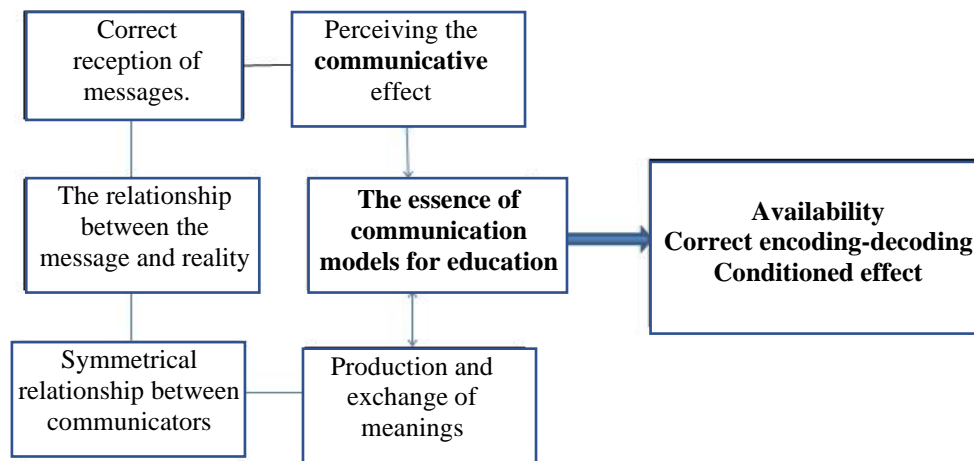
interlocutor's adherence to certain facts. The functional aspects of these views are set out in the table below (Table 1.1).

Table 1.1. The Functionality of Communication Models

Model	Model type	Communication Function	The essence model	The success of communication
Shannon and Weaver	Mathematical Model	To transmit a signal/information. Information is an approximation of meaning.	The message is received. Decoding the signal into a message.	Transmitting multiple messages through the same signal.
Gerber	Complex Linear Model	To link the message to the reality being talked about.	The message should be meaningful.	Contextual perception of the message.
Wiener	Circular Cybernetic Model	Making the reverse connection (feedback).	Anticipating the finality from the initial stage.	Quantification of communication.
Newcomb	Triangular Model	Maintaining simultaneous orientation between interlocutors.	Maintaining balance in the social system.	Maintaining a symmetrical relationship between communicators.
Westley and MacLean	Dependent Model	Providing the means by which the relationship is achieved.	The existence of the channel as an agent of communicators.	Dynamic networking of relationships.
Saussure	Semiotic-Structural Model	Communication is the production and exchange of meanings.	Emphasis should on the message, not the process.	Re-creating, interpreting, negotiating the message.
Ogden and Richards	Referential Model	The relationship between the meaning of the world and reality.	Prioritizing realities.	Ordering the variability of meaning in communication.
Peirce	Semiotic-Pragmatic Model	Dynamic interpretation of the sign.	The main role of the interpreter is to translate the sign.	Semiotics of communication as action.
Jakobson	Hybrid Model	Functions of communication.	The correct decoding of the message by the recipient.	Noticing the effect of the message on the receiver.

In Fig. 1.1, the specific elements of communication models are presented in synthesis from the perspective of "opening up" the communication competency development process in students. Therefore, one of the favorite concerns in the approach of utilizing communication in the educational process, oriented towards achieving success, is to take into account a dialectic *construct*

that would encompass elements revolving around a communicative convention of success: perceiving the effect of the message on the receiver, maintaining a symmetrical relationship between communicators, quantifying communication, contextual perception of the message, ordering the variability of meaning in communication, recreating, interpreting, negotiating the message, maintaining a symmetrical relationship between communicators, dynamizing networks of relationships, etc.



Kinetics (a type of nonverbal communication) starts from the observation of all gestures, considered to be the fundamental axis for understanding the dynamics of communication, and represents the set of behavioral signs emitted naturally or culturally. To phonemes, the distinctive units of phonology, correspond kinesemes, the smallest units of action of gesture or mimicry. To morphemes, the smallest meaningful units of the word, correspond kinemorphemes, for example, blinking. Kinesics thus becomes a grammar of gestures. Based on this, a prosody and a poetics of gestures are established: intensity, duration, extension, but also constant rhythms, constant flow. This broader dimension is integrated into a psychological, social and cultural context. Today, it is considered that, in relation to the linguistic level, nonverbal communication can fulfill functions of emphasis, completion, contradiction, regulation, repetition, or substitution.

Proxemics represents the language of space and is simultaneously intercepted according to five dimensions: size, degree of intimacy, height, proximity-distance, inside-outside. Each of us has preferences regarding the distance from those with whom we communicate. In most European cultures, proximity is not appreciated by more than 40-50 cm, except for family members or loved ones; this defines intimate space. "Invading" this space produces a feeling of discomfort. Excessive proximity can communicate threat or strictly personal relationships; excessive distance can communicate arrogance, importance, or higher social status. Proxemics studies all these spatial relationships as a mode of communication; this discipline includes the defense game of territories, the way of perceiving space in different cultures, the symbolic effects of spatial organization, the physical distances of communication. Any personal space is organized into an inner and an outer part; it possesses private and public zones. Thus, communication takes place according to four distances: intimate, personal, social, public.

Body posture, in turn, communicates primarily the social status that individuals have, believe they have, or want to have. In this regard, body posture shows how people relate to each

other when they are together. Observing body posture provides us with information about attitude, emotions, level of courtesy, and warmth. A dominant person tends to hold their head upwards, while a submissive person holds their head downwards. Generally, leaning the body forward signifies interest in the interlocutor, but sometimes it can also signify uneasiness and concern. A relaxed position, with the body tilted back on the chair, can indicate detachment, boredom, or excessive self-confidence and defense in those who consider themselves to have a higher status than the interlocutor. The postures that people assume, correlated with the relationship between them when they are together, can be classified into three categories:

1. *Inclusion/Exclusion* - a posture that defines the available space for communication activity and limits access within the group;

2. *Body orientation* - refers to the fact that two people can choose to sit face-to-face or side-by-side. The first situation communicates a predisposition to conversation, while the second communicates neutrality;

3. *Congruence/Incongruence* - a posture that communicates the intensity with which a person is involved in what the interlocutor is saying or doing. Intense participation leads to a congruent posture (similar to that of the interlocutor); a change in the interlocutor's posture triggers a change in the posture of the person who is strongly involved in communication. In the case of divergences of status, viewpoints, or opinions between communicators, incongruent postures appear: the person does not look at the interlocutor and does not react in any way.

If we were to elaborate a definition of didactic communication, we should not only describe the process itself, of transmitting/receiving a message and signaling its reception. Didactic communication means much more: it is about building an entire system based on trust and mutual respect, which provokes behavioral changes in the parties involved, forms competences in students and develops the existing competences of the teacher, in an environment defined by the quality of the relationships that are established and perpetuated throughout an educational cycle.

In this way, **it has been found** that communication is one of the most complex processes underlying interpersonal relationships, it is the support for transmitting all cultural, scientific, and aesthetic values from one generation to another, having effects both on the quality of social and professional life and on the individual's health status. In this context, starting from the analysis of the functional essence of communication models, as a basis for recording the educational value of communication, it was established that these models (mathematical, linear complex, circular, triangular, structural, referential, semiotic-pragmatic, hybrid) constitute the ontology of the deductive approach. It was deduced that all component elements condition an authentic acceptance of communication, defined as a common process of signification, based, therefore, necessarily on certain principles: the principle of cooperation, governed by maxims as fundamental norms; the constructive principle, which provides that the construction of the text is coherent and cohesive; the etiological principle, with reference to the reason for communication, the causes that determine the realization of the communication process.

Chapter 2. Educational delimitations of communication competence starts from the idea that various methods and techniques are used during physical education classes, with dominant methods being verbal exposition, conversational methods, and methods that involve demonstrations. The specific characteristic of verbal messages is that they are mainly present in the form of commands, explanations, as well as motivational, persuasive, and suggestive messages.

It is noteworthy that a verbal message, such as a command for performing a movement or a sequence of movements, has the effect of triggering a motor action in the student. Motivation and persuasion play an extremely important role in practicing physical exercise, and the teacher can only do this through verbal messages, with the support of a close teacher-student relationship, to ensure the student's receptivity and willingness to accept suggestions or follow advice in order to achieve performance.

In this regard, a perspective developed in a deduction stipulates that the feedback expected by the teacher is not necessarily another verbal message from the student, but the motor action that they perform and the correctness/accuracy of the execution. In this way, the cognitive, communicative, persuasive, and expressive functions of communication are activated, which is crucial for achieving the objectives in physical education classes.

Communication competence is a transferable skill, and we rely on the fact that developing this competence will not only reflect on the participation and performance of students in physical education but also in achieving a higher level in other disciplines in the curriculum. Taking into account the theoretical considerations, the results of previous research identified in specialized publications, as well as classroom experience, we have established a set of communication competence activities and the methods and techniques for their development, so that the ultimate goal is achieved.

Physical education is part of what we call the common core of the Curriculum Framework, both for primary and secondary education, as well as for the lower and upper cycles of high school.

This discipline fulfills several specific functions in the instructive-educational process [18 p. 30]: the function of harmonious development, which aims at the somatic and functional development of the child/adolescent; the function of improving motor capacity, which aims at improving psychomotor indices and aptitudes; the function of hygiene, which refers to the awareness, acquisition, and respect of personal and group hygiene rules; the educational function, which helps to shape and strengthen behavior guided by a higher moral standard, as well as to develop teamwork competence; the emulation function, which aims to stimulate the individual to know and exceed their limits, develop a competitive spirit, and work under stressful conditions; the recreational function, which aims to guide the child/adolescent towards beneficial recreational activities; the socialization function, which aims to form superior skills for initiating and developing relationships of mutual aid, collaboration, and successful integration of the individual into the social group to which they belong.

Analyzing these functions, we notice that at the base of all of them lies the necessity of possessing superior skills in efficient communication. Both the teacher, as a leader in the classroom and opinion former, and the students must develop superior individual and group communication skills, in order to achieve educational objectives and to attract children/adolescents to physical exercise.

Contrary, perhaps, to some preconceived ideas, the physical education lesson is based on communication just as much as any other discipline. Moreover, complex symbols from gestures, auditory signals with different meanings, movements, static postures etc. are used in physical education lessons, which have an important role in the overall didactic communication. Various didactic methods and techniques are used in the development of physical education lessons, with the dominant ones being verbal expository, conversational, but also methods and techniques that involve demonstrations in particular.

Verbal messages are predominantly present in the form of commands, explanations, but also in the form of motivation, persuasion, suggestion messages [5, p. 167].

It should be noted that a verbal message, the command for performing a movement or a sequence of movements, has the effect of triggering a motor action in the student. Motivation and persuasion have an extremely important role in practicing physical exercise, and the teacher can only achieve this through verbal messages, supported by a close teacher-student relationship, in order to ensure the student's receptivity and willingness to accept suggestions or follow the teacher's advice, in order to achieve performance.

We deduce that, generally, the feedback expected from the teacher is not necessarily another verbal message from the student, but the motor action that performs and the correctness/accuracy of the execution.

One specific element of physical education lessons is shaped by what we call background noise, which accompanies the entire educational process, originating from the students' level of enthusiasm and energy, especially since the environment in which the activity takes place is not the classroom, but rather the sports field, outdoors, or the gym, which favors a certain state that can distract the student from active listening. This fact requires the teacher to identify appropriate methods of exercising control over the actions that occur during the lesson, in order to create a community and collaborative relationships within which the educational message can be heard and understood. Active listening is a factor that is educated and trained, and its awareness and implementation are important in achieving the proposed objectives and in forming a culture of true performance, not sufficiency.

In communication, not only the content of the message is important, but also the framework in which this process takes place, along with the psychosocial characteristics of the partners [6, p. 152].

Adolescents are at an age where they rapidly go through successive periods of adaptation, both internally (physiologically, psychologically) and externally, going through a series of processes aimed at ensuring the transition from a state of imbalance in the relationship between the individual and the environment to a state of stable equilibrium [17, p. 125].

Achieving a state of equilibrium is done through continuous exchanges of information with the environment. Moreover, one cannot speak of a specific state, but of the need to establish a correspondence between the aggregate level of felt needs and the level of their satisfaction, through a continuous and dynamic process that includes the individual's entire set of resources, as a reference point for their development. Among the factors involved in social adaptation are the perception of social life in diversity, control, and communication with the environment [12], and the process itself is viewed as a state of balance between personality and the environment (ambiance). Adaptation involves a continuous modification/adjustment of personal behavior to environmental requirements, including relational requirements, in order to meet needs.

Thus, didactic communication in general, and communication in physical education in particular, require the utilization of the existing background, widening and enriching it by perfecting the lexical baggage with specific terms, by developing the capacity to internalize new code elements, and by providing adequate conditions for obtaining and comparing the expected feedback recorded in the formulated objectives with the feedback provided by the student. Therefore, the development of these skills in high school students becomes an important goal in the educational process.

The concept of development, as an action reflection of the verb to develop, refers to the process of passing through different progressive phases towards a higher quality level, through jumps that ensure the transformation of quantitative accumulations into qualitative leaps [2]. Thus, development can refer to the growth of the complexity level of a system, the increase of adaptability in the face of changing environmental factors, the expansion of a phenomenon; generally, to significant progress that is reflected in visible and measurable changes.

*By synthesizing the ideas presented and extracting the referential essence of communication, starting from the educational instance of communication models, the principles of communication activity, and operating an analytical context of the specific verbal communication, the Pedagogical **Model of Developing Communication Competence in High School Students within the Physical Education Discipline** (Fig. 2.1), which served as a basis for designing the applied activity through an experimental program called the Educational Pattern of Developing Students Communication Competence (Physical Education) - PE2CE.*

The starting point in structuring this pattern was considering and correlating the bio-psycho-social development stage of the research subjects with the pre-university school environment and its requirements.

Throughout the research, attention was focused on the following elements: understanding the student's personality (adolescent); ways to improve the encoding and decoding of didactic messages; correlating and improving the social skills of students, along with their communication competence, through self-awareness and understanding others; improving the didactic act by improving the teacher-student relationship during physical education classes; increasing the attractiveness of physical education classes to improve student participation and active involvement in the educational process.

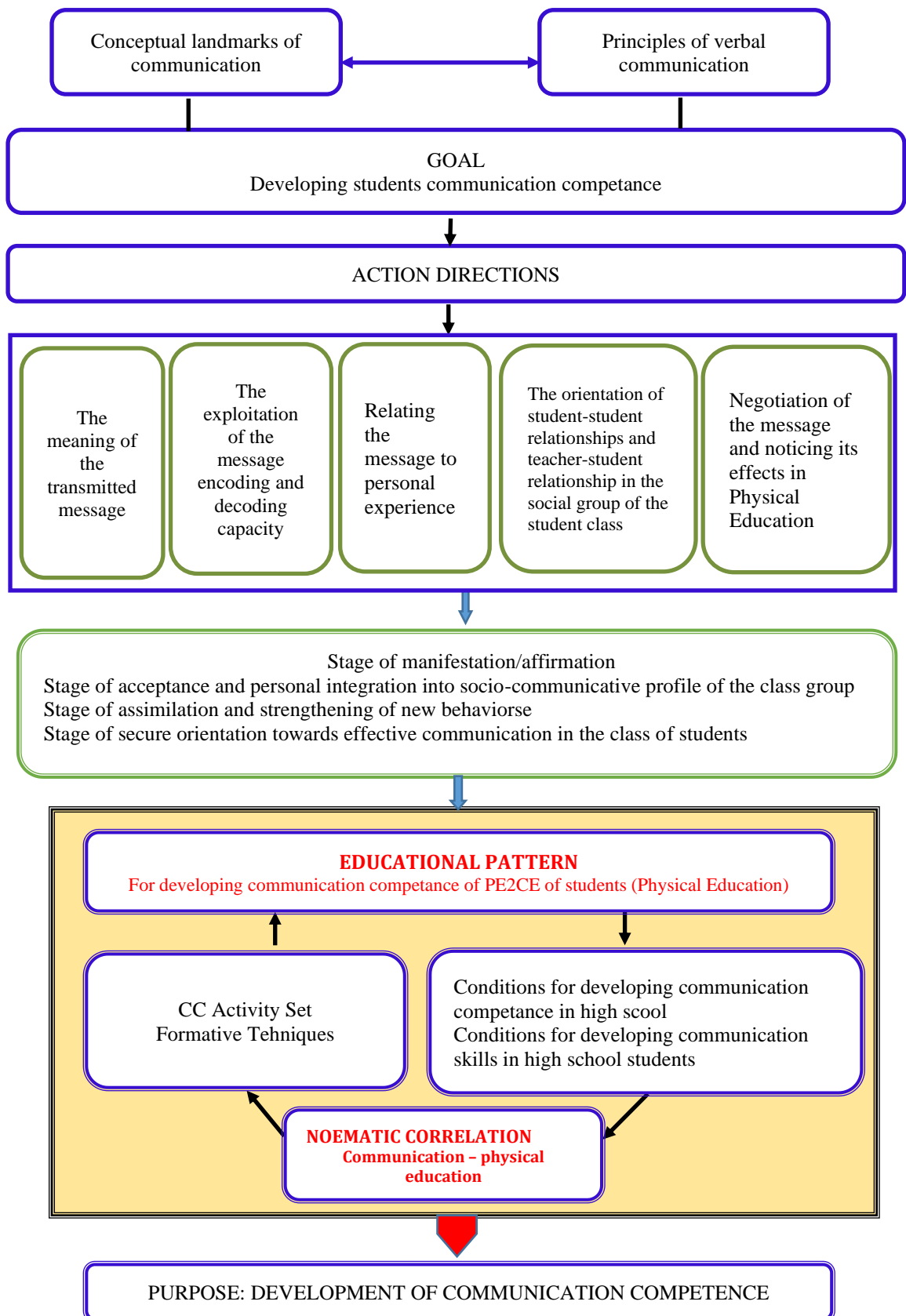


Fig. 2.1. Pedagogical model for developing communication competence in high school students within the discipline of physical education

Communication competence is a transferable skill, and in our approach, we rely on the fact that the development of this competence will not only reflect on students' participation and performance in physical education but also in achieving a higher level of education in other disciplines in the curriculum. Taking into account theoretical considerations, results from previous research identified in specialized publications, as well as classroom experience, forms, methods, and techniques for development have been established so that the ultimate goal can be achieved.

In this area of concern, we started from the following assumption: communication competence and physical education are in a special correlation, characterized in the most general way as an intentional relationship that requires perceiving the relationship and maintaining it in the field of view or a specific stance that is characteristic of the personal vision, assumption, which is perceptible in the process of developing students communication competence in physical education activities [10]. The goal of this approach is, essentially, to relate the objectivity of the existence of this correlation with the subjectivity of perceiving it.

From this perspective, the approach to a correlation that is an expression of the relationship between two entities becomes relevant. If two entities are energized in the same direction, this is a positive correlation; if they are energized in opposite directions, this is a negative correlation. By identifying correlations, we can evaluate and minimize risks. Understanding correlations provides a broad perspective in creating a whole. Here, we must remember that a correlation does not imply a causal relationship. Just because two things react the same or similarly to a certain set of circumstances does not mean that one causes what happens with the other.

The term noema first appears in Plato's work and means "thinking activity," assuming that ideas are thought (noema) with reference to something "unique." In Aristotle, within the context of thought, noema assumes a passive sense of "thinking of the thing" in the context of sensitivity, of the "perceived thing." According to Aristotle, noema comes from the imaginative elaboration of occasional data, which ultimately give rise to mental images that do not change. The first type of mental images contributes to the formation of experience, while through the intervention of thought on the second type of images, "pure concepts" are formed.

In our study, we treat noema according to the interpretation of the phenomenologist Ed. Husserl. The word *noema* comes from the Greek word νόημα, which means "thought" or "that which is thought". Philosopher Ed. Husserl used *noema* as a technical term in phenomenology to designate the object or content of a thought, judgment, or perception [11].

In his work "Ideas Pertaining to a Pure Phenomenology and to a Phenomenological Philosophy" [32], Husserl coined the term noema to refer to the correlative elements of the structure of any intentional act, such as perceiving or judging. Each intentional act has a noetic (or mental) content, directed towards an intentionally held object. The essential element of the noema is its nucleus. The nucleus, as the objective sense of the noema, is the entity itself, presented in a certain way, as it is given in the experience of consciousness, with all its specific properties, which can change in another experience of the same entity. This is an object in a certain direction towards it, in a special mode of presentation [32]. Husserl describes two types of characteristics of the nucleus: the manner of givenness and the mode of being. One and the same entity can be given in lively perception or can be the object of representation, judgment, desire, and so on. The degree of confidence in the reality of the entity that has been given to us can be different: what we see, hear, etc. may turn out to be just an illusion, a mere appearance. Consequently, the modes of

being are: reliability, presumption, suspicion, interrogation, doubt, etc., as gradations of reality. The basic (unmodified) characteristic is reliability, which is certain, or truly existent. At the basis of any intentional experience (including a volitional act) lies a doxic act. Consequently, any simple noematic correlate includes either an "existent" or another mode of being [Ibidem].

Thus, by the noematic communication-physical education correlation we understand the valuing of the special relationship between the development of communication competence and the physical education of students as an intentional, perceptible relationship, through an extension in a non-linguistic discipline, the mobilization of the doxic cogito and the significance of the educational content in a specific way "to be given".

It is well known that the essence of physical education is human movement aimed at improving people's physical and mental condition, harmonious physical development and maintaining health. Thus, the activity of physical education must be seen as a personal necessity of man, along with food, clothing, education, water, sun, human relations, living space, etc. Physical education, as a subject of study provided in all educational plans, fulfills a series of functions, among which the function of harmonious development, which aims to achieve higher indices of somatic and functional development; the function of improving motor capacity, which consists in the tendency to increase the level of development of psychomotor skills and that of acquiring and mastering motor skills and abilities; the educational function, which aims at the acquisition of some norms of moral conduct, the formation of the individual who can collaborate and communicate in a group activity, in a social activity; the function of emulation, which aims at the formation of the capacity to overcome and self-surpass, the capacity to compete, to compete; the function of socialization, which is best achieved in the physical education lesson, since in this study discipline relationships of collaboration and help are permanently established between students, etc. [20].

Therefore, ***through noematic correlation, a symbiosis*** of the purpose and functions of physical education is produced with the process of developing communication skills, through quality didactic communication. The communication relationships achieved within the educational process between students make up an important component of the educational field, with definite formative and developmental values. The school, the group, the class, the sports team practically become a "laboratory" for social learning of communication.

In order to develop the students communication skills in physical education lessons, an *educational pattern* can be used as a new element, meaning a model, a specific pattern, a sequence of action as a mediating representation, as a response appropriate to a learning problem, presenting in a simplified manner the structure of an educational phenomenon that can be repeatable. The elements of this structure can be related in a predictable way. *The educational pattern* is used when educational needs arise that presuppose existing regularities in the training-development process of skills, by combining certain elements, in order to obtain a lasting result. The educational pattern represents general and reusable solutions to some educational problems [21].

Therefore, we can assert that in didactic communication, the key to success lies in the combination of all types of communication (verbal, nonverbal, and paraverbal) in balanced proportions. The most important condition for achieving the objectives set at the physical education lesson is the implementation of an efficient communication process. It is extremely important for the student to possess a linguistic repertoire that includes specific terms related to physical education, for the teacher's intervention to come at the optimal moment, and for the results to be visible both in the student's attitude and academic performance.

In Chapter 3. The applied research of developing communication competence among high school students in physical education *is presented, with experimental data illustrating the effectiveness of the developed training tools. This chapter focuses on the process of developing communication competence among high school students, specifically within the context of physical education. The selected formative contents - collaboration with peers, socialization, general culture, communication of experience, nonverbal communication, listening and imagination, active listening, message decoding, team collaboration, collaborative involvement, action orientation, self-confidence, etc. - are structured according to the age-specific characteristics of the students.*

On this basis, a pedagogical experiment was conducted to develop communication competence in physical education classes. In order to develop communication competence among high school students, an Educational Pattern for the Development of Communication Competence (Physical Education) was developed as a training program that was utilized during physical education classes, with monthly hours being allocated to the teacher for this purpose.

The fundamental objective of the applied research was to identify how 9th grade students, coming from both urban and rural backgrounds, are prepared for communication in general and communication in physical education classes in particular, in order to create a plan for improving the student-teacher interaction and creating an environment conducive to education, based on high-efficiency information transfer between the teacher and students.

Derived objectives included identifying gender and background differences in adaptability to communication requirements at the high school level, identifying students preferences for a particular type of communication, identifying students preferences regarding physical education classes, and identifying communication characteristics between students and teachers in the 9th grade, in the lower high school cycle.

The sample was heterogeneous in terms of background and gender, but homogeneous in terms of age (students were between 14 and 15 years old). The students were enrolled in both technical fields, such as commerce and tourism, and theoretical fields, such as mathematics and computer science, making the sample also heterogeneous from this perspective.

General hypothesis: *There is a significant direct relationship between the development of students communication competence and their performance level in physical education classes.*

From the general hypothesis, the following **derived hypotheses** can be formulated:

1. The level of communication competence of 9th grade students is not significantly dependent on their gender or socio-economic background;
2. Effective and constructive communication between teachers and students leads to increased participation in class and ultimately better academic results.

The truth value of the formulated hypotheses was verified through a descriptive research conducted on a group of 9th grade students enrolled in the "Ion Ghica" Economic College in Bacau during the 2018-2019 school year. The research was designed taking into account the following elements: the enrolled students are homogeneous in terms of age 14 – 15 years old; they come from both urban and rural areas, ensuring the representativeness of the research; the gender balance is relatively equal, allowing for the results to be extrapolated to the entire community; the students are enrolled in both theoretical and technological classes, ensuring a wide representativeness from this perspective.

Four classes of 9th grade students from lower high school cycle were included in the research, totaling 135 students. The research was conducted from December 2018 to April 2019.

The first stage of observation involved the administration of a questionnaire consisting of 27 items to determine the factual situation regarding communication competence. Responses to the questionnaire used in the research were centralized and analyzed, with each item being important for the information provided and its connection to the other proposed items: the first two items discriminate respondents based on gender and background; items 3, 4, 21, 23, 20, 24, 25 aim to identify respondents socio-communicative competences; items 5, 9, 10 concern the competence of understanding a written text; items 6, 8 concern the competence of expression in the Romanian language; item 7 contains a control question for items 5, 6, 9, 11, 12, 13; items 11, 12, 13, 15, 17, 19 concern the respondent's active listening skills; items 16, 18, 22, 26 concern the quality of teacher-student communication during the instructional-educational process; item 27 establishes the correlation between self-esteem and performance in the educational process. The analysis of final scores calculated for subgroups formed based on gender and background criteria indicates that 9th grade students have similar approaches and behaviors with regard to active participation in physical education classes and the way they communicate in the group of classmates. The difference between the calculated scores for urban and rural students is insignificant, the scores being almost equal, which proves that there are no group differences, only individual differences.

The value of these scores is positive but modest, situated equidistant between (0) and (1), confirming the observations made in recent years about new students, in the sense that they do not possess the expected communication competence as noted in programmatic documents. As previously argued, the presented results are confirmed by the results obtained by Romanian students in PISA tests and in the national evaluation (table 3.1.).

Table 3.1. General scores by subgroups

<i>GENERAL SCORES</i>				
<i>RURAL GIRLS</i>	<i>URBAN GIRLS</i>	<i>RURAL BOYS</i>	<i>URBAN BOYS</i>	<i>GENERAL SCORES</i>
0,453	0,436	0,560	0,568	0,505
<i>GIRLS SCORE</i>		<i>BOYS SCORE</i>		
0,445		0,564		
<i>RURAL STUDENTS</i>		<i>URBAN STUDENTS</i>		
0,507		0,501		

For illustration, item number 8. *I can easily describe an experience of mine, for example, was formulated with the purpose of investigating, from another perspective, the student's ability to express themselves in Romanian language, using a rich vocabulary and appropriate phrases, without using typical verbal patterns for them, such as "like", "you know", etc. I mentioned these verbal patterns because I noticed that they are not only used in informal, friendly conversations, but also when students need to participate in class, answer the teacher's questions, etc. They have the role of completing the sentence and replacing the words/concepts that they do not remember or do not know. The overall scores calculated based on gender criteria are very close in value (1.075 for girls and 1.118 for boys) and show that, in general, the 9th grade students self-evaluate*

based on similar criteria, and the overall score obtained (1.096) is considered to be close to reality, as they can describe a personal experience, but not in the most inspired way.

Phase II. Following this analysis process, it was concluded that the implementation of the PE2CE intervention could be carried out during the 2019-2020 period, this would allow for the logical ordering and application of methods and techniques that would aid in self-awareness, mutual understanding, building relationships based on collegiality and respect for personal qualities and trust between students, as well as relationships based on respect and appreciation between teachers and students.

The objectives of the formative experiment were as follows:

1. *Developing a method for improving communication competence during physical education classes by selecting appropriate tools from the literature, utilizing over 20 years of teaching experience, and using available curriculum hours.*
2. *Implementing the PE2CE approach throughout the 2019-2020 school year.*
3. *Validating the results by retesting both the experimental and control groups.*
4. *Analyzing and interpreting the results obtained through the application of PE2CE.*
5. *Developing a best practices guide to support physical education teachers at the high school.*

Investigating informational resources related to development tools involved consulting theoretical sources in the field, as well as resources generated by Erasmus programs conducted in Romania and Europe, the expertise of communication specialists, continuing education courses, and the personal experience of colleagues from the same department and other departments within the institution, as well as personal teaching experience.

The approach that I initiated and carried out encountered several obstacles, especially in terms of the time available for working with students, as well as the difficulties of selecting the most suitable working tools. To establish the list of intervention tools for developing communication skills, I consulted the school counselor of the institution where I work, who has advanced knowledge of child and adolescent psychology, knows well the profile of the students I work with, as well as a communication specialist from "Vasile Alecsandri" University in Bacau. With their expertise, we selected a set of tools and built PE2CE for the 2019-2020 school year, using the teacher's monthly available hour.

Thus, we chose a wider range of tools and methods, team-building techniques, self-awareness, development, so that we have a sufficient selection base. A very important resource was, in addition to the brochures made during the youth exchanges through the Erasmus+ projects, the book elaborated at the University of Bucharest, the Martial Arts Center, which specifically refers to team formation and development, efficient communication within the team, and creating an atmosphere of trust and cooperation [3].

The experimental group (EG) consisted of 34 students, and the structure based on gender and environment of origin criteria is presented in Table 3.2.

Table 3.2. The Structure of GE from the Perspective of Gender and Environment of Origin

GE – 34 students	
GIRLS	BOYS

RURAL (%)	URBAN (%)	RURAL (%)	URBAN (%)
5,88	5,88	52,94	35,30

*In order to have an effective intervention that includes both lessons on how to capitalize on the selected activities and a sequence of these activities that allows for introspection, internalization of the information discovered by students, and integration into their own psychological system so that they can be accessed at key moments, the schedule, the opinion of the school counselor, and the communication specialist were taken into account. Following these consultations and deliberations, the **CC Activity Set** was established:*

- Activity 1. Self-awareness - application of the **Heart Map** technique;
- Activity 2. Inter-awareness - application of the **Footprint** technique;
- Activity 3. Emotional communication - application of the **Emotion Relay** technique;
- Activity 4. Verbal collaboration - application of the **Speak!** technique;
- Activity 5. Nonverbal communication - application of the **Character Walk** technique;
- Activity 6. Message decoding - application of the **We Say One Thing, They Hear Another!** technique.

In order to preserve the data and observations made in these training activities, a simple observation sheet was developed to help us collect data even as these occur, that is, during or at the end of activities, when students have expressed their opinions, feelings, and preferences.

As an example, we briefly present one of the activities: Activity 4. Verbal Collaboration

*After the winter break, when students are in a period of readjustment to the school schedule and its demands, we scheduled the next experimental activity based on the idea that in a lesson that only involves physical activities, they will be less motivated and won't get out of a state of relative apathy. Therefore, we carried out an activity that would help them better control their emotions, inhibition, and increase their self-esteem. This activity is called "**Speak!**" Like the other activities, this technique does not require any special infrastructure and can be carried out in any space, in the classroom or in the gym, outside or inside. For a good performance, it is necessary to mobilize the attention and determination of the students because they often treat such activities as a joke and do not get involved. Sometimes they do not get involved out of fear, which comes from the fact that they believe that if they were to admit their hesitation to open up in front of their peers, to admit their shyness and weaknesses, it would lead to marginalization within the group and loss of admiration or consideration from their colleagues. This is easily understood by a teacher, but we must keep in mind that many adults today have the same problem.*

We need a relatively easy object to throw/catch, such as a tennis ball or even a half-liter empty PET bottle. The students sit in a circle, facing the inside of the circle. One of them, voluntarily or appointed by the teacher, assumes the beginning of the game, that is, takes the baton and, after saying a word or phrase on the set topic, throws it to another colleague, who must speak, in turn, and pass the baton to another classmate, until all students participate in the game.

The technique is not complicated, but we need to establish rules and directions from the beginning. In this way, we can choose a subject related to sports (great athletes from a certain field or from several fields), a sport itself (specific elements/rules of a sport), specific elements of the class, jokes related to sports, etc. One student says a sentence, a phrase, or a word, and the next student continues with another word, so that a sentence/phrase referring to the given subject

is formed (the subject can be chosen by the students, suggested by the teacher, or by voting). Moreover, it is possible for students to come up with interesting ideas, which facilitates the rise of some students who may not excel in physical education within the group. As a general observation, I mention that between the two activities, I noticed that students are more relaxed, the atmosphere within the group is more permissive, and the group is not as polarized anymore (urban students versus rural students, high-performance sport students versus low-performance sport students).

They have started to have more courage to ask questions and request more indications in case of more difficult executions. The group has become more homogeneous, more participative, with more initiative and visible improved well-being.

Interest in physical education lessons, a problem we referred to earlier, was a significant challenge for the success of the activities, as reduced interest also leads to reduced performance. Students in the experimental group gave responses that led to a negative score (-1.059), surpassing the disagreement zone with the proposed formulation. In contrast, in the control group, the responses had a distribution that led to a positive score (0.130) in the indifference zone, with students showing a decrease in interest in physical education lessons. Compared to the moment of the observational study (score -0.867), the experimental group recorded a 22% increase in interest.

The most difficult problem we encountered during the period under consideration for the **implementation of PE2CE** was the fact that, through Decision no. 6 of the National Committee for Emergency Situations (CNSSU) from 11.03.2020, face-to-face courses were suspended, and online learning was introduced. This was a period that none of us had ever faced before, and we needed to reconsider our work capacity, methods, and means to still reach our students and accomplish our mission.

The educational strength of PE2CE lies in the fact that as a result of its implementation, all validation items showed progress in the experimental group compared to the moment of the observational study, which is also evident compared to the control group. In contrast, for the control group, the situation is the opposite: only three questions (approximately 11%) allowed for the calculation of a score that indicated progress compared to the situation recorded during the observational study. For the remaining 24 questions, the responses led to scores lower than those calculated in the observational study (Fig. 2.2.). The scores obtained for each item show that the students were sincere in the reflections offered at the end of the activities, so it can be said that there is a direct visible connection between their statements and the statistical results obtained.

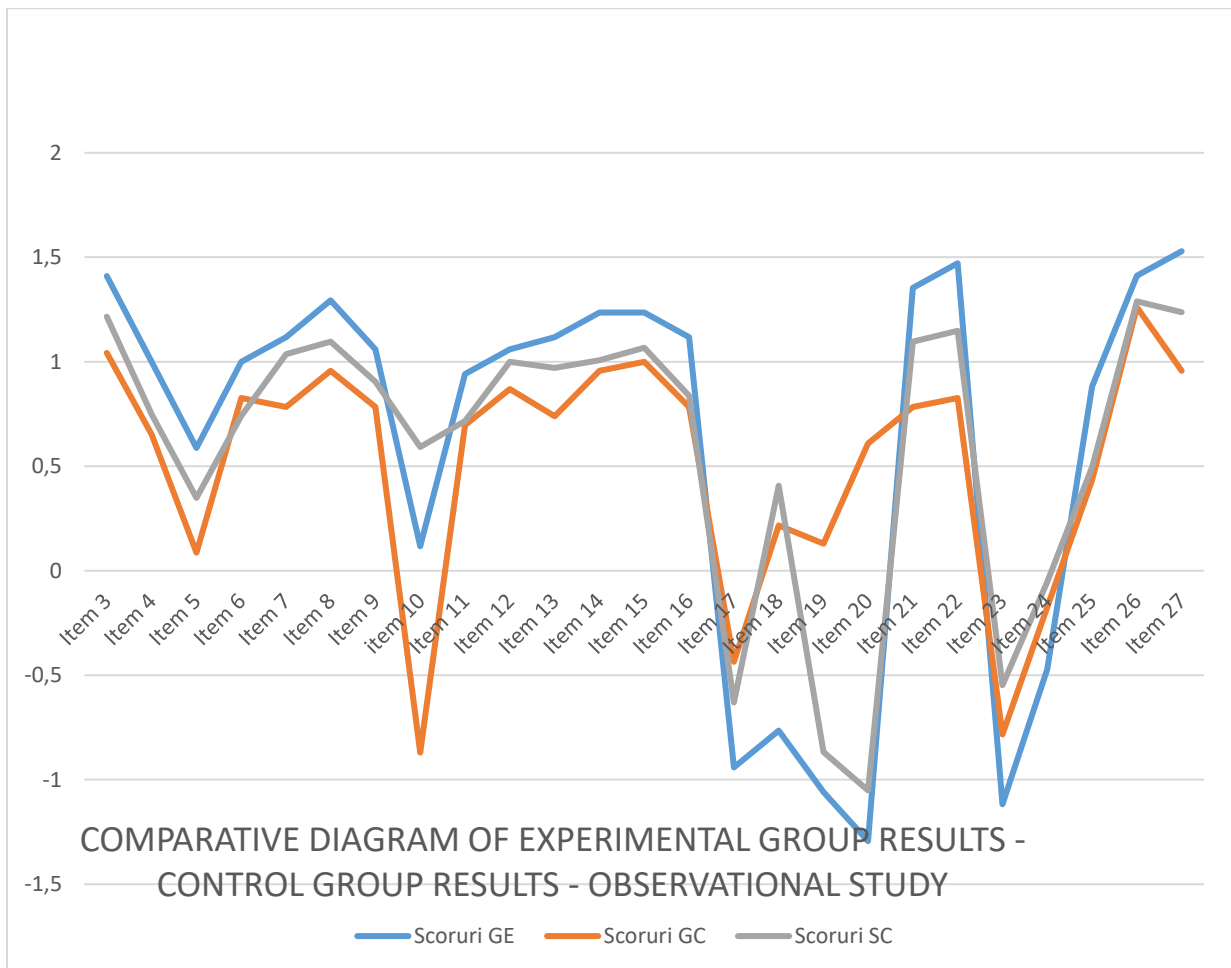


Fig. 2.2. Comparative distribution diagram of responses to questionnaire items

The correlation of scores obtained for each item shows that the students demonstrated responsibility in the testimonials given at the end of the activities, thus it can be affirmed that there is a visible direct link between their statements and the statistical results obtained.

These results indicate that, despite the difficult conditions in which the 2019-2020 school year took place, the educational Pattern had the desired effect.

GENERAL CONCLUSIONS AND RECOMMENDATIONS

*Human society, as a functional system of relationships between individuals, cannot exist without communication. This complex process unfolds according to a series of principles and laws that outline the essential framework for transmitting all cultural, scientific, and aesthetic values from one generation to another, with effects on both the quality of social and professional life and the individual's state of health. This paper investigates human communication from the perspective of the didactic act and its goals, considering them as the framework in which education must aim for performance and achieve its goals included in the educational ideal. Following the investigation of theoretical and applied data, the following **conclusions** can be formulated:*

Based on the general functions of communication and its principles, didactic communication has a series of additional dimensions and characteristics, including the explanatory dimension, structured according to the principles of pedagogical logic, the variety of communication flows,

directly correlated with the psychic structure of the participants, and the quality of the process is intrinsically linked to the experience, personality, and cognitive and affective level of the student. The process of outlining a reference framework regarding the communication competence of high school students took into account both the dimensions and forms of didactic communication, as well as the functions that physical education fulfills in the educational process. Analyzing the referential requirements of communication, as an intentional act with an expected outcome, led to the conclusion of the existence of a **noematic correlation** between communication and physical education by extending it into a non-linguistic discipline.

Based on the valorization of the ideas presented and revised through the prism of research needs, it was confirmed that various didactic methods and techniques are used in physical education lessons, with verbal-expository and verbal-conversational methods being dominant, as well as methods and techniques that involve demonstration. Verbal messages are predominantly present in the form of commands, explanations, but also as messages of motivation, persuasion, and suggestion. However, the most important condition for achieving the objectives proposed in the physical education lesson is the implementation of an efficient communication process. It is extremely important for the student to have a **linguistic repertoire** in which specific terms of physical education can be found, for the teacher's intervention to come at the right moment, and for the results to be visible both in the attitudes of the student and in their academic achievements.

By valorizing the educational instance of communication models and their practical applicability, taking into account their conceptual frameworks, the **Pedagogical Model for the Development of Communication Competence in High School Students in the Physical Education Discipline** was structured as the basis for the **Educational Pattern for the Development of Communication Competence in Students (Physical Education) - PE2CE**. The educational pattern was designed and structured to generate predictable and visible results, as a heuristic means for building a didactic scenario, so that students can assume an adequate level of participation by respecting the norms and meeting the demands imposed by the specificity of the discipline.

Starting from the fact that the observational investigation revealed that high school students have low communication skills at the beginning of their academic cycle, which is also validated by the results of a questionnaire applied to teachers from different curriculum areas, we concluded that students have difficulties in decoding didactic messages. This is also due to their limited willingness to actively listen during physical education activities, which means that the didactic message cannot achieve its goal and cannot produce the expected changes in the students' behavior as per the lesson objectives. By combining the theoretical communication framework with the need to develop an adequate reference framework for designing a communication competency development program, the **CC Activity Set** was developed. This set includes self-knowledge, mutual understanding, emotional communication, verbal collaboration, non-verbal communication, and message decoding activities.

The application of the measurement tools for the results obtained from the **implementation of PE2CE** and their processing into statistical indicators showed that the intervention had significant results, evidenced by the progress that the experimental group (GE) recorded compared to the control group (GC). As shown in Table 3.18, the overall average score calculated for GE is higher than that of GC by 16.38% (0.611 - GE and 0.525 - GC). The largest gap between the groups was recorded at item no. 20 (I prefer spending an hour in the IT lab rather than in the

gym: GE – -1.294; GC - 0.609), and the smallest gap was recorded at item no. 26 (I understand the requirements better if I watch a demonstration: GE - 1.412; GC - 1.261).

And compared to the time of the ascertainment study, GE has clearly evolved, the increase in the calculated average score being 12.31%. The biggest difference is observed in item no. 18, which refers to the understanding of the requirements formulated by the teacher (GE – -0.765; SC – 0.407), the smallest difference being observed in item no. 12, which refers to active listening (GE – 1,059; SC – 1,000).

Furthermore, it is significant that GC presented weaker results compared to the level it was at during the investigative phase. Thus, compared to the initial score, GC recorded a decrease in the overall average score (0.525) by almost 5% (SC - 0.544). The biggest difference is recorded in item no. 21, which concerns team spirit (students went through the pandemic context, which led them to isolation and loneliness): GC - 0.609; SC - -1.051. The smallest difference is observed in item no. 11, which considers nonverbal language: GC - 0.696; SC - 0.716. The correlation of scores obtained for each item shows that students demonstrated responsibility in completing the questionnaires applied at the end of the activities; thus, we can argue that there is a visible direct link between their statements and the statistical results obtained.

Regarding the implementation of **PC2CE**, we specify that it is structured to be used during the teacher's available hour, but it can also be used during counseling and guidance hour, this versatility making it **applicable** not only for the physical education teacher, but also for teachers who teach subjects from other curricular areas, who wish to improve the didactic relationship between the student and the teacher, the atmosphere, and the communication in the classroom.

The results obtained show that, despite the difficult conditions in which the school year took place, the Educational Pattern had the expected effect, so we are justified in asserting that it can be even more effective under normal working conditions.

RECOMMENDATIONS:

1. Based on the theoretical synthesis of the research, it is opportune to investigate the aspects regarding the influence of social circumstances and current trends in adolescence on students' openness to practicing physical exercise, by developing the **methodological guide** "Physical Education - Communication and Development".

2. By capitalizing on the experimental results, the practical importance of practicing sports in competition with communication can be emphasized, given the excessive use of smart devices (phones), by creating **school advertising spots** that present different complicated, difficult situations in students' lives where they may need adequate physical preparation and quality verbal communication.

3. Starting from the *Pedagogical Model of Developing Communication Competence in High School Students in Physical Education* and from the noematic correlation, it is rational, in the context of new orientations in communication education in schools, to develop **multidisciplinary modules** for communication development within various non-linguistic school disciplines, through competitiveness and verbal openness.

4. In the context of transdisciplinarity in education, the ideas, conclusions, and research results, starting from the noematic relationship, can constitute a fundamental reference in the investigational approach to the integrated learning/formation topic, in which **the specificity of physical movement is "combined" with the specificity of verbal action**, with the decisive role of the notion of "action" from various thematic perspectives.

5. The ideas regarding the functionality of didactic communication can serve as a basis for elaborating a paper on the **communication culture in physical education lessons**, which would reflect various ways of teacher-student interaction at the level of communication culture.

BIBLIOGRAPHY

1. *** CENTRUL DE EVALUARE ȘI ANALIZE EDUCAȚIONALE. *Scăderea analfabetismului funcțional – o posibilă prioritate strategică în educație*. 2015 [vizitat: 16.10.2019]. Disponibil la: <http://ceae.ro/wp-content/uploads/2015/10/Raport-Scaderea-analfabetismului-funcional.pdf>
2. COTEANU, I., SECHE, L., SECHE, M. (coord.). *Dicționarul explicativ al limbii române*. Ediția II-a. București: Editura Univers Enciclopedic, 1998. 1192 p.
3. DERLOGEA, S., BOTA, G. *160 de activități dinamice (jocuri) pentru TEAM-BUILDING*. București: Universitatea din București. Centrul de Arte Marțiale și Studii Asociate – CASA. 2011.
4. DINU, M. *Comunicarea. Repere fundamentale*. București: Orizonturi, 2007. 438 p. ISBN 978-973-736-071-7.
5. DRAGNEA, A. (coord.). *Educație fizică și sport: teorie și didactică*. București: FEST, 2006. 300 p. ISBN 973-87886-0-9.
6. DUMITRIU, GH., DUMITRIU, C. *Psihopedagogie*. București: Editura Didactică și Pedagogică, 2004. 205 p. ISBN 973-30-1864-3.
7. FABER, A., MAZLISH, E., NYBERG, L. *Comunicarea eficientă cu copiii acasă și la școală*. București: Curtea Veche, 2002. 248 p. ISBN 973-8356-07-5.
8. **FLOREA, M.** *Competențele de comunicare ale elevilor care încep ciclul liceal*. În: *Lucrările Conferinței științifice internaționale „Cadru didactic promotor al politicilor educaționale”*. Chișinău, 2019. CZU 37.091(082)-135.1-111-161.1 C12, p. 710. ISBN 987-9975-48-156-4.
9. **FLOREA, M.** *Competențele de comunicare la ora de educație fizică*. În: *Analele științifice ale doctoranzilor și postdoctoranzilor. Probleme actuale ale științelor umanistice*. Vol. XVIII. 2019, partea I, p. 233. ISBN 978-9975-46-235-8, ISBN 978-9975-46-420-8, ISSN 1857-0267.
10. **GHICOV, A., FLOREA, M.** *Educația pentru comunicare. Sensul pedagogic al corelării noematice*. În: *Didactica Pro*, nr. 2-3 (132-133), iunie 2022, pp. 11-16. ISSN 1810-7455.
11. HUIZINGA, J. *Homo ludens. Încercare de determinare a elementului ludic al culturii*. București: Humanitas, 2012. 348 p. ISBN 978-973-50-3480-1.
12. KARDARAS, N. *Copiii și ecranele luminoase. Ce îi înstrăinează pe copii și cum să rupem această stare de hipnoză*. Pitești: Paralela 45, 2016. 344 p. ISBN 978-973-47-2440-6.
13. MÂNDRUȚ, O., CATANĂ L., MÂNDRUȚ, M. *Instruirea centrată pe competențe. Cercetare – Inovare – Formare – Dezvoltare*. Universitatea de Vest „Vasile Goldiș”. Centrul de Didactică și Educație Permanentă, 2012. 145 p. ISBN 978-973-664-538-9.
14. PÂNIȘOARĂ, G. *Psihologia copilului modern*. Iași: Polirom, 2011. 224 p. ISBN 978-973-46-2126-2.

15. PEIRCE, C.S. *Semnificație și acțiune*. București: Humanitas, 1990. 344 p. ISBN 973-28-0053-4.
16. PLEȘCA, M. *Influența inteligenței emoționale asupra performanței academice*. 2016, ianuarie, pp. 52-57. Disponibil la: <http://dir.upsc.md:8080/xmlui/handle/123456789/398>
17. POPESCU, D.M. *Comunicare și negociere în afaceri*. Târgoviște: Bibliotheca, 2010. 198 p. ISBN 978-973-712-512-5.
18. RADU, I.T. *Evaluarea în procesul didactic*. București: Editura Didactică și Pedagogică, 2008. 288 p. ISBN 9789733023548.
19. ȘTEFĂNESCU, S. *Utilizarea internetului: pattern-uri de consum ale adolescenților din România*. În: Revista Română de Sociologie. Serie nouă. Anul XIX, nr. 3-4, pp. 307-330, București, 2008. ISSN 1224-9262.
20. TRAN, V., STĂNCIUGELU, I. *Teoria comunicării*. București: Comunicare.ro, 2003. 190 p. ISBN 973-8376-41-6.
21. TRIBOI, V. *Teoria și metodologia educației fizice*. Disponibil la: [https://www.usefs.md/PDF/Cursuri%20electronice/TMEF/Teoria%20si%20metodica%20educatiei%20fizice\(Lectia1\).pdf](https://www.usefs.md/PDF/Cursuri%20electronice/TMEF/Teoria%20si%20metodica%20educatiei%20fizice(Lectia1).pdf)
22. DidactForm, platforma proiectului Cadre DIDACTiceFORMate pentru educatie incluziva de calitate. *Efectul Pygmalion în comunicarea didactică*. Disponibil la:
23. <http://didactform.snsr.ro/campanie-online/efectul-pygmalion-in-comunicarea-didactica.html>
24. DIMITRIUS, J.-E., MAZZARELLA, M. *How to understand people and predict their behavior-anytime, anyplace*. New York: The Ballantine Publishing Group, 1999. 295 p. ISBN 0-345-42587-1
25. ELHAI, J.D., DVORAK, R.D., LEVINE, J.C., HALL, B.J. *Problematic smartphone use: A conceptual overview and systematic review of relations with anxiety and depression psychopathology*. In: Journal of Affective Disorders Reports, No. 207, January 2017, pp. 251-259, ISSN 0165-0327.
26. GRICE, H.P. *Logic and conversation*. In: P. Cole, J. Morgan (eds.). Syntax and Semantics. Vol. 3. New York: Academic Press, pp. 41-58, 1975.
27. HAIR, E.C., JAGER, J., GARRET, S.B. *Helping Teens Develop Healthy Social Skills and Relationships: What the Research Shows about Navigating Adolescence*. July, 2002. In: Child Trends, 4301 Connecticut Avenue, NW, Suite 100, Washington, DC 2008. Disponibil la: <https://www.childtrends.org/publications/helping-teens-develop-healthy-social-skills-and-relationships-what-the-research-shows-about-navigating-adolescence>
28. JU-YU YEN et al. *Association between Adult ADHD Symptoms and Internet Addiction among College Students: The Gender Difference*. Cyber Psychology & Behavior (Volume: 12 Issue 2: April 10, pp. 187-191, 2009). ISSN 1802-7962.
29. JU-YU YEN et al. *The association between Internet addiction and belief of frustration intolerance: the gender difference*. In: Cyber Psychology & Behavior (Volume: 11 Issue 3: June 7, 2008, pp. 273-278).
30. LAKSHMI, R. *Effective Listening Enhances the Process of Communication*. (June 6, 2018). The IUP Journal of English Studies. Vol. XII, No. 1, March 2017, pp. 7-10. Available at SSRN: <https://ssrn.com/abstract=3191767>.
31. TUDOR, G. *Social adaptation of adolescents users of smart tools*. In: Journal of Innovation in Psychology, Education and Didactics. Volume 22. Special Edition. Bacău: Alma Mater Publishing House, 2018. ISSN 2247-4579, E-ISSN 2392-7127

32. *Понятиеноема.*

https://studbooks.net/651553/filosofiya/ponyatie_noema_predmetnoe_soderzhanie

33. *Faze de lucru în recunoașterea de pattern-uri.* Disponibil la: http://www.etc.tuiasi.ro/cin/Courses/Epiom/Course/Curs_Rtizrt123XuAsdr/Capitol%2003.pdf

AUTHOR PUBLICATIONS

1. **FLOREA, M.** *Competențele de comunicare ale elevilor care încep ciclul liceal.* În: *Lucrările Conferinței Științifice Internaționale „Cadrul didactic promotor al politicilor educaționale”.* Chișinău, 2019. CZU 37.091(082)-135.1-111-161.1 C12, p. 710-715. ISBN 987-9975-48-156-4.
2. **FLOREA, M.** *Competențele de comunicare la ora de educație fizică.* În: *Analele științifice ale doctoranzilor și postdoctoranzilor. Probleme actuale ale științelor umanistice.* Vol. XVIII. 2019, partea I, pp. 233-243. ISBN 978-9975-46-235-8, ISBN 978-9975-46-420-8, ISSN 1857-0267.
3. **FLOREA, M.** *Comunicare și eficiență la ora de educație fizică.* În: *Lucrările Conferinței Științifice Internaționale „Orientări creative în învățământul și cercetarea românească la 30 de ani de la Revoluție”.* Bacău, decembrie 2019. Vol. I și II, pp. 163-168. ISBN 978-973-0-30979-9.
4. **FLOREA, M.** *Comunicarea didactică în ora de educație fizică.* În: *Lucrările Simpozionului Științific Internațional al doctoranzilor, masteranzilor și cadrelor didactice „Aspecte, orientări și perspective ale științelor educației în societatea contemporană”.* Bacău, 2020. Volum internațional de studii științifice de specialitate. Bacău: Smart Academic, 2019, pp. 159-170. ISBN 978-606-063-003-6.
5. **FLOREA, M.** *Comunicarea nonverbală și paraverbală în lecția de educație fizică.* În: *Lucrările Conferinței Științifice Internaționale „Probleme ale științelor socioumanistice și modernizării învățământului”.* Chișinău, 2020, seria XXII. Vol. II, pp. 510-516. ISBN 978-9975-46-449-9.
6. **FLOREA, M.** *Creșterea eficienței comunicării la ora de Educație fizică.* În: *Revista cadrelor didactice din învățământul preuniversitar și universitar,* Pitești, 2021, Vol.3, pp. 95-97. ISSN 2559-1371, ISSN-L2559-1371.
7. **FLOREA, M.** *Curriculum și învățământ în epoca actuală.* În: *Sesiune Interjudețeană de Comunicări Științifice și Metodice – Incursiune în Curriculum.* Ediția a IX-a, Botoșani, 2018, pp. 179-182. ISSN 978-606-575-920-6.
8. **FLOREA, M.** *Empatia, emoția și învățarea.* În: *Analele științifice ale doctoranzilor și postdoctoranzilor. Probleme actuale ale științelor umaniste.* Vol. XVII, partea I, 2018, pp. 154-163. Chișinău: Tipografia UPS „Ion Creangă”. ISBN 9789975-46-393-5.
9. **FLOREA, M.** *Instrumente de îmbunătățire a procesului de comunicare la ora de educație fizică.* În: *Revista iTeach: Experiențe didactice,* București, 2021, nr. 118, pp. 5-7. ISSN 2247-966-X.
10. **FLOREA, M.** *Îmbunătățirea competențelor de comunicare la disciplina Educație fizică.* În: *Lucrările Conferinței Naționale „Modalități eficiente de abordare a educației prin derularea proiectelor educaționale”.* Ghid de bune practici relevante și relatate prin proiecte inițiate de cadre didactice din învățământul preuniversitar, în beneficiul elevilor și eficientizării activității din instituțiile de învățământ, partea a II-a. Bacău: Smart Academic, 2019, pp. 37-39. ISBN 978-606-8947-63-1.
11. **FLOREA, M.** *Percepția educatorului asupra competențelor de comunicare ale elevilor.* În: *Revistă de Științe Socioumane,* nr. 1 (47), 2021, pp. 60-71. ISSN 1857-0119, SSn 2587-330X.

12. **FLOREA, M.** *Patternul educațional al dezvoltării competențelor de comunicare ale elevilor (Educația fizică)*. În: Acta et Commentationes, Sciences of Education, nr. 2 (28), 2022, pp. 177-183. ISSN 1857-0623, E-ISSN 2587-3636.
13. **FLOREA, M.** *Didactic Communication during the emergency period*. In: Journal of Innovation in Psychology, Education and Didactics, Bacău, 2020, nr. 24 (2), pp. 189-198. doi: 10.29081/JIPED.2020.24.2.06, ISSN 2247-4579, E-ISSN 2392-7127
14. **FLOREA, M.** *Communication in Physical Education*. Conference papers „La Violence Détruit, l’Amitié Contruit!”: Editura Docucenter, Bacău, 2019, pp. 122-125. ISBN 978-606-721-394-2.

ADNOTARE

Florea Mihaela. Dezvoltarea competenței de comunicare la elevii din ciclul liceal în cadrul disciplinei „Educație fizică”. Teză de doctor în științele educației, Chișinău, 2023

Structura tezei: teza include introducere, trei capitole, concluzii generale și recomandări, bibliografie din 255 de surse, adnotare în limbile română, engleză și rusă, 168 de pagini de text de bază, 20 de tabele, 24 de figuri, 12 anexe. Rezultatele obținute sunt publicate în 15 lucrări științifice.

Cuvinte-cheie: comunicare, model de comunicare, competență de comunicare, funcționalitate, dezvoltare, educație fizică, adolescent, semnificație, pattern educațional, corelare noematică.

Domeniul de studiu: Teoria generală a educației.

Scopul cercetării: determinarea bazelor teoretice ale comunicării educaționale, elaborarea și validarea reperelor aplicative de dezvoltare a competenței de comunicare în formă de *Pattern educațional (PE2CE)*.

Obiectivele cercetării: studierea reperelor conceptuale referitoare la modelele comunicării umane (școli, funcții, tipuri, elemente, esențe noționale), la comunicarea verbală și la cea didactică și la specificul acestora; esențializarea comunicării la lecția de educație fizică, precum și evidențierea modului în care competența de comunicare a elevilor care acced în ciclul liceal de studii influențează nivelul de relaționare pe parcursul studiilor; specificarea elementelor care descriu comunicarea în grupurile de adolescenți și corelarea acestora cu cerințele comunicării didactice eficiente; identificarea semnificației educaționale a procesului de dezvoltare a competenței de comunicare a elevilor la educația fizică; elaborarea *Modelului de dezvoltare a competenței de comunicare la elevii din ciclul liceal în cadrul disciplinei educația fizică* în calitate de fundament teoretico-aplicativ, în vederea valorificării competenței de comunicare a elevilor; implementarea *setului de activități CC* în procesul educațional și validarea rezultatelor obținute.

Noutatea și originalitatea științifică rezidă în esențializarea *corelării noemice comunicare-educație fizică*, în fundamentarea ei aplicativă în procesul educațional la nivelul elevilor din liceu (clasele a IX-a – a X-a) și în structurarea *setului de activități CC*, ca reper în dezvoltarea competenței de comunicare a elevilor.

Rezultatele obținute care au contribuit la soluționarea problemei științifice importante se prefigurează din elaborarea Modelului pedagogic de dezvoltare a competenței de comunicare la elevii din ciclul liceal în cadrul disciplinei *educație fizică* și a *Patternului educațional PE2CE*, ca parte componentă a modelului, ceea ce a condus la ilustrarea efectelor aplicării acestuia la nivelul elevilor din ciclul liceal, orientând valorificarea lui pe un spectru mai larg de elevi și discipline, printr-o remodelare ulterioară.

Semnificația teoretică rezidă în identificarea și esențializarea pedagogică a următoarelor noțiuni: „codarea”-„decodarea mesajului”, „negocierea mesajului”, „semnificarea mesajului”, „pattern educațional”, „corelare noematică”, fapt care a permis reflectarea mai largă a fenomenelor consemnate în tema cercetării.

Valoarea aplicativă a lucrării se reflectă în valoarea aplicativă a *setului de activități CC* nu doar la educația fizică, ci și la oricare altă disciplină școlară, dat fiind că nu necesită o infrastructură specială, fiind utilizate metode și tehnici aflate la îndemâna fiecărui profesor. De asemenea, *Patternul educațional (PE2CE)* poate fi aplicat și în lecțiile *out-door*, care în ultimul timp sunt considerate o soluție alternativă în educație.

Implementarea rezultatelor științifice a fost realizată în cadrul Colegiului Economic „Ion Ghica” din Bacău, în clasele liceale a IX-a și a X-a, pe un eșantion de 135 de elevi.

ANNOTATION

Florea Mihaela. Development of communication skills in physical education for high school students. PhD thesis in education sciences. Chisinau, 2023

Thesis structure: introduction, three chapters, general conclusions and recommendations, 255 bibliographical sources, annotations (Romanian, English, Russian), key concepts (in Romanian, English, Russian), list of abbreviations, 168 pages of basic text, 20 tables, 24 figures, 12 annexes. The research results are published in 15 scientific papers.

Keywords: communication, communication model, communication skills, functionality, development, physical education, adolescent, significance, educational pattern, noematic correlation.

Field of study – general theory of education.

The purpose of the research: determining the theoretical bases of communication, elaboration and validation of the applicative landmarks for the development of communication skills in the form of educational Pattern.

Research objectifs: studying the conceptual landmarks related to human communication models (schools, functions, types, elements, notional essences), to verbal and didactic communication and their specifics; highlighting the communication at the physical education class, as well as highlighting the way in which the communication skills of the students who access the high school cycle influence the level of relationship during the studies; specifying the elements that describe communication in adolescent groups and correlating them with the requirements of effective didactic communication; identifying the educational significance of the process of developing students' communication skills in physical education; elaboration of the Model for the development of communication skills in high school students within the discipline "Physical education" as a theoretical-applied foundation in order to capitalize on the communicative skills of students; implementation of the CC Activity Set in the educational process and validation of the results obtained.

The novelty and scientific originality lies in the essentialization of the noematic communication-physical education correlation and its applicative substantiation in the educational process at the level of high school students (cl. IX – cl. X) and the structuring of the CC Activity Set, as a benchmark in developing students' communication skills.

The results obtained that contributed to solving the important scientific problem are foreshadowed by the elaboration of the Pedagogical Model for the development of communication skills in high school students in the discipline of Physical Education and Educational Pattern PE2CE, as part of the model, which led to illustrate the effects of its application at the level of high school students, orienting its capitalization on a wider spectrum of students and disciplines, through a subsequent remodeling.

Theoretical significance consists in the identification and pedagogical essentialization of the following notions: coding-decoding the message, message negotiation, message significance, educational pattern, noematic correlation, which allowed a broader reflection of the phenomena recorded in the research topic.

The applicative value of the paper is reflected in the applicative value of the CC Activity Set, both in Physical Education and in any other school subject, since it does not require a special infrastructure, but techniques are used at the disposal of each teacher. Also, the educational pattern (PE2CE) can be applied in the out-door hours, a concept that lately is considered as an alternative solution in education.

The implementation of the scientific results is part of the context of the “Ion Ghica” Economic College from Bacău, the ninth and tenth high school classes, 135 students.

АННОТАЦИЯ

Флореа Михаела. Развитие коммуникативных навыков в физическом воспитании старшеклассников. Кандидатская диссертация педагогических наук. Кишинев, 2023.

Структура диссертации: введение, три главы, общие выводы и рекомендации, 255 библиографических источников, аннотации (на румынском, английском и русском языке), ключевые понятия (на румынском, английском и русском языке), список сокращений, 168 страниц основного текста, 20 таблицы, 24 рисунков, 12 приложения. Полученные результаты опубликованы в 15 научных статьях.

Ключевые слова: общение, коммуникативная модель, коммуникативные навыки, функциональность, развитие, физическое воспитание, подросток, значимость, образовательная модель, ноэмная корреляция.

Область исследования – общая теория образования.

Цель исследования: определение теоретических основ общения, разработка и апробация аппликативных ориентиров развития коммуникативных навыков в форме учебного паттерна.

Задачи исследования: изучение понятийных ориентиров, связанных с моделями человеческого общения (школы, функции, типы, элементы, смысловые сущности), с речевым и дидактическим общением и их спецификой; подчеркивая общение на уроке физкультуры, а также подчеркивая, как коммуникативные навыки учащихся, которые имеют доступ к циклу средней школы, влияют на уровень отношений во время учебы; уточнение элементов, описывающих общение в подростковых группах и соотнесение их с требованиями эффективного дидактического общения; выявление воспитательной значимости процесса формирования коммуникативных навыков старшеклассников в физической культуре; разработка Модели развития коммуникативных умений старшеклассников в рамках дисциплины «Физическая культура» как теоретико-прикладной основы с целью развития коммуникативных умений учащихся; внедрение комплекса мероприятий КЦ в образовательный процесс и валидация полученных результатов.

Новизна и научная оригинальность заключаются в эссенциализации корреляции ноэмого общения и физического воспитания и ее аппликативного обоснования в образовательном процессе на уровне старшеклассников (кл. IX – кл. X) и структурировании комплекса деятельности ВЦ, как ориентир в развитии коммуникативных навыков учащихся.

Полученные результаты, способствовавшие решению важной научной задачи предвосхищают разработку Педагогической модели развития коммуникативных навыков у старшеклассников по дисциплине «Физическая культура и Образовательная Модель», как части модели, которая привела к иллюстрации эффектов его применения на уровне старшеклассников, ориентируя его капитализацию на более широкий спектр учащихся и дисциплин, посредством последующего ремоделирования.

Теоретическая значимость состоит в выявлении и педагогической эссенциализации следующих понятий: кодирование-декодирование сообщения, согласование сообщения, значимость сообщения, образовательный паттерн, ноэмическая корреляция, что позволило более широко отразить явления, зафиксированные в теме исследования.

Апplikативная ценность работы отражается в апplikативной ценности Комплекса занятий СС, как по физическому воспитанию, так и по любому другому школьному предмету, так как не требует специальной инфраструктуры, а методики имеются в распоряжении каждого преподавателя. Кроме того, образовательная модель может быть применена во внеурочное время, что в последнее время рассматривается как альтернативное решение в образовании.

Внедрение научных результатов является частью контекста Экономического колледжа «Ион Гика» из Бакэу, девятый и десятый классы средней школы, 135 учащихся.

FLOREA Mihaela

**DEVELOPMENT OF COMMUNICATION SKILLS IN HIGH SCHOOL
STUDENTS WITHIN THE DISCIPLINE OF
„PHYSICAL EDUCATION”**

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