

Professional and Communicative Competence of Physical Education Instructors in Postmodern Education

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Abstract: Communication occupies a key place in the professional activities of physical education instructors, who involve students in physical culture and health activities, create conditions for them to master the experience of such activities through the implementation of health-preserving technologies in the process of student-centered education. The aim of the research is to investigate the psychological and pedagogical peculiarities of professional and communicative competence formation in future physical education instructors in postmodern education. The research involved 32 students; it was conducted in 2019-2021. Questionnaire survey of students was carried out according to the authors' fact-finding questionnaire, aimed at studying the state of professional and communicative competences formedness in conformity with motivational, cognitive, behavioural, value-based, emotional-volitional criteria. The ascertaining stage of the experiment revealed insufficient level of professional and communicative competences formedness in the students according to the specified criteria. The formative stage of the experiment, which provided the creation of a communication-oriented educational environment for students, revealed an increase in the number of students with high and sufficient levels of professional and communicative competences formedness. An increase in the level of students' mastering of theoretical knowledge in the field of physical education and sports to form professional and communicative competences during their study of mandatory and optional components of the educational program was also established. A high level of professional and communicative competences and theoretical knowledge of future physical education instructors, formed during their studies at a higher educational institution, will contribute to improving the efficiency of their future professional activities.

Keywords: *Communication; Interaction; Professional and Communicative Competence; Physical Education Instructor.*

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1. Introduction

The education system provides for the acquisition of mandatory professional and communicative competencies by students of higher education which are determined by the requirements of postmodern society, in particular, the ability to apply the latest scientific achievements, develop the need and ability to learn throughout life, and improve communicative competence between the instructor and students (Conlon, 2002; Frohmann, 1994; Chagovets, Chychuk, Bida, Kuchai, Salnyk, & Poliakova, 2020; Zahorodna, Saienko, Tolchieva, Tymoshchuk, Kulinich, & Shvets, 2022).

The most important problem of modern education in the world is the issue of its effectiveness both for a person and for society. Special hopes are placed on education, related to the elimination of the causes that give rise to global problems of our time, one of which is “the preservation of a man as a biosocial structure.” One of the conditions for achieving this goal is the activity of a physical education instructor, who not only forms an idea about health and its role in human life in students, but also creates and introduces health-preserving educational technologies into pedagogical practice (Griban, et al., 2019; Nosko, et al., 2020; Prontenko, et al., 2019b; Tymoshenko, et al., 2019; Arefiev, et al., 2020). Health by its very nature should be the first need of a person, but satisfying this need, bringing it to an optimal result has a complex, often contradictory, mediated nature and does not always lead to the desired result (Prysiashniuk, et al., 2019; Dutta, 2021; Shkola, et al., 2019; Prontenko, et al., 2020a; Griban, et al., 2020; Ng, Klavina, Ferreira, Barrett, Pozeriene, & Reina, 2021). This situation is due to a number of circumstances, first of all, the fact that many instructors and students of higher education have not developed their professional and communicative competences.

It is known that communication occupies a key place in the professional activities of physical education instructors. Future instructors should be ready for versatile business contacts based on the principles of professionalism, mutual respect, objectivity and support. Thus, an important task in the process of preparing a future physical education instructor for professional activities is the search for effective means of forming professional communicative knowledge, abilities and skills that ensure the instructor’s successful performance of his / her professional tasks (Andoh, 2012; Frunza & Grad, 2020; Maki, Yamaguchi, Koeda, & Yamaguchi, 2013).

Communication in the activities of a physical education instructor is considered as a means of the process of transferring information from an

instructor to a student with the aim of establishing emotional contact and learning. Therefore, there is a need to study the psychological and pedagogical peculiarities of professional and communicative competence in future instructors of physical education, as the main component of their professional qualities. Currently, the requirements for the professional training of a future physical education instructor are the formation of a personality capable of self-education, creative approach to mastering professional skills, critical thinking, development of moral and ethical qualities, ability to receive and correctly apply information that requires certain professional knowledge, abilities, skills and the experience of their transfer to students (Álvarez, 2020; Pavlova, et al., 2020; Kryshantovych, Bilostotska, Ulianova, Tkachova, & Tkachov, 2020; Prontenko, et al., 2019c).

According to the definition of the scientists (Hoffmann, 1999; Singhal & Nagao, 1993), competence is the ability of an individual to carry on activities or perform work tasks in a qualified manner. In such a case, the concept of competence encompasses a set of knowledge, skills and relationships that enable an individual to effectively act or perform certain functions aimed at achieving standards in a professional field or sphere of activities.

The term “competence” (lat. *Competentia* – “jointly achieve, obtain, respond, approach”) is derived from the word “competent”, which means, in turn: has competence; knowledgeable, experienced in a certain field. The analysis of the scientific literature allowed to reveal that “competence” is interpreted in different ways in the scientific literature: as a synonym for professionalism; as the readiness of a specialist to engage in a certain activity and as an attribute of preparation for future professional activities. In the European educational community, there is also no single, clear and unambiguous understanding of the definition of the concept of “competence” in relation to its use to describe the desired image (professionally qualified model) of a graduate of one or another level of education. In its documents, the International Commission of the Council of Europe considers the concept of competence as general or key skills, basic skills, fundamental ways of learning, key qualifications, key ideas, supporting knowledge. According to the experts of the Council of Europe, competences envisage the ability of a personality to perceive and respond to individual and social needs; a set of attitudes, values, knowledge and skills (Hoffmann, 1999; Abbas, Raja, Anjum, & Bouckenoghe, 2019).

Experts of the European Union countries define competence “as the ability to apply knowledge and skills”, which ensures the active application of educational achievements in new situations. In UNESCO documents, the concept of competence is interpreted as a combination of knowledge, skills, values and attitudes applied in everyday life (Feyz, Kiakojour, Farrokhsersht, & Aghahmady, 2020).

Today, the scientific literature distinguishes the concepts of “competence” and “competency”, while noting that the existing definitions have quite a lot in common; at the same time, the understanding of competence is multifaceted, and the concept of “competency” does not have a single interpretation and is interpreted in different ways: as “a set of powers (rights and duties) of any body or official, established by the law, the statute of this body or other regulations”, “possessing knowledge that allows you to judge about something”, “a field of issues someone is well-versed in”. In addition, in most studies of recent years, the concept of “competency” is interpreted not simply as the sum of abilities, knowledge and skills, but as the ability or willingness to mobilize already organized knowledge, skills, abilities and mental qualities necessary to perform a task at a high level and adequate to the specific situation (Bondarenko, Okhrimenko, Tverdokhvalova, Mannapova, & Prontenko, 2020).

The instructor’s professional competence is understood as the instructor’s personal capabilities, which allow him / her to independently and effectively realize the goals of the pedagogical process. For this, you need to know pedagogical theory, be able to apply it in practical activities. Pedagogical competence of an instructor is the unity of his / her theoretical and practical readiness to carry out pedagogical activities. Professional competence combines the theoretical and practical readiness of an instructor to carry out pedagogical activities, which is a condition for the formation of the future instructor’s readiness for pedagogical activities, as one of the components of professional activities motivated by an internal motive. Professional competence is a regulatory educational value in the field of “higher pedagogical education”. Ideally, it presupposes the future specialist’s possession of the entire set of cultural (including purely professional) samples known to the present day in the relevant field of human activities. Professional competence in the majority of pedagogical studies (White & Gutheil, 2016; Kucherenko, Mamchur, Mamchur, & Bidyuk, 2020) is determined by the subject-based background of those sciences the contribution of which is leading in terms of its formation.

Professional pedagogical communication as a specific process of mutual exchange of information within the systems of “man – man”, “man – computer”, “man – computer – man” is a means of carrying out the professional activities of an instructor, whose mastery should be based on the one hand, on special professional knowledge and versatile professional skills, and on the other – on the ability to exchange information with students, pupils, parents, colleagues, administrative workers, education employees, etc., achieving mutual understanding. The success of its implementation ensures competence in the implementation of communication i. e. an integral personal formation that combines the instructor’s conscious understanding of the value of communicative activities, theoretical and practical readiness for its qualified implementation (Trybulkevych, Zaitseva, Lupak, Dychkivska, & Bortniuk, 2020).

“Communicative competence of a specialist is a certain level of personal and professional experience formedness in terms of interaction with others, which an individual needs in order to function successfully in the professional community and society within the limits of his / her abilities and social status”. Therefore, knowledge, experience and the ability to communicate both in the business sphere and in everyday situations is the main source of communicative competence acquisition by a future physical education instructor. The set of communicative knowledge, skills and abilities that make up the communicative competence of a specialist include:

- knowledge of regulations and rules of communication;
- a high level of speech development, which allows a person to freely transmit and receive information in the process of communication;
- understanding of non-verbal means of communication;
- the ability to establish contact with people, taking into account their gender, age, socio-cultural, status characteristics;
- the ability to behave adequately to the situation and use its specifics to achieve one’s own communicative goals;
- the ability to influence the interlocutor in such a way as to incline him / her to your side, to convince him / her of the strength of your arguments;
- the ability to correctly assess the interlocutor as a person, as a potential competitor or partner and to choose your own communication strategy depending on this assessment;
- the ability to evoke a positive perception of your own personality in the interlocutor (Murphy, 2020; Ghibanu, 2018; Frunza, 2018; Gurevych, Sira, Kanyuk, Sidun, Syno, & Chernovol, 2022).

The ability to communicate is influenced by the following personality parameters: peculiarities of thinking, good command of speech, empathy and spontaneity of perception, certain social guidelines (for example, interest in the communication process itself, and not only in its result), communication skills i.e. the ability to navigate in time, among partners, in relationships, in situations (Álvarez, 2020; Chirvasiu, & Simion-Blândă, 2018; Fantini, 2020).

The analysis of literary sources showed that there are no theoretically justified and defined ways of forming the professional and communicative competence of future physical education instructors in the process of their training at universities and faculties of physical education and sports during the study of professional academic disciplines, which should be aimed at the development of individual components of professional and communicative competence, which involves the formation of a certain complex of professional and communicative competencies. This gave rise to a number of contradictions between: trends regarding the role of communicative competence of a modern physical education instructor and the insufficient level of its formedness in students; the requirements of regulatory documents regarding the formation of communicative competence in students and the insufficient level of its formedness in future physical education instructors; society's need for high-quality professional training of a communicatively competent physical education instructor and the lack of a comprehensive system of professional and communicative competence formation in the process of studying professional academic disciplines in higher educational institutions (HEIs).

The aim of the research is to investigate the psychological and pedagogical peculiarities of professional and communicative competence formation in future physical education instructors in postmodern education.

2. Methodology

Research methods: theoretical analysis and generalization of literary sources on the topic of the research, pedagogical observation, questionnaires, pedagogical experiment, methods of mathematical statistics.

The object of the research was the educational process at the Faculty of Physical Education and Sports of Zhytomyr Ivan Franko State University, practical training and the organization and conduct of physical education training sessions and physical culture and health activities at school, and the professional and pedagogical communication of student apprentices with

high-schoolers, parents and colleagues. The research was conducted in 2019-2021. 32 students majoring in “Physical Education Instructor” took part in the research. The general sample of students who took part in the research included all students who enrolled in 2016 in the specified specialty. The ascertaining stage of the pedagogical experiment (2020) revealed the existing level of professional and communicative competences formedness in the 4th-year students who were obtaining a bachelor’s level of education, and the formative stage of the pedagogical experiment (2020-2021) allowed to investigate the level and dynamics of professional and communicative competences formedness in the 5th-year students who continued their studies at the master’s level of higher education and who were involved in a communication-oriented educational environment created at the faculty. We consider the communication-oriented educational environment as a complex system formation, which is based on subject-subject relations between all participants of the educational process and provides such an organization of education, when the professional training of future instructors takes place directly in the real educational process with simulated communicative activities for the physical education instructor. Whereupon, pedagogical activity is the process of solving standard and non-standard pedagogical tasks. At all stages of solving pedagogical tasks, the instructor uses an adequate communication system, by means of which pedagogical interaction is organized. This environment took into account the attitude of students to the educational process, the choice of academic disciplines for the formation of the selective component of the curriculum; identification of students’ attitude to various forms of presentation of educational material, application of methods and tools used to form their professional and communicative competences.

To study the level of professional and communicative competences formedness in students i. e. future instructors of physical education, the survey was conducted according to the author’s questionnaire, which contained 20 questions aimed at assessing their mastery of the algorithm for building effective professional and communicative interaction, the ability to apply the acquired knowledge, skills and abilities in educational and professional activities; the ability to analyse and interpret the peculiarities of educational and upbringing activities, the ability to set tasks and provide means for their implementation; the ability to argue and defend one’s own point of view in making a decision and achieving a result. The questionnaire was anonymous, which increased the reliability of the study. As for the limitations of the study, we did not take into account the factors that could

affect the formation of their professional and communicative competences outside the educational process at the higher educational institution.

Professional and communicative competences were assessed according to motivational, cognitive, behavioural, value-based, emotional-volitional criteria according to a 100-point ECTS scale: high level – 90-100, sufficient – 82-89, average – 74-81, low – 60-73. The first three levels show a positive result: the formed professional and communicative competence of the future instructor, while a low level requires solving additional tasks that must be solved by reassessing motivation to learning and activating internal and external resources.

A high level characterizes the perfect mastery of the algorithm for building effective professional and communicative interaction, the ability to apply the acquired knowledge, skills and abilities in educational activities; perfect ability to analyse and interpret the peculiarities of educational and upbringing activities, the ability to set tasks and provide means for their implementation; perfect ability to argue and defend one's own point of view in decision-making and achieving results.

A sufficient level characterizes the mastery of the algorithm for building effective professional and communicative interaction, the available opportunities to apply the acquired knowledge, skills and abilities educational activities, to undertake professional and communicative activities during fitness and health recreation events, the ability to analyse and interpret the results of educational activities, the ability to ask questions and argue as well as defend one's own point of view in decision-making and achieving results.

An average level characterizes the situational mastery of the algorithm for building effective professional and communicative interaction, episodic manifestations of the ability to apply the acquired knowledge, skills and abilities during educational activities, to carry out professional and communicative activities during fitness and health recreation events, partial ability to analyse and interpret high-schoolers' achievements, partial ability to argue and defend one's own point of view in decision-making and achieving results.

A low level characterizes the lack of mastery of the algorithm for building effective professional and communicative interaction, lack of ability to apply the acquired knowledge, skills and abilities during educational activities, as well as the inability to carry out professional and communicative activities during fitness and health recreation events, not formed ability to analyse and interpret high-schoolers' achievements, not formed ability to

argue and defend one's own point of view in decision-making and achieving results.

This research complies with the ethical standards of the Act of Ukraine "On Higher Education" No. 1556-VII of July 01, 2014 and the Letter from the Ministry of Education and Science of Ukraine "On the Academic Plagiarism Prevention" No. 1/11-8681 of August 15 2018. Informed consent was received from all students who took part in this research.

3. Results

Examining the concepts of "interaction" and "communication" during the physical education training session, we established that they are manifested in the communicative process of the instructor and high-schoolers in a real combination of activity, cognition and interaction. Each of the concepts "interaction" and "communication" covers a wide range of cooperation issues not only of health and fitness aspects of physical education and sports, health, physical development and physical fitness, etc., as well as relevant social interactions. Therefore, these categories have their own meaning, where "interaction" covers only the sphere of relations between the instructor and high-schoolers and is a component of the concept of "communication". At the same time, pedagogical communication is a component of the instructor's professional activities, which is aimed at solving the educational and health-improving tasks of physical education, ensuring the physical culture and health-improving process and a healthy lifestyle of high-schoolers during extracurricular hours, and organizing relationships between the instructor and high-schoolers.

During physical education training sessions and various forms of fitness and health recreation events at school the physical education instructor needs to formulate the goal and task, inform the high-schoolers of theoretical information, explain the technique of physical exercises, analyse and assess the quality of their performance, sum up the results of the training sessions, etc. Therefore, the quality of the instructor's interaction with the high-schoolers will depend on the knowledge of special terminology, the ability to correctly express his / her thoughts, while the language must be logical and grounded, with a sufficient vocabulary, the instructor's ability to select the necessary words, to build grammatically justified sentences from them in compliance with grammatical and stylistic norms. The quality of the training sessions also depends on diction,

emotional and intonation colouring, inner conviction, the vocabulary of the instructor's language, his / her facial expressions, gestures, looks, body movements, spatial movements, etc. In such a case, mistakes made by physical education instructors reduce the quality of training sessions. These include primitivism and monotony of language, use of clichéd phrases, dialect and slang words, incorrect terms and commands, etc.

In general, professional and communicative competence implies the presence of the following components: communicative knowledge, abilities, skills; communicative orientation; humanistic attitude in communication; communicative creativity, which ensure effective pedagogical interaction between the instructor and the high-schoolers in the complex.

We consider professional and communicative competence of a physical education instructor of a secondary school by way of an integrative personal formation, which is manifested in the process of pedagogical communication with high-schoolers, colleagues and parents as the ability to apply the acquired experience of communication, as well as the individual and psychological qualities of the instructor to achieve the goal and tasks of education in accordance with the State Standards of General Education through solving communicative tasks.

The content of the category of "professional and communicative competence of a physical education instructor" can be revealed through the structure of communicative competence: perceptual (interpersonal perception and assessment of communication); reflective (self-analysis and self-assessment of behaviour in the process of communication) and behavioural components (choice of adequate means of interpersonal communication, management of the communication process and regulation of one's own behaviour).

We established in our research that professional and communicative competences of a physical education instructor consist of relevant knowledge and skills: cognitive component (knowledge that is necessary for effective communication (linguistic knowledge, psychology of communication, pedagogical skills and communication skills); activity component (the ability to use linguistic, psychological, pedagogical knowledge during the educational process of physical culture at school and during extracurricular and out-of-school fitness and health recreation events as well as sports activities); personal component (personal qualities that determine professional development, level of sports achievements, authority among the environment, the ability to communicate, tendency to

communicate, motivation and self-control in communication, mastery of feedback mechanisms, interaction style, etc.).

When considering the content of professional and communicative competence of a physical education instructor, we should focus on the ability to freely master verbal and non-verbal means of social behaviour, since communicative competences are always manifested in society, and the factors that positively affect its development are life experience, erudition, intelligence, knowledge and ability to navigate in society.

Professional and communicative competence of a physical education instructor is manifested as readiness for professional activities (motivational aspect); possession of knowledge, abilities and skills in working with student youth (cognitive aspect); the presence of experience in solving professional tasks in educational activities and organizing culture and health as well as sports events in various situations (behavioural aspect); manifestations of competence and its application in the process of communication with high-schoolers, parents, school administration, etc. (value-based aspect); emotional-volitional regulation of the process and result of competence manifestation (emotional-volitional aspect). Each component of professional and communicative competence of a physical education instructor has in its composition individual-personal, interactive-practical and subject-informational components, which contain motivational, cognitive, behavioural, value-based, emotional-volitional criteria for the manifestation of competence.

We used the following indicators to assess the motivational criterion for the manifestation of professional and communicative competence in future physical education instructors: emotional stability during pedagogical communication; observance of speech behaviour taking into account the emotional states of high-schoolers; kindness, frankness, sincerity, initiative when communicating with colleagues, parents and high-schoolers; understanding of feelings and emotional state of high-schoolers, colleagues, parents; striving to achieve a high level of professional and communicative competence in the process of pedagogical activities; the presence of personal qualities that encourage the instructor to ethically adequate behaviour in the educational environment (pedagogical tact, tolerance, civil position, friendliness, benevolence, openness); application in professional communication of special terminology, speech constructions inherent in physical education; search for new information in the field of physical education and sports.

We used the following knowledge to assess the cognitive criterion for the manifestation of professional and communicative competence in future instructors of physical education: professional ethics and their observance in the process of pedagogical communication; behaviour in conflict situations and ways of their prevention and elimination; forms and methods of self-control; peculiarities of the age-related behaviour of communication subjects (high-schoolers, parents, colleagues); personal-group and interpersonal interaction in the educational environment; understanding of gestures, facial expressions, voice quality, its range, tonality, speech pauses; terminology of physical education and its use in the educational process of physical culture.

We used the following skills and abilities to assess the behavioural criterion of the manifestation of professional and communicative competence in future physical education instructors: to determine the purpose, task, plan and program of pedagogical communication with high-schoolers and parents; to logically and consistently express one's thoughts during pedagogical communication and conduct of physical education training sessions as well as fitness and health recreation and sports events; to predict the psychological climate in the educational environment during pedagogical communication and avoid situations that will prevent the achievement of the intended learning objective; to organize pedagogical interaction with high-schoolers and parents; to resolve conflict situations in pedagogical communication during the educational process and maintain the necessary contacts with subjects of the educational environment; to initiate and support the communication process in the educational environment; to adjust to pedagogical communication with a high-schooler with an inadequate emotional state and mood; to apply knowledge of gymnastic terminology and speaking skills to solve professional tasks in the educational process of physical culture.

It should be noted that the value-based aspect and the aspect of emotional-volitional regulation are internal personal formations of students i. e. future instructors of physical education, which are quite difficult to objectively measure. Therefore, we used the following ones to assess the value-based criterion of the manifestation of professional and communicative competence in future instructors of physical education: understanding and knowledge of the conceptual apparatus, analysis and assessment of means of speech communication; the availability of means that provide the content of pedagogical communication, which involves the

application of professional knowledge and experience, the general erudition of the individual.

We used the following aspects to assess the emotional-volitional criterion of the manifestation of professional and communicative competence in future physical education instructors: the ability to realize and recognize one's own feelings and the feelings of interlocutors, for self-motivation and management of one's own emotions and volitional manifestations in relations with colleagues, high-schoolers and parents; the ability to comply with the norms of oral speech, gestures and plasticity of poses, emotional and mimic accompaniment of utterances, speech tone and speech volume; the ability to realize and recognize one's own feelings, as well as the feelings of others; the ability to manage one's emotions and volitional manifestations in oneself and in relations with high-schoolers; self-confidence, knowledge of one's own strengths, weaknesses and needs; the ability to manage oneself, one's emotions and will; the ability to show respect and tolerance for someone else's opinion and to defend one's own opinion in a cultural way; the ability to resolve conflicts in communication, to change one's speech behaviour in professional communication.

The ascertainment experiment conducted by us with students i. e. future instructors of physical education was aimed at studying the state of professional and communicative competences formedness according to the defined criteria (Table 1). The research has shown that only 9.4 % of future physical education instructors have a high level of motivation to perform their professional duties, 18.8 % have sufficient motivation to ensure the educational process and communication with high-schoolers. At the same time, 37.4 % of students have no motivation for the professional activities of a physical education instructor.

Table 1. Levels of professional and communicative competences formedness in future physical education instructors (the ascertaining stage of the pedagogical experiment, n = 32, in %)

Criteria	Levels			
	High	Sufficient	Average	Low
Motivational	9.4	18.8	34.4	37.4
Cognitive	6.3	15.6	28.1	50.0
Behavioural	12.5	18.8	31.3	37.4
Value-based	9.4	12.5	28.1	50.0
Emotional-volitional	6.3	9.4	24.9	59.4

Regarding the cognitive criterion, the majority of students do not have professional and communicative competences, as 28.1 % of them have an average level and 50.0 % have a low level of competence manifestation. Behavioural manifestations of competence require significant improvement in the process of educational activities and during practice. A low level of future physical education instructors was revealed in the manifestation of professional and communicative competence according to value-based (50.0 %) and emotional-volitional (59.4 %) criteria. In general, the majority of students i. e. future instructors of physical education revealed an insufficient level of professional and communicative competences, which was manifested in situational compliance with the rules of professional and ethical behaviour and in the lack of desire to correlate their own goals with the interests of high-schoolers.

The biggest problem of future physical education instructors is considered to be the possession of only elementary skills to logically and consistently express their thoughts during pedagogical communication, as well as to present educational material in an accessible and logical manner, to demonstrate the performance of exercises in the process of physical education training sessions, where students ignored errors in communication and explanations of the exercises in terms of terminology. The obtained data showed that the formation of professional and communicative competences in future physical education instructors requires a targeted system of pedagogical influences and the performance of communicative tasks throughout the entire period of instructors training.

We established that pedagogical communication, as a communicative activity, is a system of communicative actions in the process of which the communicative competences of the physical education instructor are actualized and formed. This makes it possible to purposefully influence the formation of professional and communicative competences in students i. e. future instructors of physical education for communicative activities during their mastery of professional academic disciplines by creating a communication-oriented educational environment.

The presence of a system of communicative knowledge, skills and qualities allows students to gain new knowledge about communication, organize communication in given situations, quickly navigate and find a way out of difficult communicative situations, predict further behaviour in communication with high-schoolers. The system of professional and communicative knowledge and skills of future physical education instructors creates the necessary theoretical basis for solving communicative situational

tasks. Therefore, it is expedient to form the knowledge, abilities and skills of professional and pedagogical communication in future physical education instructors, to direct their activities to gain practical experience in solving various communicative situational tasks that occur in a communication-oriented educational environment.

We defined the implementation of interdisciplinary connections during training sessions from the main component of the educational program as a pedagogical condition for the formation of professional and communicative competences. In such a case, the realization of the goal of professional and communicative competences formation in future instructors of physical education requires continuous monitoring of the process of the specified qualities formation. The monitoring of the process of professional and communicative competences formation in future instructors of physical education performs the following functions: 1) diagnostic (records the current state of the volume and level of acquisition of communicative competences); 2) prognostic (reveals the strategy and tactics of further development of professional and communicative competences); 3) informational (ensures the accumulation of information regarding the current state of professional and communicative competences formedness).

The pedagogical formative experiment was aimed at the formation of professional and communicative competences in students i. e. future physical education instructors, which was carried out in the educational process at the Faculty of Physical Education and Sports based on the principles of continuity, fundamentality, scientificity, personal orientation, professional competence, humanization, democracy, integrativeness, unity of learning, education and development of the personality, variability, creativity (formation of the ability to pedagogic creativity), harmonization of relations with the team and the environment, etc. The students studied under the master's educational program and were involved in a communication-oriented educational environment additionally created for them. Focused effort on professional and communicative competences formation in future physical education instructors contributed to the students' professional and communicative competence improvement (Table 2).

Table 2. Dynamics of professional and communicative competences formedness in future physical education instructors during the formative stage of the pedagogical experiment (n = 32, in %)

Criteria	Levels							
	High		Sufficient		Average		Low	
	Before	After	Before	After	Before	After	Before	After
Motivational	6.1	18.2	12.1	21.2	33.3	42,4	48.5	18.2
Cognitive	–	15.2	9.1	18.2	24.2	39.4	66.7	27.2
Behavioural	3.0	18.2	12.1	21.2	18.2	36.4	66.7	24.2
Value-based	–	15.2	12.1	24.2	24.2	33.3	63.7	27.3
Emotional-volitional	6.1	21.2	15.2	24.2	21.2	45.5	57.5	9.1

The research showed that the number of students who have significantly improved their level of professional and communicative competence increased. In particular, motivational assessment criterion before the experiment was inherent for 48.5 % of students with a low level, and it made 18.2 % after the experiment; cognitive one decreased from 66.7 % to 27.2 % of students with a low level of professional and communicative competences; behavioural – from 66.7 % to 24.2 %. Similar improvements took place in terms of value-based and emotional-volitional criteria.

The analysis of the results of the research also showed that purposeful work in the educational process on the formation of professional and communicative competences promotes better assimilation of theoretical material from the academic disciplines of the educational program and activates students' interest in learning. The implementation of means of maintaining a communication-oriented educational environment in the educational process of future physical education instructors resulted in a significant increase in the level of mastery of theoretical knowledge in the field of physical education and sports (Table 3). The difference before the experiment and after its completion made in terms of the mandatory components of the educational program 25.09 points at the reliability difference of $p < 0.001$ and in terms of the optional components – 23.56 points at $p < 0.001$. The research confirmed that theoretical knowledge

became the basis for activating students' consciousness and determined the level of their needs for professional and communicative competences mastering. The assimilation of theoretical knowledge stimulated students to analyse facts, generalize them and draw conclusions, activated their ability to retrospectively search for information, its systematization, analysis and synthesis, accumulation of individual information experience. In addition, mastering the theoretical section involves students in learning about the values of physical education, develops and forms the cultural potential of the student's personality, expands his / her worldview, increases spirituality and contributes to the formation of an active life philosophy.

Table 3. Dynamics of theoretical knowledge in future physical education instructors on the formation of professional and communicative competences during the formative stage of the pedagogical experiment (n = 32, in points)

Components of the educational program	Before the experiment	After the experiment	The difference	Difference significance	
	Mean ± SD	Mean ± SD		t	p
Compulsory	53.17 ± 7.34	78.26 ± 9.68	25.09	4.81	< 0.001
Optional	51.78 ± 7.19	75.34 ± 9.17	23.56	4.23	< 0.001

Legend: Mean – arithmetical average; SD – standard deviation; p – the significance of the difference between the indicators before and after the experiment due to the Student's t-criterion

The acquired knowledge allowed students to better understand the natural and social processes of physical education functioning, to be able to use them for professional and personal development, self-improvement, organizing a healthy lifestyle, spending leisure time, and achieving professional and socio-cultural needs.

4. Discussion

The analysis of physical education as a type of culture gives us reason to assert that a physical education instructor, who involves high-schoolers in fitness and health recreation activities, creates conditions for them to master the experience of such activities through the implementation of health-saving technologies in the process of learning in educational institutions, and solves the task of involving high-schoolers to culture as to the experience of activity as a whole. He / she solves this problem with pedagogical means and methods, organizing and managing activities for the

development of various forms of physical education (Griban, et al., 2020; Manolachi & Vizitei, 2018; Prontenko, Bublei, Marushchak, & Bondar, 2020).

Modernization of the national education system requires the search for additional own possibilities of adaptation of the system of higher professional education to the modern requirements of life, to a healthy lifestyle. High-schoolers' health problems are actualized in the conditions of adverse social, environmental and economic factors. One of the directions for solving this problem is the formation of professional and communicative competences in students of the Faculty of Physical Education and Sports i. e. future instructors of physical education during their studies at the higher educational institution. In such a case, a rather important factor in the formation of professional and communicative competences in future instructors of physical education is the organization of health and fitness work in the higher educational institution, the opportunity for students to systematically engage in physical exercises and various sports, while developing their communication skills.

The analysis of the results of our scientific research shows that the problem of professional and communicative competence formation in future instructors of physical education in the course of their education requires further research in both theoretical and practical aspects, in particular, the forms and methods that should be aimed at the effective formation of professional and communicative competence of future physical education instructors in the process of professional training are not analysed. Therefore, professional and communicative competence formation in students of the Faculty of Physical Education and Sports should occupy a leading place.

Experts from different countries of the world consider the instructor's professional competence as a component of his / her professionalism. What is more, the instructor's professionalism is interpreted by them as a qualitative characteristic of a high level of pedagogical activity, which is based on the following principles: volume and quality of pedagogical practice (knowledge about learning and teaching); a diploma in the field in which teaching is carried out; deep knowledge of the taught subject area; broad verbal abilities; teaching experience (5-8 years). Meanwhile, approaches to the formation of professional competence of future instructors are of less interest to scientists than the criteria, indicators and tests of its measurement (Gurevych, Sira, Kanyuk, Sidun, Syno, & Chernovol, 2022; Tehranian, 1991). The analysis of approaches to defining

the essence of the concept of “professional competence of an instructor” shows that this problem is still not solved among the world pedagogical community. There is no single definition of this concept; instead there are a number of related concepts: “teaching success”, “successful teacher”, “teaching efficiency”, “teacher performance”, “teacher competency”. The views of scientists are mostly aimed at measuring the professional competence of the instructor, that is, at the effective characteristics of education.

The publications analysed by us (Miloradova, Okhrimenko, Dotsenko, Matiienko, & Rivchachenko, 2022; Zahorodna, Saienko, Tolchieva, Tymoshchuk, Kulinich, & Shvets, 2022) indicate that there is no single definition of the concept of communicative competence in the scientific literature. Taking into account the interpretation of the concepts of competency and competence in regulatory documents, we understand the communicative competence of an individual as the socially recognized level of certain communicative knowledge, abilities and skills, value attitudes towards the communication process. In addition, the presence of communicative competencies in a person is manifested in communicative competence.

The analysis of existing approaches regarding the content of the concept of “communicative competence”, as well as the interpretation of competence “as an actual identification of competency” allowed us to clarify the definition of this category. So, communicative competence is an integrative personal formation, which is manifested in the process of communication as the ability to actualize and apply the acquired experience of communicative activity and individual psychological qualities of a person to achieve a communicative goal. Communicative competencies based on knowledge, abilities, skills, methods of communicative activity and manifestations of emotional and valuable attitude towards it are the basis of communicative competence. Communicative competence is revealed in the process of solving communicative tasks.

On the basis of the analysis of scientific research (Fantini, 2020; Khatuntseva, Kabus, Portyan, Zhernovnykova, Kara, & Knysh, 2020) we consider professional and communicative competence of the physical education instructor by way of an integrative personal formation, which is manifested in the process of pedagogical communication with high-schoolers, parents and colleagues as the ability to actualize and apply the acquired experience of communicative activity, as well as the individual and psychological qualities of the individual to achieve the goal and tasks of

education in accordance with State Standards of General Education through solving communicative tasks. The structure of communicative competence is a composition of five components:

- individual and personal, because the success of communication is impossible without certain personal qualities, which are necessary for an individual to communicate;

- speech, since no communication is effective without the knowledge of the speech apparatus and the ability to apply this knowledge in speech;

- interactive and practical, which reflects all aspects of interaction between people;

- multicultural, which explains the aspects of interaction between different peoples and cultures that is especially relevant in the conditions of globalization of modern society;

- subject and informational, which takes into account the subject aspect of communication, as well as the ability to work with information, without which a professional will not be competent and competitive in the labour market (Murphy, 2020; Ho, Looi, & Goh, 2020; Pyati, 2017).

We can summarize that professional and communicative competence of a physical education instructor is manifested in professional and pedagogical activities related to communication within the educational and upbringing environment, the success of which depends on the level of formedness and the degree of actualization of professional and communicative competence components. The results obtained extend the findings of many studies (Kotyk, Shaposhnikova, Berezyuk, Savchenko, & Helesh, 2021; Prontenko, et al., 2019a).

5. Conclusions

Professional and communicative competence of a physical education instructor is manifested in the process of pedagogical communication as the ability to achieve the goals and tasks of education and upbringing when solving tasks and problems of professional activities that arise in the educational process and during extracurricular fitness and health recreation events as well as sports activities in an educational institution. Professional and communicative competence of the physical education instructor is an integrative personal formation, which is manifested in the process of pedagogical communication with high-schoolers, parents and colleagues as the ability to actualize and apply the acquired experience of communication and the individual and psychological qualities of the individual to achieve the

goals and tasks in the educational process of the educational institution. Thus, professional and communicative competence of the future instructor of physical education is a basic and system-forming concept, which includes knowledge, abilities, skills, professionally important and personal qualities that correspond to the content of professional activities, which imply the readiness and ability of the future instructor to carry out educational and upbringing activities in specific conditions of the educational institution.

It was found that professional and communicative competence of future physical education instructors is formed in the process of communicative activities, which is considered as the process of solving communicative situational tasks, which involve explaining the technique of performing exercises, the sequence of solving technical and tactical tasks, as solving them depends on individual characteristics of high-schoolers. Communicative situations reflect the content of the physical culture instructor's professional activities in its various manifestations and require the presence of knowledge, abilities and skills that students learn during the mastery of the educational program.

We defined the main criteria in order to assess the levels of professional and communicative competences formedness in physical education instructors: motivational, which reveals a conscious attitude, interest as well as motivational and meaningful readiness for professional activities; cognitive defines a set of linguistic and professional knowledge, on the basis of which this competence is formed; behavioural involves communicative actions and adequate assessment of communicative-linguistic communication and the choice of means to achieve the effectiveness of communicative interaction; value-based involves understanding and knowledge of definitions and the availability of means that ensure pedagogical communication using the professional knowledge and experience and general erudition of the instructor; emotional-volitional determines the ability of the instructor to realize and recognize his / her own feelings and the feelings of interlocutors, manage his / her own emotions and volitional manifestations of colleagues, high-schoolers and parents in compliance with the norms of speech, gestures and plasticity of poses, emotional-mimic expression, speech tone, etc.

The analysis of the results of the scientific research conducted by us during the ascertaining stage of the experiment revealed an insufficient level of professional and communicative competences formedness in future instructors of physical education according to motivational, cognitive, behavioural, value-based, emotional-volitional criteria, which determined the

need to create a communication-oriented educational environment for the formation of professional and communicative competences of future instructors of physical education in the process of studying the academic disciplines of the mandatory and optional components of the educational program while studying at the higher educational institution. The results of the formative stage of the experiment revealed an increase in the number of students with high and sufficient levels of professional and communicative competences formedness according to the specified criteria, as well as a significant decrease in the number of students with low and average levels. In addition, at the end of the research, an increase in the level of students' mastery of theoretical knowledge in the field of physical education and sports according to mandatory and optional components of the educational program was revealed, which is the result of purposeful work on the formation of professional and communicative competences of students within a communication-oriented educational environment. Mastering the theoretical section involves students in learning the values of physical education, develops and shapes the cultural potential of the student's personality, expands his / her worldview, increases spirituality and contributes to the formation of an active life philosophy.

A high level of professional and communicative competences and theoretical knowledge of future physical education instructors, formed during their studies at the higher educational institution, will contribute to improving the efficiency of their future professional activities.

The obtained data showed that the formation of professional and communicative competences in future instructors of physical education requires a targeted system of pedagogical influences and the performance of communicative tasks throughout the entire period of training of the future instructor. It was found that pedagogical communication, as a communicative activity, is a system of communicative actions, in the process of which the communicative competences of the physical education instructor are actualized and formed. This makes it possible to purposefully influence the development of professional and communicative competences of future instructors of physical education in the process of communication during the mastering of mandatory and optional components of the educational program.

It was established that the problem of professional and communicative competence formation in future instructors of physical education has not yet been sufficiently investigated in pedagogical science and has not been properly reflected in the practical activities of higher

educational institutions of Ukraine, in particular, further study of the form and methods of professional and communicative competences forming in future instructors during their education at faculties of physical education and sports is required.

Authors' contributions

Grygoriy Griban, Anatolii Bosenko and Inna Asauliuk were involved in study concept and experimental design. Grygoriy Griban, Mariia Topchii, Lesia Vysochan and Svitlana Zamrozovuch-Shadrina were involved in data collection, analysis and article writing. Nadiia Orlyk, Pavlo Pilipchuk, Tetyana Skyrda, Nataliia Shcherbatiuk and Ihor Bloshchynskyi were involved in statistical analysis and data interpretation. All authors were involved in critical review and final approval of the article.

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Conflict of Interest

The authors declare that there are no conflicts of interest.

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