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# Methodological Background of Research Problem of High School Students Pre-professional - pedagogical Competence Formation

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## Abstract

The article reveals the problem of a high school student pre-professional - pedagogical competence formation from the standpoint of its methodological comprehension, conceptual - essential substantiation, structural - meaningful content, taking into account the basic normative regulations. The terminological analysis of "pre-professional - pedagogical competence" concept made it possible to present it as an integral characteristics of a school graduate personality with the outline of clear semantic facets in scientific and pedagogical knowledge. The structure of a high school student pre-professional - pedagogical competence proposed in the article includes personal, social and professional - pedagogical competence, as its structural elements, with the corresponding characteristic features. The structure is complemented by key "soft skills" with meaningful content, connected with pedagogical activities differentiating into personal and social "flexible skills". A substantiated choice of scientific methodological approaches ensures the determined meaning of personal, social and professional - pedagogical competencies. The conditions for a high school student pre-professional - pedagogical competence are considered in the aggregate and trinity of a pedagogical vocational orientation extracurricular activities, school pedagogical educational environment, out-of-school socio-cultural educational space of a socially active school. Pre-professional - pedagogical competence of a high school student is presented in the gradual dynamics of its formation at the threshold, basic, advanced levels in the corresponding functional spaces of vocational guidance, a high school student professional self-determination and pre-professional readiness.

*Keywords:* high school student, pre-professional - pedagogical competence, soft skills, career guidance, professional self-determination, pre-professional readiness.

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## **Introduction**

The current situation in the development of domestic ongoing pedagogical education is based on the key provisions of the social order, valuable orientations of civil society, new pre-professional educational needs of high school students. The outlined strategies of the Russian modern education policy can be traced today in the position of the Russian Federation Minister of Education S.S.Kravtsov, verbalized at the Gaidar Forum (Moscow, January 14-15, 2021) and at the meeting of the State Duma Committee on Education and Science (Moscow, March 24, 2021), that 5 thousand specialized pedagogical forms will soon be created, which future high-skilled teachers will attend, and that “teachers need to be selected when at school, to identify children who are interested in pedagogical work” (Bulletin of Education , 2021).

## **Purpose and objectives of the study**

Hence, the problematic field of the article is outlined in the study of a high student pre-professional - pedagogical competence formation from the standpoint of its methodological comprehension, conceptual - essential substantiation, structural and content foundations, taking into account the basic normative and scientific regulations. The target setting of our research is determined by the essential - terminological analysis, the definition of scientific methodological approaches to the study of pre-professional - pedagogical competence formation as an integral characteristic of a school graduate personality in combination with the extra-subject, extra-professional competences of the future modern teacher, revealing its stages and steps in the process of formation gradual dynamics.

## **Literature review**

The multidimensionality of the indicated problem is revealed in numerous scientific studies of the authorships, whose ideas are of interest to us: the social ordering of education (Skudareva & Osinina, (2017); the formation of high school students pre-professional competence in the context of specialized training (Kamyshova, 2007); the organization of pre-profile and profile training for high school students (Mamontova, Ermakova & Kashlach, 2016); new approaches to vocational guidance at schools (Ambarova & Nemirovsky, 2020); the network interaction of universities and schools for students “soft skills” formation (Patlina & Popova, 2017); “Soft skills” in the competence model of a university graduate (Salnaya, 2016); the formation of students “flexible skills” in the context of the implementation of a teacher professional standard (Yarkova & Cherkasova, 2016).

## **Methodology**

Using the methods of the literary theoretical analysis, we consider the methodological foundations of the research with the help of pedagogical systems contextual and dynamic analysis, we make an attempt to indicate the clarity and unambiguity in the interpretation of the research basic concepts, eliminating the semantic conceptual ambiguity; applying the methods of systematization and generalization, we define the personal, social and professional-pedagogical competence of high school students as components of their pre-professional pedagogical competences, which are formed gradually and on a level-by-level basis, manifesting themselves in the corresponding characteristics and features.

## **Results**

Taking into consideration the above mentioned we focus on the definition of “competence” in the context of the indicated problem research. The terminological analysis of the "competence" concept made it possible to recognize its translation from English in several meanings: ability, skill; competence; prosperity, good financial situation; legal competence, competence. It should be emphasized that the term "competence" in foreign literature is used in both cases, when it comes to both competence and competencies, differentiating their meaning only by the context of the problem.

The richer vocabulary resource of the Russian language provides attempts to differentiate these concepts, denoting them in different ways. In the Explanatory Dictionary of the Russian Language by Ozhegov, N.Yu.Shvedova, a “competent” specialist is interpreted as knowledgeable, well-informed, authoritative in any field; “Competence” (competentia, lat.) - a range of issues in which anyone is aware (Ozhegov et al, 2016). Nevertheless, such fine semantic sides of “competence” and “competence” concepts do not allow these terms to acquire established clear semantic outlines in scientific and pedagogical knowledge. Let us illustrate the formulated thesis with the opinion of D.I.Ivanov that in the domestic pedagogical literature the terms "competence / competence" are unsettled and, "most likely, they are interchangeable": in the domestic normative literature, including Education Standards, as well as in scientific and methodological literature, "competence" is replaced by the term “Competence”, revealing, in this case, semantic confusion and delusion (Ivanov, 2008).

The current situation of semantic and conceptual uncertainty initiates us to designate clarity and unambiguity in the interpretation of the concepts of “competence” and “competence”.

Hence, we understand “competence” as a synthesis of acquired skills and abilities as a result of mastering a certain subject field, and “competence” as a personal quality formed as a result of a combination of various acquired competencies, tested and verified in social and professional activities, and also confirmed by social practice and human life experience.

Now it seems logical to move on to the study of "pre-professional - pedagogical competence" concept, having previously defined the essence of "pre-professional competence" concept, various contexts of which, found in modern scientific research are summarized below. So, "pre-professional competence" in modern scientific and pedagogical literature is multidimensionally understood as:

- readiness for a conscious choice of a future profession and the choice of an appropriate professional education;
- the period of motivational abilities formation (Ambarova & Nemirovsky, 2020);
- the period of assessing one's own orientations in the future profession, in the culture of humanity and in one's own life;
- subjective and general cultural competence and its subtypes - social and communicative (Kamyshova, 2007);
- manifestation of cognitive abilities in obtaining information in the chosen professional sphere;
- ability to solve theoretical and practical tasks in active work;
- the ability to self-assess and present one's own results to the community interested in them (Mamontova, Ermakova & Kashlach, 2016).

The expressiveness of the pedagogical context in the essence of pre-professional competence, as well as our authorship presentation of "competence" and "competence" concepts gives us a basis for formulating the definition, which we present in the following interpretation: "pre-professional-pedagogical competence" is a vivid professional-pedagogical quality of a person trained for a conscious choice of the pedagogical profession by a school graduate, characterized by socio - pedagogical pre-professional maturity, formed as a result of mastering a set of personal, social and pre-professional - pedagogical competencies, demonstrating the ability of a high school student personality for creative perception and understanding of pedagogical reality, to comprehend the social mission of a teacher's profession, and his readiness to accept pedagogical ideology, confirmed by the persistent intentions of mastering professional pedagogical education, filled with actual professional meaning, tested in pre-professional - social pedagogical activity by a high school student, who understands the importance of professional pedagogical activity for a person and society.

At this generalizing level of our research, there is already an awareness that "pre-professional pedagogical competence" is an integral characteristic of a school graduate personality, which has a complex structure and poly-contextual content, which we try to substantiate below.

## **Discussion**

The basic normative regulation of "pre-professional and pedagogical competence" formation among high school students is the Federal State Educational Standard of General Secondary Education (according to the text of), Federal State Educational Standard of secondary education which includes almost all key positions of the legal and organizational-substantive condition of the future teacher personality development: a professional, a leader, a researcher, an expert, a creator, a coach, a tutor, etc. at the pre-professional stage.

We can note that the requirements of the Standard for the personal and metasubjective results of mastering the basic educational program, revealed in point 18.2.1 of Federal State Educational Standard of General Secondary Education are aimed at the formation of high school students' competencies in social activities, along with competencies in the subject, education and research, project fields.

Scientific rethinking of ideas, norms, provisions of the Federal State Educational Standard of General Secondary Education, as an official state standard, while adapting them to modern requirements and correlating with the ideas in the making pre-professional - pedagogical competence of a high school student, initiates us to give their scientific substantiation and new interpretation: the ideas of social partnership are determined by the Standard to form the ability of a high school student to consider the positions of other participants activity, to conduct a constructive dialogue, to achieve mutual understanding; the ideas of lifelong pedagogical education are correlated with the points of the Standard about ongoing education of a high school student, who is "motivated for education and self-education throughout his life"; the ideas of professionalization of a high school student orient him, in accordance with the provisions of the Standard, towards "a conscious choice of a future profession, professional self-determination"; the ideas of pre-professional - pedagogical competence formation of a high school student are transformed according to the Standard on the "formation of competencies in social activity of students and their right to determine the "nature of professional preferences; the ideas of the technological organization of pre-professional - pedagogical competence formation of a high school student are associated with the normative messages of the Standard for the definition of "technologies of interaction and cooperation of the educational process subjects and social institutions"; "forms and methods of organizing socially significant activities of students."

It already seems possible to predetermine that the formation of the social activity competence of a high school student, which in accordance with the problem of our research is concretized as "pre-professional - pedagogical competence", will be technologically carried out in the conditions of the aggregate and trinity of the following social and educational activity spheres using adequate technologies:

- extracurricular activities of a pedagogical vocational orientation as a component of the main educational program of the Federal State Educational Standard of General Secondary Education, which includes professional tests of high school students from Three-Skills: «I am a super-double in primary school», volunteer practices «Bright people», pedagogical interactivity of university teachers Pedagogical excellence, psychological motivational trainings etc;
- school pedagogical educational space as a system of conditions and opportunities for a high school student personality formation in a social and spatial-objective environment jointly with pedagogically expedient and socially significant socio-cultural events: a school-platform for taking pedagogical practice by university students - former pupils of the pedagogical form; school media center, pedagogical laboratory of lifelong pedagogical education, international pedagogical internship platform, implementation of social and educational projects, etc;
- out-of-school socio-cultural educational space of a publicly active school, filled with the implementation of the Project "Learning from Professionals" - taking summer pedagogical practice in institutions of additional education, in health camps, etc.; participation in the VI Open Regional Championship "Young Professionals" World skills Russia - 2020 Junior, etc.

As you can see, the fulfillment of the Federal State Educational Standard of secondary education requirements for terms of taking into account the "needs and individual social initiatives of students" makes us develop a structure of a high school student pre-professional - pedagogical competence, which, according to our plan, consists of personal, social and professional - pedagogical competences as its structural elements ... Personal competence, as a structural element of the pre-professional - pedagogical competence of a school graduate, orientated on the Federal State Educational Standard of the secondary educational institution, includes the following characteristics:

- awareness of oneself as a personality who accepts traditional national and universal humanistic and democratic values;
- ability for independent, creative and responsible activity;

- readiness for self-education in accordance with the ideals of civil society;
- striving for self-development and personal self-determination;
- understanding the values of a healthy and safe lifestyle;
- striving for physical self-improvement.

The anthropological approach as a methodological construct of our problem study determines the meaningful filling of personal competence, demonstrating its effectiveness in connection with the actualization of the humanitarian paradigm in pre-professional pedagogical education, where an appeal to a human being and his development finds itself in three “dimensions”: personality, individuality and subject; focusing attention on the Human's ability to reflect as a mechanism of self-development, self-education and self-improvement and the possibility of self-realization. The social competence of a high school student manifests itself integrated into: formed social activity, valuable-semantic attitudes, allowing the graduate to show his involvement in the fate of the Fatherland; the value of labor and creativity awareness for a person and society; having responsibility to family, society, state, humanity; willingness for cooperation, constructive dialogue, socially significant and interpersonal relationships; respect for the opinions of other people; striving for mutual understanding.

The sociocultural methodological approach activates the origins and driving forces of high school students social competence development, determines the system of actions and interactions in the sociocultural educational space, ensuring the sociocultural adaptation of high school students in the organizational and meaningful conditions of forming the image of a “new person” as a subject of social life.

Professional - pedagogical competence reveals itself in the following characteristics: understanding of professional activity importance for a person and society, vivid readiness for a conscious choice of profession; awareness of education and self-education significance throughout his life; conscious attitude to the values of education and science, improvement of scientific methods for the surrounding world cognition; developed ability to carry out educational research, design, information and cognitive activities; possession of creative and critical thinking; improved motivation for creativity and innovation.

The system-activity approach, as a key methodological basis for the implementation of the Federal State Educational Standard of General Secondary Education and as a methodological basis for the formation of pre-professional pedagogical competence regulates the system of pre-professional training of a high school student for pedagogical activity as a kind of integrity with complex structured elements, subordinated to the main goal and focused on a certain result.

In addition to the above, we agree with the opinion of the Russian Academy of Education Academician A.M. Novikov that competence, in parallel with the technological training of a professional, implies and ensures the formation of extra-professional or supra-professional qualities of his personality, which today are actualized by a social order (Skudareva et al, 2017) and professional pedagogical interest and are the subject of research in numerous publications (Romanyuk et al, 2012).

It should be clarified that we talk, first of all, about the supra-subject, over-professional competencies of a modern specialist, which today while not having an unambiguous scientific interpretation, are understood as: “soft skills”, “key competencies (skills)”, “universal competencies (skills)”, “skills of the XXI century”, “metasubject skills (abilities) ”.

To understand the essence of the concept, let us resort to its interpretation by Salnaya, where “soft skills” are designated as personal qualities of a man that contribute to the possibility of more effective and harmonious interaction with other people (Salnaya, 2016).

The problem of the soft skills formation and development in the pedagogical sphere is the subject of Russian researchers works by Yarkova and Cherkasova (2016), Patlina and Popova (2017) and others, in which scientists substantiate the importance of the soft skills development among teachers, since they, in turn, are called upon to form “flexible skills” among the younger generation, demanding as “skills of the XXI century”, especially among graduates of a modern school who are professionally oriented and self-determined to the teaching profession. So, let's name the key soft skills consistent with pedagogical activities, and briefly define their content, differentiating them into personal and social “flexible skills”.

Among the personal "flexible skills" we present:

1. Critical thinking as a professionally oriented type contributes to the productivity of pedagogical activity and presupposes doubts about the reliability of the incoming information about the established rules and one's own established ideas about the world.



2. Creativity as an ability for creative, non-standard solution of pedagogical problems, characterized by speed (productivity) and flexibility of thought, originality, curiosity, accuracy and courage.
3. Emotional intelligence is impossible without the skills of recognizing emotions, understanding intentions, influencing the emotional state of others, and managing one's emotions and status.
4. Cognitive flexibility allows you to quickly turn from thought to thought, as well as to simultaneously think over several ideas and solve some problems.
5. Self-management regulates the self-organization and self-realization of the teacher's personality, necessary for self-control, planning and goal-setting of his time.

The most significant social “soft skills” are:

1. Environmental thinking directs towards the rational consumption of all kinds of natural resources and the elimination of harm to the planet.
2. Management of learners creates conditions for cultivating their potential in achieving maximum opportunities;
3. Cooperation with participants in educational relations predicts the ability to build interaction with subjects at various levels from instrumental to meaningful in order to solve educational problems.
4. The ability to negotiate ensures the organization of communication through the negotiation process, justifying one's position and convincing others of its loyalty.
5. Development of social design and teamwork skills.

In addition to the above soft skills, researchers highlight the following problems: leadership, adaptability, especially in conditions of uncertainty, self-presentation skills, research and design skills, etc., which are very important according to the definition of the Federal State Educational Standard of General Secondary Education.

The pre-professional - pedagogical competence of a senior pupil precedes the professional - pedagogical competence, determining his readiness to overcome a new stage of professional development directly in the process of professional activity. Taking into account the results of various studies in this context, we consider it possible to present pre-professional - pedagogical competence, defining the stages and gradual dynamics of its development, reflecting them in table №1.

Anticipating the analysis of the table contents, we point out that we have identified three stages in the development of pre-professional pedagogical competence: threshold, basic and advanced, in proportion to the functional spaces: professional orientation, professional self-determination, pre-professional readiness. Let us emphasize that the gradual content of competencies, short-term goals, the expected results of the DPPK formation are differentiated into personal, social and professional components with the orientation for the structural components of the same name competence, while maintaining the logic of research. It should be noted that the functional spaces of competence, the formulated goals, the expected results of its formation are not the subject of strict regulation and can vary depending on the personal and individual characteristics of the school graduate, internal and external conditions and the form content of the competence formation.

Table 1. The dynamics of pre-professional pedagogical competence formation and the differentiation of its components: L: (personal), S (social), P (professional).

<b>Stages</b>	<b>Functional components</b>	<b>Short term goals</b>	<b>Expected results of becoming</b>
Threshold Functional space: professional orientation	L: Enhancing the cognitive activity of students in the search for "their" profession by means of vocational information and vocational supervision. S: Social problem activation of choosing pedagogical careers: professional propaganda, advertising. P: Revealing the vocational intention to become a teacher by means of diagnostics: professional selection and professional choice.	L: Identifying career interests. S: Determining the "strategic vector of career guidance that meets modern social challenges. P: Vocational choice.	L: Internal readiness for independence and meaningfulness in the choice of professional guidelines. S: Strengthening social and valuable orientations that affect the choice of the teaching profession. P: Programming the professional choice of a school graduate in accordance with the needs of the labour market. Base Functional space: professional self-determination
Base Functional space: professional self- determination	L: Development of a conscious interest in the problem of choosing a teacher's profession. S: Formation of socially significant motives for choosing a teaching profession; P: Formation of professional direction.	L: Personal immersion in the foundations of the teaching profession choice. S: Individualization of professional pedagogical routes, taking into account social needs and the labour market. P: Professional identification.	L: Satisfaction with professional choice, internal motivation for mastering pedagogical activity. S: An active search for a life position, the meaning of life, based on humanistic traditions. P: Designing a professional role in the chosen profession of a teacher. Advanced Functional space: pre-professional readiness
Advanced Functional space: pre- professional	L: Development of self-awareness and conviction in the correct choice of the pedagogical profession.	L: Formation of abilities for professional pedagogical activity.	L: Creative perception and understanding of pedagogical reality. S: Awareness of the teaching

readiness	S: Development of future teacher “soft” skills, which are in demand of modern society. P: Formation of elementary professional skills in the teaching profession, primary professional adaptation.	S: Attitude for self-realization in socially approved activities. P: Active tests of strength in various pre-professional types of pedagogical activity close to real conditions	profession social mission, social - pedagogical pre-professional maturity. P: Adoption of pedagogical ideology, confirmed by the persistent intentions of mastering vocational education.
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## Conclusion

As it can be seen from the table, the stages of pre-professional-pedagogical competence formation are identified with functional spaces: threshold - with professional orientation; basic - with professional self-determination; advanced - with the pre-professional readiness of a school graduate. Each of the mentioned functional spaces corresponds to the functional components we have formulated, differentiating them into personal, social, professional with their content, which like short-term goals and expected results of the competence development are built into the logical framework of the same-named and essentially similar structural components pre-professional - pedagogical competence (personal, social and pre-professional competence) of a high school student in a socially active school.

It seems that the pre-professional - pedagogical competence of a high school student presented by us in the progressive dynamics of its formation with the allocation of personal, social and professional components, as well as the results of the contextual terminological and essential analysis will allow us in the future to structure more effectively the systemic process of its formation in practice and optimize the organizational and content conditions.

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