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COGNITIVE COMPETENT AS A KEY FACTOR IN THE CONTINUOUS PROFESSIONAL DEVELOPMENT OF A TEACHER

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Abstract. Cognitiveness, competent and competence are concepts that are reflected in various interpretations of a generalization idea in scientific research. In the article, definitions are given to cognitive competent, the conceptual basis are drawn to the analysis, formation of the concept's "competence" and "competent", entry into practice, theoretical approaches to the terms "cognitive competence" and "cognitive competent" are classified, which are its components. In particular, the role of cognitive competent in professional self-development is established. Also, on the basis of the literature studied, the author's approach was carried out and the cognitive competent structure of the teacher was presented. A structure consisting of such organizations as motivation, information, reflexive and activity covers the content, scientific and practical components are covered in detail.

Keywords: professional growth, cognitive competence, competent, structure, reflection, motivation, activity, information, process.

抽象的。 认知能力、胜任能力和胜任能力是科学研究中对概括思想的各种解释所反映的概念。本文对认知胜任能力进行了定义，并得出了概念基础进行分析，形成了概念的“胜任能力”和“胜任能力”。“胜任”，进入实践，对“认知胜任”和“认知胜任”这两个术语的理论进路进行了分类，是其组成部分。特别是确立了认知胜任在职业自我发展中的作用。对所研究的文献进行了研究，实施了作者的方法，并提出了教师的认知能力结构。由动机、信息、反思和活动等组织组成的结构涵盖了内容，详细涵盖了科学和实践部分。

关键词：专业成长、认知能力、胜任、结构、反思、动机、活动、信息、过程。

Introduction. Professional competent is regarded as a concerted project of peak and activity that should be sought for the teacher, a pedagogical employee should always be capable of finding an optimal solution to professional tasks of various complexity and pedagogical situations, and also, he or she should be open to news, initiative, aspiring. So, this process requires the teacher to change his attitude to his

activity, to restructure when necessary. This is one of the priorities of the system.

Since the scope of our study is focused on determining the qualities of cognitive competence and cognitive competent, below, we will focus on developments that explain these concepts.

Analysis of the scientific literature on the subject. Although the literature on pedagogy and psychology provides certain definitions of

the terms “cognitive competence” and “cognitive competent”, it was also found that they did not have a clearly defined approach, as there was no complete interpretation of the term’s “competence” and “competent”.

In particular, cognitive competences are defined as follows:

“the result of education, which reflects the presence of the student at the level of the ability to develop, organize and self-develop cognitive activities in professional, personal and social life; readiness to constantly increase the level of education; demonstration of personal potential, reflection and ability to independently acquire new knowledge and skills” [17, p. 301];

“readiness to constantly increase the level of knowledge, understanding of the importance of personal potential and the need to demonstrate it, the ability to independently acquire new knowledge and skills, the ability to self-develop” [8, p.63];

“rapid finding of necessary information in global sources of information, to distinguish the important ones here and now, to analyze, to search for information close to them in memory and to synthesize what is found, use of imagination and associative connections, ability to identify a problem, make a hypothesis, test it in practice, formulate and present a solution” [15];

“ability to think and act effectively through the development of cognitive and functional competencies” [17, p. 298.].

L.Lyubimov, one of the scientists who made a significant contribution to the scientific study of education [14, p.17]. “Author’s concept of modernization of general education. Without slogans, calls and admonitions, but with answers to the following questions: What to do? Why do you need to perform? How to do this?” while

observing cognitive competences in his analytical work entitled, the interrelationship between the results of international research such as TIMSS, PIRLS, PISA on the need for school reform and education quality monitoring has been recognized by leading experts. In his opinion, the results of these monitoring are an important tool for determining the level of intelligence of the population and the equality of cognitive competences of the nation, which is important for the economic growth and development of the state. Only a school can serve as a “factory” of these competences.

Cognitive competent in the interpretation of E.V.Vyazova is expressed in the form of “the acquisition by the student of a set of competences in the field of independent reproductive and productive cognitive activity in relation to real objects” [5, p. 10], L.A.Osipova said that “integral feature that ensures the readiness and aspiration of a person to realize their potential (knowledge of educational technology, ability to apply knowledge in practice, experience of independent organization of educational activities) in the successful solution of problems in the educational process or other activities” [16, p. 8]. Also, in the research of I.G.Lipatnikova, T.Yu.Parshina, “an integral feature that ensures the readiness of the individual for independent learning, personal and professional development” [13, p.3], D.V.Dudko’s research explains that “the unity of theoretical and practical preparation of a teacher for professional activity, its constant development, the ability to make creative decisions during their professional activity” [7, p. 67].

Based on the above considerations, analysis, and personal research, it has become possible to define the terms teacher cognitive competent and competence:

Cognitive competence of the teacher is readiness to carry out professional activities effectively by activating cognitive processes, ability to understand the high task and the ability to develop knowledge independently.

Cognitive competent of the teacher is that he possesses a set of cognitive competences in relation to specific objects of reality and is effectively reflected in his professional activity.

The effectiveness and success of pedagogical staff is ensured on the basis of their professional training, level of qualification, creative approach to the performance of their duties, diligence and consistency. The achievement of a high level of cognitive competence of pedagogical staff is characterized by recognition by the pedagogical community, colleagues, compliance with the requirements for professional activity, expansion of individual professional opportunities, realization of their potential.

Authorship approach. Based on the above considerations and analysis of perspectives on the field, it was concluded that the formation of the structure of cognitive competence, consisting of motivation, information, activity and reflexive components, correlates with the professional and pedagogical abilities of the teacher. (Figure 1).

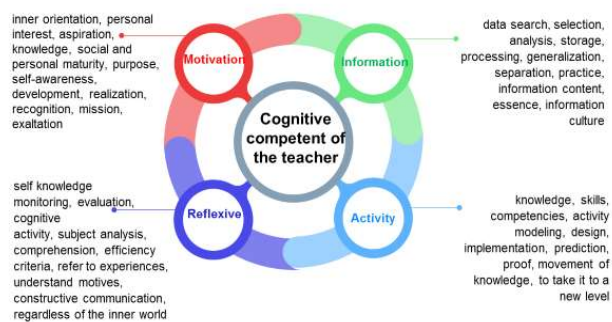


Figure 1. The structure of the teacher's cognitive competent

Structure classification. Motivational component in the structure of cognitive competence is a positive inner orientation of the teacher in the process of professional development, personal interest, aspiration, knowledge, social, personal maturity, ability to set goals, achieve them, self-awareness, development, demonstration, proof, recognition represents a set of motives such as getting, accomplishing a mission, and reaching heights. This component expresses the motivational readiness of the teacher for continuous professional growth based on the understanding of the needs, values, motives, educational goals and role in the performance of tasks. Because it is these qualities that serve as a link between the actions of the teacher and through the activation of cognitive processes, the acquisition of knowledge, the acquisition of new ones, the level of interests, abilities, successes, the desire to conduct quality activities, self-confidence and understanding of opportunities.

In the field of scientific literature, motivation is recognized as a set of psychological factors that determine behavior and its orientation and activity. In particular, according to J.G.Yuldashev, one of the personal qualities of a teacher is "motivational readiness to study constantly due to their inherent pedagogical activity." Often such a principled readiness for reading is updated by an event in their pedagogical activity or by information about the possibility of improving their skills [11; p. 124.]. Motive implies a reason that explains the tendency of readiness, personality behavior [12; p. 78].

E.Goziev emphasizes that the growth of motives, the emergence of new motivated information, is due to changes in the environment. In this case, the activity is an active

situation, moving away from the psychological conditions within the existing needs, interests, and then forms new interests, needs, aspirations, changes the nature and forms of motives [25; p. 158]. That is, "any activity is more effective and gives quality results if the person has strong, bright, deep motives that motivate him to overcome the inevitable difficulties, inconveniences and other situations, to strive for the desired goal and to take active action" [18; p. 352].

Motivation is also recognized as a multi-level, complex system of engaging learners, shaping and developing their interests. It states that "...needs, interests, aspirations, beliefs, goals, desires, interests, requirements, values, customs, etc. are the founders of this system. Motivation is the purposeful orientation of students' activities through psychological influences based on certain needs" [6; p.33].

Thus, motivation as a psychological factor represents the inner motivation of educators to be active in the relevant processes, the reason for their actions, the continuous development of professional skills. That is, motivation is closely related to meeting the specific needs of the educator. Need is the strongest motive that motivates, moves and motivates a person to an activity.

The information organizer of the structure represents the ability to search, select, analyze, generalize, separate, and practice relevant information in the acquisition of new knowledge.

Most of the research devoted to the study of the essence of information [2, 10, 23] gives a deeper emphasis on the three concepts. In the first concept, information is formally perceived as the coded volume of certain characters using some medium, and it does not take into account

the content of the information. The latter are based on philosophical views and emphasize the importance of the content of information. The second - the functional concept connects the essence of information with the functioning of self-organizing systems. It identifies the nature of information about cognitive processes and presents it as a part of human knowledge that is used in activity and self-management. Third, the concept of attribute is formed on the basis of the development of the science of cybernetics, which studies information as a property (attribute) of all matter. According to this theory, the task of decoding to receive information encoded by material objects cannot be accomplished without cognitive structures.

As a result of studying the development of the above theories, researchers G.G.Belonogov, R.S.Gilyarevsky [3, p. 1] conclude that information can be both the meaningful content of messages in the process of communication or human interaction, as well as the information stored on the media in text, image or voice. Also, A.V.Sokolov [20] expresses that information activity is an integral part of mental work, manifested in the perception, storage (remembering), processing (understanding, evaluation, generalization, etc.), the transmission of social information. The description of L.V.Astakhanova, who studied the information on the basis of a cognitive approach, gives a more complete description of the ideas in these studies: "Information is a subjective image of the objective world, manifested in the genetic and social nature of man, and more or less adequately reflected in order to adapt to reality" [2, p. 12].

This component of the structure of cognitive competent increases the volume of information day by day, in the context of

improvement and refinement of modern computer and telecommunication technologies, the problem of developing teachers' professional knowledge of the information process and information culture is an important task.

This is because a teacher with information competent knows the importance and necessity of the flow of information created in his field, while improving the demand and readiness for continuous education and independent work on professional skills throughout his career, independently processes data, receives information from various sources, i.e. the Internet, including national and foreign networks, and uses them effectively in the classroom, in a way that students can understand.

To do this, each teacher must not only have informed knowledge and skills, but it is also important to be able to organize training sessions on the basis of modern pedagogical technologies, to develop and develop a culture of working with information, while improving their professional skills. Information culture is the ability and skill to use all types of media appropriately in a person's daily life and activities. Consequently, in-service training is an urgent task, such as developing and shaping the culture of teachers' work with information, in which the teacher becomes more and more a consultant, a guide, a manager of the educational process. Also, as its functions as the owner and disseminator of information are now entrusted to information technology, the main issue is access to the world of knowledge and information, how to use and master the resources of this world.

A teacher's professionalism and information culture are characterized by his or her information worldview, a system of knowledge and skills that enables him or her to work independently to perfectly meet the

demand for professionally informed information using both traditional and modern pedagogical and information technologies. The use of advanced technology highlights important and key aspects of a teacher's career, that is, to improve the professional skills of teachers, to constantly arouse in them an interest and aspiration to knowledge, to work on the search, storage, sorting and processing of information, the correct formation of their assessment skills.

In this regard, in the process of professional development of pedagogical staff to improve the professional skills of teachers, most teachers do not have sufficient skills to work with information, it can be noted that the inability to articulate the required requests at the required level has led to difficulties in the design and preparation of materials, qualification documents, curricula related to the activity. Therefore, it is important to pay serious attention to the development of information competence in teachers in retraining and professional development courses.

Explains the activity organizer of the structure, combining knowledge, skills, abilities of the teacher, self-realization as a person, modeling, designing professional activities, predicting results, consciously justifying their actions, raising their knowledge to a new level.

In a number of researches works in the structure of competencies [4, 19, 22] the activity organizer takes precedence. According to A.G.Asmolov [1], this situation allows us to understand the essence of competence in the movement of knowledge.

A.V.Khutorsky includes the following in the composition of the organizer of the activity: skills in goal setting, planning, analysis, reflection, self-assessment of learning activities; creative skills in productive activity (finding

knowledge directly from reality; methods of behavior in non-standard situations, mastery of heuristic methods of problem solving; the ability to distinguish facts from fabrications, measurement skills, mastery of probability, statistical and other methods of the cognitive process reflected in the requirements of functional literacy) [21, p.62.].

The essence of the organizer of the activity is determined by the fact that the teacher is focused on practice in realism and self-awareness, focused on continuous professional development, not losing the ability to read throughout life and the condition of performance. It is assumed that there is a natural process in activity that represents the perfection of the cognitive composition of the human personality, which develops on the basis of the interaction of teacher and student in the learning environment. The priority approach focuses on the development of theoretical and practical thinking in the teacher, non-standard decision-making in complex situations, agility in unexpected situations, understanding of scientific terms, application of new knowledge in practice, modeling the content of teaching, as well as perception of education as a value. All efforts are aimed at creating favorable conditions for the development of the individual, the understanding and acquisition of knowledge as a value, based on the mastery and development of universal methods of activity. It should also be noted that the interdependence of activity communication with cognitive communication allows for a clearer understanding of the essence of the organizer through the transfer of information, expansion of knowledge, development and improvement of skills in the process of exchange of actions, practices, skills and abilities.

The reflexive component of cognitive competence is the teacher's self-knowledge, access to a state of cognitive activity, to analyze oneself as a subject of pedagogical activity, to understand it, to develop criteria of efficiency, to apply to experience, to understand motives of actions, to look at the inner world, defines the qualities of self-control, self-assessment, the establishment of constructive communication.

When thinking about teacher reflection, D. Dewey argues that he should be a "permanent student of his profession" [9] who can think it, research and analyze his own experience, and has a relentless need for self-improvement and self-improvement. M. Wallace admits that non-reflection practice is useless and over time leads to professional stagnation, not teacher growth and as a strategic task of the in-service training system, it is necessary to "focus not only on the replacement and renewal of outdated professional structures of teachers, but also on the development of their reflexive abilities" [26, p. 2].

It can be seen that reflection develops a teacher's ability to quickly find the right solution to complex, problematic pedagogical situations, to rely on experience, to stimulate research, creative processes, to understand professional needs and challenges, to design ways to work with them, to set new tasks. Understanding reflection as a cognitive process determines a teacher's ability to analyze the emergence of ideas, goal setting, and outcomes according to the level of self-knowledge (feelings, will, character, needs, habits, experiences). That is, the teacher's reflexive ability manifests itself as an important mechanism for realizing the individual trajectory of professional development (diagnosis, motivation, goal setting, content formation, direction setting, implementation,

analysis, and evaluation). Experience represents "a set of knowledge and skills acquired in practice, in life" [24, p. 639.] and it is essential as a central element, the reflection of which (understanding, analyzing, reconstructing its meaning) is an integral condition of the continuous professional development of the teacher.

Conclusion. It can be concluded that cognitive competent is the teacher's perception of himself as a subject of self-knowledge, the desire to raise their knowledge to a new level, readiness for continuous professional development, identification, satisfaction, development of needs for their activities, information retrieval, processing, transmission skills, career values, interests and motivations. Cognitive competent represents the integrity of theoretical, methodological, technological and legal-normative knowledge that ensures the combination of general, special and practical knowledge of the teacher's science and professional development.

LIST OF REFERENCES:

1. Asmolov A.G. System-activity approach to the development of new generation standards // *Pedagogy*. - M., 2009. - No. 4. - P. 18-22.
2. Astakhanova L.V. The concept of informational competence of a specialist: a cognitive approach // *Bulletin of South Ural State University. Series "Education. Pedagogical sciences"*. - Chelyabinsk, 2013. - T. 5. - No. 4. - P. 10-16.
3. Belonogov G.G., Gilyarevsky R.S. Once again about the epistemological status of the concept of "information" // *NTI. Series 2. "Inform. processes and systems"*. - 2010. - No. 2. - P. 1-6.
4. Vorovshchikov S.G. Intraschool management of the development of educational and cognitive competence of high school students: dis. ... Dr. ped. Sciences. - M., 2007. - P. 416.
5. Vyazova E. V. Formation of cognitive competence in students on the basis of an alternative choice of educational actions (on the example of teaching mathematics): author. dis. ... cand. ped. Sciences. - Yekaterinburg, 2007. - 23 p.
6. Djuraev R.X., Turgunov S.T., Nazirova G.M. *Pedagogy*. - T.: O'zPFITI, 2013. - 88 p.
7. Dudko D.V. Cognitive competence of the personality of the future teacher and the dynamics of its formation // *Proceedings of the Russian State Pedagogical University. A.I. Herzen*. - St. Petersburg, 2008. - No. 63-2. - P. 63-67.
8. Zeer E.F. *Psychology of personality-oriented professional education*. - Yekaterinburg: Ural Publishing House. state prof.-ped. un-ta, 2000. - 258 p.
9. Zeer E.F. *Psychology of vocational education: a textbook for students of higher education*. textbook manager – M.: Academy, 2009. – 384 p.
10. Zubakin I.A. The main achievements of information theory // *News of higher educational institutions of Russia. Radio electronics*. - St. Petersburg, 2013. - No. 4. - P. 13-18.
11. Yuldashev J.G. Theoretical and methodological bases of professional development (or is it easier to be a teacher). - T.: "Teacher", 1998. - 208 p.
12. Karimova V. *Psychology*. - T.: A.Qodiriy National Heritage Publishing House, 2002. - 203 p.

13. Lipatnikova I.G., Parshina T.Yu. Formation of cognitive competence in the process of teaching elementary mathematics to students of pedagogical universities // Modern problems of science and education (electronic journal). - 2012. - No. 1. - P. 1-8. – URL: <https://science-education.ru/ru/article/view?id=5492>
14. Lyubimov L.L. The author's concept of modernization of general education. Without slogans, appeals and instructions, but with answers to the questions: What should be done? Why should this be done? How can I do that? / National Research University Higher School of Economics, Institute of Education. - M.: NRU HSE, 2020. - 80 p. – (Modern Analytics of Education. No. 2 (32)).
15. Lyubimov L.L. Cognitive competencies [Electronic resource]. – URL: <https://alma-mater-spb.ru/wp-content/uploads/2013/08/Cognitive-competencies.pdf>
16. Osipova L.A. Information and educational projects as a means of forming students' cognitive competence: author. dis. ... cand. ped. Sciences. - Bryansk, 2008. - 22 p.
17. Potanina O. V. Cognitive competence of the future engineer: essence, structure, content // Bulletin of the Bashkir University. Section "Pedagogy and psychology". - Ufa, 2009. - T. 14. - No. 1. - P. 298-301.
18. Pedagogy / V.A.Slasyonin, I.F.Isaev, E.N.Shiyanov; Ed. V.A. Slastenin. - M.: "Academy", 2002. - 576 p.
19. Roslyakova S.V. On the cognitive component of cognitive competence // Personality and society of the problem of interaction: Materials of the VI International Scientific Conference / Chelyabinsk branch of the University of the Russian Academy of Education, April 25, 2013 - Chelyabinsk: Monograph Publishing House, 2013. - P. 27-32.
20. Sokolov A.V. Information: concept, categories, ambivalent nature. Philosophical essays // NTI. Series 1. "Org. and methodology inform. work". - 2010. - No. 5. - P. 1-13.
21. Khutorskoy A.V. Key competencies as a component of the personality-oriented paradigm of education. Narodnoe obrazovanie. - M., 2003. - No. 2. - P. 58-65.
22. Shalamov V.V. The development of cognitive competence of students of professional educational institutions of the deontic type in the process of independent work on history: dis. ... cand. ped. Sciences. - Yekaterinburg, 2007. - 191 p.
23. Shannon K. Works on information theory and cybernetics. - M.: Publishing house of foreign lit., 1963. - 832 p.
24. Annotated dictionary of the Uzbek language. Volume 3 / Editorial Board: T.Mirzaev et al.; Institute of Language and Literature of the Academy of Sciences of the Republic of Uzbekistan. - T.: "National Encyclopedia of Uzbekistan" State Scientific Publishing House, 2006. - 687 p.
25. Goziev E. General psychology. - T.: "University", 2002. - 238 p.
26. Wallace M. Action Research: How to Do It // Paper presented at the 2 nd International Conference of the Malaysian English Language Teaching Association, 24 - 27 May, 1993.