

DEVELOPMENT OF COGNITIVE QUALITIES IS AN IMPORTANT FACTOR OF TEACHER'S PROFESSIONAL GROWTH

¹Ibraimov Holboy, ²Ibragimov Alamjon Amrilloevich

¹Director of the Scientific Research Institute of Pedagogical Sciences of Uzbekistan named after T.N. Kori Niyoz, Doctor of Pedagogical Sciences, Professor

²Director of the Samarkand region national center for training pedagogues in new methods
Doctor of Pedagogical Sciences, Associate professor

<https://doi.org/10.5281/zenodo.8428310>

Abstract. *Professional growth of the teacher allows him to keep up with the times. It is known that in the modern world, the human mind, thought processes, brain activity, which reveal unparalleled opportunities in human personality and professional development, are studied as an object of cognitive research, and in this regard, much progress has been made. The article reveals an important aspect of cognitive pedagogy - the positive effect of cognitive qualities of a person on self-expression and development. Also, the importance of inculcating these qualities in the effectiveness of students in mastering the subject and the effectiveness of the teacher's work was emphasized.*

Keywords: *cognitive content, intelligence, skill, mobility, flexibility, visualization, skill development.*

Introduction. The constant increase in demands for the quality of education and professional skills of pedagogues requires the teacher to organize his activities based on new approaches. Because a modern teacher has not only his professional skills or a high level of qualification, but also his intellect, active participation in innovative processes, the ability to project the efficiency and results of work, correctly assess situations, enterprising, critical and creative approach to his work, remains competitive in the educational environment only by being resistant to external influences, quickly finding information, processing, being active and proactive.

These requirements require the teacher to study continuously, develop his knowledge, quickly adapt to changes and unexpected situations, make rational decisions, offer alternative approaches, develop new ideas, identify points of professional growth, to have cognitive qualities such as managing, creating one's own position, correcting one's mission, effectively using intellectual abilities, engaging in interaction, being constantly active, and visualizing educational information and ensuring its logical consistency determines the necessity. Below, we present a description of these qualities by categorizing them from the point of view of the subject of our research (Fig. 1).

Literature analysis and methodology. First, let's focus on the qualities that express the cognitive mobility of the teacher. When referring to dictionaries, the term "mobility" is "mobile, agitated" [1; p. 605], "active, able to move quickly" [4; p. 496], "the exchange of emotional states, the display of the speed of thought, lightness and frequent change, the ability to quickly move from one place to another" [6; p. 629] was observed to mean such meanings.

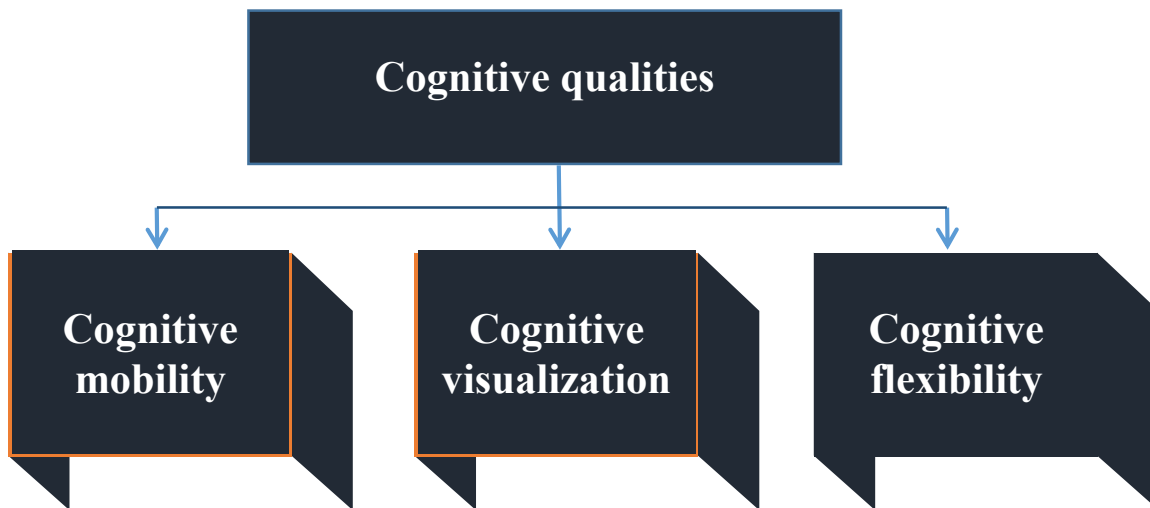


Figure 1. The structure of the teacher's cognitive qualities

We can apply the concept of mobile to a teacher who has the ability to constantly develop himself, to respond quickly to changes, to new or unexpected situations, and to adapt. Only such a pedagogue fully understands his main idea, consciously analyzes and understands that he is engaged in teaching activities, demonstrates professional activity and is proactive in practical actions. So, we can understand mobility not only as a person's ability to physical mobility, but also as mobility of his psychological characteristics, cognitive and emotional processes.

The concept of mobility was first found in the studies of the American sociologist Pitirim A. Sorokin at the beginning of the last century. According to him, mobility represents "the movement of a person or a social object from a certain social situation to another" [11]. During the study of individual or group social mobility, the researcher divides them into vertical and horizontal types and explains the emergence of this concept as a scientific term with the need to express the processes related to the change of human status on a global scale.

Based on extensive analysis, the World Economic Forum (WEF) predicts the necessary skills that will define personal maturity in the 21st century, and the next qualitative change points to *cognitive flexibility* as one of the keys to success in the workplace [12].

The analysis of different interpretations of the term cognitive flexibility made it possible to recognize that the definition of this theory is clear and successful. The researcher expresses cognitive flexibility as "the ability to reorganize one's knowledge in different relationships in accordance with the requirements of a sharply changing situation" and states that it is one of the main functions of learning [8]. The theory of cognitive flexibility emphasizes that teaching should be clear, that knowledge should be designed, and that students should be given the opportunity to expand their personal perceptions of information.

As the continuous progress of education requires the change of its philosophy, paradigms, values and non-traditional attitudes to teaching technologies, the cognitive flexibility of the pedagogue, who is the main participant of this process, becomes more and more important. Because these changes make it a priority for each teacher to quickly adapt to the current conditions in order to develop his competence, creativity, independence, analyze educational innovations, apply them to his work, and continuously improve his professional training.

Cognitive flexibility implies the full mobilization of the teacher to effectively apply his knowledge, experience, intellectual abilities in various pedagogical situations and to achieve the

goal of his activity. According to J.Brown and Ye.Langer [5; p. 139], cognitive flexibility is expressed in the form of an individual's ability to give different meanings to his personal experience and to enter into a multifaceted relationship with the environment. And also D.Zavalishina [2] evaluates flexibility as a fundamental characteristic of a person who is a master of his profession.

Also, in the current conditions, the volume of information is constantly increasing, the need for new knowledge, skills and qualifications is rapidly increasing like an arithmetic progression, which means that every pedagogue should study continuously throughout his life in order to successfully perform his work. It is this situation that shows the need to consider *cognitive visualization* as an important principle in order to interact in modern information fields and make an understandable, meaningful, portable, bright presentation.

The authors emphasize that it is especially important to understand and strengthen the importance of visual means of communication in the educational process. Because the combination of different methods of presenting educational information stimulates cognitive styles not only of transmission, but also of perception [7; 161]. Processing of visual information by the right hemisphere of the brain and interacting with verbal information develops the connection between the hemispheres and, at the same time, develops the "proportion" of the brain. It is necessary to take into account this situation in the educational process and use it correctly. Because this phenomenon can be explained as one of the serious reasons why modern students do not accept formal approaches to education [3].

Results and discussion. The professional mobility of the teacher creates an opportunity to quickly adapt to changes in the content of his activity. That is, professional mobility is not only a certain ability of a teacher, but also a combination of organizing and developing activities, having flexible thinking, accepting innovations and effectively incorporating them into the process. In this structure, cognitive content consists of independent blocks that form the basis of professional mobility (Table 1).

Table 1.

Cognitive composition of professional mobility

"readiness for change"	"activity"
<ul style="list-style-type: none"> - desire to change; - readiness to make important changes in personal life or activity; - creativity; - quick decision-making; - ability to read a lot; - ability to observe and correctly assess the environment, etc. 	<ul style="list-style-type: none"> - the ability to adapt to and change unfamiliar professional conditions; - the ability to independently set and implement achievable goals; - the ability to enter into various social relations and establish mutual relations; - anticipation of results and regulation of intensive activities, etc.

The cognitive mobility of the teacher has a complex structure and reflects a sufficient volume and different approaches. Based on the studied research works and our personal observations, we understand that the *cognitive mobility of a teacher* is an integrative feature that expresses his readiness and ability to develop himself in changing conditions of his work, to find

quick solutions in certain pedagogical situations, to understand his professional needs, and to adapt to modern requirements.

Cognitive flexibility. In our opinion, the ability of a teacher to constantly develop his knowledge and effectively use it in voluntary situations in order to function at a high professional level shows his level of cognitive flexibility.

The level of cognitive flexibility of a teacher means that it is important to develop the following skills:

- quick adaptation to changes, new or unexpected situations;
- being able to come to a common opinion and engage in effective interaction with colleagues or students;
- foreseeing and solving problematic situations, offering alternative approaches, realizing communication skills;
- the ability to independently build a trajectory of continuous professional development;
- analyze the activity on the basis of perception, make changes painlessly if necessary and accept the point of view of others;
- setting serious goals, achieving them, motivating oneself and others;
- ability to assess emotional or intellectual stress and constant readiness for them;
- creativity, positive orientation, development of new ideas, implementation and persuasion of others.

Here, it is important to remember that the main principle of developing cognitive flexibility is lifelong learning. Because this principle allows you to answer such questions:

"What is my pedagogical mission?"

"What else do I not know or need to know?"

"What other knowledge, skills, and abilities do I need to acquire in my life or career?"

"How do I develop and manifest myself?"

"What does my continuous professional development represent?" That is, a pedagogue can remain in a state of cognitive flexibility, make effective decisions and develop his professionalism only by continuously acquiring new knowledge.

Let's consider the necessity of cognitive flexibility of the teacher in one example. In the conditions of the pandemic, which threatens the whole world, the education sector was forced to make changes to its traditional teaching system. The application of education to electronic education, online education and tele-education, which are not sufficiently developed in our country, is necessary not only to create appropriate conditions, but also to quickly adjust the knowledge and skills of the pedagogical staff working in the system to work with information communication technologies showed.

Unfortunately, in our observations and questionnaires conducted with students of advanced training courses, it was found that teachers of general education schools do not have enough knowledge and skills in this field. For example, 67% of the 653 students who participated in the pilot study have an idea about e-learning. Also, 35% of students have relevant knowledge about e-learning software systems, it was found that they are 61% about open and closed networks, 21% about content creation and deployment, and 27% about interactive learning environment support systems. But here it is necessary to pay attention to one situation. From the results of the interview with the listeners who participated in the survey, it was found that they understand that they need to continuously improve their knowledge, skills, and qualifications and have a positive attitude.

This shows that they have a tendency to cognitive flexibility. The results of the training and short-term courses with the participants of the trial test also proved this hypothesis, and the positive dynamics of the above-mentioned indicators were observed in them.

A low level of cognitive flexibility in a teacher causes difficulties in the work process, as well as complications in the effectiveness of activities, acceptance of innovations and interactions with students. This situation, along with preventing students from becoming competent, independent, critical-thinking, competitive, leads to inertness, rigidity, conservatism, stagnation and crisis in professional development.

Cognitive visualization ensures the effectiveness of working with educational information by activating the cognitive process. Cognitive visualization represents a solution to the pedagogical tasks of the field of professional development, such as optimization of the educational process as adult education, provision of correct and feedback, and reflection. The fact that the process is related to psychological states such as perception, awareness, and recall suggests the following benefits of visualization:

- to fully understand and correctly analyze educational information;
- ensuring logical consistency of answers;
- development of critical and creative thinking;
- easy understanding of large volumes of information and integration of new knowledge;
- comprehensive, interesting, understandable delivery of educational material, etc.

As the object of our research, the level of cognitive visualization of educational material among teachers was studied. In the questionnaires conducted during the experimental work, the students evaluated the presentation of educational information through visualization as a positive situation and recognized that it is an effective means of achieving the lesson's goal. 69.5% of the 653 listeners who participated in the experiment answered that visualization provides full understanding, analysis and efficiency of educational information, 23.7% answered that it should. The rest of the participants, 3% and 1.4% believe that it probably does not provide and definitely does not provide, respectively, and another 2.4% of the participants had difficulty answering. However, the participants found it difficult to answer the question of which forms and methods of cognitive visualization they use. This situation shows the need to provide enough information about the effective methods, forms, and tools of visualization in professional development courses, as well as to develop these skills in pedagogues.

The use of various tools of visualization in the presentation of educational information in training courses allows to significantly activate the cognitive activity of the listeners, increase their motivation, easy assimilation of new knowledge and development of independent education, as well as to strengthen the skills of use in professional activities. Therefore, the inclusion of elements of cognitive visualization not only in the organization of courses, but also in the creation of educational literature in the field ensures the achievement of the expected results.

Conclusion. In general, we would like to emphasize that the development of the teacher's cognitive qualities is of urgent importance in the current pace of pedagogical reality, it is necessary to carry out result-oriented research and quickly incorporate it into educational practice. It can be said with confidence that cognitive qualities allow the teacher to minimize the impact of inconsistencies between the specific conditions of the educational environment and the regulatory and legal documents regulating the system and the curriculum, to create an individual approach to

students, and to expand the visual imagination. , allows you to adapt to unexpected situations, rapid changes without excessive effort, to set growth points for professional development.

REFERENCES

1. An explanatory dictionary of the Uzbek language. Volume 2 / Editorial board: T.Mirzayev and others; Institute of Language and Literature of the Russian Academy of Sciences. - T.: "National Encyclopedia of Uzbekistan" State Scientific Publishing House, 2006. - 672 p.
2. Zavalishina D.N. Practical thinking: specificity and problems of development. - M.: Publishing house "Institute of Psychology of the Russian Academy of Sciences", 2005. - 376 p.
3. Katkhanova Yu.F., Korzinova E.I., Ignatiev S.E. Visualization of educational information as a pedagogical problem. Bulletin of ASU. - 2018. - No. 4 (228). - P. 51-59.
4. Krysin L.P. Explanatory dictionary of foreign words. – M.: “Eksmo”, 2006. – 944 p.
5. Todysheva T.Yu. The relationship of personality flexibility and personality self-esteem. Bulletin of the Krasnoyarsk State Pedagogical University. V.P.Astafiev. Actual problems of science. Psychology. - 2013. - No. 4 (58). - p. 138-142.
6. Explanatory dictionary of the English language / Ed. A. Hornby. – M.: Sigma press, 1995. – 850 p.
7. Bolter D. Exploring and changing the world of the media // Humanistic perspectives in the technological world. Georgia: Georgia Institute of Technology. – 2014. – P. 211-215.
8. Cognitive Flexibility Theory (Spiro, Feltovitch & Coulson). – URL: <https://www.instructionaldesign.org/theories/cognitive-flexibility/>.
9. Amrilloevich, I. A. (2021). COGNITIVE MOBILITY OF THE TEACHER: APPLICATION IN PEDAGOGICAL PRACTICE, CONTENT, ESSENCE AND STRUCTURE. *Berlin Studies Transnational Journal of Science and Humanities*, 1(1.5 Pedagogical sciences).
10. Ибрагимов, А. (2023). KOGNITIV SIFATLARNING UZLUKSIZ KASBIY RIVOJLANISHGA TA’SIRI (MAKTAB PEDAGOG XODIMLARI MISOLIDA). *Ижтимоий-гуманитар фанларнинг долзарб муаммолари/Актуальные проблемы социально-гуманитарных наук/Actual Problems of Humanities and Social Sciences.*, 3(8).
11. Sorokin P.A. Social and Cultural Mobility. The free Press of Glencoe, Illinois. – 654 p. – URL: <https://archive.org/details/in.ernet.dli.2015.275737>.
12. This is the indispensable skill that will future-proof your career. – URL: <https://www.fastcompany.com/90516784/this-is-the-indispensable-skill-that-will-future-proof-your-career>.
13. Ibraimov Kh. I. Creativity as one of the characteristics of the personality of the future teacher // Science, education and culture. – 2018. – no. 3 (27). - P. 44-46.
14. Ibragimovich Kh.I. Peculiarities of using credit-module technologies in the higher education system of Uzbekistan //Integration of science, education and practice. Scientific-methodical journal. - 2021. - P. 209-214.
15. Ibraimov Kh. "Theoretical and methodological basis of quality control and evaluation of education in higher education system." *International journal of discourse on innovation, integration and education* 1 (2020): 6-15.

16. Ibragimov, X., Abdullayeva Sh. "Pedagogika nazariyasi (darslik)." T.: Fan va texnologiya 288 (2008).
17. Ibraimov X.I., M.Quronov. Umumiy pedagogika (darslik). –T., “Shaffof”, 2023, 416-bet.
18. Ibragimovich I. K. et al. PEDAGOGICAL ABILITIES OF A TEACHER, STRUCTURE AND DEVELOPMENT //湖南大学学报 (自然科学版). – 2021. – Т. 48. – №. 12.
19. Ибрагимов Х. И. ПЕДАГОГИКА И ВОСПИТАНИЕ //Экономика и социум. – 2021. – №. 1-1 (80). – С. 608-611.
20. Ibragimovich, Ibraimov Kholboy. "Intensive methods of teaching foreign languages at university." Вопросы науки и образования 27 (39) (2018): 78-80.
21. Ибраимов Х. И. Педагогические и психологические особенности обучения взрослых //Academy. – 2019. – №. 10 (49). – С. 39-41.
22. Ибрагимов Х. И. Организация самостоятельной работы студентов в условиях цифровизации вузовского образования //Наука и образование сегодня. – 2020. – №. 7 (54). – С. 74-75.
23. Ibragimov, X. I., U. A. Yo'ldoshev, and X. Bobomirzayev. "Pedagogik psixologiya." O'quv qo'llanma. O'zbekiston faylasuflari milliy jamiyati nashiriyoti Toshkent (2009).