

# Pedagogical conditions of developing professional competence of teachers of higher educational institutions

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**Abstract.** At present, a competency-based approach is being fixed in the education system of Uzbekistan, as a result of which the conditions of activity are also changing (in particular, innovative educational technologies are being widely disseminated). This requires the teacher to be active, independent, initiative, able to make difficult decisions and responsible for them. In this regard, there is a need to study the features of the professional competence of the teacher.

## 1 Introduction

The acceleration of the state's development, the expansion of opportunities for social choice, and the introduction of modern information technologies pose significant changes in the education system for domestic science and practice. The increased requirements for the quality of education in the context of its restructuring and integration into the world educational space significantly change the level of social expectations in relation to the effectiveness of the entire complex of pedagogical sciences.

Today, a teacher's professional competence is a criterion for university professional and pedagogical training. The professional competence of a teacher is a dynamic, developing category, determined by a specific historical situation in which professional activity is carried out.

In the education systems of different countries, while preserving the traditions and the unique nature of education, there is a trend towards standardization associated with globalization processes, and at the same time, the need for radical educational reforms is increasing. Of particular relevance in these conditions is the problem of strengthening the continuity of the link between all parts of the educational system in Uzbekistan. The goal of education is thus multicomponent in nature: in public life - the socialization of the individual, in the general educational field - key competencies, in the professional field – professional competence.

## 2 Methodology

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To solve the set tasks and test the hypothesis, the following were used: theoretical research methods, study and analysis of philosophical, sociological, pedagogical and psychological literature on the research problem; conceptual and terminological apparatus; approaches of scientists to the problem under study; empirical research methods: study and generalization of experience in the formation of professional competence of a teacher in the system of higher professional education and in the system of professional development of teachers.

### **3 Resources**

The study and use of the term “professional competence of a teacher” fall in the 80-90s of the XX century. The conducted research shows that this term began to be studied most closely by Russian scientists in the late 90s – early 2000: V.A. Adolf, L.A. Basharina, Yu.V. Vardanyan, A.A. Vorotnikova, O.S. Grishechko, A.V. Dobudko, T.V. Dobudko, G.I. Zakharova, M.N. Karapetova, N.V. Karnaukh, N.V. Kuzmina, M.I. Lukyanova, A.K. Markova, N.V. Matyash, S.V. Meleshina, V.R. Popova, V.Y. Sinenko, S.S. Tatarchenkov and others.

Authors who reflect on the philosophical foundations of the Competency approach in the USA, their global goals and objectives, organizational system, essence, educational standards, quality, quality control of education, and activities of higher pedagogical schools are M.Apple, D.Armstrong, D.L. Ball, D. Barnes, F. Baumgartner, M. Cochran-Smith, D. K. Cochran, L. Darling-Hammond, S. Feiman-Nemser, A. D. Glenn and others.

Scientists such as B.Adizov, A.A.Ahmadov, A.Kh.Aminov, T.L.Khurvalieva, N.A.Muslimov, Sh.Saidkulov are conducting scientific research in our republic on the problems of professional development and professional competence.

### **4 Results**

It is long overdue to create and implement a specific model of student learning, which in its structure will contain all the most important indicators and criteria, as well as components of graphic culture, which, in turn, will be aimed at developing the ability to visually-figurative transmission of information, subject to the use of graphic funds. It should be noted that the use of this training model contributes to the intellectual development of the student: the formation of spatial and figurative thinking serves as a certain way of knowing one’s future specialty, and in the future would significantly increase the effectiveness of the professional and general cultural training of students.

At the same time, when analyzing the pedagogical research of graphic culture and the stages of its formation, we revealed its dependence on the overall development of visual culture and noted its inextricable connection with student-centered learning of students and their professional orientation, that is, the dependence on the motivational sphere and degree development of its components. The main components that determine the level of the motivational sphere and indicate the professional orientation of the student’s personality are psychological structures and formations, first of all, these are needs and attitudes, orientation, interests, and motives for obtaining a profession [10].

Let us denote that the main principle of the strategy for the development and formation of education in our country should be the idea of creating certain psychological and pedagogical conditions conducive to the development of a future technical specialist. Consequently, already at the initial stage of higher education, a student needs to create all the conditions that contribute to the successful mastery of a number of basic professional competencies and contribute not only to professional development but also to the development of personal qualities of a future professional, including a high level of formation

of components of graphic culture. This means that in organizing a model for the formation of graphic culture in the process of teaching graphic disciplines, the principle of implementing social and cultural norms and values should be laid down. Consequently, the organization of a model for the development of graphic culture is possible only if these laws are understood by all participants in the education system, both teachers and students [9].

In the process of developing a model of graphic culture, it is necessary to determine, and in the future take into account and apply modern graphic sources of information in practice. These are, first of all, the spatial, volumetric drawings of modern objects, and details; their active use will allow us to increase not only the volume of professional skills and knowledge but also their quality, to strengthen the understanding of the principle of their applicability and compliance in the practical activities of an engineer. It follows that the very organization of the pedagogical model of graphic culture in the system of higher education should be fixed by blocks of practical tasks, the development of which requires correlation not with abstract forms, but with objects that exist in reality.

## 5 Discussion

The changes currently taking place in Uzbekistan predetermine the creation of social and pedagogical conditions adequate to these processes, thereby determining the need for meaningful reform, creative design and the introduction of a new model of education. Solving the problems of higher professional education is impossible without increasing the pedagogical intellectual culture, actively influencing public opinion, obligatory overcoming established stereotypes, and conservatism in pedagogical science and practice, leading to new research problems in pedagogy.

An innovative development that has significantly enriched the modern educational space has become the “professional competence of a teacher”, which today acts as a criterion for the quality of training of graduates of higher educational institutions. The essence of the conceptual requirements for professional competence is to expand the knowledge, skills and abilities necessary to improve the efficiency of professional activity and life in general.

The need to include this category in the pedagogical thesaurus is due to the fact that the professional competence of a teacher, being an essential characteristic of professionalism, and an indicator of pedagogical skill most fully and comprehensively reflects those parameters that are characteristic of a new type of teacher, while the term “professionalism”, broad and capacious, does not give an accurate interpretation of the totality of those components that society presents to a specialist in the field of education of the 21st century. One of the characteristic features of the teacher's professional competence is to increase the role of the subject in social transformations and improve his ability to understand the dynamics of processes and their impact on their course. The emergence of the term “professional competence of a teacher” is associated with the 80s. However, this phenomenon was practically not studied in the XX century.

Pedagogical conditions are significant circumstances that determine the achievement of a high level of formation of the teacher's professional competence. In the course of experimental work, we focused on the following pedagogical conditions that contribute to the effectiveness of the formation of the teacher's professional competence in the educational process of the university: orientation on the subjectivity of a person capable of self-identification and self-actualization; creation of a creative environment; motivation for reflective activity.

The identification of the above conditions for the formation of a teacher's professional competence is based on the fact that there is a change in the nature of the pedagogical activity, which can be traced in a number of trends: the transition from knowledge-oriented to the student-oriented paradigm of pedagogical activity; the formation of a reflective culture in the

process of pedagogical interaction; an increase in the science intensity of pedagogical activity; the relationship of pedagogical activity with fundamental pedagogical research, etc.

It is considered the pedagogical conditions for the formation of a teacher's professional competence.

Modern pedagogical science, based on fundamental knowledge and modern technologies, directly affects the content, level and quality of education, therefore, consideration as the first pedagogical condition for the formation of a teacher's professional competence in the educational process of a university is an orientation towards the development of the subjectivity of a person capable of self-identification and self-actualization is based on the fact that the specifics of pedagogical processes in vocational education is the peculiarity of students as subjects of education, which consists in the fact that the period of their stay at the university is accompanied by the mastery of the technology of conscious action: "for what?" (goal), "what?" (content), "how?" (method). The process of interaction of the subject of education with the outside world is ongoing, its result is a change in consciousness. At the same time, the development of the personality and the manifestation of the need for activity are associated with the achievement by the individual of a sense of satisfaction from the process and results of activity, the presence of a desire to overcome difficulties and the success of solving complex problems, the desire to show their capabilities in the process of activity.

Subjectivity is associated with the ability of the individual to self-development, therefore the essence of the subjectivity of the future teacher is revealed in professional behavior, in relation to the professional himself as the subject of pedagogical activity. To become a subject of pedagogical activity means to master this activity, to master it, to be capable of its implementation and creative transformation. The subjectivity of the teacher allows, remaining himself, to go beyond the scope of activity, creating conditions for personal growth.

The inclusion of the subject in the activity is accompanied by a correlation of the individual abilities of a person with the requirements that are imposed by the content and conditions of the activity itself from the point of view of its successful implementation. In the process of mastering pedagogical activity, the student is faced with new tasks, professional situations, and non-standard conditions that determine the emergence of a number of contradictions that act as driving forces for the development of the personality of the future teacher.

An essential indicator of a student as a subject of educational activity in the educational process of a university is his ability to perform all types and forms of this activity (listen to and record lectures, take notes on literature, speak to an audience, argue, give an analytical assessment of phenomena and situations, etc.). Therefore, an important task of the teacher is to form the student as a subject of educational activity, which implies the need to teach him the ability to plan, organize his activities, the ability to fully learn, and communicate.

Attitude towards a student as a socially mature person, a bearer of a scientific worldview involves taking into account the fact that a worldview is a system of a person's views not only on the world but also on his place in it. In other words, the formation of a student's worldview means the development of his reflection, and awareness of himself as a subject of activity. In turn, this obliges the teacher to strengthen the dialogue of teaching and create conditions for students to defend their own opinions, views, goals, and life positions in the educational process of the university.

At the same time, it should be noted that in the development of a personality as a subject of activity, motivation also acts as a leading regulator of personality activity. At the same time, not only the level of the student's abilities is important, but also his subjective assessment of his capabilities and confidence in the productivity of his own activity.

The competence of the subject teacher as a subject of the educational process is characterized by his readiness to perform professional functions, the harmonious unity of social attitudes and his psychological and pedagogical training.

The competency-based approach allows to determine the level of knowledge of the teacher, to find out how much he is able to:

- to solve the problems of training, education and development in their dialectical relationship and unity;
- to attract the attention of schoolchildren and interest them in the material being studied;
- take into account the age and psychological characteristics of schoolchildren, as well as their level of development, and on the basis of this, provide an individual and differentiated approach;
- to build their relationships with schoolchildren on a humane, democratic basis;
- combine theory and practice in teaching the subject;
- be fluent in innovative technologies.

The main requirements for activities focused on the educational system's development are expressed in several patterns. Among them, Pikelnaya singles out the regularity of the unity of management, the regularity of the optimal combination of centralization and decentralization; the regularity of an adequate ratio of the control and controlled subsystems; the regularity of the influence of managerial actions on the final result of educational activities. These patterns are reflected in the principles, functions, and forms of management [2].

The program-targeted approach to the management of vocational education is considered:

a) the fundamental features of the system management of the development of education – the integrity of development, focus on results, proactive management, and the presence of a development program that meets certain requirements (relevance, predictability, rationality, realism, integrity, controllability, sensitivity to failures), flexibility of organizational structures, democratic leadership, advanced control;

b) system planning for the development of education – problem-oriented analysis, sequence of analysis, analysis of results, analysis of the educational process, and conditions, as a result of which a development concept should be drawn up, a strategy for change should be developed, tasks for each stage, program goals, development of an implementation plan changes;

c) program implementation management – building an organizational structure for program implementation, creating a favorable motivational environment for innovative activities, and advanced control.

Competence is a complex integrated indicator that characterizes the professional level of a specialist, a set of professional and personal qualities necessary for him to carry out effective work. The professional competence of a vocational training teacher is a complex characteristic that reflects his readiness and ability to carry out effective pedagogical and production activities in the conditions of continuously changing modern production and educational processes. A comparative analysis of scientific works made it possible to single out two points of view on this concept: on the one hand, the terms of reference that determine responsibility for solving practical problems, on the other hand, knowledge, experience, skill, i.e., the ability to implement these terms of reference.

The professional competence of a teacher of the education system implies the following characteristics of its components: cognitive component (includes professional knowledge in the field of psychological, pedagogical and methodological sciences), activity component - (professional skills and experience); professional and personal component (personal qualities and professional value orientations of the teacher). The competency-based approach in updating the content of education is aimed at developing the competencies of students based on the principles of fundamentality, universality, integration, variability, and practical

orientation. In the process of developing a competency-based approach, researchers clarify the basic concepts. So, according to E.F. Zeer, competence implies not so much that a specialist has a significant amount of knowledge and experience, but rather the ability to update the accumulated knowledge and skills at the right time to use them in the process of implementing their professional functions [4].

The development of technological competence of a future technology teacher includes problem-based, modular, contextual and game learning; methods: conversation and discussion, analysis of various situations, cases, creative tasks, work with literature, solving creative problems, reflective techniques, techniques of multidimensional representation of a creative product, brainstorming, etc. [5].

A professionally competent teacher can be called a teacher who, at a sufficiently high level, carries out pedagogical activities, and pedagogical communication, and achieves consistently high results in teaching and educating students. The development of professional competence is the development of creative individuality, the formation of susceptibility to pedagogical innovations, and the ability to adapt to a changing pedagogical environment. The socio-economic and spiritual development of society directly depends on the professional level of the teacher. The changes taking place in the modern education system make it necessary to improve the qualifications and professionalism of the teacher and his professional competence. The main components of professional competence are:

*Technological competence* is an integrative personal characteristic that includes the necessary personality traits, motivation, social, behavioral, and ethical attitudes, and the result of learning, expressed in the acquisition of pedagogical and technological knowledge and skills.

*Socio-legal competence* – knowledge and skills in the field of interaction with public institutions and people, as well as possession of professional communication and behavior techniques;

*Personal competence* – the ability for continuous professional growth and advanced training, as well as self-realization in professional work;

*Special competence* – preparedness for independent performance of specific activities, the ability to solve typical professional tasks and evaluate the results of one's work, the ability to independently acquire new knowledge and skills in the specialty;

*Extreme competence* – the ability to act in suddenly complicated conditions, in case of accidents, or violations of technological processes;

*Professional competence* is the possession of a set of professional knowledge and experience (competencies), as well as a positive attitude towards work, required for the effective performance of work duties in a particular area of activity [7].

The study of psychological and pedagogical literature showed that the success of a university graduate in any kind of professional activity depends on the formation of the personality, his "self" – self-awareness, independence, self-development, self-organization, and self-government. At the present stage of the educational space, independence is considered an instrument of conscious reflection in the formation of a personality. At the same time, sociocultural artefacts are external factors in the formation of independence, internal factors are the characteristics of the psyche, and the subjective factor is the organized pedagogical process.

So, the education of a person with stable motives, views, beliefs, needs and aspirations, orienting a person to a certain direction of behavior and activity, is interconnected with his professional training. At the same time, the orientation is socially conditioned and formed in the ontogeny of the process of education and upbringing, acts as a property of the individual, manifested in the worldview culture, professional orientation, in activities related to personal abilities, knowledge, and experience. A graduate of a technical university today is a specialist who knows how to use reference information data, and the results of experiments, understand



the latest technologies, and knows how to use databases and data banks that summarize all world experience. A modern engineer is a person with the skills of a researcher, able to find and highlight the most important methodological principles, and able to evaluate the main parameters and properties of the created technical systems. He must be able to develop models of technical systems and competently use a set of the latest methods and tools that allow checking and clarifying the correctness of the selected design schemes, structural forms, materials and technologies that ensure technological safety. The professional activity of a future engineer in the conditions of modern production is a complex, hierarchically built, multifunctional, multi-level and dynamically developing structure.

The competencies of personal self-improvement are a way of objectifying the degree of the potential of a person's self-organization as a complex biological and social system.

The modelling method makes it possible to visually, and figuratively, with the help of diagrams, and brief verbal characteristics, present a pedagogical phenomenon in the form of an integral dynamic system. The creation of a model is a concretization of the general scientific principle of the connection between the whole and the individual, in which their combination and the resulting interaction gives rise to a new quality – the desired model.

Features of the formation of students' managerial competence require the use of a model, the structural components of which are the components, structure and content of managerial competence, stages and conditions for its implementation, ensuring the effectiveness of this model.

The model of formation of managerial competence that we have developed is a holistic, open, dynamic pedagogical system that has the properties characteristic of pedagogical systems – integrity, structure, hierarchy, interdependence of the system and environment, plurality of descriptions [3].

An important and independent condition for the formation of the readiness of future teachers for a dialogue of the positions of the subjects of the educational process is the creation in the process of pedagogical practice of an educational and professional community of students, university teachers and teachers of an educational institution as a space for the formation of a trial managerial competence of students [4].

Professional competence is the leading component of a person's professional potential. According to V.A. Adolf, "professional competence is a complex formation, including a complex of knowledge, skills, properties and qualities of a person, which provides variability, optimality and efficiency of building an educational process" [2].

Considering the various aspects of pedagogical work, E. F. Zeer identified the types of professional competence:

- in the field of professional activity – special activity competence;
- in professional communication – social and communicative competence;
- in professional personal activity – personal competence;
- in holistic professional self-development – individual competence, which makes it possible to identify pedagogical conditions aimed at the formation of competencies included in the structure of professional-pedagogical competence [5].

It is obvious that the pedagogical and professional competence of a teacher are closely related, and cannot, in a modular way, characterize a qualified teacher, they must be represented by a single structure.

By creating a new form of collaboration in pedagogical practice – an educational and professional community – with new ways of interaction, and positions of partners, we really meet the expectations of the student. In such a community, the subjectivity of the future teacher in professional activity becomes, the objectivity of a new professional activity for the student opens up.

So, summarizing the above, we can say that the process of forming the managerial competence of students can be considered as a kind of standard, an analogue of the activities

of a teacher and students, i.e., a model aimed at solving the general problems of forming the managerial competence of future teachers in a pedagogical university.

## 6 Conclusion

Integration processes in the world community at the end of the 20th - beginning of the 21st century contributed to the development of approaches to understanding the main socio-economic phenomena and categories that are acceptable for various scientific fields, due to various methodological foundations. The modern definition of the concept of "competence" in domestic science is consonant with foreign ones in terms of content. The main structural characteristics are knowledge, skills, and abilities that are activity-mediated in nature.

The study of the teacher's professional competence necessitates the identification of its structural components, as well as a description of its content.

Self-satisfaction, a subjective feeling of constant development initiates the development of professional competence. There comes a time when the further development of professional activity, and the formation of its individual style is impossible without a radical break in the normatively approved activity. The teacher must perform a professional act, and show excess activity. Excessive professional activity can be expressed either in the transition to a new educational and qualification level or to a qualitatively new, innovative level of performance.

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