

Pedagogical Conditions for the Formation of Teachers' Information and Communication Competence in the Professional Development Process

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Abstract.The article discusses the pedagogical conditions for the teachers' information and communication competence formation in the professional development process.

It was provided the information on professional, methodological and general competencies and presented the methodological and reference information on professional, national competences.

Keywords. Competence, information and communication competence, pedagogical conditions, professional development process, professional competence, methodical competence, general scientific competence.

Particular attention is paid to youth education around the world, in particular, the pedagogical opportunities expansion for teaching science and natural sciences, enriching the practical content of the education system, the formation of professional competencies in educating students. The use of interactive teaching methods in teaching, the traditional and modern teaching methods integration, the teaching methods integration based on information and communication technologies and the teachers' competence development in the use of information and communication technologies in a wide information environment are becoming increasingly important.

The forms and methods of teachers' information competence formation in the professional development have been studied by researchers. For example, A.A. Temirbekova said that the information competence formation process in the additional education should take into account such aspects as theoretical and methodological (axiological, systemic, competitive, active, synergistic) approaches [1], in the research work of A.M. Ivanov the possibilities of teacher's professional development in several stages (differential approach, distance learning, telecommuting) on the basis of system of advanced training [2], A.M. Goryunov developed a distribution model of teachers' professional development in the information and communication technologies [3], A.L. Miller important stages of teachers' ICT competence formation in the conditions of additional professional training (information-propaedeutic, operational-activity and acmeological) [4], I. A. Eshmatov's definition of the information and communication competencies functions in the formation of teachers' information and communication competencies system in the modern information technology environment, based on the needs of

the informed society and socio-educational needs, personal harmonization and professional information space design, comprehensiveness and integrity. [5]

In the last two decades, the "competence" concept has been studied in education at the general didactic, general pedagogical and methodological levels. U. Inoyatov and B. Khodjaev considers a competent approach in the modernization of general secondary education as a new pedagogical reality, taking into account practical experience, competence as didactic units within this approach and the three traditional elements of education (triad) - "Knowledge - Skills - Skills" six units (sextet) - Analyzed as "Knowledge - Skills - Qualifications - Practical experience - Competence - Competency" [6].

A. Koldashev and R. Odinaev explained the concepts of professional competence and competency as follows. Professional competence is the ability to apply knowledge and skills in practical practice in solving problems related to professional activity. Competence is a sign of activity that leads to the expected result. It is knowledge product and an expert ability to apply it in practice. Competence differs from knowledge in that a task cannot be defined or evaluated without practical performance. Qualification is an important criterion of competence, which is described as manifested as a result of repeated application in a variety of situations, including problematic situations. [7].

The development of teachers' professional competence, the educational technologies improvement for students, is a guarantee of educational effectiveness growth in the educational institution. At a time when new goals, new requirements are set, types of activities are changing, educators need to get acquainted with new achievements of advanced science and practice, to improve their pedagogical skills and achieve high results.

The main factor of qualitative changes in the education is the competencies acquired by teachers in their work (professional, methodical, general, etc.), the degree to which they can be absorbed by young people and applied in practice. In this regard, the teacher implies the selection of new strategies of education on the basis of a competent approach to professional development in staff, the work implementation related to the educational process, content and outcome understanding.

In the educational and scientific competencies formation in students, the professional competencies that need to be formed in the teacher are important. Professional competence is a set of skills, competencies and experiences that allow an employee to carry out their professional activities effectively, which means that skills, competencies and experiences in a particular job are confirmed in practice for all categories of professionals.

Methodological competence is not only an integral part of scientific competence, but also

combines social psychological, professional-communicative and informational competencies. Methodological competence is a set of qualities combined with the potential qualities of the pedagogical staff to feel the socio-psychological, communicative and informational activities, methodological methods and technologies for designing the educational process aimed at developing the personality of the school student through the formation of universal learning actions in an innovative educational environment [8].

Methodological competence is, firstly, knowledge and understanding of the fundamental theories of professional activity, and secondly, awareness of the theoretical and methodological achievements of science in the field of professional activity and the formation of an independent logical attitude to them.

On the one hand, methodological competence is a theoretical knowledge system formed in their subject and methodological skills teaching methods that allow the teacher to ensure the basic pedagogical tasks implementation (training, design, supervision and self-development) on the other hand, it means being able to master methods aimed at organizing and managing the learning process in general. The methodical competence structure consists of a number of interrelated categories, namely: knowledgeable (good knowledge of the subject in their specialty, maintaining a high level of professional regulations in their work), active (make the right decisions about their work, work with information and communication technologies and tools), reflexive (draw conclusions based on their pedagogical activity and the results achieved in the educational process), personal qualities (self-interest, ability, personal views, self-management and development).

General competencies develop in the work of the teacher. R.V. Baturina included in the list of national competencies that should be formed in teachers:

1. Ability to learn basic knowledge in the field of mathematics and natural sciences and use them in professional activities;
2. Potential for acquiring new knowledge using modern education and information and communication technologies;
3. Ability to collect, process and interpret information using modern information and communication technologies to form feedback on relevant social, scientific and spiritual issues;
4. The potential to generate new ideas;
5. The potential to develop their intellectual level;
6. The potential for active communication in scientific, industrial and cultural activities [9].

In the professional development process, based on the study of pedagogical conditions for the formation of information and communication competence in teachers, the following conclusions were made:

1. In the professional development system, the pedagogical conditions for the educational, methodological and general scientific competencies formation in teachers have been clarified:

-scientifically based organization of the competencies formation process (such as educational, methodical, general) that are directly related to the professional activity of teachers;

- increase the subject activity in working with data;

- activation of the teacher's attitude to receiving information from the information environment (motivation);

- monitoring the teacher's acquired knowledge, skills and abilities in his professional activity.

2. Teachers' continuous professional development through pedagogical diagnostics is a topical pedagogical problem, and changes in the students activities after training are also important, they serve as an effectiveness indicator of teaching methods, forms and tools used in professional development.

3. In the professional development process, important aspects (such as inquisitiveness, organization, consulting, navigation) in the competence formation in the use of information and communication technologies in teachers were clarified on the basis of modernity, information, competency approach and mobility requirements for the use of modern educational technologies and information and communication technologies.

4. The methodological, general and educational core competencies formation in teachers is the basis for the information and communication competence formation in them.

The result of the reforms in the education system is related to the potential and professional competence of teachers. Pedagogical research and analysis show that the professional competence of the teacher today lags behind the requirements for the educational process. This shows the urgency of the problems associated with the quality training of teachers in the continuing education process.

In short, one of the most pressing issues today is the citizens training to effectively use ICT to fully express themselves in any situation in an informed society, the formation of the so-called ICT competence of teachers in education.

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