FORMATION OF INFORMATION AND COMMUNICATION COMPETENCE OF THE TEACHER AS AN ONE OF THE MAIN TASKS OF MODERN EDUCATION

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Abstract:
Currently, information technology is a necessary addition to the traditional educational process in general education schools. In the educational process of the school, electronic textbooks, notebooks, textbooks, didactic materials, simulators, testing systems, electronic libraries, catalogs, information resources of the Internet, etc. are often used. The formation of a teacher's information competence is a guarantee of professional development. competence as a factor in improving the quality of education. The article examines the formation of professional competence of teachers in the context of informatization of society. The article examines the formation of professional competence of teachers in the context of informatization of society. At the same time, the concepts of information competence are analyzed and the stages of the formation of professional information competence of teachers are given.

Keywords: the highest educations, information and communication competence, information culture, professional competences, major factors of information and communication competence, technologies of training, efficiency of use of modern technology of training for formation of information and communication competence of the teachers.

Introduction

In the context of the transition to a modern information society, the requirements for professional training of a teacher, especially to the level of their professional competence, are increasing. One of the most important professional competencies of a modern teacher is the information and communication complex.

The concept of "information and communication competence of a teacher" was considered in the works of V. F. Burmakina, I. N. Falina, O. N. Shilova, O. V. Ursova, A. A. Elizarov, M. S. Tsvetkova, L. N. Gorbunova, A. M. Semibratov, F.M. Z.

Speaking about the possibilities of information and communication technologies for the educational process, many scientists cite the following aspects (L. L. Bosova, V. A. Krasilnikov, E. I. Mashbitz, I. V. Robert, A. A. Abdukadyrova, F.M. Zakirova, N. Taylokova, etc.):

• creation of a unified information and educational environment for learning not only one region, but the country and the world community as a whole;

• independence of the educational process from the place and time of training;

• unlimited possibilities of collecting, storing, transferring, transforming, analyzing and using information of various nature;

• development of student-centered learning, additional and advanced education;

• increasing the availability of education, with the expansion of forms of education;

• significant expansion and improvement of the organizational support of the educational process (virtual schools, laboratories, universities, etc.);

• increasing the activity of subjects in the organization of the educational process;

• significant improvement of the methodological and software support of the educational process;

• ensuring the possibility of choosing an individual training path;

• development of student's independent search activity;

• increasing the motivational side of training, etc.

The main goals of the development of modern school informatization are determined by the school development strategy and are aimed at providing educational and organizational processes with new types of information resources based on the use of computer networks and their information content, as well as new information and communication technologies.

It is already becoming obvious that one of the most important components of a teacher's professional competence is the degree of his readiness to use modern information technologies in his professional activities.

The problems of using information technologies in the education system are reflected in the scientific and methodological works of G.A. Kruchinina, Yu.K. Babansky, S.A. Zhdanov, V.P. Bespalko, V.S. G. Kineleva, O. A. Kozlova, A. A. Kuznetsova, M. P. Lapchik, E. I. Mashbitsa, V. M. Monakhova, E. S. Polat, I. V. Robert, N. F Talyzina, A. Yu. Uvarov, A. A. Abdukadyrov, F. M. Zakirova, N. Taylokova and others.

Currently, many pedagogical personnel have a lag in the ability to work in the field of using the capabilities of information technology in the educational process. One of the main reasons is the unpreparedness of the majority of teachers to implement information and communication technology in the educational process of a general education school. The rapidly developing field of information technology determines

the features of the process of forming the professional competence of teachers in the field of using information and communication technology in the educational process. The information and communication competence of a subject teacher at the modern stage is understood as his readiness and ability to independently use modern information and communication technologies in pedagogical activities to solve a wide range of educational problems and design ways to improve qualifications in this area. Possessing information and communication competence, the teacher not only strives to use computer technologies in his work, but also models and designs modern technologies.

Materials and Methods
The use of information and pedagogical technologies significantly increases the professional capabilities of a teacher, expands the boundaries of his pedagogical culture, and therefore serves to increase the effectiveness of his professional activity. Information technology is based on the following basic electronic didactic functions:
1) visibility, providing awareness and meaningfulness of the perceived educational information, the formation of ideas and concepts;
2) informativeness, since teaching aids are direct sources of knowledge, that is, carriers of certain information;
3) compensatory, facilitating the learning process, contributing to the achievement of the goal with the least expenditure of effort and time.
4) adaptability, focused on maintaining favorable conditions for the course of the learning process, organizing demonstrations, independent work, the continuity of knowledge;
5) integrability, allow us to consider an object or phenomenon as a part and as a whole.
In accordance with the object and subject of the objectives of the work are:
1) to study the equipment of the school with modern technical means in the field of computer technology, ensuring their effective use in the educational process.
2) analyze the formation and improvement of information and communication competence of teachers;
3) identify the main problems and methods of development of the formation of information and communication competence of teachers.
To solve the set tasks and achieve the set goal, the following methods were used:
1) constructive-critical analysis of the literature on the research problem;
2) observation as a linguistic and methodological device;
3) learning experiment

The primary role and importance in the system of organizing the teacher's lifelong learning of information technologies should be assigned to the creation of the necessary pedagogical conditions that contribute to the improvement of the teacher's pedagogical skills, his inclusion in active activities based on the use of information and communication technology in the educational process.

Specialists understand information technologies of education as "technologies based on the use of computing and other information technology, as well as special software, information and methodological support" [8].

By the information and communication competence of teachers, adhering to the opinion of the author E.V. Ivanova, we mean a system of knowledge and skills in the use of information technologies that provide an effective solution to professional pedagogical problems. Strategic guidelines for the formation of information and communication competence of a teacher in modern conditions of modernization of education are:

• increasing professional competence;

• ability to work in an informational and educational environment;

• tolerance, sociability, ability to cooperate;

• ability to work in network interaction;

• readiness for self-education throughout life;

• the ability to apply the knowledge gained in practice.

During the initial stage of the formation of a teacher's information competence, it is advisable to focus on cognitive (independent study of the material when interacting with computer tools) and developmental technologies (problem and programmed learning), as well as the means that support them (electronic textbooks and teaching aids). It does not follow from this that other technologies should not be used at this stage, but that cognitive and developmental ones will be effective, bringing the greatest benefit due to the personal qualities of the trainees.

The next stage is the basic stage of the formation of professional identity. Effective technologies of this stage should be considered activity (business games, situational training) and developmental (analysis of professional tasks, professionally oriented research activities, problem solving in groups, analysis and systematization of scattered professional information, preparation of reports on discussion topics) technologies. Computer facilities capable of supporting the technologies of this stage - simulators, expert training systems, network resources.

And, finally, the final stage of training is the stage of developing the competence of a specialist. Effective technologies of this stage should be considered personality-oriented (independent and educational and research work, anticipatory independent

work, projective learning, training according to an individual plan) and developmental (role-playing games, reflection of professional activity, solving problems in interaction, searching and generating new professional knowledge) technology

The necessary organizational and pedagogical conditions for the formation of teachers' readiness to use information technology in pedagogical activities are:

• development of a single information and educational space of the school based on the system integration of information technology into all links of the educational process;

• modernization of the system of methodological work at school as the basis for organizing the educational process of school teachers for the use of information technology in professional activities;

• a system of lifelong learning as the main condition for the formation of the readiness of school teachers to use information technologies in professional activities, which involves not only mastering the method of using information technology in the teacher's professional activities, but also developing self-education skills in the field of IT.

For the formation of information and communication competence of a teacher, special attention should be paid to the implementation in the education system of the possibilities of telecommunication technology.

The Internet provides great opportunities for the teacher in mastering the information space, these are:

• the use of e-mail, which ensures the exchange of information between network users both within the region and outside it;

• creation of your own web sites to present information;

• exchange of thematically organized knowledge;

• participation in forums;

• participation in conferences that allow discussing interesting issues in real time;

• subscribing to a newsletter, after which information about new products in this area will be systematically sent to the e-mail address;

• distribution and downloading of centrally prepared materials;

• free access to educational software and documentation from file archives containing thousands of megabytes of information;

• access to catalogs of hundreds of the world's best libraries;

• testing on-line;

• participation in joint network projects of teachers from different countries.

At present, almost all educational institutions are equipped with modern personal computers, have local and corporate networks, and have posted their sites on the Internet. The creation of the information environment in the general education school was largely facilitated by the adopted state programs, the purpose of which is to develop the informatization of education in the country. Therefore, today it is not enough for a teacher to have only subject-methodological and psychological-pedagogical training. The rapid spread of computer systems, their active implementation in the educational process force the teacher to master information technologies.

Information and communication competence of a teacher is formed at the stages of studying a computer, using information technologies as a means of teaching in the process of professional activity and is considered as one of the facets of professional maturity. The analysis of the teacher's pedagogical activity makes it possible to distinguish the following levels of the formation of information and communication competence:

1) the level of the consumer of information;

2) the level of the computer user;

3) the level of logical functioning and knowledge of the characteristics of the equipment;

4) the level of subject-specific tasks based on a creative, interdisciplinary approach.

The main pedagogical conditions, in the author's opinion, influencing the formation of information and communication competence of a teacher are:

1) the creation of professionally oriented tasks, pedagogical situations in the lesson that create motivation for mastering information technologies;

2) training using visual models, multimedia tools, Internet resources that stimulate the process of forming information and communication competence;

3) the implementation of creative projects, taking into account the educational specialization of teachers using information technology.

The main elements of the process of forming information and communication competence are:

• Ability to use information technology to demonstrate printed and graphic documents;

• the ability to use information technology to demonstrate audio and video materials in the classroom;

• ability to create presentations;

• ability to organize and process data using tables, technological maps;

• the ability to build comparative tables and identify patterns using a computer;

• the ability to apply information technology for modeling processes and objects, making drawings and sketches;

• ability to use computer testing;

• the ability to use the Internet for solving pedagogical issues, collecting information, participating in teleconferences, access to scientific, pedagogical, methodological data.

Information and communication competence of a teacher involves the widespread use of computer technology, electronic versions of educational materials, training programs, pedagogical technologies of a creative nature. The teacher must have the necessary training to correctly differentiate the capabilities of students in the study group, depending on individual characteristics, motivation, age and psychological characteristics.

Our experience of working with teachers allows us to highlight some features that should be taken into account in the development and implementation of educational programs of educational institutions, a system of advanced training for teachers associated with the formation of information and communication competence. These features are:

• the prevalence of practical and laboratory classes in the study load using a computer and the organization of independent work of teachers;

• preliminary study in educational institutions by students of teaching methods of specialized pedagogical and methodological disciplines. Academic disciplines related to the use of information technology in the educational process should be studied in senior courses;

• reflection of the specialization of teachers (Russian language, physics, technology) in the content of academic disciplines related to the formation of information and communication competence;

• mastering by teachers of the methods of using information technologies at various stages of the lesson (organizational-preparatory, theoretical, practical, summing up the results of the lesson).

Information and communication competence is one of the main competencies of a modern teacher, which has objective and subjective sides. The objective side is expressed in the requirements that society imposes on the professional activity of a teacher. The subjective side of information and communication competence is determined by the personality of the teacher, his professional activity, the peculiarities of motivation in the improvement and development of pedagogical skills.

The tasks related to the problem of the formation of the teacher's information and communication competence can be divided into three groups:

1) expressing the interests of society;

2) reflecting the functions and content of the teacher's professional and pedagogical activity;

3) expressing the individual professional needs and interests of the teacher.

Formation of information and communication competence of a teacher involves:

• mastering by them knowledge and skills in the field of informatics and information and communication technologies;

• development of the teacher's communication skills;

• the ability to navigate the information space, analyze information, reflect on their activities and their results.

• The information and communication competence of a teacher can be divided into four components:

• motivational - the presence of a motive for achieving a goal, readiness and interest in work, setting and awareness of the goals of information activities;

• cognitive - the presence of knowledge, skills and ability to apply them in professional activities, analyze, classify and systematize software;

• operational-activity - demonstrates the efficiency and productivity of information activities, the use of information technology in practice;

• reflexive - ensures the readiness to search for solutions to emerging problems, their creative transformation based on the analysis of their professional activities.

Formation of information and communication competence of a teacher is an important component of his professionalism. A systematic, holistic view of information competence, highlighting its structure, justifying the criteria, functions and levels of its formation, allows you to purposefully and effectively organize the educational process within the framework of educational activities, increase the level of subject-specific knowledge, make effective decisions in educational work, purposefully and systematically develop the student.

Formation of information competence of a teacher is a guarantee of increasing the level of professional competence as a factor in improving the quality of education. The level of formation of the teacher's information and communication competence is determined by:

• firstly, knowledge about information, information processes, models and technologies;

• secondly, the skills and abilities of using the means and methods of processing and analyzing information in various activities;

• thirdly, the ability to use modern information technologies in educational activities;

• fourthly, the worldview vision of the surrounding world as an open information system.

Designing a lesson using new information technologies and Internet resources requires a teacher to have a high degree of professional competence, namely (and, above all) information, analytical, predictive and projective skills at the stage of its preparation, organizational and mobilization skills at the pedagogical stage.

Results

To determine the degree of information and communication competence of teachers in their professional activities, the following pedagogical surveys were conducted, which are given below.

I. Questionnaire to determine the extent of information and computer technology use

1. Your specialty
_____

2. Do you use information and communication technologies (underline as appropriate):

in preparation for the lesson;

– On the lesson;

– For self-education;

– Other (specify).

3. What information and communication technologies do you use (underline as appropriate):

– text editor;

– electronic tables;

– electronic presentations;

– multimedia disks;

– Specialized programs;

– Internet;

– Electronic textbooks;

– Other (specify).

4. How often do you use information and communication technologies (underline as appropriate):

– Daily;

– Once a week;

- 1-2 times a month;
- 1-2 times a quarter;
- Other (specify).

5. Do you think that the use of information and communication technology makes it much easier to prepare for lessons and to diversify them?

_____

_____

6. Are the conditions created at school for the use of information and communication technologies?

_____

_____

7. Does the school administration encourage information and communication technologies?

_____

_____

II. Diagnostic map of the degree of knowledge of the teacher on the topics

Surname, name of teacher	I					II							III		IV	V
	1	2	3	4	5	1	2	3	4	5	6	7	1	2	1	2

Basic knowledge on the topics

I. Microsoft Power Point as a presentation creation tool
1. Familiarity with PowerPoint.
2. Creating a slide with a diagram and a table.
3. Inserting pictures and animations into a slide when demonstrating.
4. Creating control buttons.
5. Saving and preparing a presentation for demonstration.

II. Microsoft Word .
1. Font, size.
2. Creating and editing a text document.
3. Typing and editing a text document.
4. Paragraph indents and spacing.

5. Creating and formatting tables.
6. Inserting a figure.
7. Page numbering. Printing the finished document.

III. Microsoft Publisher
1. Preparing a postcard.
2. Booklet preparation and printing.

IV. Internet
1. Internet search.
2. Email.

V. Development of outlines of lessons using information technologies.
III. Diagnostic card of the extent of teacher's information and communication technology use in professional activity

Surname, name of teacher_____

Search and selection of additional information for the preparation of lessons using Internet resources	
Use of presentations, multimedia materials, etc. at the lessons with the children	
Creating a database of students and their parents of their class	
Development of lessons for children in different areas with the use of information technologies	
Use of the Internet for self-education	
Use of ready-made digital educational resources in the pedagogical process	
Own web-site (no; yes (give address))	
Experience in the use of ICT in the following areas	
Willingness to organize training for school teachers (specify topic)	

To solve the research problems, it was necessary to study in practice the state of the problem of the formation of information and communication competence of a teacher and experimentally test the effectiveness of the use of theoretical and practical resources aimed at the formation of this quality in a teacher. The results of the diagnostic experiment on the study of the level of formation of the information competence of the teacher in education, clearly demonstrated the pedagogical expediency of finding ways and conditions for increasing the effectiveness of the formation of this quality in the teacher. Purposeful work on the formation of information competence of a teacher in education was based on the generalization of

the results of a diagnostic study, as a result of which a conceptual model of the formation of information and communication competence of a teacher was developed and tested in the article using a complex of pedagogical conditions.

Discussion The analysis of diagnostic data made it possible to penetrate deeper into the essence of the studied pedagogical phenomenon and the processes associated with it, which makes it possible to develop and substantiate pedagogical conclusions, and also made forecasts for the further development of this quality. Namely, it allows us to state the effectiveness of organizational actions to form the information competence of a teacher in the context of a regional system of additional professional education.

Statistical data processing, carried out during the ascertaining and forming stages of the experiment, showed that there is a reliable relationship between the pedagogical conditions for the formation of the teacher's information competence created in the educational process and the positive growth of indicators of the development of this complex teacher education. So, in the experimental groups, there are significant increases in indicators, both average values and values for components. Comparative analysis showed that the organization of pedagogical activities has a positive effect on the formation of this quality of a teacher.

There is an identification of the teacher with informational activity, in other words, the teacher's personal competencies, acquired in the process of informational activity, begin to manifest themselves not only in professional activity, but also become a value guide in other spheres of his life.

The conditions for the effective formation of information and communication competence of a teacher in the educational system are:

• scientifically grounded organization of the process of formation of information and communication competence of a teacher;

• actualization of the teacher's subjective position in the process of working with information;

• a special organization of an informational educational professionally significant environment;

• stimulating the motivation of students to receive a personally significant educational product;

• monitoring, the subject of which is the level of informational competence of the teacher.

At the end of the experiment, the teachers were asked to try their hand at themselves and held a master class on mastering these programs.

Conclusion

The use of Microsoft Power Point, Windows Movie Maker, Acoolsoft PPT2Video Converter increases the interest of students in grades 6-9 in the use of ICT both in classroom and extracurricular activities, these programs can make our lessons even more interesting, and, therefore, will help in mastering new material on school subjects.

The new educational situation makes in demand such competences of the teacher, which are currently insufficiently developed in him: design and construction, organizational and technological, communicative and regulatory, technical and didactic, etc. based on the analysis of professional activity and the definition of its new functions, develop a model of teacher competence.

Having analyzed the education system, we have developed the following requirements for the information and communication competence of a teacher:

1) knowledge of the principles of a personal computer and the ability to work with technical equipment;

2) the ability to interact with electronic information and present it in various forms (text, table, figure, etc.););

3) the ability to carry out effective search, selection and presentation of information using Internet resources;

4) skills of conducting lectures, seminars, discussions using telecommunication technologies ;

5) the skills of using information technology to create their own educational materials.

In accordance with the requirements of the system, a modern teacher needs the following work skills for effective pedagogical activity:

1) with text editors as a means of preparing and executing texts of varying complexity;

2) with spreadsheets as a means of processing numerical information and presenting it in the form of diagrams, graphs, etc.

3) with the help of presentation tools, as a means of visual collective presentation of educational material;

4) with graphic media editors as means of image processing and multimedia products;

5) e-mail, telecommunication and Internet technologies, as a means of communication with students and colleagues around the world;

6) with modern information retrieval systems as a means of searching for educational and scientific information.

As for the requirements of the general education system, the schools set the following tasks:

1) wide equipment with technical means, Internet access of educational institutions;

2) creation of a local electronic network in each school, uniting the work of all structures of the school;

3) creation of specialized computer training courses for teachers;

4) the formation of local pages in the information and library centers of schools, containing electronic teaching materials of teachers in their subjects with Internet links to educational sources;

5) web support for academic subjects;

6) development of electronic textbooks containing multimedia didactic materials.

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