

Readiness of Teachers of Educational Establishment for Improvement of Professional Competence in the Area of Realization of Distance Educational Technologies

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Abstract: The study discusses the concept of professional competence of teachers, improvement and development of which at the present stage of development of education associated with the introduction into the system of additional professional education of distance learning technologies. Presented model of distance learning and their specific differences for the system of professional development of educators; the concepts “competence” and “self-oriented”, approaches to education, conditions for successful realization in the educational process of distance learning technologies. The results of monitoring studies on the readiness of teachers to teaching with the use of these technologies and the ICT competence of the modern teacher as one of the most important indicators of the success of his professional activity.

Key words: Remote educational technologies, professional standard of the teacher, competence of the teacher, model of the organization of distance learning, information and communication technologies of training

INTRODUCTION

The development of information technologies and their widespread introduction into the education system requires that a teacher’s readiness to improve its professional competence continuously, throughout his professional biography. The rapid process of informatization of society, the development of internet technology is responsible for introducing change into the system and training. In accordance with the Federal Law from 29 December 2012 No. 273-FL “on education in the Russian Federation, part 2, Article 16, “the realization of educational programmes with the use of e-Learning and distance learning technologies” by the ministry of education of Russia from January 9, 2014 No. 2 “on approval of procedure for using by organizations engaged in educational activities, e-Learning, distance learning technologies in the realization of educational programs, organizations (including additional professional education) is given the right to exercise educational activities, using distance education technologies. Under distance educational technologies we define educational technology, realized primarily by using information and telecommunication networks in indirect (distance) between students and teachers.

The necessity of using of distance learning technologies in the educational process in system of additional professional education is determined not only legislatively but also by presence of a number of preconditions such as:

- The realization of the concept of lifelong education “education through all life”, proclaimed by UNESCO
- Globalization of education. In documents of UNESCO the attention is paid that “one of features of globalization is exclusively great value of knowledge”, thus is emphasized that “any education system can’t be separated from the historical, cultural, religious and linguistic roots”
- The changing model of education, the transition from a knowledge-centric approach in education to competence-based and student-oriented approaches

The agency for strategic initiatives “education 2030” has identified the main trends of development of education, one of which is the individualization of education “university for one”. It is the individualization of education allows the maximum to take into account the personal qualities of the student, making it possible to design the educational process is not for an “average

student” and put in the basis of individual development. In this case, “development” and in this case “professional development” becomes a key focus in the professional development of the teacher. In the design of individual educational trajectories leading role is for distance educational technologies.

The rapid development of telecommunication technologies and information processing technologies have led to the increasing of volume of their using in the educational process. Nowadays, the internet is the technological basis of this prerequisite. In world practice, at the present stage successfully implemented a model of “mixed learning” or “hybrid learning”. The basis of the traditional model of organization of educational process on all or part of the above-mentioned technologies. This model of education, the agency for strategic initiatives “education 2030” defines in foresight as a form of learning in the future.

MATERIALS AND METHODS

In the process of writing was used theoretical and empirical methods: study and analysis of psychological-pedagogical and methodical literature, theoretical sources on the issue of ICT technologies (including distance learning technologies) in the process of improvement of qualification of teachers; a study of normative and methodical documentation of teaching experience; monitoring of educational process, testing, questioning.

Main part: The preparation of highly qualified teachers is one of the key problems of the educational system of Russia. In the concept of long term socio-economic development of the Russian Federation until 2020 principles of openness and continuity of education enshrined as fundamental principles for the development of education. The term “continuing education” means education throughout life. Continuous education of educators is through educational organization of additional professional education and self-improvement of qualification (self-training) of teachers.

The teacher must continuously implement training that meets modern requirements. This requires the

formation of readiness to the process of post-graduate, self-training, i.e., the formation of motivational readiness of the teacher to research independently in terms of self-education at the stage of getting education at the university. The readiness of teachers to self-directed professional development has no fundamental differences among students (future teachers) and researching teachers. The results are presented in the histogram No. 1 the readiness of the teacher to self-development (Table 1).

If 4% of students (low level of readiness), took part in the survey, explain that they have no need for self-training, so as long as they don’t work in school, 55% of researching teachers motivate “not ready” for independent professional development lack of time and resources. Note the fact that with increasing experience, the percentage of such teachers is increased to 62. The reverse process is observed among teachers of retirement age, this figure drops to 34%. Teachers explain their position on this issue by the fear of losing a job and the need to keep up with the young to be competitive.

One of the most effective and promising tools in organizing ongoing educational process aimed at the development of professional competence of the teacher, according to respondents is the training based on distance learning technologies that allows you quickly and flexibly coordinate the individual needs of teachers through open education system.

The Republic of Tatarstan is among the regions with a high level of informatization of educational institutions. This was a result of the timely handling of issues related to the provision of educational institutions not only computer equipment but also the creation of a single information-educational space. The application in the Republic of Tatarstan of distance learning technologies in the learning process of trainees of training courses is one of the elements of informatization of education as well it is and indicator of the maturity of informatization of education. Remote-educated technology concentrates the technical, human and financial resources in order based on them to give education a new quality, increase accessibility, improve economic efficiency.

State autonomous educational institution of additional professional education “institute of education

Table 1: The readiness of the teacher to self-development

Questions	Answers (%)			
	Ready on a budgetary basis	Ready on an extrabudgetary basis (at own expense)	Don't see the need	Not ready
Are you ready for independent professional development?				
Students	3	1	44	52
Teachers with experience up to 10 years	38	7	25	30
Teachers with experience >10 years	32	5	34	29
Teachers retirees (age 55 years and over)	54	12	23	11

Table 2: Model of distance learning

Models	Characteristic differences for the system of improvement of professional skill of workers of education
Professional development in the form of external	The training is designed for educators who for industrial or personal reasons, do not have the opportunity to engage in full-time training
The advanced training at one of the institutions postgraduate education	Training is carried out on the basis of one of the institutions of postgraduate education. Built of basis of educational resources developed in a separate institution. Educational resources available on the site (educational portal) of this institution
Adult education on the basis of regional (Federal) resources	Training is carried out on the basis of regional (Federal) resources. In the process of learning the teacher consciously chooses not only the level of educational resources but also the that frames govern their implementation
Postgraduate education is conducted under the general supervision of the head organization	The formation of educational resources with regulatory functions for remote forms of education is based on uniform standards developed by the head of the educational institution. Educational resources are designed for different levels of education on current issues and trends focused on all categories of educators: from teacher to manager
Offline adult education	Offline adult education has a network approach to the distribution of educational resources through the available media channels. Aimed at self-education
Informal adult learning	Informal adult learning as flexible and diverse organization and forms the system of training focused on the specific needs and interests of the learners

development of the Republic of Tatarstan and the Volga inter-regional centre of advanced training and retraining of education workers of Kazan (Volga region) Federal University, the education workers of the Republic of Tatarstan offers advanced training and retraining with the use of distance learning technologies. In the process of organizing the training of teachers used the model of global practice Table 2.

Under the impact of modernization of Russian education and development of information and communication technologies there are concepts such as competence and person-oriented approaches in education. The result of realization of competence approach in the process of training should become not a set of learned information but the ability to apply this knowledge in professional activities for various professional difficulties. On the basis of personality-oriented approach is focused on the intellectual and creative development of personality of a teacher, the satisfaction of their needs in education when a key figure is the personality of the teacher and not the subject of study (Ivanov *et al.*, 2003). Professional development in terms of self-education (using distance learning technologies) on the basis of competence-based and student-centered approaches will be the result of independent cognitive activity which undoubtedly is a strong potential in improving the quality of postgraduate education of teachers.

The realization of the training programs in state autonomous educational institution of additional professional education “institute of education development of the Republic of Tatarstan and the Volga inter-regional center of training and retraining of education workers of Kazan (Volga Region) Federal University” is accompanied by monitoring investigations. The monitoring results allow to identify the readiness of teachers to training using distance learning technologies, strengths and weaknesses of this process.

To identify the readiness of teachers for training remotely open anonymous survey of employees of education-participants of training courses was conducted. Only in 2014 in the survey participated 3062 teacher living in different districts of the Republic of Tatarstan. At the time of the survey 61% of respondents lived in rural areas, 39% in the cities while all 100% had the experience of distance learning.

According to the results of the analysis of the research, only 32% of teachers trained to teach using distance education technologies, noted the advantage of this form of learning: a flexible combination of independent cognitive activity with various sources of information, the ability to work in a group, operational and systematic interaction with the teacher.

It should be noted that 68% of respondents and it's big part, unfortunately, experiencing various difficulties, among the most often answers such as:

- Problems with access to the internet
- Limited access to internet resources in the educational organization
- There is no free time
- Inability to organize the time, control from outside is necessary
- Low level of ICT competence of teachers

The worrying fact that 13.4% of respondents indicated that their level of ICT-competence is low, therefore, the use of ICT technologies in the educational process for these teachers is causing difficulties. Assume that low level of ICT competence of teachers can be associated with indicators such as age of working teachers: so, the average age of teachers researching in the school in 2014 accounted for 53 years.

Answering the question related to the choice of the most appropriate learning model with application of distance educational technologies, the respondents were distributed on the following groups:

The leaders expressed their preference for the model of “professional development in the form of externship”, explaining that large workload on a primary place of employment and lack of opportunities to break away from work for long term.

Teachers with experience <10 years preferred model “informal adult learning” as it is this model, according to the respondents, oriented to the specific needs and interests of learners, allowsve quickly and effectively solve professional difficulties arising at young teachers.

Teachers with experience >10 years preferred model of “ adult education on the basis of regional (Federal) resources”, explaining their choice by the fact that the learning process is based on regional (Federal) resources, taking into account the ethno-cultural component.

In the use of distance learning technologies from the listener to a greater extent required autonomy, responsibility and organization. Answering the questions of the entrance survey, 78% of respondents at the initial stage of learning was of the opinion that in remote mode to learn easier and more convenient as they can plan the classes do not need to waste time and money on the road. The output results of the survey showed that 62% of respondents indicated that distance learning has required a more serious effort, increased sense of responsibility for the learning outcome has changed the attitude towards the learning process: “easy and convenient” the learning process has become a “serious work”.

For successful realization in the educational process of distance learning technologies in different volume will require not only the implementation in the educational process of modern information technologies but also the creation of a whole didactic system. Only such approach will be the basis for the realization of such goals as:

- Availability of quality education, irrespectively from location, physical ability, age, social status and other factors limiting the possibility of self-realization of the personality
- The competitiveness of educational institutions
- The preservation and development of a unified educational space

The rapid development of internet technologies has led to the increased volume of using in the educational process of distance learning technologies. In world practice at the present stage successfully realized a model of “mixed learning” or “hybrid learning”. In the traditional model of organization of educational process of professional development and retraining of teachers is increasingly used above mentioned technologies.

Experience of active using of e-Learning in Western countries and its comparison with traditional forms of learning based on direct personal interaction between the teacher and the student, identified accurately distinguishable strength sights of each of these forms. Thus, the strengths of e-Learning include flexibility, individualization, interactivity, adaptability as the ability of the organization of the educational process for students with different capabilities and requests, etc. To the strength sights of traditional full-time students consider the emotional component of personal communication, spontaneity in the formation of chains of associative ideas and discoveries. Combining the advantages of each form of learning formed the basis of the technology of blended learning which is >10 years of use in Europe and the USA. A systematic approach in the organization of the educational process, expressed in the combination of face-to-face and e-Learning is called blended learning.

In the current environment is especially important to the problem of development of professional competence of teachers in the field of Internet technologies, the realization of which involves professional multifunctionality, integration of educational content, versatility, affective communication (emotional) range of interaction with the students.

The leading role in this process is played by system of post degree pedagogical education which creates conditions for continuous development of professional competence of teachers. Thanks to it overcomes the gap between vocational training of teachers in a higher educational institution and new demands made by modern society.

In our research appeared interesting scientific works of scientists dealing with the problems of continuous education and advanced training of pedagogical staff: Bondar (2015), Vershilovski (2002), Maslov (1992), Onushkin and Kulyutkin (1981), Putsov (1992) and Slastenin (2003). Foreign experience of the use of internet technologies within the school of education and professional development of teachers is reflected in the works of V.I. Bogolyubov, B.J. Kocica, L. Olkhovskaya I., E.S. Polat, D.T. Rudakova, A.T. Silaeva, O.G. Smolyaninova, etc.

An important aspect of development of system of professional development is the readiness of teachers of the Republic of Tatarstan to study with using distance learning technologies. Speaking of readiness we note that most researchers consider professional readiness as system quality which includes a positive attitude towards an activity in this case to distance training.

In psychological and pedagogical literature professional readiness is defined as a set of relations of the individual to process, object, the result of the activity, expressed in the presence of special knowledge, skills, ability to work in a new, constantly changing environment.

Information competence of the teacher, according to researchers of the UNESCO Institute for information technologies in education is a set of competencies necessary for obtaining, understanding, assessment, adaptation, generation, storage and presentation of information used for problem analysis and decision making.

The professional level of ICT-competence of the teacher is defined by the following documents: the order of the Ministry of Labour of Russia from 18.10.2013 No. 544 "on approval of the professional standard "teacher (teaching activities in the field of preschool, primary general, basic general, secondary general education) (kindergarten teacher, teacher)" (Registered in Ministry of Justice of Russia 06.12.2013 No. 30550) where professional ICT competence is considered as the skillful using of common in this professional field in developed countries ICT tools in the solution of professional tasks where you need when you need.

In professional pedagogical ICT competence includes: the all-user ICT-competence, general pedagogical ICT competence, subject and pedagogical ICT competence (reflecting professional ICT competence relevant to the area of human activity).

Professional pedagogical ICT-competence is based on the recommendations of the UNESCO ICT competency of teachers. Presented in all components of the professional standard. Revealed in the educational process and is estimated by experts as a rule, during the observation of the teacher and the analysis of its fixation in the information environment.

Today teachers realize necessity of competent and effective use of the modern Information and Communication Technologies (ICT) not only in professional activity but also in the process of improving skills, self-development and education.

RESULTS AND DISCUSSION

Serious work conducted at the Institute of Education Development of the Republic of Tatarstan. Since 2007 in the educational process of professional development courses used distance education technologies and carried out monitoring studies on the problem of "readiness of teachers to distance learning". The monitoring results indicate a strong growth of indicators of the level of

education, professional ICT competence of young specialists for the period 2007-2014. Source: anonymous survey, made on the basis Goole molds and placed in open access on the internet, held in 2014 state autonomous educational institution of additional professional education "institute of education development of the Republic of Tatarstan in cooperation with Volga interregional centre for advanced training and professional retraining of education workers of Kazan (Volga region) Federal University I would especially like to mention:

- Educational level of educators in comparison with 2007 on existence of higher education of teachers increased from 83.8-93.9%
- Part of young teachers in comparison with 2007 school year with working experience of 5 years from the total number of education workers increased from 7.6-14.5%
- Regularly apply skills of using ICT in a professional context (level increased from 21-82%)

Despite, the steady growth rates we see that the overall willingness of professionals to implement the requirements of the professional standard of the teacher professional ICT competence remains very low and its components were not sufficiently formed (the all-user 89%, general pedagogical 87%, subject and pedagogical 66%).

Distance learning technologies are a great addition to traditional methods of training and in certain conditions and alternative that allows the teacher not to interrupt the process of self-development and self-education in the rapidly changing conditions of modern life.

CONCLUSION

According to the results of the study, the ICT competence of the modern teacher is one of the most important indicators of its success and at the same time a necessary prerequisite to further enhance the level of professional competence that determines the importance of development of system of training of the modern teacher, based on the use of distance learning technologies.

The offered model of training allow you to decide some of the challenges of raising the level of ICT competence of teachers, however have several drawbacks and does not allow to fully solve the problems of active use by a teacher of ICT technologies (including distance learning technologies in their professional activity that allows to speak about the integration of existing models

of training and personalized demands of the modern educator, the need to move information from educational materials to practice-oriented, aimed at improving teacher qualifications.

REFERENCES

- Bondar, V.I., 2015. Managerial Activities of School Director: Didactic Aspect. Analitika Rodis Publishers, Moscow, Russia, Pages: 156.
- Ivanov, D.A., K.G. Mitrofanov and O.V. Sokolova, 2003. Competence Approach in Education, Problems, Concepts, Tools: The Training Guide. APK and PRO, Moscow, Russia, Pages: 101.
- Maslov, V.I., 1992. Retraining of Teachers. Osvita Publisher, Kiev, Ukraine, Pages: 190.
- Onushkin, V.G. and Y.N. Kulyutkin, 1981. Education of adults as an object of research. Sov. Pedagogics, 6: 86-94.
- Putsov, V.I., 1992. Nature and Terms of the Effectiveness of Learning Process in Courses. Education Publisher, Kiev, Ukraine, Pages: 190.
- Slastenin, V.A., 2003. Introduction to Pedagogical Principle: Textbook for Higher Educational Pedagogical Institutions. Academy Publishers, Moscow, Russia, Pages: 187.
- Vershilovski, S.G., 2002. General Adult Education: Experience and Problems. Znanie Publishers, Saint-Petersburg, Russia, Pages: 166.