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PEDAGOGICAL INTERNET ASSOCIATIONS AS A MEANS TO ENHANCE THE PROFESSIONAL COMPETENCE OF TEACHERS

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Abstract: The article explores and substantiates pedagogical Internet associations as a means to enhance the professional competence of teachers. The state and modern approaches to the organization of professional development of teachers through pedagogical Internet associations have been determined. The use of the possibilities of pedagogical Internet associations as a means to enhance the professional competence of teachers has been developed, theoretically substantiated and practically tested. Criterial diagnostic tools, which make it possible in the course of experimental work to test the effectiveness of using the capabilities of pedagogical Internet associations as a means to enhance the professional competence of teachers, have been developed. Educational and learning materials and recommendations for teachers, methodologists and specialists of education authorities on the issue of using pedagogical Internet associations as a means to enhance the professional competence of teachers have been developed.

Keywords: Pedagogical, Internet associations, means, enhancement, professional competence, teacher.

INTRODUCTION

The need for a rapid response of the school's educational practice to the constantly changing conditions associated with the development of learner-centered education models and new state educational standards has actualized the problem of the enhancement of the professional competence of teachers. The knowledge the teacher received in the vocational education system and the experience he (she) accumulated during the teaching practice are not enough for a modern teacher. Professional development becomes an urgent problem for a teacher. The current procedure of taking upgrade training courses and the lack of continuity between the course and intercourse periods of professional development do not ensure the continuity of the development of the professional competence of teachers. Studying the requests of educational institutions and methodological services established the need for creating a system of intercourse assistance for teachers. Pedagogical studies and observations show that many teachers have a low level of professional competence. Some teachers lacked deep moral consciousness, reflexive capacity, and social thinking. Therefore, the question of finding effective forms for the development of professional competence of teachers in the intercourse period is becoming urgent; one of such forms can be pedagogical Internet associations.

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In scientific studies, serious attention has been paid to the enhancement of the professional competence of teachers: studying the problem of the professional development of a teacher in the process of the enhancement of the professional skills, creating favorable conditions for becoming a specialist (Day, 1994; Hoffmann, 1999; Rakhimbekova *et al*., 2015); studying the professional development of a teacher in the process of educational activity (Brown-Rice, & Furr, 2013); studies on the organization and management of the teachers' professional competence enhancement system at different levels; creation of single information space in this system (Utegenov *et al*., 2014; Sakenov *et al.*, 2012; Sundburg, 2001). Over the past few years, a number of modern studies have been devoted to the issues related to the problem of network organization of processes in the professional development system: the development of the network organization of the methodological center (Zolotykhin, 2014; Pniower *et al*., 1999); interaction of the methodological center and educational institutions in regard to the personnel's development (Mirza, 2013; Sterbini, & Temperini, 2009); development of a model of network educational relations in the pre-university professional education (Limayem, & Cheung, 2008; Latha, & Kirubakaran, 2013): development of a regional vocational education network organization system (Efimova, & Fiedler, 2004); network interaction in the staff development system (Pouyioutas *et al.*, 2003; Huang *et al.*, 2006; Dietrich *et al.*, 2012). As we can see, the organization and content of the process of the professional development of teachers are a major focus of interest among many researchers, but the problem of pedagogical Internet associations as a means to enhance the professional competence of teachers has not been studied in essence. A variant of solving this problem can be the use of the opportunities of network communities of teachers in the intercourse period, which is the main idea of our study.

The analysis of the state of the process of enhancement of the professional competence of retrainees during the intercourse period allowed to reveal the following contradictions between: the need for conceptual and methodological support for a person-oriented continuous process of the professional development of teachers in the intercourse period and the insufficient elaboration of this problem in pedagogy; the need for the development of personal and professional contacts and the interaction of teachers in order to enhance the professional competence, to enrich the educational experience, to support each other in improving the practical work and insufficiently effective existing forms of pedagogical interaction.

The need to resolve these contradictions has determined the problem of the study: what organizational forms can provide an effective enhancement of the professional competence of retrainees in the intercourse period? The relevance, inadequacy of the theoretical and practical development of the problem, the presence of the above contradictions determined the choice of the study objective, which consists in the development, scientific justification and practical implementation of the model of the enhancement of the professional competence of teachers when using the possibilities of pedagogical Internet associations.

METHODS

The methodological basis of the study is based on the concept of continuous education of the teaching staff, the provisions of acmeological and axiological approaches in relation to the additional professional education of teachers. The implementation of these approaches in this study makes it possible to consider the professional development of teachers as part of the continuous professional pedagogical education system, to describe the process of the enhancement of the professional competence of retrainees during the intercourse period, to identify the features of the formation and to develop the content of the professional development programs in the logic of Internet interaction between teachers. The theoretical framework for the study: theory of social networks, theory of the competency-based approach to the education; theoretical framework of adult education, modern concepts of Internet education, acmeological theory of personal and professional development; methodology of educational research. Methods of study. To achieve the study objective in view, the following methods were used:

1. **Theoretical:** The analysis of philosophical, psychological, pedagogical and sociological literature on the topic of study; the analysis of the state document package on the modernization of Russian education; modeling and planning;
2. **Empirical:** Experimental work, observation, testing, questioning methods (questionnaire, conversation, interview), the analysis of the activity of education subjects, mathematical methods of data processing, expert analysis of experimental material.

RESULTS

Taking into account the existing approaches to determining the content of a teacher's professional competence, we consider it as an integral characteristic of personal and professional qualities of specialists, manifested in teacher's ability and willingness to solve worldview problems, research and creative tasks using knowledge, expertise, skills, and experience. Therefore, in the framework of our study, it is important to determine the key components of the professional competence of teachers. The scientists' opinions also vary on the determination of the structure of teacher's professional competence. In their studies, Henner (2004), Omarov *et al.* (2016) emphasize the components of a teacher's professional competence: communicative, informative, regulatory and intellectual-pedagogical competence; the latter is the basis for the other ones. Onalbek *et al.* (2013) identifies four types of professional competence: special, social, personal, and individual. Zhumabaeva *et al.* (2016), Kramsch (2006) identify the following types of pedagogical competence: special and professional competence of the taught discipline; methodical competence in the field of ways of formation of knowledge, skills of students; socio-psychological

competence in the field of communication processes; differential psychological competence in the field of motives, abilities of students; auto-psychological competence in the field of merits and demerits of one's own activity and personality.

Based on the conducted theoretical study and taking into account the specific features of the category under study, in the framework of our study of the pedagogical Internet association as a means to enhance the professional competence of teachers, we have identified the following components of professional competence:

1. Information-related (knowledge of various sources of pedagogical information and their features, methods and cycle of cognition, ability to process various kinds of pedagogical information, mastery of the methods of cognition, recognition of the importance of new pedagogical information, desire to learn something new, experience in preparing reports, writing abstracts, conducting observations and experiments, etc);
2. Activity-related (knowledge of the structure of activity, principles of organization of rational professional activity, stages of professional activity; ability to exercise rational professional activity, perception of the need for rational activity, desire for creative professional activity; experience of planning and implementation of rational professional activity);

The formation of professional competencies is determined by three levels: high, medium and low.

In the modern context, the professional development system performs the adaptive function of education, the effectiveness of which manifests itself in the degree of satisfaction and development of the needs of the individual in personal self-fulfillment. The modern personified process in the system of professional development and retraining of educators is distinguished by the freedom of choice, and the mobility of the programs being implemented. In the system of the professional development of teachers in the aspect of the formation of professional competence as an equivalent element, we emphasize the organization of work with teachers in the period between the courses of professional development of teachers, ensuring the continuity in the professional self-development of a teacher. Learning throughout life becomes an indispensable and increasingly important element of modern educational systems. Non-formal education (courses, trainings, short programs that can be offered at any stage of education or professional career) as well as spontaneous education which is realized at the expense of self-education of citizens in a saturated cultural and educational environment of the pedagogical Internet association of teachers and researchers play an increasing role in educational systems. It will be one of the main participants in decision-making and quality control in the education system both at the level of teaching staff and academic councils and in the form of re-created subject professional associations.

We define the pedagogical Internet association as a group of teachers, carrying out joint activities aimed at stimulating and developing innovative processes in the school, enhancing professional competence, identifying and supporting creative teachers, providing them with continuous, targeted methodological assistance, creating conditions for self-fulfillment using computer network tools. Pedagogical Internet technologies are a means that is just beginning to gain momentum. However, in the conditions of the insufficiently formed information and technological competence of teachers, when the category of primary school teachers remains semi-trained, as well as in the conditions of the still weak technical equipment of educational institutions, it is difficult to involve teachers, especially primary school ones, in virtual pedagogical Internet associations. At the same time, in our opinion, virtual pedagogical Internet associations are an environment for self-fulfillment, in which a teacher is given the opportunity to expand the boundaries of his (her) pedagogical experience, to broadcast the ideas, to conduct a dialogue with others. However, the access to this environment is possible only with the formed readiness for self-fulfillment.

DISCUSSION AND STUDY SIGNIFICANCE

The ascertaining stage of the experimental work included: testing of primary school teachers in order to determine the level of the formation of professional competence; questionnaire to identify professional difficulties. On the basis of the data obtained, we noted the insufficient level of the professional competence of teachers, which confirmed the need to change the pedagogical practice of primary general education.

The formation stage of experimental work included two sub-stages: planning and implementation. To determine the level of the formation of professional competence, we developed questions for testing teachers. The analysis of diagnosis results obtained during the ascertaining stage made it possible to distinguish two groups of educators for realizing the formation stage of experimental work: control and experimental. Each group included 37 participants, distributed evenly according to the obtained diagnosis results. In the control group, teachers were not participants in the pedagogical Internet association.

In order to identify professional difficulties for the participants in the experimental group, we conducted a questionnaire. The data analysis made it possible to identify groups of professional problems that caused the greatest difficulties for teachers: implementation of variational teaching and learning kits in primary general education; modern lesson in elementary school; use of information technology in the teaching and educational process; organization of project work. The results of the data show the following:

1. The level of teachers' need for methodological assistance in the implementation of variational teaching and learning kits is 75%;
2. The level of teachers' need for methodological assistance in the implementation of information technology is 78%;
3. New methods and forms of work offered by methodologists are used by no more than 50% of teachers in their work.

The presence of a common problem can be the basis for uniting teachers of various educational institutions into pedagogical Internet associations. The revealed difficulties of teachers are associated with the expansion of the variation of primary school, so the main task of the experimental work was to provide effective scientific and methodological assistance to primary school teachers in mastering modern approaches, technologies, directions for development of modern primary education through the organization of pedagogical Internet associations which work under variational systems and teaching and learning kits.

The organization of pedagogical Internet associations of the primary school started with the creation of creative groups of teachers who work under variational programs and teaching and learning kits. The objectives of the creative group are: professional development of teachers, methodological assistance, creation of conditions for the exchange of work experience, preparation of lecturers for courses, studying the experience of teachers, determination of positive aspects for the purpose of synthesis and dissemination, studying the teachers' needs, demands, and difficulties.

At the implementation stage of the experiment:

1. Creation of a pedagogical Internet association, accompanied by the transfer of teachers to the work under new general education programs and teaching and learning kits;
2. Involving members of pedagogical Internet associations in active forms of diverse activities and creating conditions for professional development through network programs, projects, events that stimulate the initiative and activity of teachers;
3. Presentations of the work of pedagogical Internet associations were conducted among the educational community in the framework of school seminars, conferences, festivals, and competitions.

In the course of experimental work, we determined that the organization of the work of pedagogical Internet associations in the intercourse period of professional development is a sequential process that involves several levels:

1. **Level of information :** When teachers, educational institutions exchange information, effective information flows are well-organized between them;

2. Level of distribution of responsibilities, implying a clear distribution of authority and responsibility among all participants of pedagogical Internet associations;
3. Level of formation of social and pedagogical standards, determination and testing of performance criteria for pedagogical Internet associations;
4. Level of resource exchange is realized when different pedagogical Internet associations have common resources of different types (methodical, personnel, material, etc.)

As a result of the analysis of the experimental data, the levels of the formation of professional competencies among teachers were determined: if the coefficient K is less than 50%, the level of competence is low; if K is in the range from 50% to 70%, it is medium; if K is in the range from 70% to 100%, it is high. As a result of the experiment performed, the following data were obtained (Table 1):

TABLE 1: ASSESSMENT OF FORMATION OF PROFESSIONAL COMPETENCIES AMONG TEACHERS BY THE END OF THE EXPERIMENT

Professional competences	*Levels of formation of professional competencies among teachers (%)*					
	Control group of teachers			*Experimental group of teachers*		
	Low	*Medium*	*High*	*Low*	*Medium*	*High*
Information-related	18	63	19	6	13	81
Activity-related	19	64	17	4	12	84

As can be seen from Table 1, in the experimental groups, the number of teachers with a high level of professional competence by the end of experiment was 81% and 84%, the number of teachers who reached the medium level was 13% and 12%, the number of teachers with low level was 6% and 4%. The results in the control groups were strikingly different, the number of teachers with a high level of professional competence was 19% and 17% after the experiment; the number of teachers who reached the medium level was 63% and 64%, the number of teachers with low level was 18% and 19%. The obtained indicators are testimony to the high efficiency of pedagogical Internet associations in the formation of professional competencies of teachers.

The analysis of the results of the experimental and control groups proves the effectiveness of the implementation of pedagogical Internet associations as a means to enhance the professional competence of teachers in the intercourse period. The effectiveness of the work on the implementation of pedagogical Internet associations is also determined by means of the social criterion that allows evaluating the productive nature of social and educational projects. In the first year of the experimental work, the number of pedagogical Internet associations increased from

8 to 17, at the same time, there was uniting of pedagogical Internet associations at various levels: local, district, inter-district, regional. One of the indicators of the social criterion is the dynamics of the achievements of pedagogical Internet associations. The result of the activity of the participants in the pedagogical Internet associations for the mastery of innovative programs and technologies within the framework of the development of the variation of primary general education is the positive dynamics of the implementation and mastery of the teaching and learning kits of primary school: the number of primary school teachers implementing the variational teaching and learning kits is 67.4% of the total number of primary school teachers in the region.

To study the effectiveness of pedagogical Internet associations, a sociological survey was conducted. Teachers noted the following positive results: 73% of respondents noted changes in emotional state; 81% of respondents said about the need for self-improvement; 79% of the respondents noted a change in the creative component of the activity; 91% of the respondents noted changes in employee relations; 93% noted changes in attitude towards professional activity.

The structure and main content of the activity of pedagogical Internet associations, as shown by the formation stage of the experiment, make it possible to implement differentiated and individual approaches to the work with teachers and educational institutions in accordance with their professional needs, contribute to the obtaining of qualitatively new educational results. During the formation phase of the experiment, when organizing pedagogical Internet associations of teachers, the emphasis was on building partnerships that allow getting a unique experience of knowing yourself through working with others; realizing your own goals and objectives in comparison with the goals and objectives of others; learning to interact; making up for missing resources; solving your personal tasks within the general context. When organizing network communities, the basic need for development was realized, namely: the need for the organization of active interaction in the educational environment; the need for the development of the institution as a component of the social institute of education; the need for the enhancement of the professional competence of teachers through common research projects and communication; the need for full-fledged age development of students, which cannot be provided by one educational institution without interaction with other institutions; the need for the organization of the opportunity to share the experience openly; the need for self-education. It is important to note that under the conditions of the organization of pedagogical Internet associations of teachers there is a dialogue between the participants, the each other's experience and the processes occurring in the network elements are reflected. In the conditions of pedagogical Internet associations, innovations acquire a developing character, which is related to the individual interests of community participants, the continuous exchange of

information and experience, and the lack of obligatory joining. In the conditions of pedagogical Internet associations, individual experience is in demand, but not as a simple reproductive imitation, as a material for dissemination, but as a reflective element that helps an individual to reflect on its own experience and project its professional activity, adding something new to it. Activities in conditions of pedagogical Internet associations are realized in pairs, creative groups, between which there is an exchange.

The implementation of pedagogical Internet associations ensures the completeness of the actions necessary to achieve the set goals, the coordination of the connections between all subjects of education; implements modern functions dictated by the need for the quick response to the demands of the pedagogical community, educators, on the needs of the regional education system, changes in the development of the country's education system. As a result of the study, using the developed pedagogical tools, during the experimental work, the effectiveness of pedagogical Internet associations was proved as a means to enhance the professional competence of teachers.

CONCLUSIONS AND RECOMMENDATIONS

The modern professional development system requires new approaches to organization and management. The search for new forms and conditions for the continuous professional development of teachers at different levels, new approaches to enhancing the professional competence of teachers cannot be limited only to an upgrade training course in professional development institutions. As well, the professionalization of teacher's activity cannot be localized only in the system of methodical work of the school which often rests on its own pedagogical experience and limits the opportunities for teachers in development. The solution of this problem is possible only if all persons interested in the development of education are united; it can only be realized on the basis of pedagogical Internet associations. The integration of an upgrade training course and intercourse period can be such a system. For this, we need appropriate means, among which, in our opinion, pedagogical Internet associations such as clubs, problem and creative groups, associations, interdistrict creative and problem groups, virtual pedagogical communities occupy priority positions.

Developed in the course of theoretical research and implemented by us in the formation stage of experimental work, the form of enhancement of the professional competence of teachers in the intercourse period, using the possibilities of pedagogical Internet associations of teachers, is aimed at creating conditions for ensuring the continuity and targeting of the teachers' professional development system, supporting the creative initiatives of teachers, that ultimately was positively reflected in the level of enhancement of the professional competence of teachers

participating in the experimental work. The experimental work made it possible to be reinforced in the correctness of the chosen direction of the study of the professional competence of teachers and ways to enhance it. The results of the experiment showed high effectiveness in the implementation of the developed form of enhancement of the professional competence of teachers in the intercourse period, using the capabilities of pedagogical Internet associations of teachers. The results obtained were stable, which allows concluding that the goal has been achieved. Teaching and methodological materials and recommendations for teachers, methodologists and specialists of education authorities on the issue of using pedagogical Internet associations as a means to enhance the professional competence of teachers have been developed.

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