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Individualization and self-design technology implementation results for continuing education of teachers

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Abstract

The article presents the results of the study that determines the effectiveness of continuing education of teachers based on continuing education programs that use the idea of individualization and self-design technology via the analysis of scientific and pedagogical literature on the topic of research and pedagogical modeling. As a result, the majority of teachers from the experimental group (84.0%) are satisfied with the results of their training, which is 32% more than the share of teachers in the control group. In conclusion, self-designing is directly related to the processes of self-improvement, self-

actualization, self-esteem, expanding the idea of self-designing phenomenon.

Keywords: Advanced training, Teacher, Personality resources.

Resultados de implementación de tecnología de individualización y diseño propio para la educación continua de los docentes

Resumen

El artículo presenta los resultados del estudio que determina la efectividad de la educación continua de los docentes basada en programas de educación continua que utilizan la idea de la tecnología de individualización y auto diseño a través del análisis de la literatura científica y pedagógica sobre el tema de la investigación y el modelado pedagógico. Como resultado, la mayoría de los docentes del grupo experimental (84.0%) están satisfechos con los resultados de su capacitación, que es un 32% más que la proporción de docentes en el grupo de control. En conclusión, el auto-diseño está directamente relacionado con los procesos de auto-mejora, auto-actualización, autoestima, expandiendo la idea del fenómeno de auto-diseño.

Palabras clave: Formación avanzada, Docente, Recursos de personalidad.

1. INTRODUCTION

The relevance of the study, the results of which make the basis for the proposed article writing, is the search for new ideas and effective technologies to organize continuing education of teachers in the system of additional teacher education, through the improvement of continuing education programs.

The importance of the search for such educational programs is determined by the fact that they are, first of all, the elements of continuous pedagogical education that ensure the teacher's continued professional growth and competitiveness in the educational service market (DZHAKHBAROV & KHARCHENKO, 2017; EMANUEL, 2016).

Such a search is also necessary because, as the analysis shows, formalism, superficiality, and imitation of educational activity continue to be preserved in the teacher training system. In some cases, courses are considered not as an opportunity for personal and professional growth, but as an element necessary to confirm or upgrade the category (GOROVAYA, V., ANTONOVA, N., & KHARCHENKO, 2005; PANOVA & KHARCHENKO, 2016). Hence, the motivation of teachers for this form of training is not high, and educational interests are chaotic and inconsistent (OZDOEVA & KHARCHENKO, 2019).

The origins of the problem are that the so-called adaptive model of student training continues to be used in this education system, which satisfies, at best, the current needs of students. Modernization processes in the education system are ongoing, therefore a different teaching model is required that would have propaedeutic content, orient a teacher towards future changes, prepare for these changes, and develop the teacher professionally and personally. Such changes are directly indicated by the latest initiative No. 08-2739 "The National

System of Teacher Growth,” set out in the letter from the Ministry of Education and Science of the Russian Federation dated on December 27, 2017, as well as by research data presented in some author works (DZHAKHBAROV & KHARCHENKO, 2017; ZMEEV, 2002).

The analysis of the scientific literature and some regulatory documents showed that, on the one hand, the activities of educational organizations of additional teacher education system to improve the qualifications of teachers are one of the relevant areas of pedagogical science and practice. On the other hand, it has revealed a limited number of works, orienting the development of training programs for teachers on the use of didactic and developing potential of individualization and self-design (DZHAKHBAROV & KHARCHENKO, 2017; EMANUEL, 2016).

Many organizational issues of self-design remain unresolved. On the one hand, the underestimation of the teacher's ability to self-design and self-organization is observed, and, on the other hand, a significant adjustment of additional pedagogical education institution work is required. A search is required for criteria by which they measure the effectiveness of self-designed educational programs.

Based on this, the goal of the study was formulated, which was to apply the idea of additional pedagogical education individualization and the technology of self-designing to the process of continuing

education program development for teachers, and then to test these programs in the system of continuing professional education.

The problem solved in this publication was to present the results of testing a teacher-training program, developed on the basis of the aforementioned idea and technology, to the pedagogical community.

2. METHODS

In the process of the research conduct, the following methods were used: the analysis of scientific and pedagogical literature on the topic of research, the study of regulatory documents on the organization of additional pedagogical education, and pedagogical modeling. During the experimental stage, they used questionnaires, observation, the analysis of the educational activity products among the course participants. The questionnaire included the questions related to students' assessment of the class conduct methodology, the work of teachers and, the courses in general, according to a five-point system. At the final stage, the methods of statistical data analysis were applied, their graphic and semantic interpretation were carried out.

The effectiveness of the teacher training program was evaluated by the positive dynamics of the indicator values:

- Motivational criterion (sustainable motivation for learning; interest and emotional involvement in the project and educational activities; professional subjectivity; desire for cooperation and network interaction; goal-setting, focus on results, self-education; reflexivity);

- Cognitive criterion (understanding the socio-pedagogical role of a teacher; knowledge and mastering of one's abilities, knowledge of the requirements for a modern teacher; the ideas about individualization and self-designing, sufficient subject knowledge and ideas about highly professional-pedagogical behavior);

- Activity criterion (individual skills of communicative professional-pedagogical interaction; theory and practice integration skills; skills to design, execute and correct basic educational and professional activities; skills to comment on these actions and demonstrate professionally-oriented behavior).

Three levels of manifestation were distinguished for each criterion: low level, a teacher - the student of the courses demonstrates a pronounced neutral (and even sometimes negative) attitude towards training (training is necessary for category certification); intermediate level, the teacher demonstrates a positive attitude towards learning; high level, the teacher demonstrates the interest in learning, shows creativity.

3. RESULTS

The pedagogical experiment on testing individualized teacher training programs was carried out during 2016-2017 in the system of teaching staff advanced training at the Southern Federal University.

50 teachers took part in the formative experiment, of which 25 were included in the control group and 25 - in the experimental group. The experiment involved the teachers with practical experience at school and who had some training during continuing education courses. The experiment participants — the teachers included in the control group — underwent coursework according to the traditional program, and the teachers included in the experimental group studied according to the developed author's program.

If to characterize such a program briefly, then it represents the following structure. An individualized continuing education program is the author's pedagogical project that defines the goals and objectives of training, the structural and logical structure of the program, a combination of training forms, filling with educational, professional and personally relevant content, current and final control technology, and which is a fragment of the teacher's continuing professional education.

As was noted, the model of such an educational program was constructed using the principle of individualization and self-design

technology, modular-professional development of training blocks, level (and individualized) structure of modules, the list of which was determined, on the one hand, by regulatory requirements for a teacher and, on the other hand, it included its own professional-pedagogical experience, reflexed by training subject.

By individualization, we mean the complex of organizational and pedagogical conditions aimed at a teacher's subjectivity development in the learning process and preparation for learning, as well as at his motivation increase for continuous professional and personal self-improvement.

We considered self-designing as an independent activity of a teacher, aimed at the reflection of his own pedagogical experience and self-actualization of professional problems, and the development of the course preparation program content on their basis.

The feature of the teacher training experiment was that approximately six months before the start of course training, with the help of the author team of university teachers involved in advanced training, reflexive activities were organized among the teachers who applied for the course, which was aimed at the determination of problem areas, and possible contradictions in the practical pedagogical work of teachers. It should be noted that a contradiction was revealed during this work - a low level of teachers' readiness to reflect on their

own professional problems, and a low level of teacher motivation to change this situation.

Nevertheless, the materials and data obtained became the basis for the training program development, which were agreed with future course participants shortly before the start of training.

The program included the following educational parts: theoretical and methodological (with the inclusion of regulatory information), psychological and pedagogical, methodological, research, subject, each of which included training modules.

At the same time, part of the training module content was developed and offered by the organizers and teachers of the continuing education system, and another part was developed in the form of problem sections and topics and offered by the teachers themselves. Course participants could choose the form of mastering one or another module - full-time, part-time, distance.

The development of each module involved different (personified) time costs and types of classes, depending on the level of teacher training. Our experience in personalized teacher training program introduction within the system of additional professional education has revealed the fact that it is enough to distinguish three levels (high, medium, low) of teacher training for its organization.

The program was developed based on the psychological and pedagogical principles of teaching teachers as adult students (BABAEVA, E., GULYAKIN, D., MAGOMEDOVA, R., PANOVA, I., PASHTAEV, B. & KHARCHENKO, L., 2014; BORLAKOVA, S., KLUSHINA, N., KLUSHINA, E.A., KOTOV, S., PETROVA, N., PIVNENKO, P., & KHARCHENKO, 2018) and performed a wide range of functions - from target to diagnostic, thereby ensuring the high efficiency of teaching staff.

The continuing education program was implemented in certain pedagogical conditions (informational, technological and personal), which are a set of measures taken in the educational environment to organize additional pedagogical education, which determine the course, specificity, and effectiveness of the teacher's training process and that correspond to the personality-oriented and subject-professional learning contexts.

Thus, the developed program, especially its modules, were individualized by content, development pace, and the forms of training. Such an approach to the development of training programs created an opportunity for each teacher to design the trajectory of his own professional development and, at the same time, set the task to develop the methods, technologies, techniques, and means of a psychological and pedagogical support organization for the teacher's occupational genesis. The interdependent actions of a teacher and the

teachers who organized his training served as the basis for positive changes in teacher education quality.

Now we turn directly to the discussion of the pedagogical experiment results. The main result of the experimental work on testing the programs was the determination of teacher readiness level for further professional activity, which was determined on the basis of indicator change analysis for motivational, cognitive and activity criteria.

The diagnostics of the mentioned criterion values among teachers - the students of the courses, immediately before the start of training, showed that there is no significant difference between the values of indicators for teachers, both in the control and the experimental groups. A rather significant part of the teachers of both groups, or 45.5% - 46.0%, had low and medium levels of criterion indicators, which exceeded 90% in total. And, less than 10% of teachers have a high level of indicator values.

Upon completion of training within the framework of the continuing education program in both groups of teachers - control and experimental, control measurements were taken in order to identify the dynamics of readiness level (tables 1, 2).

Table 1: Readiness for teaching in the control group

Values	Motivational		Cognitive		Activity		stat. average
	men	%	men	%	men	%	%
Low	5	20%	7	28%	14	56%	34,7%
Average	16	64%	14	56%	7	28%	49,3%
High	4	16%	4	16%	4	16%	16%

Table 2: Readiness for teaching in the experimental group

Values	Motivational		Cognitive		Activity		stat. average
	men	%	men	%	men	%	%
Low	5	20%	4	16%	6	24%	20%
Average	12	48%	13	52%	13	52%	50,7%
High	8	32%	8	32%	6	24%	29,3%

Having compared the data given in tables 1 and 2, as well as the values of indicators for the teachers of both groups before and after course training, we identified the effectiveness of various training programs. The obtained data of the analysis are shown in table 3 and in figure 1.

Table 3: Dynamics of readiness for teaching among control and experimental groups, %

Readiness level	Control group			Experimental group		
	ascertaining stage	control check	dynamics	ascertaining stage	control check	Dynamics
Low	45,5%	34,7%	-11,8%	45,5%	20,0%	-25,5%
Average	46,5%	49,3%	+2,8%	45,5%	50,7%	+5,2%
High	8,0%	16,0%	+8,0%	9,0%	29,3%	+20,3%

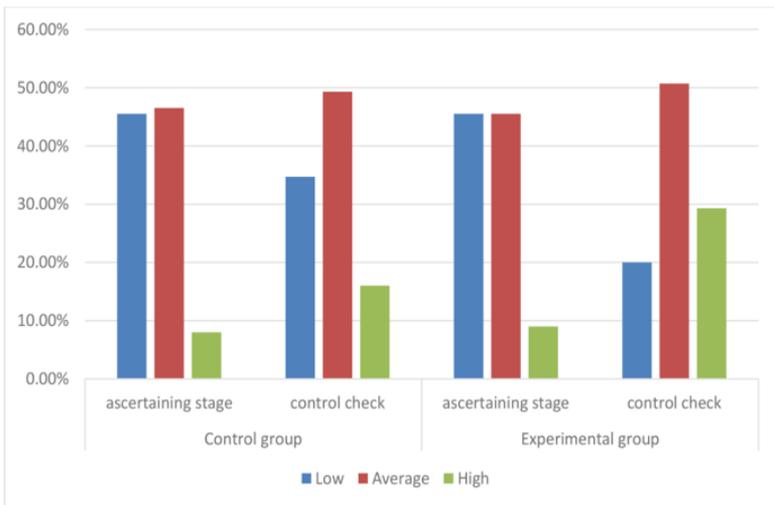


Figure 1: The dynamics of readiness for teaching in the control and experimental groups

The comparative analysis of the pedagogical experiment results obtained at the end of the training did not reveal statistically significant changes in the control group of teachers, although minor changes occurred, which allows us to talk about the effectiveness of traditional training in continuing education courses. The picture was completely different in the experimental group of teachers. The values of all indicators have undergone significant changes among the students of the courses studied under the experimental program that implements the idea of individualization and self-design technology. So, according to the average value, the indicators of teachers from the experimental group in comparison with the indicators of teachers from the control group, the dynamics of the values were 1.8 - 2.5 times higher.

It is also important that the majority of teachers from the experimental group (84.0%) is satisfied with the results of their training, which is 32% more than the share of teachers in the control group (52.0% total).

4. CONCLUSIONS

Based on the data obtained in the experiment, several conclusions were made:

- The data obtained do not contradict and, at the same time, develop the achievements obtained by other authors who have

studied various aspects of continuing education and advanced training of teachers in the system of additional teacher education;

- The identified theoretical basis and the prevailing conditions in the system of additional pedagogical education can be considered as certain prerequisites that allow the transition to the development of teacher development programs based on the idea of individualization and technology for self-designing educational programs, moreover, we consider the data obtained as the factors determining the need for changes in continuing education and in the organization of coursework for teachers;

- The introduction of individualization and self-designing technology idea in the development and implementation of continuing education programs allows us to increase the motivational, cognitive and activity resources of teachers who studied under the author programs, while individualization, in our opinion, influences positively the teacher motivational resource and self-designing on the teacher activity resource;

- Individualization of training motivates the manifestation of the teacher's individuality, the construction (active participation in the construction) of the individual trajectory of postgraduate teacher education at each stage of professional development, which ensures the continuous professional growth of the

teacher, his self-development, self-education, which acts as an integrated result of the interaction of the internal individual and personal potential and resources (or conditions) of the external educational environment;

- The process of self-designing a continuing education program is considered by the authors as the process consisting of two stages: the first stage is the teacher's comprehension of his own level of professional competence, which includes the following components: assessment, reflection, motivation, actualization, problematization; the second stage is the development of an individualized continuing education program that satisfies the current and future educational needs of a teacher;

- Self-designing is directly related to the processes of self-improvement, self-actualization, self-esteem, expanding the idea of self-designing phenomenon, as a process aimed at understanding and seeing a teacher in the pedagogical profession;

- An individualized educational program - it is a pedagogical construct developed on the basis of reflection of previous pedagogical experience and self-actualization of accumulated professional problems that defines the goals and objectives of training, the structural and logical development of the program, a combination of training forms, filling with educational and

professional and personally relevant content, current and final control technology, and which is a fragment of the teacher's continuing professional education;

- An educational program developed, justified and used by the authors, changes the attitude of teachers to continuing education courses in a positive way and leads to teacher satisfaction increase with his course training;

- Training in the framework of such programs and the created pedagogical conditions leads to teacher readiness increase for further professional activity, which allows us to draw a general conclusion about the advisability of using the idea of individualization and self-designing technology in the practice of continuous pedagogical education.

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