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The Results of Piloting the Practically Oriented Model of Future Primary School Teachers Training

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Abstract

This research is devoted to the problem of transformation of modern teacher education in accordance with the present-day challenges. The article presents the analysis of methodological approaches to solving this problem, and the results of authors' empirical study. The study was conducted at the Academy of Psychology and Pedagogy of the Southern Federal University. Ninety-five students of the profile "Primary Education" were tested. According to the results of the empirical study the actual training of primary school teachers is more focused on the formation of students' professional hard skills competencies which contain fundamental knowledge in the field of pedagogy and psychology, pedagogical research, digital knowledge and skills. The hard skills of half of the respondents are at a high level of formation. Soft skills and self-skills competencies are less developed according to the basic level. The soft skills competencies contain developed systemic and critical thinking, self-organization and self-development and many others. The authors assume and reveal that the formation of self-skills competencies depends on the ability of a teacher to empathize with the students. The study revealed a very close relationship between the level of students' self-skills competencies and the level of their empathy. The results of the initial stage of the study confirmed the need to develop an innovative model of primary school teachers training, built on the basis of the integration of practice- and fundamental-oriented approaches. The results of the study at the intermediate stage showed some growth of the level of competence formation among the students of the experimental group.

Keywords: present-day challenges, primary school teacher, hard skills competencies, soft skills competencies, self-skills competencies.

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Introduction

The socio-cultural framework of peoples' and states' life determine the functioning of each human life and human communities as a whole. They create images-patterns that serve as educational targets, as well as conditions that promote or hinder the achievement of these targets (Kornetov, 2016). The socio-cultural framework of modernity can be described as the challenges that modern education, including the training of teachers, seeks to meet. Among the present-day challenges, which dictate the need to transform Russian universities and higher education as a whole, researchers note, first of all, the fourth industrial revolution and the development of digital technologies. The transformation of higher education according to the new paradigm is primarily associated with the use of computer science and artificial intelligence, the analysis and processing of big data, the use of blockchain technology and other digital transformations (Fadeev, Zmeev & Gazizov, 2020). The increasing digitalization of all spheres of public life brings, on the one hand, previously unknown opportunities, and, on the other, hidden dangers for the humanitarian component of social existence. The result of the modern confrontation between the traditional ("conservative, saving") and rationalistic (corresponding to the scientific and technological type of civilization) educational paradigms should turn into an anthropocentric stage of education development, which is based on the presence of a human dimension in all spheres of human knowledge: nature, society and man himself. The anthropocentrism of society and education is characterized by the dominance of intangible values, the focus on solving environmental and other global problems caused by the scientific and technological development of modern civilizations, and the priority of information consumption over material and energy one. The transition to the anthropocentric paradigm of teacher training requires its deep targeted, structural and technological restructuring (Shishov & Kalney, 2016).

The present-day challenges determine the directions of changes in the field of education of modern people. The changes are related to the requirements imposed by society on an educated person. An educated person today is, first of all, a researcher who has a holistic education, aspires to personal growth, skillfully uses various tools to achieve goals, successfully uses information and communication technologies (Guseva, Pivnenko & Shatokhina, 2015). The rapidly changing modern world requires graduates of a higher school not only to possess the theoretical foundations of their profession, but also professional and applied skills, accordingly students' training at the universities is becoming more and more practice-oriented (Bulin-Sokolova, Obukhov, & Semenov, 2014; Guruzhapov, 2017; Kondrashova & Solokhin, 2016; Margolis, 2014; Shatokhina & Tatarenko, 2018). The strengthening of applied orientation of higher education should not, however, lead to the loss of its traditional fundamental character, which is the key to a broad outlook, critical and meta-subject thinking, as well as the formation of soft-skills of a university graduate that are so relevant in modern conditions (Yadrovskaya, 2013). It also refers to higher pedagogical education.

The list of qualities required today from the future teacher can be continued further, but the question arises: is the modern system of higher pedagogical education ready to respond to the demands of the time? In our opinion, it is not. In line with the indicated dilemma, the problem of our study is formulated: what should be transformed in the training of primary school teachers at the university, so that it could meet the present-day challenges?

Purpose and objectives of the study

When starting the research, we set the following purpose: to substantiate theoretically and implement in the educational process of the Southern Federal University a model of vocational training of primary school teachers that meets present-day socio-cultural and Sci-Tech challenges. The following objectives are solved in the study. Socio-cultural and Sci-Tech trends of higher pedagogical education development are analyzed. The model of future primary school teachers vocational training meeting the above-mentioned trends is methodologically justified. The transformed components of the model implemented at the Southern Federal University are described. The model of future primary school teachers vocational training is built on the basis of the integration of fundamental knowledge and experience of practical pedagogical activity. The intermediate results of piloting the educational model are described.

Literature review

A lot of researchers point to the need of transforming modern teacher training. The transformation of teacher education, according to the authors, should be connected, on the one hand, with its ability to meet current socio-cultural and scientific-technological challenges, on the other, to “look beyond the horizon” and lay the foundation for the future of humanity in our days. This strategic and predictive function of education is beyond doubt. The main vector of researches in this area is related to the search for methodological grounds for such modernization. In this regard, the methodology of pedagogical activity that meets the challenges of modernity is associated with informatization and regulatory changes in the field of modern education (Vasilevskaya, 2016). The activity approach, therefore, is the methodological basis of practice-oriented teacher education and the reference point for its transformation in modern conditions. However, the strengthening of the applied orientation of teacher training should not resist the fundamental character that has traditionally characterized teacher training in the Russian higher education system.

The problem of fundamentalization of education was investigated by one of the authors of this article earlier (Kondrashova, 2012), and approaches to the definition of the concept of “fundamentalization of education” are identified and justified.

The fundamentalization of education is a category that characterizes the content of education (Popov, 2013). The fundamentalization of education is one of the didactic principles of building modern educational systems, which permeates all the structural components of education (Sadovnikov, 2011). Fundamentalization of education is a category of quality of modern educational systems (Subetto, 2010; Sukhanov, 1996; Filippov & Tikhomirov, 2000). Researchers of the phenomenon of fundamentalization of education note that the opposition of fundamental and practice-oriented education is already a thing of the past. We can firmly say that today fundamental education is associated with the scientific search for truth, its socio-technological implementation and transmission to new generations (Bryzgalina, 2021). This synthesis is reflected both in the targets of higher education and in its structural components, such as content and process-diagnostic one (Efimov & Lapteva, 2017). Educational results contain professional, meta-professional and personal competencies, including: the ability to formulate, implement and defend professional position; self-control; mobility; search activity; readiness to solve problems; find and use various tools of intellectual activity; an open attitude to the world and people, manifested in the ability to communicate and cooperate with the carriers of alternative professional positions, life and religious views.

The content of education, which synthesizes an applied orientation and fundamentalism, is distinguished by a number of features: scientific character correlate with the knowledge that reflects the current state of the sciences, which are major for professional activity; interdisciplinary character related to a humanitarian component in the training of specialists of all profiles (cultural studies, art history, religious studies, philosophical concepts); universalism, associated with its construction, which ensures the formation of students' professionally significant abilities and personal qualities that retain significance throughout a person's life; practice orientation as a unity of professionally significant theories and practices that have proven their effectiveness, as well as having a conceptual, innovative character; axiological character as the representation of the experience of creative pedagogical activity and emotional-value relationships; openness as the deployment of scientific knowledge in accordance with the problems that reflect both the current state of science and the needs of modern society.

At the technological level, it is a scientific and educational process that represents the unity of universalization and specialization and consists of various types and forms of scientific research; individualization of scientific and educational students' trajectories; hybrid forms of organization of scientific and educational activities; transformation of teaching and learning on the basis of digital technologies; inclusion of the university in global research and educational networks while preserving the best national research and educational traditions; organization of quasi professional activities of students in the field of various practices; practical participation of expert representatives in the training of future specialists.

Methodology

This study is based on the methodologically significant views of Kornetov (2016), Fadeev et al. (2020), according to which education is influenced by the socio-cultural framework of its existence and should meet the present-day challenges.

The methodological guidelines for our research were Shishov and Kalney's (2016) views on the vector of modern teacher education transformation, associated with the emergence of a new, anthropocentric paradigm, which is based on a human dimension in all spheres of knowledge and activity.

Significant for our research is the opinion of Bryzgalina (2021) according to which the confrontation between practice-oriented and fundamentalism in higher education is a thing of the past, and today it is associated with both the scientific search for truth, its transmission to the next generations, and its socio-technological implementation.

Margolis (2015) studies traditional and innovative models of teacher training. The conceptual basis, according to the scientist, for the development of new models of teacher training that meet modern requirements, are the concepts of "practitioner-researcher" and "reflexive teacher". The concept of the practitioner-researcher is aimed at the formation of the teacher's professional thinking, the ability to professional actions and professional identity. The concept of a reflexive teacher is aimed at developing the ability to reflect and make professionally responsible decisions.

The conceptual basis was the connectivism theory of learning (Kerr, 2007), which is associated with the immersion of the student in the information environment, using various areas of communication between the participants of the educational process, with the ability to determine the relevance of the acquired knowledge in modern conditions.

The problem of building an educational environment in the conditions of digitalization of modern society is described by one of the authors of this paper in relation to the course of higher mathematics (Kondrashova & Solokhin, 2021).

The research was conducted in the Academy of Psychology and Pedagogy of the Southern Federal University, Rostov-on-Don (the region in Russia). Respondents were the students of the training direction 44.03.01 Pedagogical Education, major "Primary Education". Ninety-five students were tested in the study. Experimental group: 1st year students (entered 2019, full-time education) – twenty-six respondents; 1st year (entered 2019, part-time education) – twenty-one respondents.

Control group contained 2nd year students (entered 2018) – twenty-five respondents; 4th year students (entered 2017) – twenty-three respondents.

The implementation of the modernized educational model began in September 2019. The initial diagnostic cross-section was performed in May-June 2020, and the intermediate control cross-section was performed in April 2021.

The study was conducted with the use of the following research methods: the analysis of psychological and pedagogical methodological literature; the analysis of modern educational Internet resources; the survey of respondents using Google forms; comparative analysis of the results of experimental activity; statistical methods for processing the results of experimental activity (Pearson correlation coefficient, Wilcoxon's T-test).

The following theoretical research methods were used: content analysis of psychological, pedagogical and methodological literature, the purpose of which was to examine the methodological approaches to building the model of primary school teacher training meeting the challenges of our time. The analysis of modern educational resources of the Internet was used to determine the possibilities of the digital environment for creating the educational model. Google Forms were used as practical research methods. The content of the Forms was developed by the authors of the study based on the curriculum. All the respondents received a consent form and an information sheet. The informed consent was agreed with the students involved and was re-established during the study. Pseudonyms have replaced the names of the participants. The participants were given an opportunity to withdraw from the study at any time.

The comparative analysis of the results of the initial and the intermediate stages of the study was carried out to identify the dynamics of the indicators of the level of competence formation. For statistical data processing, the Pearson correlation coefficient and the Wilcoxon T-test were used. The Pearson correlation coefficient allowed us to determine the relationship between the level of formation of self-skills competencies and the teacher's ability to empathize with the pupils. Wilcoxon's T-test confirmed a significant shift towards increasing the level of competence formation since the implementation of the modernized model of future primary school teachers training.

Results

The results of the initial stage of experimental activity allowed us to identify the shortcomings of the existing model of primary school teacher training. Below we describe the indicators that serve as the features of the formation of professionally significant competencies for a modern primary school teacher.

We use the same indicators to determine the effectiveness of the experimental model of vocational training of primary school teachers, built on the basis of the synthesis of practice-oriented approach and the fundamentalization of the scientific and educational process. The same indicators became the basis for the selection and modifying test methods.

Indicators of *professional hard skills competencies* contain fundamental knowledge in the field of pedagogy and psychology, organization of pedagogical research, theories and methods of primary education, knowledge and skills in the field of digital educational platforms and resources, legal and ethical foundations of professional activity, the ability to use modern educational technologies, create original educational programs and technologies (teacher-theorist, teacher-researcher, teacher-practitioner).

Indicators of *professional soft skills competencies* contain developed systemic and critical thinking, the ability to carry out professional communication and intercultural interaction, to design the trajectory of self-organization and self-development (thinking teacher, communicating teacher, reflecting teacher).

Indicators of *professional self-skills competencies* contain a set of personal qualities necessary for a future primary school teacher to build a humanistic interaction with primary school students, being a pattern of activities and relationships with other people (openness, empathy, diligence, commitment, responsibility, etc.). One of the indicators of this competence formation is the ability to solve situational pedagogical tasks (teacher-Human, teacher-professional).

To determine the level of competence formation, a five-level scale was used (Selyanskaya, 2011):

Level 1 (deficient level) - unable to solve the given professional task;

Level 2 (understanding level, the level of reproductive task solution) - able to solve the given professional task using standard methods and according to pre-developed, established and prescribed procedures;

Level 3 (basic level, the level of innovative-reproductive task solution) - able to find non-standard methods of solving tasks, choosing the most effective procedures;

Level 4 (high level, innovative) - able to set goals and objectives of one’s own professional activity, the activities of the subordinates and the organization as a whole, developing innovative methods and procedures;

Level 5 (strong level, innovative-and-creative) - able to develop the concepts of one's own professional activity, the activities of the subordinates and the organization as a whole on the basis of a multi-level assessment of the organization and the environment.

The implementation of the innovative educational model began in September 2019. It determined the selection of students for testing.

Table 1. Diagnostic results of the level of competence formation (respondents of the control and experimental groups)

Professional and pedagogical competencies	Level	**1st year (19/20) (47) %**	**2nd year (20/21) (47) %**	**2nd year (19/20) (25) %**	**4th year (20/21) (23) %**
Digital educational resources: *hard skills competencies*	5	7	18	5	53
	4	21	22	23	40
	3	28	30	29	7
	2	28	26	35	0
	1	16	4	8	0
Pedagogical research: *hard skills competencies*	5	0	12	0	33
	4	7	14	5	13
	3	28	31	35	27
	2	50	39	53	27
	1	15	4	7	0
Modern technologies: *hard skills competencies*	5	5	19	0	56
	4	17	32	28	22
	3	36	37	32	22
	2	36	10	36	0
	1	6	2	4	0
Designing individual trajectory and personal growth: *soft skills competencies*	5	6	17	0	6
	4	29	24	4	33
	3	28	31	29	33
	2	21	28	47	28
	1	16	0	0	0
A set of personal qualities: *self-skills competencies*	5	5	15	0	4
	4	29	24	4	31
	3	21	32	28	35
	2	23	29	48	30
	1	16	0	0	0

Comparing the indicators of the control and experimental groups presented above, we came to the conclusion that when using the traditional model of primary school teacher training, more than 50% of students have a strong level of hard skills competencies formation, the formation of soft skills and self-skills competencies is at the level of understanding (basic level).

These results confirm the need to develop an innovative model of primary school teachers training. The results of the study at the intermediate stage showed a significant growth of the level of competence formation among students of the experimental group. On average, the growth of the level of indicators of hard skills, soft skills and self-skills competencies is 15%.

Using the Wilcoxon T-test, we identified the direction and severity of changes of the indicators of competence formation of the experimental group students. In table 2 zero shifts are excluded, the number of observations is as less as the number of zero shifts.

We made the following two assumptions: the intensity of shifts in case of competence formation level growth is not higher than intensity of shifts in case of level drop; the intensity of shifts in case of competence formation level growth is higher than intensity of shifts in case of level drop.

Table 2. Diagnostic results of the degree of changes of the competence formation indicators (respondents of the experimental group)

No	**T_{before}**	**T_{after}**	**Differential**	$\lvert t_{before} - t_{after} \rvert$	**Decomposition of factors according to the expert's assessment**	**New grades**
1	4	5	1	1	1	14,5
2	0	1	1	1	1	14,5
3	4	5	1	1	1	14,5
4	0	1	1	1	1	14,5
5	1	3	2	2	1	14,5
6	4	5	1	1	1	14,5
7	1	3	2	2	1	14,5
8	0	1	1	1	1	14,5
9	4	5	1	1	1	14,5
10	3	4	1	1	1	14,5
11	3	4	1	1	1	14,5
12	4	5	1	1	1	14,5
13	3	4	1	1	1	14,5
14	3	4	1	1	1	14,5
15	3	4	1	1	1	14,5
16	3	5	2	2	1	14,5
17	3	5	2	2	1	14,5
18	4	5	1	1	1	14,5
19	4	5	1	1	1	14,5
20	4	5	1	1	1	14,5
21	4	5	1	1	1	14,5
22	4	5	1	1	1	14,5
23	0	1	1	1	1	14,5
24	0	1	1	1	1	14,5

25	2	3	1	1	1	14,5
26	2	3	1	1	1	14,5
27	1	2	1	1	1	14,5
28	3	4	1	1	1	14,5
29	3	4	1	1	2	30,5
30	3	4	1	1	2	30,5
31	2	3	1	1	2	30,5
32	4	5	1	1	2	30,5
Sum						528

Checking the correctness of the matrix based on the calculation of the checksum

$$\sum x_{ij} = \frac{(1+32)\cdot 32}{2} = 528$$

Temp = 30,5+30,5+30,5+30,5 = 122

Tcr = 175 ($p < 0,05$)

Tcr = 140 ($p < 0,01$)

122 < 140

Consequently, the shift towards the growth of the level of competence formation due to the implementation of the modernized model of primary school teachers training is significant (natural).

To analyze the self-skills competencies, we used the test of the empathic potential of the personality (the method of rapid diagnosis of empathy), developed by Yusupov (1995). We assumed that the formation of self-skills competencies depends on the ability of the teacher to feel the inner world of the student, to be able to empathize with the students. As a statistical method, we used the Pearson correlation coefficient.

The level of competence formation (X)

Level of empathy (Y)

Table 3. Calculation of the Pearson correlation coefficient

No	X	Y	Error d_x	Error d_y	$d_x \times d_y$	d_x^2	d_y^2
1	5	5	1,7	1,2	2,04	2,89	1,44
2	3	3	-0,3	-0,8	0,24	0,09	0,64

3	3	3	-0,3	-0,8	0,24	0,09	0,64
4	4	4	0,7	0,2	0,14	0,49	0,04
5	4	4	0,7	0,2	0,14	0,49	0,04
6	2	3	-1,3	-0,8	1,04	1,69	0,64
7	2	3	-1,3	-0,8	1,04	1,69	0,64
8	5	4	1,7	0,2	0,34	2,89	0,04
9	5	4	1,7	0,2	0,34	2,89	0,04
10	4	5	0,7	1,2	0,84	0,49	1,44
11	4	4	0,7	0,2	0,14	0,49	0,04
12	4	4	0,7	0,2	0,14	0,49	0,04
13	2	3	-1,3	-0,8	1,04	1,69	0,64
14	5	4	1,7	0,2	0,34	2,89	0,04
15	2	3	-1,3	-0,8	1,04	1,69	0,64
16	5	4	1,7	0,2	0,34	2,89	0,04
17	2	3	-1,3	-0,8	1,04	1,69	0,64
18	4	5	0,7	1,2	0,84	0,49	1,44
19	4	4	0,7	0,2	0,14	0,49	0,04
20	4	4	0,7	0,2	0,14	0,49	0,04
21	4	4	0,7	0,2	0,14	0,49	0,04
22	2	3	-1,3	-0,8	1,04	1,69	0,64
23	2	3	-1,3	-0,8	1,04	1,69	0,64
24	2	3	-1,3	-0,8	1,04	1,69	0,64
25	5	5	1,7	1,2	2,04	2,89	1,44
26	2	3	-1,3	-0,8	1,04	1,69	0,64
27	3	4	-0,3	0,2	-0,06	0,09	0,04
28	5	4	1,7	0,2	0,34	2,89	0,04
29	3	4	-0,3	0,2	-0,06	0,09	0,04
30	5	5	1,7	1,2	2,04	2,89	1,44
31	3	4	-0,3	0,2	-0,06	0,09	0,04
32	3	4	-0,3	0,2	-0,06	0,09	0,04
33	3	4	-0,3	0,2	-0,06	0,09	0,04
34	2	3	-1,3	-0,8	1,04	1,69	0,64
35	2	3	-1,3	-0,8	1,04	1,69	0,64
36	2	3	-1,3	-0,8	1,04	1,69	0,64
37	3	4	-0,3	0,2	-0,06	0,09	0,04
38	3	4	-0,3	0,2	-0,06	0,09	0,04
39	3	4	-0,3	0,2	-0,06	0,09	0,04
40	4	5	0,7	1,2	0,84	0,49	1,44
41	4	4	0,7	0,2	0,14	0,49	0,04
42	2	4	-1,3	0,2	-0,26	1,69	0,04
43	3	4	-0,3	0,2	-0,06	0,09	0,04
44	3	4	-0,3	0,2	-0,06	0,09	0,04
45	3	4	-0,3	0,2	-0,06	0,09	0,04
46	3	4	-0,3	0,2	-0,06	0,09	0,04
47	3	4	-0,3	0,2	-0,06	0,09	0,04
	155	180			23,38	51,83	18,68

The arithmetic mean for X and Y:

$M_x = \frac{155}{47} = 3{,}3$; $M_y = \frac{180}{47} = 3{,}8$

The amount of deviation from the arithmetic mean for each of the compared indicators:

$d_x = X - M_x$ и $d_y = Y - M_y$.

Parameter of the Pearson correlation coefficient according to the following formula:

$$r_{xy} = \frac{\sum(d_x \times d_y)}{\sqrt{(\sum d_x^2 \times \sum d_y^2)}} = \frac{23{,}38}{\sqrt{51{,}83 \times 18{,}68}} = 0{,}7514$$

Parameter of the T-criterion for the evaluation of the statistical significance of the correlation:

$$\mathrm{t_r} = \frac{\mathrm{r_{xy}}\sqrt{\mathrm{n}-2}}{\sqrt{1-\mathrm{r_{xy}^2}}} = \frac{0{,}75\sqrt{47-2}}{\sqrt{1-0{,}75^2}} = 7{,}6.$$

The critical value of the T-criterion is found in the table, where for the number of degrees of freedom $\mathrm{f} = \mathrm{n} - 2 = 45$ and the level of significance p = 0,01 value, $t_{cr} = 2{,}69$. The calculated value $\mathrm{t_r} = 7{,}6$ is more than $t_{cr} = 2{,}69$, therefore, the relationship is statistically significant.

The Pearson correlation coefficient is 0.75, which corresponds to a very close relationship between the level of self-skills development of the student's competencies and the level of empathy. This correlation is statistically significant ($p<0.01$).

The intermediate cross-section, the results of which are presented above, allowed us to justify the need for a personal-activity model of teacher training. The results validated its effectiveness.

Discussion

According to the study, the piloting of the educational model, built on the basis of the integration of practice- and fundamental-oriented approaches, caused the growth of the level of the following students' competences: hard skills, soft skills and self-skills competences. Students have fundamental knowledge in the field of Pedagogy and Psychology, theories and methods of primary education, knowledge and skills in the field of digital educational platforms and resources, legal and ethical foundations of professional activity, the ability to use modern educational technologies.

They are characterized by a rather developed systemic and critical thinking, the ability to carry out professional communication and intercultural interaction, to design the trajectory of self-organization and self-development. Students are characterized by a set of personal qualities necessary for a future primary school teacher: openness, empathy, diligence, commitment, responsibility and many others.

Therefore, modern teacher training should be transformed according to the educational model built on the basis of the integration of practice-orientation and the fundamentalization of the scientific and educational process. The modernized educational model should include the following structural components: target, content, and technological ones.

The target component of the personal-activity model of pedagogical education is aimed at the formation of future primary school teachers' professional and pedagogical competencies, which can be differentiated into the following groups: hard skills (professional skills of applied orientation), soft skills (meta-professional skills), self-skills (personal qualities).

The peculiar features of ***the content component*** of the educational model are:

scientific character as the compliance with the current state of the sciences that are basic for the elementary school teacher's professional activity, as well as sciences that provide a general vision of nature and humanity (so called humanities);

interdisciplinarity as the integration of subject theories and techniques within the educational modules (for example, Theories and Technologies of Primary Mathematical Education), as well as the combining of training and school practices;

universalism as the training courses providing the formation of such meta-skills as analytical and critical reading of large volume texts, the ability to carry out research projects and to turn subject knowledge into innovative practices;

practice-orientation is associated with the study of theories and practices of primary education that have proven their effectiveness (the systems of D. B. Elkonin - V. V. Davydov, L. V. Zankov, "School of Russia", "School of the XXI Century", etc.), as well as having a conceptual, innovative character (International Baccalaureate (IB), project-based learning (PBL), STE(A)M-practices in primary education, blended learning technologies;

axiological character as the learning courses and practices that encourage students to creative pedagogical activity and form their emotional-and-value attitude to the profession.

The technological component reflects the unity of the universalization and specialization of teacher training and consists of:

various types and forms of scientific research, educational and extracurricular activities: interdisciplinary and problem-oriented researches; scientific and educational projects in team and network formats;

individualized students' scientific and educational trajectories, based on both their individual capabilities and needs, and on constantly changing economic and educational challenges;

hybrid forms of organization of scientific and educational activities, such as blended learning as the use of online and offline educational technologies, as well as the study of open online courses by students;

digital transformation of education as the increasing access to information within the electronic educational environment of the university and open digital educational platforms and resources; creation and use of multimedia educational resources by lecturers;

participation of experts-representatives of educational organizations in the training and assessment of future primary school teachers.

It should be noted, however, that it is necessary to improve the above-described educational model from the point of view of the formation of students' self-skills competencies. This is due to the fact that we are dealing with the inner world of the individual, the formation of which is an extremely complex and unpredictable process. The empirical study of personal qualities is also difficult due to the lack of appropriate diagnostics. It is important from this point of view that our empirical study revealed a significant connection of this group of competencies with the empathic potential of the individual (the Pearson correlation coefficient is 0.75).

Conclusion

The study allows us to make the following conclusions. The challenges of the emerging scientific and technological civilization require the modernization of the university teacher training. The transformed higher education training of future teachers should not only meet the challenges of modernity, but also lay the foundations for the future development of human civilization, so it needs to be transformed according to the anthropocentric paradigm, the distinctive feature of which is the human dimension in all spheres of knowledge and social life.

The essence of the personal-activity model of future primary school teachers vocational training, being piloted at the Academy of Psychology and Pedagogy of the Southern Federal University, is the synthesis of practice- and fundamental-oriented approaches to the design of target, content and technological constituent components. As a research perspective, we can indicate the improvement of the structural components of this model from the viewpoint of the formation of students' professional self-skills competencies, i.e. personal qualities necessary for a modern primary school teacher. The results of the study can be used for the development of educational programs of practice-oriented training of future primary school teachers in the system of higher pedagogical education.

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