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**NEW TEACHER FOR A NEW SCHOOL: EDUCATIONAL  
PROCESS PARTICIPANTS ON THE PROBLEM**

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*Abstract*

The research question considers a gap between modern requirements to education under the conditions of implementation of federal state educational standards of new generation and introduction of a new professional standard of the teacher and quality of pedagogical education. The article is devoted to one of the stages of a complex research, the main objective of which is creation of complete multilevel model of training of the teacher for the new school focused on implementation of modern requirements into the system of general education. The purpose of this stage is to detect the deficiencies of teacher's training at the current stage from the point of view of various participants of the educational process, as well as to define the key ways to their elimination. For these purposes to be met the following was used: theoretical methods (analysis and synthesis of standard documentation and pedagogical literature), empirical (measurement, comparison), and also methods of statistical processing of results of a research. At this stage of the investigation, the result of this research is to define weaknesses in the existing system of teacher's training from points of view of heads of educational institutions, practicing teachers and pupils and also to develop a system of measures aimed at the improvement of pedagogical education for the purpose of increasing quality.

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**Keywords:** Society of knowledge, general education, training of the teacher, professional teacher's competences.



## **1. Introduction**

### **1.1. On the choice of a subject**

The relevance of this perspective is caused by the challenges placed in front of education systems in the whole world connected to the approach of the fourth industrial revolution era. Realization of its main trends will entail serious institutional, structural, substantial, and technological changes in the functioning of educational institutions, and revise approaches to the organization of educational processes, including the system of the general education. Training the teacher for this changing world becomes the most important problem at the current stage of social development. The solution to this problem should include analysis of the characteristics of a changed society, transformed technologies, a changed student, and transformations in modern education. Working under the conditions of a transformed educational system demands special qualities from the teacher in the 21st century: the teacher has to be initiator and organizer of constructive innovative changes, he/she has to be ready to act successfully in the context of variable models of education and to constantly update the knowledge, the methodical and technological repertoire, to expand and improve professional competences. Fundamental for his innovative activities are the characteristics of a society of knowledge that goes far beyond simple subject-oriented models in education and puts in the forefront - the general intellectual development, creativity, independence and personal responsibility with its orientation for a lifelong training.

Education in Russia has all necessary prerequisites for the realization of a long-term strategy of innovative development. These prerequisites are social demand, reasonable concepts of a new educational paradigm and methodology of activities for its realization, excellent pedagogical practices, and a bank of modern technologies in training. However, there are several economic, public, and psychological barriers, where, with no doubt, the insufficient condition of pedagogical specialists, not prepared for new requirements, belongs. It is connected with a number of factors.

First of all, in connection to the decrease of prestige of a teacher's profession and low salaries, the teaching staff at modern Russian schools is generally more aged and, therefore, quite conservative: teachers of a senior generation are guided by outdated experiences of the previous era, postulating it as the only one that is right, they are hardly getting used to innovations and often openly resist to use them. It is hard for them to accept that the essence of a present stage in development of education consists in constant and sometimes rapid changes caused by no less fast transformations in socio-economic and technological condition of a modern society. Difficulties in rebuilding of their relation to new realia aren't surprising because, the system of education always is considered to be one of the most conservative social institutes. Therefore, even today many teachers hope for reforms to be over soon and for everything to become "as they used to be", without understanding that the return to the former is already impossible.

The same can be mentioned for the lecturers at universities, who train these young teachers. The system of training of a teacher is problematic, in the same field; experts, grown up in other social and economic conditions, are very often transporting different values and using outdated approaches and archaic techniques. It is a good thing that they are focused on preservation of the best traditions of national education. Their approaches, however, are not necessarily coordinated with requirements for the

development of modern society. Thus, pedagogical education itself needs to be reoriented according to the new realia.

Education policy in Russia reacts with a little delay to the calls of time; nevertheless, all necessary steps are being taken. So, since 2014 a massive project for modernization of pedagogical education within "Comprehensive program of increase in professional level of pedagogical employees of the general education organizations" was implemented by the Ministry of Education and Science of Russian Federation. It suggests the following steps to increase professionalism:

- Ordering of educational results of teaching training programs in compliance with requirements for professional standards and Federal State Educational Standards for general education (the updated list of professional competences).

- Increase of practical orientation of programs (development of new model of internships, including network interaction with the educational organizations realizing programs of general and secondary professional education – "school and university partnership", long-term industrial internship, internship in the educational organization, module distributed internship).

- Principle of modules in design of programs of teachers training (integrated modules, practical, theoretical and research unit of educational program providing conditions for performance of labour function or a set of labour functions according to the professional standard of a teacher).

- Activity approach in training of prospective teachers.

- Network interaction with educational organizations of general, secondary, professional and higher education.

- Development of an available module context, increase of mobility. (Bolotov et al., 2015)

All these measures are global. There are many unsolved problems of a more private character. In particular, detection of deficits in development of professional competences of a teacher is obviously important for the use of the obtained data as a basis for creation of modernization strategy in teachers training. A lot of strengths and enormous experience that is urgent for the present conditions is accumulated in Russian system of teachers training. Definition of its weaknesses is not aimed to discredit it, but on the opposite; it will allow it to focus on the most important directions of strategic development. At the same time, it is important not to be limited to purely scientific research, but also to involve all the participants of educational process into this discussion: heads of schools, teachers, pupils.

## **1.2. Literature review**

Today, transformations in pedagogical education in Russia are subjects of profound discussions among scientists. Based on the results of international comparative researches of reading literacy (PIRLS), and mathematical and natural-science literacy (TIMSS), it is possible to talk about the high level of proficiency of Russian school students with regards to the knowledge of subjects, which in turn demonstrates the high-quality subject training of teachers in Russian institutions of higher education. At the same time, famous academician Bolotov, based on the investigation of usage of subject oriented skills for operating the practical tasks (PISA), notes that Russian high school students experience serious difficulties in realization of their knowledge potential. (Bolotov, 2014) Moreover, data of the polls held among the employers and graduates of pedagogical universities confirm the lack of practical training of

teachers. (Sobkin, 2010) Kasparzhak defines this problem as a basic one for pedagogical education. In his opinion, the main cause is the archaic organization of educational process that leads to training of a “knowing” but not always “capable” teacher. (Kasparzhak; 2013, 2014) Considering problems of modern pedagogical education in Russian Federation, Margolis depicts 3 groups of crucial difficulties: problems of pedagogical education determined by a condition of a profession (low social prestige, lack of effective system of vocational guidance, single-channel character of training direction for a perspective teacher); problems of pedagogical education in general (lack of communication between the existing federal state educational standards of higher education as an integrated group of specialties "Education and Pedagogical Sciences" with the requirements of the teacher's professional standard, insufficient practical training of graduates of pedagogical majors, deficit of a research component in the main professional educational programs); problems of graduates entering the professional world (low rate of employment, lack of programs of post-graduate education and support of young teachers, lack of system of an independent assessment of the received qualification) (Margolis, 2014). Bermus, analyzing experience of similar reforms in the western countries, including Sweden, Great Britain, Norway, USA, etc., reveals possible conceptual resources for modernization of pedagogical education in Russia. He considers following necessities: a) scientific-informational supplement of all the taken measures, b) comparative analysis of a contribution of pedagogical education into social development, c) interrelations between requirements of standards and quality indicators for general and professional pedagogical education. As a modernization factor, he suggests to take into account identification and modelling of dynamics of a teacher's image in sociocultural and professional contexts, and also a level differentiation depending on an experience and efficiency of work. (Bermus, 2015)

It is noted that young teachers refuse to work at schools because of insufficient practice oriented training in a higher educational institution. (Bolotov, 2014; Kasparzhak, 2013) This fact, along with many others, has induced the Ministry of Education to support efforts on modernization of pedagogical education. Another significant factor for it is the increasing rate of “burn-outs” amongst teachers. This fact, in its turn, leads to the often and rapid quitting of teaching personnel. However, such a difficult situation with involvement of young specialists into schools and high rates of quits is peculiar not only for Russia. A number of studies establish that interests of teachers in educational jobs is influenced by such factors as personal characteristics of teachers, their vocational training, working loads and style of school management. (Darling-Hammond et al, 1999; Day, 2002; Kyriacou & Kunc, 2007; Müller, Alliaata & Benninghoff, 2009) What really makes a difference for the students considering teaching as an option for future career are such aspects as incomes, working conditions, public opinion on teaching profession and also an opportunity to help pupils to acquire knowledge (Stokes, 2007; Johnson & Kardos, 2008). Scholars from many countries agree that the main reason behind a decision of a young teacher to quit his/her profession is connected to socio-economic factors and the fact that educational programs for pedagogical majors are too theoretical and do not train graduates for practical work at schools properly. (Furlong, 2013)

## 2. Problem Statement

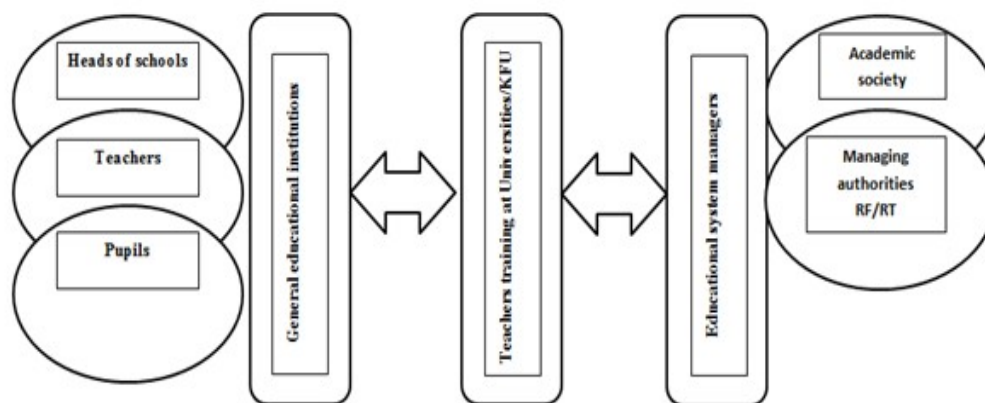
The key issue of this research is the gap between modern requirements to education under the conditions of society of knowledge, implementation of federal state educational standards of new generation and implementation of new professional standard for a teacher and quality of education. In order to provide high quality of general education even the latest technical equipment is not enough: schools need new teachers, who are well trained, flexible, creative and ready to constantly improve knowledge and professionally develop themselves. Politicians working in the field of education understand it perfectly. So, since 2012 the Ministry of Education and Science in the Republic of Tatarstan provides a grant "Our new teacher" and searches for "talented, smart and purposeful" individuals (citation from the program commercial). As it appears on the website of the Ministry, those who received a grant get up to 500 hours retraining or professional internship, training abroad, fully equipped office, and social privileges. Other measures to increase the level of professionalism of teachers and bringing back the prestige of a teacher's profession are also introduced.

Nevertheless, this in a way "catch-up" approach aimed at "improving" teachers in office cannot solve the problem completely. Therefore, one of subordinated programs of Russian national project "Comprehensive Program of Growth of the Professional Grade of Teaching Employees of the General Educational Organizations" is aimed at upgrading pedagogical education itself: the system of supporting measures for preparation of pedagogical frames according to the professional standard of a teacher and federal state educational standards of general education are provided in it.

Constant search for ways to train new teachers takes place also at the Kazan Federal University. Here teacher's training is one of the prior directions of development. (Gafurov & Kalimullin, 2015) Since 2014, KFU takes part in projects on modernization of pedagogical education, initiated by the Ministry of Education and Science of the Russian Federation. In 2015, KFU actively participated in the project of certification of graduate students with majors in pedagogy that is organized by the Ministry of Education and Science of the Republic of Tatarstan in cooperation with the leading higher educational institutions located on the territory of the republic carrying out training of teachers. Currently, KFU also carries the project "Strategic academic unit is implemented: Teacher of the 21st century". Within this project, the problem of transformation of pedagogical education into the "4 T" format is offered to be solved: transformed student, transformation of education that is a transformed teacher, and the transformation of pedagogical education. The project maintains the idea of development of standard and legal base of functioning of CAE within structure of Kazan Federal University: innovative practice oriented model of pedagogical education realized in the conditions of Federal Universities; educational standards and variable vectors of a teacher's training; organizational, methodical and scientific supplement of implementation of educational standards into pedagogical education in the conditions of Federal Universities.

The task within this research was to reveal elements in system of teacher's training that require special attention. We realize that there are many positive aspects in the system of training that have to be kept; modernization should neither rearrange this system nor should it cancel all the accumulated experience. Crucial here is to set the priorities while concentrating on the main problems. As long as the most significant result of an activity carried out in the educational institution including the teacher's

training, are competences, our attention was paid to them. We have involved heads of schools in the Republic of Tatarstan, teachers and pupils from Tatarstan schools. At this stage it was especially important for us that this modernization has been initiated from above and is moved by managers and academicians. The university as an intermediate link (Figure 1) tries to involve schools and their representatives, children and parents to a discussion.



**Figure 01.** Parties interested in preparing a new teacher

### 3. Research Questions

In this research, at this stage we have answered two main questions: 1) what professional competences of teachers seem to the heads of schools, pupils and teachers to be highly important for successful realization of main professional functions of a contemporary teacher; 2) level of development of which of the competences chosen by the participants of educational process is represented to them in the most unsatisfactory way. Necessity of the first block of questions that is connected to allocation of the most important competences is caused by the fact that scientific and pedagogical literatures list dozens of general and private competences of the teacher that completely disorients practitioners. Besides, during the transition of educational standards to the next generation, all higher educational institutions in Russia will have to formulate professional competences of the graduates independently (in future the standard will only order universal and all-professional competences). Answers of respondents enabled us to range some of the competences and to allocate the most significant ones for the modern teacher from the point of view of the participants of this poll.

### 4. Purpose of the Study

Objective of the complex research we conducted is to develop a strategy of improving the existing system of teachers training in KFU and design a complete multilevel model for teachers training for a new school focused on implementation of modern requirements into education. Renewed training for new teachers for a school focused on realities of a knowledge-oriented society is to become the result of introduction of this model. Researches are supposed to be carried out in several steps.

At the first stage, we have decided to reveal deficiencies of pedagogical education at present times from the point of view of various participants of educational process, as well as to define main ways of their elimination. Attention of the authors was attracted to young teachers recently graduated from pedagogical institutions/faculties.

## **5. Research Methods**

In the present paper, we relied on theoretical and methodological studies of Russian and foreign teachers on the problems of modernization of pedagogical education. We also generalized standard documentation, in particular Federal state educational standards and other documents of the Ministry of Education and Science of the Russian Federation and Republic of Tatarstan. Moreover, innovative activities in the field of educational management in Russia were analyzed. As for research methods, we used theoretical methods (analysis and synthesis of standard documentation and pedagogical literature), empirical (measurement, comparison) as well as methods of statistical processing of research results. Authors developed two questionnaires: for the determination of the most important competences of a teacher of modern school and on allocation of deficits in the level of development of these competences from the point of view of various participants of educational process.

Research was completed from March to December, 2016. We interviewed teachers, pupils and heads of educational institutions. 210 teachers of physics, mathematics, history, biology and chemistry at an average and senior degree of training, and 25 administrators of schools in Tatarstan took part in the poll. Survey was conducted in the Volga Center of interregional training and professional retraining of educators. Questions were answered by 260 pupils attending senior classes of the KFU basic school – Lyceum of Lobachevsky and lyceum No. 159 of Sovetsky district in the city of Kazan.

When developing the questionnaire on depicting the most important professional competences of a teacher we considered Federal state educational standards of the higher education for the specialties 44.03.01 Pedagogical education (Bachelor degree) and 44.04.01 Pedagogical education (Master degree) and an approved draft of the Professional standard of a teacher as a basis. Questionnaire covered more than 70 particular competences concretizing the general competences presented in educational standards. We were fully aware that such a quantity can lead to some confusion. On the other hand, our hypothesis claimed that most of respondents will likely choose approximately the same competences, level of formation of which is easy to observe in daily practical activities of a teacher. Respondents were offered to choose the main 10. On the basis of statistical processing of results, we could also allocate the 10, chosen by maximum number of participants.

The second questionnaire aimed at finding deficits of pedagogical education from the point of view of various participants of educational process. Core interest was concentrated not in the procedural part (methodology, organization, content) of teachers training, but the result in aspect of levels of their formation of three main units: subject, didactic and psychological competences. It should also be mentioned that not all the professional competences of a teacher were reviewed but only those that were indicated as significant within the first investigation.

## 6. Findings

In total 10 professional competences of a teacher on a 10-mark scale were estimated. Each question contained both quantitative and qualitative indicators. It is important that results of an assessment of all the participants of educational process represent no drastic differences, which in our opinion confirm the objectivity of respondents and validity of the developed questionnaire. So, average score of teachers of all competences was defined as 5.86, for pupils 6.51, and 7.16 for managers. As we can see, on average teachers estimate their level quite lower, than pupils and heads of schools. It is also remarkable that respondents oftentimes gave quite high marks and at the same time note that they are not satisfied with the level of the development of a certain competence. Blocks of competences and average value of an assessment of their development in three groups of respondents are presented in *Table 1*.

**Table 01.** Blocks of competences and the average value of the assessment of their development for the three groups of respondents

Competence	Heads of schools	Teachers	Pupils
Subject competences	7.10	5.41	6.23
Didactic competences	5.98	5.30	5.69
Psychological competences	8.42	6.89	7.62
	7.16	5.86	6.51

*Table 2* represents competences that were depicted by the respondents as the most important ones in the first questionnaire. It allows noticing differences and varieties in evaluating certain competences by different groups of respondents

**Table 02.** Similarities and differences in the assessment of individual competencies by different groups of respondents

	Competences	Level of competence development (10 points scale)			Range of satisfaction with competence development		
		Heads of schools	Teachers	Pupils	Heads of schools	Teachers	Pupils
<b>Subject Competences</b>							
1.	Subject knowledge: interesting presentation of the material; additional information; answering the questions; subject interrelations; recommendation of additional information sources	7,10	5,41	6,23	4	6	5
<b>Didactic Competences</b>							
2.	Creative approach to lesson preparation; implementation of unusual forms and methods	5,80	4,70	4,50	6	8	9
3.	Critical thinking development; motivation for discussion	4,65	3,67	5,12	9	10	7
4.	Goals determination in educational activity and	4,99	4,12	4,89	8	9	8



	summarizing						
5.	Organization of interaction and cooperation; providing active participation of learners in class	4, 44	6,14	6,87	10	3	4
6.	Organization of learners' autonomous work	6,89	4,76	5,40	5	7	6
7.	Objective evaluation of educational results with regards to the actual learning capacities of students	5, 34	5,70	3,66	7	5	10
8.	Usage of IT tools in the learning process	9,8	8,7	9,4	1	1	1
<b>Psychological Competences</b>							
9.	Creating an inspiring atmosphere	8,54	8,02	8,12	2	2	2
10.	Creating of harmonious psychological climate	8,30	5,77	7,13	3	4	3

Evaluation of the level of competence development and their ranging demonstrated only 2 competences that raise no questions for all the groups of respondents (>8) (*Table 2* and 3). Level of development of all others was estimated as average (< 8) and low (< 6) (*Table 3*), on the basis of which the conclusion on the presence of deficits in the system of teachers training has been made.

**Table 03.** Assessment of the degree of satisfaction with the level of competence development and their ranking

Competences	Range of satisfaction with competence development (average score)	Level of competence development (10 points scale)	Level of satisfaction with competence development
Usage of IT tools in the learning process	1	9,3	high
Creating an inspiring atmosphere	2	8,22	high
Creating of harmonious psychological climate	3	7,06	average
Subject knowledge: interesting presentation of the material; additional information; answering the questions; subject interrelations; recommendation of additional information sources	4	6,25	average
Organization of interaction and cooperation; providing active participation of learners in class	5	5, 81	low
Organization of learners' autonomous work	6	5,68	low
Creative approach to lesson preparation; implementation of unusual forms and methods	7	5,00	low
Objective evaluation of educational results with regards to the actual learning capacities of students	8	4,90	low
Goals determination in educational activity and summarizing	9	4,66	low
Critical thinking development; motivation for discussion	10	4,48	low

Thus, as a result of the conducted research, the following deficits in the level of formation of professional competences of a teacher at schools of the Republic of Tatarstan were revealed:

- pressure of traditional experience of teaching and the existing stereotypes of pedagogical thinking;
- inability to put and to diagnose educational purposes;
- inability to develop criteria of objective results evaluation of training according to real learning capacities of school pupils;
- insufficient creative potential of young teachers;
- inability to organize autonomous work of learners;
- inability to realize the principles of active approach;
- superficial knowledge of a subject and its scientific bases;
- insufficient possession of ways of creating harmonious psychological climate.

It should be noted that the questionnaire contained an open question to each poll question aimed at the qualitative analysis of each competence assessment. The most frequent argument used to ascertain a low score from the heads of educational institutions and teachers was an insufficient practical training of young specialists and lack of real experience in interaction with pupils

## **7. Conclusion**

Current research paper enabled the authors to plan the system of measures for elimination of deficits in teachers training. In particular, the following is offered:

- It is necessary not only to strengthen the practical orientation of prospective teachers training but also to reconstruct all the structure of student teaching, its inner substance and the attitude towards it from all the perspectives of all participants of pedagogical process.
- For didactic preparation, the main emphasis should be transmitted to the development of interactive technologies of training focused on realization of an activity approach.
- For module structuring of educational programs, the role of competence modules should be strengthened (that is the certain professional and pedagogical competences aimed to train).
- To introduce the procedure of certification of higher educational institutions lecturers taking part in training of the prospective teachers.
- To introduce the procedure of certification of young professionals by experts from higher educational institutions and ministerial organizations.

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